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ENSM. P.U. KOLEA**



**End of Studies Dissertation
Master's Degree in Management
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**The Impact of Digital Service Quality
on Customer Satisfaction
Case: Algérie Poste**

Prepared by: HADJ MAHAMMED Lyes

Supervisor: A. HORRI

President: A.BELAIDI

Co-supervisor: A. BENHIDJEB

Examineur :L.MOAHAMED

EL LAHADJ

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ABSTRACT:

In a rapidly evolving and complex environment, technology plays a pivotal role across various domains. Algeria has actively pursued enhancements in its public enterprises, including Algérie Postee, to elevate service quality and meet customer expectations. Our current study delves into the correlation between the quality of digital services and customer satisfaction, employing a quantitative methodology. Through this research, we've explored fundamental concepts and analyzed empirical data gathered from our internship at Algérie Poste. Our findings affirm the significant influence of the quality of digital services on enhancing customer satisfaction levels.

Keywords : Digital services, Algérie Poste, Customer satisfaction, service quality, public service

Résumé :

Dans un environnement complexe qui évolue rapidement, la technologie joue un rôle essentiel dans de nombreux domaines. L'Algérie a activement poursuivi l'amélioration de ses entreprises publiques, y compris Algérie Poste, afin d'élever la qualité des services et de répondre aux attentes des clients. Notre étude actuelle examine la corrélation entre la qualité des services numériques et la satisfaction des clients, en utilisant une méthodologie quantitative. Dans le cadre de cette recherche, nous avons exploré des concepts fondamentaux et analysé des données empiriques recueillies lors de notre stage à Algérie Poste. Nos résultats affirment l'influence significative de la qualité des services numériques sur l'amélioration des niveaux de satisfaction des clients.

Mots-clés : Services numériques, Algérie Poste, satisfaction client, qualité de service, service public.

ملخص:

في بيئة تتسم بالتعقيد والتطور السريع، تلعب التكنولوجيا دورًا جوهريًا في مختلف المجالات. تسعى الجزائر بنشاط لتحسين مؤسساتها العامة، بما في ذلك بريد الجزائر، بهدف رفع جودة الخدمات وتلبية توقعات العملاء. تركز دراستنا الحالية على استكشاف العلاقة بين جودة الخدمات الرقمية ورضا العملاء، مستخدمين منهجية كمية.

خلال هذا البحث، قمنا باستكشاف المفاهيم الأساسية وتحليل البيانات التي جمعناها أثناء فترة تدريبنا في بريد الجزائر. تشير نتائجنا إلى التأثير الكبير لجودة الخدمات الرقمية على تحسين مستوى رضا العملاء

الكلمات المفتاحية: الخدمات الرقمية، بريد الجزائر، رضا الزبائن، جودة الخدمة، الخدمة العمومية

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LIST OF ABBREVIATIONS AND ACRONYMS

PSQ: public service quality

ICT: Information and Communication Technologies

ECD: Organization for Economic Co-operation and Development

ERP: Enterprise resource planning

CRM: Customer relationship management

GDPR: General Data Protection Regulation

SMEs: Small and medium-sized enterprises

ISO: International Organization for Standardization

TQM: Total quality management

AFNOR : Association Française de Normalisation

EPIC: Établissement public à caractère industriel et commercial

ATM: Automated teller machine

TEP: Terminal de Paiement Electronique

ADE :Algérienne Des Eaux

SEAAL: Société des Eaux et de l'Assainissement d'Alger

INTRODUCTION

Introduction

The integration of digital technologies into service delivery has become a cornerstone for enhancing customer satisfaction and operational efficiency across various industries. This transformation is particularly evident in the postal service sector, where traditional models are being reimagined through digital innovation to meet the evolving expectations of customers. Algérie Poste, the national postal service provider, stands at the forefront of this digital revolution in Algeria, navigating the complexities of integrating digital services to enhance customer experiences. Our study delves into the impact of digital service quality on customer satisfaction at Algérie Poste, illuminating the critical dimensions of digital service that influence customer perceptions and satisfaction levels.

The relevance of this research is underscored by the rapid pace of digitalization that characterizes the contemporary service landscape. As Algérie Poste endeavors to transition from traditional postal services to a more digital-centric model, understanding the nuances of how digital service quality affects customer satisfaction becomes imperative. This study is motivated by the recognition of digital service quality as a multifaceted construct that encompasses reliability, responsiveness, assurance, empathy, and tangibility—each of which plays a pivotal role in shaping customer experiences and satisfaction.

Our research is situated within the broader context of digital transformation efforts in Algeria, reflecting a national ambition to harness digital technologies for public service improvement. In this light, Algérie Poste's digital services ranging from online financial transactions to real-time tracking of mail present a fertile ground for investigating the dynamics of digital service quality and its correlation with customer satisfaction.

This study is propelled by a desire to contribute to the existing body of knowledge on digital service quality, particularly in the context of postal services in developing countries. Through a comprehensive analysis of customer perceptions and experiences with Algérie Poste's digital services, we aim to identify the key drivers of customer satisfaction.

In aligning with these goals, our research questions explore the nature and strength of the relationship between digital service quality and customer satisfaction, the significance of various service quality dimensions, and the impact of demographic factors on customer perceptions. By addressing these questions, our study endeavors to shed light on the strategic imperatives for Algérie Poste in the digital era, providing a roadmap for leveraging digital service quality as a lever for customer satisfaction.

As we embark on this investigative journey, our study is guided by the conviction that the findings will not only enrich academic discourse but also translate into actionable strategies for

Algérie Poste. In doing so, we contribute to the ongoing dialogue on digital transformation in the public sector, advocating for a customer-centric approach to digital service innovation.

Context of the Study

The advent of the digital era has fundamentally transformed the delivery of services across various sectors worldwide, necessitating a strategic realignment to align with the evolving digital preferences of consumers. The postal service industry, with its traditional reliance on physical operations, is undergoing a significant transformation. In Algeria, this transformation is vividly represented by Algérie Poste, which stands at the forefront of the sector's digitalization efforts. This shift is part of Algeria's broader ambition to digitalize public services to increase operational efficiency, enhance accessibility, and improve user satisfaction levels.

Algérie Poste plays a crucial role in the Algerian economy and social fabric, bridging traditional postal services with modern digital financial solutions. This dual function underscores a transition from a classic postal service to a comprehensive digital services provider. The move towards digitalization is driven by the need to meet changing customer expectations and to utilize technological innovations to bolster service quality and customer satisfaction. Yet, this transition is challenged by various factors including technological adoption hurdles, digital literacy levels among the population, and the infrastructural investments required.

In this context, the influence of digital service quality on customer satisfaction emerges as a vital area for exploration. Algérie Poste's foray into digital services, ranging from online financial transactions to mail tracking, marks a significant shift in customer interaction modalities. Delving into how these digital service dimensions' impact customer satisfaction is essential for refining service delivery, enriching customer experiences, and enhancing loyalty in a competitive digital age.

Objectives of this Study

This study is centered on dissecting the impact of digital service quality on customer satisfaction at Algérie Poste. This central aim is supported by several specific objectives:

- **To Assess Digital Service Quality Dimensions at Algérie Poste:** We aim to identify and evaluate the core dimensions of digital service quality pertinent to Algérie Poste, such as reliability, responsiveness, assurance, empathy, and tangibility, and their customer perceptions.
- **To Ascertain Customer Satisfaction Levels:** Our study seeks to gauge the prevailing satisfaction levels among customers regarding Algérie Poste's digital services. We plan

to employ quantitative methodologies to obtain an in-depth understanding of customer experiences and attitudes.

- **To Examine the Correlation between Digital Service Quality and Customer Satisfaction:** We intend to analyze how each digital service quality dimension contributes to overall customer satisfaction, pinpointing strengths and areas for enhancement.
- **To Explore the Influence of Demographic Factors:** Our research will also explore how demographic variables, including age, gender, educational background, and digital literacy, influence perceptions of digital service quality and customer satisfaction at Algérie Poste.

Through achieving these objectives, our study aims to enrich the academic literacy on digital service quality and customer satisfaction, particularly within the postal service industry in developing nations. Furthermore, it aspires to equip Algérie Poste and similar entities with data-driven strategies for successfully managing their digital transformation endeavors, ensuring that technological progress translates into enhanced customer satisfaction and service efficiency.

Research Problem

The rapid digital transformation within the service sector has elevated customer expectations regarding digital service quality. In this context, Algérie Poste has embarked on integrating digital technologies to enhance its service offerings. However, the extent to which digital service quality influences customer satisfaction within the Algerian postal service remains underexplored. This gap signifies a critical research problem, especially given the pivotal role of digital services in enhancing operational efficiency, customer convenience, and satisfaction. Thus, the primary problem our study seeks to address is:

What's the impact of digital service quality on customer satisfaction?

subsidiary questions

To comprehensively address the main research problem, our study is structured around the following subsidiary questions:

Is there a correlation between customer satisfaction and digital service quality?

Does The reliability of digital services positively influences customer satisfaction ?

Which dimension of digital service quality is perceived as most crucial by Algérie Poste's customers?

To explore the impact of digital service quality on customer satisfaction at Algérie Poste, three hypotheses guide our investigation:

Hypothesis 1: The quality of digital services provided by Algérie Poste has a statistically significant positive impact on customer satisfaction.

Hypothesis 2: The reliability of digital services positively influences customer satisfaction.

Hypothesis 3: Among the dimensions of service quality, assurance is the most significant predictor for Algérie Poste customers.

Choosing the theme

Choosing the theme for a research project, especially one as comprehensive as a thesis, involves a strategic consideration of several factors, including relevance, interest, data availability, and the potential impact of the research. When it comes to the impact of digital service quality on customer satisfaction at Algérie Poste, the choice of theme is motivated by a constellation of factors that highlight its significance for both academic and practical purposes. Here's a detailed justification for choosing this theme:

- Relevance to Current Trends:

Digital Transformation: The ongoing digital transformation across sectors globally, and specifically within postal services, makes this theme highly relevant. As digital interfaces increasingly become the primary mode of interaction between service providers and customers, understanding their impact on customer satisfaction is crucial.

- Academic and Practical Significance:

Filling a Research Gap: There is a noticeable gap in research specifically focused on the digital transformation of postal services in developing countries and its impact on customer satisfaction. This theme provides an opportunity to contribute valuable insights to the literature.

Practical Implications: The findings from this study have the potential to inform strategic decisions at Algérie Poste, aiding in the enhancement of digital service offerings and improving customer satisfaction levels. This bridges the gap between academic research and practical application.

- Personal Interest:

A genuine interest in the intersection of technology and customer service, coupled with the transformative changes happening within postal services, can drive motivation and engagement throughout the research process.

- Data Availability and Accessibility:

Access to Data: Algérie Poste's push towards digitalization may provide various avenues for collecting primary data through customer surveys, interviews, and digital service usage statistics, ensuring a rich data set for analysis.

Collaboration Opportunities: Potential collaboration with Algérie Poste for data collection could offer exclusive insights into the digital service strategy and customer feedback, enhancing the study's depth and applicability.

- Potential for Impact:

Strategic Recommendations: this study endeavors to explore potential avenues for improvement within Algérie Poste's service offerings. Through our findings, we aspire to contribute modestly to the enhancement of its service quality strategies, with the ultimate aim of fostering greater customer satisfaction.

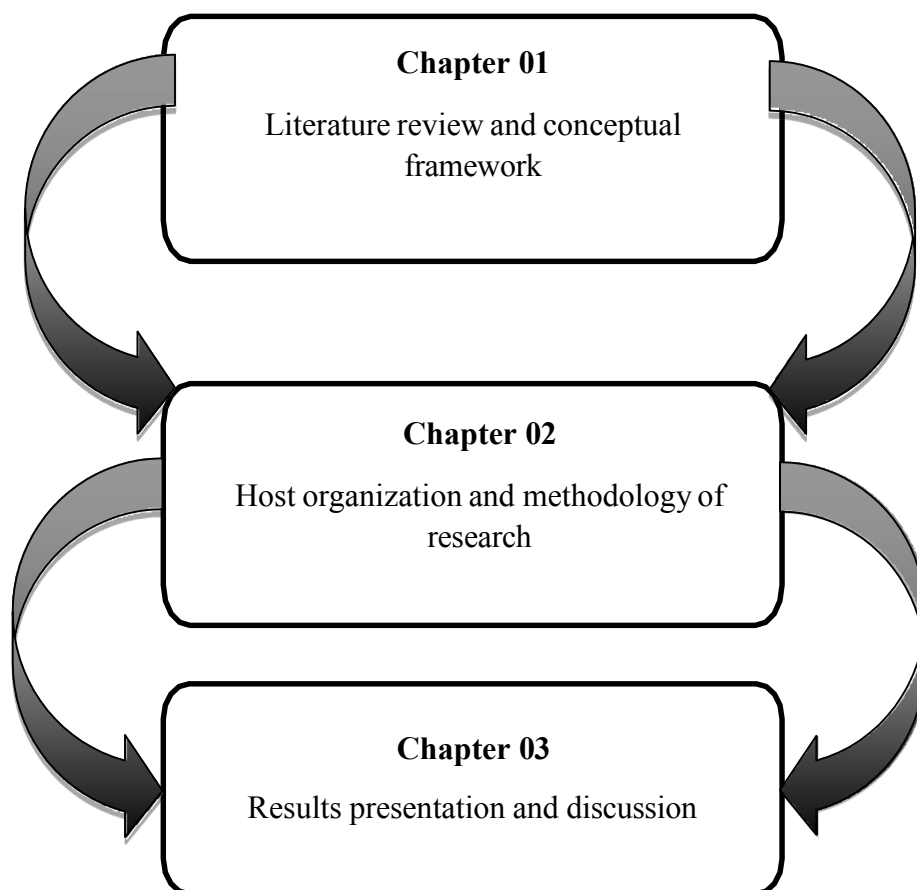
Policy Implications: Insights from this research could influence policy-making regarding digital service standards in postal and similar public services, advocating for customer-centric digital transformation strategies.

- Personal Development:

Skill Enhancement: Engaging in this research can significantly enhance analytical, data collection, and critical thinking skills, useful both academically and professionally.

In conclusion, the choice of this theme is driven by its timely relevance, the opportunity to fill an existing gap in research, personal interest and expertise, data accessibility, the potential for significant impact, and the benefits for personal and professional development. This multifaceted motivation ensures a comprehensive approach to exploring how digital service quality impacts customer satisfaction at Algérie Poste, offering valuable contributions to both theory and practice.

To answer our problematic and research questions, our work is structured as follows



In the first chapter entitled literature review and conceptual framework where we will try to link the digital transformation and service quality, then a conceptual framework where we will present the main concepts of our research namely: digitalization, service quality customer satisfaction.

The second chapter is reserved to the presentation of the host organization and the methodology followed.

Finally, in the last chapter, entitled results and discussion, we will present the results of our study and the discussion.

CHAPTER 1: THEORETICAL FRAMEWORK

We present in this chapter, first, the previous studies conducted related to our research theme before defining the main concepts used in this research work.

Section 1: Literature Review

To place this research within a scientific framework, a review of the literature on the subject of Digital Service Quality and its impact on customer satisfaction is essential. Several researchers have approached this topic in various ways, such as:

1.1 Literature Review on Digitalization

The article titled "The Effect of Digitalization on the Quality of Service and Customer Loyalty" by Shabani, Behluli, Qerimi, Pula, and Dalloshi, published in the *Emerging Science Journal* in December 2022, explores the impact of digitalization on service quality and customer loyalty within the banking sector of Kosovo. Utilizing a quantitative methodology, the study surveyed 400 clients of Kosovo banks to assess how digitalization influences service quality and customer loyalty. The study employs the SERVQUAL model to measure service quality across five dimensions: tangibility, reliability, responsiveness, assurance, and empathy. Additionally, the relationship between customer loyalty and demographic factors is examined.

The findings suggest that digitalization positively affects both service quality and customer loyalty. Specifically, digitalization was found to have a significant relationship with the dimensions of service quality, indicating that as banks enhance their digital offerings, the quality of service perceived by customers improves. Moreover, the study identifies no significant difference in customer loyalty between genders, but reveals a notable variation in loyalty across different age groups and levels of education. This suggests that while digitalization is broadly beneficial, its impact on customer loyalty may vary based on demographic characteristics.

The research contributes valuable insights for banking institutions in Kosovo and potentially other regions, highlighting the importance of digitalization in enhancing service quality and fostering customer loyalty. It underscores the need for banks to invest in digital technologies and tailor their digitalization strategies to meet the diverse preferences and expectations of their customer base. By doing so, banks can not only improve service quality but also strengthen customer loyalty, which is crucial for their long-term success in an increasingly digital marketplace.

This study's findings are particularly relevant for policymakers and bank administrators looking to leverage digital tools to improve public service delivery and enhance customer satisfaction. As digitalization continues to transform the banking industry, understanding its

implications on service quality and customer loyalty becomes increasingly important for developing effective digital strategies that cater to the evolving needs of customers.

In "Workers' Attitudes towards Digitization and Its Role in Improving Service Quality in an Algerian Institution," Mekboul & Derbale (2022) delve into the effects of digitization on enhancing service quality, focusing on employees at a postal institution in Bechar, Algeria. Employing a descriptive analytical approach and a questionnaire distributed among 95 workers, the study thoroughly examines the relationship between digitization initiatives and their perceived impact on organizational development, job performance, and service quality improvement.

The study reveals a generally positive response to digitization among employees, noting a significant link between digitization and better service delivery within the institution. It interestingly points out no considerable differences in digitization attitudes based on gender or age, but it does find variances related to job seniority, with employees having five to ten years of experience showing specific insights. This detailed analysis sheds light on the complex interactions between digitization efforts and their effects on organizational efficiency, employee performance, and service quality enhancement.

Mekboul & Derbale's (2022) work significantly contributes to the conversation on digital transformation in the public sector, offering empirical evidence that digitization is crucial for organizational and service quality advancements. Their research enriches the scholarly debate on digital adoption in public entities and offers actionable advice for decision-makers and institutional leaders seeking to overcome the challenges of digital integration to boost operational effectiveness and service excellence. Hence, this study is a key resource for subsequent research in digital transformation's impact on service quality in the public sector, advocating for a strategic approach to digitization to achieve significant gains in institutional performance and service provision.

In "Digitalization of Public Organizations as a Tool for a Responsive Reaction to a Crisis Situation" (Marciniak & Łukasik, 2023), the study meticulously explores the integral role of digital tools in enhancing the operational efficacy and crisis management capabilities of public organizations. Through a diagnostic survey encompassing 357 local government units, Marciniak and Łukasik gather insights from highly experienced individuals within the public sector, aiming to ascertain the impact of digitalization on work outcomes and the quality of services provided. This comprehensive investigation reveals a generally favorable perception towards digitalization among public sector employees, highlighting its potential to significantly improve service quality and operational outcomes. However, the study also illuminates a

spectrum of opinions regarding digitalization's impact, indicating variability in the adoption and effectiveness of digital tools across different government units.

This variance underscores the complex nature of digitalization within the public sector, suggesting that while digital tools are widely acknowledged for their potential to revolutionize service delivery, their actual implementation and impact can significantly vary. Marciniak and Łukasik's contribution to the discourse on digital transformation in public administration is profound, offering empirical evidence of digitalization's positive implications for enhancing service quality and fostering customer loyalty. Their research addresses a crucial gap in the literature by providing a detailed analysis of public sector workers' perceptions of digitalization, thus offering valuable insights for policymakers and administrators aiming to leverage digital tools for improved public service delivery.

Through this scholarly endeavor, Marciniak and Łukasik enrich the academic discussions on digitalization, presenting a nuanced understanding of its implications for public administration and crisis management in an increasingly digital world. Their work not only highlights the strategic importance of digitalization in modernizing public administration but also serves as a pragmatic guide for public organizations navigating the complexities of digital transformation amidst the evolving global landscape.

The study by Dahmani Lydia, "The Impact of Digitalization on the Improvement of Public Service: The Case of CASNOS Bordj Bou Arreridj," offers an in-depth exploration into how digital transformation initiatives within the Algerian public sector, specifically at the National Social Security Fund for Non-Employees (CASNOS) in Bordj Bou Arreridj, have redefined service delivery mechanisms and operational efficiencies. Through qualitative research, including interviews with key stakeholders within CASNOS, the study sheds light on the multifaceted impact of digitalization on public services.

Key findings from Dahmani's research highlight the critical role of digital technologies in streamlining administrative processes, enhancing data management systems, and improving customer service interactions. The transition to digital platforms has facilitated a shift towards more transparent, reliable, and user-friendly services, allowing for greater accessibility and convenience for the beneficiaries of social security services.

One of the significant outcomes of digitalization, as detailed in the study, is the reduction in processing times for various services offered by CASNOS. This improvement directly correlates with increased satisfaction levels among service users, who now experience fewer delays and more straightforward procedures. Furthermore, the digital transformation has

enabled better data accuracy and security, reducing errors and safeguarding personal and sensitive information.

Dahmani's research also delves into the challenges encountered during the digitalization process, including technical issues, resistance to change among staff, and the need for ongoing training and capacity building to ensure the effective use and maintenance of new digital systems. These insights are critical for understanding the holistic impact of digitalization efforts, providing a balanced view of the benefits and hurdles involved in transitioning public services to digital platforms.

This study contributes significantly to the literature on digitalization in the public sector, offering practical insights and recommendations for policymakers and public administrators aiming to leverage digital technologies to enhance service delivery. By presenting the case of CASNOS Bordj Bou Arreridj as a model, Dahmani Lydia's work underscores the potential for digital initiatives to transform public services, making them more efficient, accessible, and responsive to the needs of the public.

1.2 Literature Review on Service quality

In the comprehensive study by Medupin and Ojeleye (2023), the impact of service quality on customer loyalty within Jigawa State's banking sector is meticulously explored. Utilizing a robust survey research design, the investigation gathers quantitative data from 384 customers across notable banks including Access Bank, UBA, First Bank Nigeria Plc, and Unity Bank. Through the implementation of frequency count, simple percentages, and linear regression analysis for hypothesis testing, the findings reveal a significant correlation between service quality and customer loyalty, thus highlighting the paramount importance of service quality in enhancing customer retention.

The research emphasizes the critical need for banks in Jigawa State to prioritize improvements in service quality as a means to foster customer satisfaction and loyalty. Recommendations include the allocation of more resources towards initiatives such as quality assurance programs, periodic service audits, and the design of customer-centric services. These strategies aim not only to meet but exceed customer expectations, thereby securing their long-term loyalty and trust.

The contribution of Medupin and Ojeleye (2023) to the academic discourse on the nexus between service quality and customer loyalty within the banking sector is profound. Offering empirical evidence on the significant effects of service quality on customer loyalty, their research provides valuable insights for banking institutions in Jigawa State and beyond. This study serves as an essential reference for future research in the area of service quality and its

influence on customer loyalty, advocating for strategic enhancements in service quality to achieve superior customer satisfaction and loyalty.

In "Conceptualisation et mesure de la qualité des services publics (QSP) dans une collectivité territoriale" (Goudarzi & Guenoun, 2010), the authors undertake a comprehensive examination of public service quality (PSQ) within a territorial collectivity, employing the SERVQUAL model as a foundational framework. This research meticulously navigates through the theoretical underpinnings of service quality, extending its application to the public sector with a specific focus on capturing the perceived quality of public services. Through an empirical study involving 251 citizens of a medium-sized city, Goudarzi and Guenoun aim to validate a model for measuring public service quality that integrates the conventional dimensions of SERVQUAL with aspects uniquely characteristic of public services.

The findings from the study illuminate the significant role of perceived service quality in shaping public satisfaction, underscoring the importance of reliability, empathy, assurance, tangibility, and responsiveness in the public sector context. Moreover, the research highlights the utility of the adapted SERVQUAL model in identifying key areas for improvement within public services, thereby providing actionable insights for public administrators and policymakers aiming to enhance service delivery and citizen satisfaction.

Goudarzi and Guenoun's work significantly contributes to the burgeoning discourse on service quality in the public sector, offering a novel methodological approach to conceptualizing and measuring PSQ. Their research not only enriches the theoretical landscape of public service management but also serves as a valuable tool for public organizations seeking to implement quality improvement initiatives based on citizen feedback. Through this scholarly endeavor, Goudarzi and Guenoun advance our understanding of the complexities involved in measuring and enhancing service quality within the public sector, providing a robust foundation for future research in this critical area of public administration.

In "E-Service Quality, E-Trust, E-Satisfaction, And E-Loyalty In Online Shopping" (Pratama, Prasetyo, & Ramli, 2023), the authors undertake a rigorous exploration into the dynamics of e-service quality, e-trust, e-satisfaction, and their collective impact on e-loyalty within the context of online shopping. This research is pivotal, addressing the direct and mediated relationships among these variables, using a quantitative approach through survey data collected from 110 respondents of online shopping applications. The study findings intriguingly reveal that while e-trust positively affects e-satisfaction and subsequently e-loyalty, e-service quality alone does not directly influence e-loyalty or e-satisfaction significantly.

This work is foundational in its examination of the nuanced interplay between the quality of online services, the trust engendered by these digital platforms, the satisfaction levels of consumers, and their loyalty to online shopping venues. The research delineates a complex, multi-faceted relationship where e-trust emerges as a critical driver of e-loyalty, mediated by e-satisfaction, yet e-service quality's impact remains nuanced and indirect. This nuanced analysis contributes significantly to the understanding of consumer behavior in digital marketplaces, providing valuable insights for online retailers aiming to bolster customer loyalty through enhanced service quality and trust-building measures.

Pratama, Prasetyo, and Ramli's (2023) study enriches the discourse on digital consumer behavior by empirically evidencing the significant roles played by trust and satisfaction in cultivating e-loyalty. Their findings offer a roadmap for online businesses seeking to optimize their service quality and trust indices to foster a loyal customer base. This research stands as a critical reference for future investigations into the intricate mechanisms that underpin loyalty in the ever evolving landscape of online commerce, advocating for a strategic focus on trust and satisfaction as central pillars for securing customer loyalty.

In the insightful study by Kowalik (2020) titled "The Role of Safety in Service Quality in the Opinion of Traditional and Digital Customers of Postal Service," the research delves into how customer perceptions of safety significantly impact their evaluation of postal service quality. Kowalik's work is distinguished by its dual focus on both traditional and digital customer segments within the postal service industry, offering a nuanced understanding of how different customer groups prioritize various safety attributes in their service quality assessments. Kowalik's research methodology encompasses a thorough literature review, followed by a detailed survey analysis targeting Polish users of postal services. The study's findings are pivotal, highlighting that while both traditional and digital customers consider safety an essential component of service quality, their valuation of specific safety attributes such as personal data protection, confidentiality of correspondence, infrastructure safety, and preventive measures varies markedly.

For digital customers, the emphasis is significantly placed on the importance of data protection and infrastructure safety, reflecting the inherent risks and concerns associated with digital transactions and communications. These findings suggest that digital customers' heightened awareness and expectations regarding online safety measures directly influence their perceptions of service quality. Conversely, traditional customers, who typically engage with postal services in more conventional settings, prioritize the confidentiality of correspondence and personal data protection. This preference underscores the enduring value of privacy and

security in physical postal interactions and highlights the nuanced differences in safety expectations between customer segments.

Kowalik's study is groundbreaking in its comprehensive approach to understanding the complex relationship between safety and service quality in the postal industry. By differentiating between traditional and digital customers' safety priorities, the research offers invaluable insights for postal service providers aiming to enhance their service offerings. The study advocates for tailored safety measures that address the distinct needs and concerns of both customer groups, thereby improving overall service quality and customer satisfaction. The implications of Kowalik's research extend beyond the postal service industry, offering broader lessons for service providers in various sectors on the importance of aligning safety measures with customer expectations. This study stands as a vital contribution to the literature on service quality and safety, paving the way for future research in this critical area of customer service management.

1.3 Literature Review on Customer Satisfaction

In "Exploring the Correlation Between Service Quality and Customer Satisfaction in the Hospitality Industry," Fatma and Kumar (2024) meticulously examine the intricate relationship between the constructs of service quality and customer satisfaction within the hospitality sector. This comprehensive study leverages a methodological framework to dissect the various dimensions of service quality—reliability, responsiveness, assurance, empathy, and tangibles—and their differential impact on customer satisfaction levels. The research underscores the critical role of these dimensions in shaping consumer perceptions and expectations, thereby influencing their overall satisfaction and loyalty towards the service provider.

The findings of the study illustrate a nuanced understanding of how service quality serves as a linchpin in enhancing customer satisfaction, with reliability being pinpointed as the most influential factor. The authors delve into the subtleties of customer satisfaction, highlighting it as a multifaceted concept influenced by preconceived expectations, the quality of service delivery, and the ensuing emotional responses. Furthermore, the study brings to light the pivotal role of customer satisfaction in mediating the relationship between service quality and customer loyalty, suggesting a direct correlation where diminished service quality could potentially erode customer loyalty.

Fatma and Kumar's work contributes significantly to the burgeoning literature on service quality and customer satisfaction, providing empirical evidence to support the assertion that superior service quality is indispensable for fostering customer satisfaction and loyalty in the

hospitality industry. This study not only enriches the academic discourse on the subject but also offers practical insights for industry practitioners aiming to refine their service offerings to meet and exceed customer expectations. Hence, this research stands as a valuable resource for future studies and serves as a strategic guide for hospitality service providers endeavoring to enhance their competitive edge through quality service delivery and customer-centric strategies.

The article titled "Impact of Service Quality on Customer Satisfaction and Loyalty" by Purna Man Shrestha, published in *Management Dynamics* in December 2021, presents a comprehensive study on the effect of service quality dimensions on customer satisfaction and loyalty within Nepal Telecom's customer base in the Surkhet Valley of Nepal. Adopting a quantitative approach, Shrestha employs the SERVQUAL model, which encompasses five dimensions of service quality: tangibles, reliability, assurance, empathy, and responsiveness, as initially proposed by Parasuraman, Berry, and Zeithaml in 1991. Through a survey distributed to 500 customers, with 395 valid responses, the research utilizes multiple regression analysis to determine the impact of these service quality dimensions on customer satisfaction and loyalty. The study identifies "reliability" as the most significant factor affecting customer satisfaction and "empathy" as the most influential in driving customer loyalty, underscoring the critical role of dependable services and the importance of understanding and addressing customer needs in enhancing loyalty. Additionally, customer satisfaction is recognized as a pivotal mediator that significantly enhances customer loyalty towards the service provider.

This research contributes valuable insights for telecommunication service providers, particularly Nepal Telecom, indicating that investment in improving service quality dimensions can significantly elevate customer satisfaction and foster loyalty. It underscores the necessity for targeted strategies to enhance reliability and empathy to achieve competitive advantage and sustain long-term customer relationships. The findings of this study are instrumental for both practitioners in the telecommunications industry and policymakers aiming to enhance service delivery and customer engagement strategies.

The research article titled "Effect of E-Service Quality on E-Customer Loyalty through E-Customer Satisfaction on E-Commerce Shopee Application" by Iranda Kayla Avania and Arry Widodo, published in the *Budapest International Research and Critics Institute (BIRCI-Journal) Humanities and Social Sciences* in February 2023, examines the relationship between e-service quality, e-customer satisfaction, and e-customer loyalty within the Shopee e-commerce platform in Batam City, Indonesia. Utilizing a quantitative approach with SEM-PLS analysis

on a sample of 100 respondents, the study aims to uncover how e-service quality impacts customer loyalty directly and indirectly through customer satisfaction.

The findings indicate that while e-service quality directly impacts e-customer satisfaction significantly, its direct effect on e-customer loyalty is not significant. However, e-customer satisfaction significantly influences e-customer loyalty, and it also mediates the relationship between e-service quality and e-customer loyalty, suggesting that satisfaction plays a crucial role in fostering loyalty among Shopee's users.

This study highlights the critical importance of e-service quality in generating customer satisfaction, which in turn leads to customer loyalty in the e-commerce sector. It suggests that e-commerce platforms, specifically Shopee, should focus on enhancing their service quality to improve customer satisfaction levels, ultimately leading to increased customer loyalty. The research offers valuable insights for e-commerce platforms aiming to strengthen their customer loyalty strategies by emphasizing the pivotal role of customer satisfaction and the underlying quality of e-services.

Section 2: conceptual framework

Through the conceptual framework of our work, we will cover the most important terms that designate the content of our research, and help us to answer our problematic.

2.1 Digitalization

For almost three decades, digitalization has become integrated into our society and the structure of our businesses. Computing has become an essential element of our daily lives. Digital projects offer benefits to businesses by requiring stakeholders to reconsider their way of interacting and enabling them to experiment with new forms of organization and power within the organization.

2.1.1 History and Definitions

2.1.1.1 History

digitization is a protracted historical progression that commenced with the creation of the computer. They identify four pivotal historical stages within this journey: (Michel Barabel, 2015)

During the period from 1936 to 1959, there was a significant development in the field of computing with the advent of the computer and the subsequent emergence of the computer market.

During the period from 1960 to 1983, there was a significant increase in the use of computers in the professional field and the widespread adoption of management computing.

During the period from 1984 to 2007, there was a significant shift towards computerization and the use of personal computing in enterprises. This coincided with the rise of the Internet.

Since 2008, there has been a widespread use of ICT (Information and Communication Technologies) and the emergence of the digital era, which includes technologies such as smartphones, cloud computing, and big data.

Undoubtedly, digitization has become an omnipresent technology that brings advantages to numerous areas of the economy. According to the OECD's 2013 report, it has become a ubiquitous technology that is present in every area of the economy

2.1.1.2 Definitions

During the development of computing and the Internet, the word "digital" would then simply indicate that the product was using new technologies: a digital camera, digital board, digital tablet, digital library, and so on. It is interesting to note that these two terms are now considered synonyms (according to the Larousse online dictionary) and that the term " numérique " has

largely replaced "digital" in marketing language. The word "digital" in French comes from the Latin *digitus* (finger). This includes everything that requires the usage of fingers, such as counting with an abacus, for instance. As a result, virtual supports dependent on finger usage have been termed as digital supports. The English translation of the word "digital" in French was "numérique." These two words refer to any kind of information that is encoded as numbers. Unlike analog, where the signal is transferred in a continuous form directly, in the digital realm, it is sliced and coded into binary form for later reconstruction. Analog to digital converters allow the conversion of analog data into digital binary values, thereby enabling the creation of multimedia data. Subsequently, a computer and its peripherals, such as scanners, sound cards, and video acquisition cards, can digitize a wide array of documents (audio, video, paper). Algorithms are developed to compress data of various types (text, image, sound, etc.) to enable easy storage on a single medium (hard disk, USB key, etc.) (Bertrand Belvaux, 2018).

The term "digitalization" refers to converting information and processes into digital format and using digital technologies for all kinds of business applications (Meier, Marthinsen, Gantenbein, & Weber, 2023). Digitization plays a pivotal role in the realms of data processing, storage, and dissemination. It enables the uniform handling of diverse types of information, irrespective of their original formats, allowing for efficient management and integration. The process involves converting various forms of content ranging from textual documents to images, and audio recordings—into binary code. This conversion facilitates the simplified storage, retrieval, and sharing of information. Consumer electronics widely employ digitization to enhance user experience, making it a cornerstone of modern technology. This capability to standardize and streamline information contributes significantly to the digital ecosystem (Qurashi, 2011).

Bertrand Duperrin, Head of Digital Transformation at Emakina France, states that digital transformation is a prerequisite for any other initiatives. The common cultural and behavioral foundation is essential for transforming professions (Chaintreuil, 2015). He elaborates that this stage was achieved by combining the ideas of Enterprise 2.0 and social business. Enterprise 2.0 emphasized internal collaboration, while social business encompassed the internal/external spectrum. Genuine awareness is essential for digital transformation. Adapting habits, culture, and mental processes is now crucial to satisfy new needs. Digital transformation requires us to reassess longstanding business structures, distinguishing it from digital translation (Chaintreuil, 2015).

From the previous definition we could conclude that 'Digital transformation' is a thorough process that goes beyond just adopting technology. It represents a fundamental change in how businesses think about and carry out their business models, internal procedures, and external interactions. This transformation involves more than just incorporating digital technologies into current systems; it signifies a complete restructuring of business operations to promote innovation, improve cooperation, and optimize communication throughout all levels of a company. Digital transformation combines the encoding of information into a binary format with the tactile connection with technology, merging the evolution of 'digital' and 'numérique.' It utilizes the accuracy and effectiveness of digital encoding while recognizing the human-centered approach of 'numérique,' allowing companies to traverse the intricacies of the digital era. This method relies on a cultural and behavioral change that necessitates firms to develop a mindset focused on continuous learning, adaptability, and customer-centricity. Digital transformation is more than just a technical update; it involves a strategic reorganization that equips firms to succeed in a world that is becoming more digital.

2.1.2 The Difference Between Digitalization, Digitization, and Digital Transformation:

Digitization, digitalization, and digital transformation are commonly used terms in several fields, but their interchangeable usage sometimes obscures their precise meanings and implications.

Digitization is the process of transforming analog data into digital representation, allowing computers to handle conventional material like documents. It transforms industry but presents issues such as cybersecurity and the requirement for robust management systems (Adesanya, 2022).

Digitalization is incorporating digital technologies into business operations to bring about strategic change, revamp processes, and establish new digital revenue sources (Adesanya, 2022).

Digital transformation involves an organization fully adopting digital technologies in its operations, which can be divided into three main areas: automation, dematerialization, and disintermediation. This method represents a move towards more effective, efficient, and straightforward corporate operations by utilizing the advantages of digital technology (Fadoua KHANBOUBI, 2019).

2.1.3 The key Dimensions of Digitalization

Digital transformation reshapes business landscapes across scope, scale, speed, and source, challenging traditional models and fostering rapid, extensive changes in competitive dynamics and consumer expectations : (Aubry Mathilde, 2021)

- **Scope:** Digitalization's impact is vast, affecting entire organizations or significant parts of them. It challenges established industry leaders by dissolving traditional competitive barriers, especially evident in the retail sector where digital technology merges physical and online commerce. This integration is illustrated by significant acquisitions and the adoption of in-store kiosks and online order collection points, forcing retailers to overhaul their business models and logistics.

- **Scale:** The volume of informational transactions with stakeholders has skyrocketed, driven by an increase in digital interfaces between businesses and their environments. This shift requires companies to reevaluate their internal processes and engage with customers through social media platforms like Facebook and Twitter. Customer opinions have gained considerable influence, necessitating effective online reputation management.

- **Speed:** Changes occur rapidly, compelling companies to quickly reorganize resources and rethink their competitive strategies and innovation processes. This has led to shorter product development cycles influenced by significant media events and a heightened consumer expectation for quick service delivery. Supply chains have become more extensive, robust, and adaptable to meet the demanding expectations of consumers who readily switch loyalties.

- **Source:** The sources of competition have diversified, allowing new entrants like Tesla to challenge established market leaders despite lacking traditional advantages. This highlights the increased intensity and diversity of competition, stemming from various locations and sectors

2.1.4 The advantage of digitalization

Digitalization offers a multitude of benefits that can revolutionize business operations, enhance customer experiences, and secure a competitive edge in the market. Below are the key advantages of embracing digital transformation: (Kimberling, 2021)

- **Increase in revenue:** Increasing productivity and business turnover are crucial for a company's growth. Digitalization serves as a tool for boosting a company's revenue through several means. It offers a perfect structure for cost-efficient marketing and thorough promotional campaigns. Furthermore, the extensive virtual area allows for addressing a wider audience, which in turn leads to higher sales. Improving customer relations not only helps retain clients but also boosts the company's reputation.

- **Clutter Reduction:** Relying on paper for storing information is becoming more and more inconvenient. Why deal with the weight of bulky paper when you can get the same information using a smartphone or a USB drive? Digital data storage greatly lowers the reliance on physical paper, resulting in a reduction in deforestation and contributing to environmental conservation.

- **Improving Company-Client Relations:** The clientele is the cornerstone of a company's success and prominence. It is essential to maintain and cultivate this precious relationship. Digitalization enhances client relationships through multiple methods. Consistent social media ads help the firm be present in the minds of its followers, maintaining direct communication to enhance relationships. Digital platforms facilitate engaging and amicable conversation, fostering a hospitable and laid-back environment that enhances the company's reputation. Attending to customer feedback is crucial for ensuring consumers feel appreciated and engaged.

- **Expansion of Influence Sphere:** Digitizing corporate activities is an essential adjustment in response to the current global environment, allowing organizations to expand their influence considerably. Businesses may establish a strong presence in the online realm and surpass competitors by utilizing digital tools. Social media and internet support this spread by serving as prospective communication avenues. Moreover, initiatives like sponsored content, collaborations with respectable sites, and blogs, along with the possibility of expanding the audience through shares and mentions, are successful methods.

- **Data Storage and Preservation:** Data in digital technology refers to information stored on digital mediums. Digitalization enables the storing of several data formats on devices like USB drives, memory cards, smartphones, or PCs. Information can also be saved on cloud platforms such as Google Drive or email accounts, providing convenient access from any location. These services guarantee data retention for an infinite duration as long as the accounts stay active.

- **Improved Competitive Edge:** Enhancing your company's infrastructure improves your competitive advantage in the industry. Anticipating the necessary features and functionalities for your new system to enhance your organization is essential. Consider your strengths and areas for growth within your field. Choose software features that meet your requirements and strengthen your distinctive selling points.

- **Enhanced Operating Model Efficiency:** Reflect on your business strategy and how upgrading your IT infrastructure could optimize your operations. Several companies have found new commercial opportunities by integrating digital strategies. Traditional firms can enhance their e-commerce presence by utilizing a dependable ERP system to monitor inventories and sales, thereby improving the business's expansion and market reach.

- **Enhanced Supply Chain Management:** Efficient supply chain management improves transparency, supplier oversight, and comprehension of your products' microeconomics from raw materials to consumer delivery. When incorporating shipping and logistics into your organization, ensure it aligns with your ERP transformation process.

- **Adaptability:** An efficiently implemented IT transformation enables quick adaptation to market and customer requirements. 2020 underscored the significance of company flexibility and adaptation. To make your organization more flexible through transformation, it is essential to select suitable software and integrate it effectively to prevent operational disruptions.

- **Enhancing Employee Engagement and Cultivating a Positive Organizational Culture:** Human capital management software can help in recruiting and retaining skilled individuals by assessing performance, providing direction, training, and support, and pinpointing areas that need enhancement. ERP software can improve the work experience by simplifying duties, increasing efficiency, and promoting a successful atmosphere by lowering stress.

- **Enhanced Customer Experience:** Imagine a situation where a consumer asks about a late delivery. A customer support worker can readily retrieve the order details from the system, address any uncertainty, and maybe salvage the deal. This additional perspective adds value, enhancing consumer happiness regardless of their level of awareness.

- **Maximizing Revenue by Minimizing Costs:** Reducing costs makes it easier to achieve revenue growth. Recognizing inefficiencies in existing business processes is crucial for the progress of a company. Improved transparency in many business areas enables better practices and more revenue by identifying patterns, evaluating trends, and capitalizing on data-driven opportunities.

- **Decreasing Expenses:** Digital transformation saves money upfront and in the long run by incorporating more efficient procedures and faster issue detection. Utilizing data for strategic raw material ordering can result in cost savings.

- **Enhanced transparency:** is achieved by ERP or SAP systems, revealing previously unnoticed trends and patterns in current processes. This real-time data access offers a complete perspective on all business facets, improving team transparency and productivity.

- **Enhancing Efficiency:** Implementing an ERP system greatly enhances efficiency in business operations by improving inter-departmental communication, data flow, and customer lifecycle management, resulting in time, cost, and resource savings.

2.1.5 The challenges of digitalization

Digital transformation, initiated with the advent of computers, has seen businesses integrating digitization of data and enhancing their operations through digital means. Despite significant strides in document digitization, database management, and workflow organization, traditional businesses face challenges from digital-native companies like GAFAM, who leverage digital platforms to dominate markets. The shift to digital necessitates a radical change in business models, highlighting the importance of evolving mindsets and cultural practices to prioritize digital initiatives.

2.1.5.1 Challenges in the Digital Landscape

Businesses face several problems and opportunities in the digital realm as they strive to expand and set themselves apart in a competitive market. These problems exist at three primary levels: (Lahchame Kasmia, (2021)

- **Visibility, Brand Image, and Traffic:** Digital presence is crucial for businesses to gain market visibility and engage with customers. Effective strategies include leveraging websites for e-commerce, employing strong SEO techniques, and utilizing social media to attract new customers and improve brand reputation. The digital approach enables businesses to tap into international markets and enhance their image through direct customer interaction and digital tools.

- **Customer Satisfaction and Service Quality:** Digital technology offers opportunities to improve customer relationships and service quality through comprehensive data analysis. By employing CRM systems, businesses can gain a holistic view of customer behavior, enabling targeted marketing strategies, enhancing customer satisfaction, and ensuring a seamless customer experience across various channels.

- **Performance Optimization:** Digital technology reshapes company operations, facilitating better communication, collaboration, and productivity. Businesses transitioning from traditional to digital models must embrace technological advancements to streamline operations, integrate services, and optimize performance.

2.1.5.1 Additional Digital Transformation Challenges

Businesses have numerous challenges when dealing with the intricacies of digital transformation that go beyond just implementing technology. The issues range from opposition to new work methods to the growing amount of data, making them complex and varied. It is crucial for a successful transformation to prioritize cybersecurity and sustain consumer engagement in a digital environment filled with information. To tackle these issues, a thorough approach is needed, encompassing efficient communication, ongoing learning, strong data management, and creative customer contact methods: (proxival, 2022)

- **Change resistance:** Humans play a crucial role in driving digital transformation within firms, despite common misconceptions. Employees may feel apprehensive when transitioning to new work techniques, which can make it difficult for them to let go of existing work habits. Effective communication from management and regular training sessions are the key to supporting staff during this period of transformation.

- **Data Proliferation:** Operations including internet sales, inventory management, human resource management, and advertising produce a growing amount of data as time progresses. Digitalization of enterprises has greatly increased communication avenues between organizations and their audience. Organizations currently engage with their target audiences using websites, social media, mobile apps, emails, and catboats. This website generates consumer data regarding preferences and activities, requiring the processing, storage, and analysis of this information while following GDPR regulations.

- **Cybersecurity:** Businesses that embrace new technologies are more appealing to cybercriminals. Securing information systems is essential to safeguard firm data from cyber assaults and breaches. Small and medium-sized organizations (SMEs) are especially susceptible to cyberattacks. Digitalization may entail the utilization of various interconnected systems, software, and platforms. The intricate nature of the system can lead to vulnerabilities, as a vulnerability in one part of the system can jeopardize the entire network.

- **Engaging with customers:** It is essential to provide tailored and pertinent material in today's data-rich online landscape to retain the attention of the intended audience and secure prolonged interaction.

2.1.6 The Digital strategy

2.1.6.1 definitions

Companies have endeavored to explore and capitalize on digital technologies since their debut and widespread use in their operations. When the fundamental activities of a company are significantly changed, it also affects their goods, processes, and organizational structures. These

changes are noticeable at both the individual and organizational levels. Furthermore, organizations must implement novel management strategies to oversee these intricate changes. Having a well-defined plan for implementing and leveraging digital technology is essential. It serves as a pivotal component for integrating the coordination, prioritizing, and execution of digital transformations across the firm. (Aubry Mathilde, 2021).

M & BD Consulting describes digital strategy as a series of tactics that enable a company to effectively lead its competitive efforts in the digital realm. It involves deliberate decision-making and proactive behavior. The organization establishes its priorities in the digital realm and manages its resources based on this procedure (González, 2015).

A successful digital transformation is predicated on a foundation of a well-conceived digital strategy. This strategy, akin to traditional business strategies, necessitates judicious investment decisions aimed at optimizing competitive advantage, growth, profitability, and value, followed by disciplined execution.

2.1.6.2 The digital strategic rules

The digital arena remains largely open in many traditional sectors, presenting a unique opportunity for companies to establish a winning position through the following five strategic rules: (Dan Wald, 2019)

- **Understanding the Strategic Impact of Digital:** A comprehensive grasp of the competitive landscape and its potential evolution due to digital technologies is crucial. This involves contemplating how digital advancements can introduce new products or services, empower new competitors, and necessitate changes within the organization and its broader ecosystem

- **Elevating Digital Ambitions:** Companies that excel in the digital domain often start with bold visions, aiming to significantly impact value creation. The aspiration for substantial achievements is vital, especially in digital fields where network effects can lead to a monopolistic advantage for early adopters and agile followers.

- **Prioritizing Strategic Investments:** Success in digital strategy comes from concentrating efforts on a few high-value initiatives rather than dispersing resources thinly across many projects. Identifying and focusing on the most impactful use cases can provide clarity and yield superior outcomes.

- **Developing New Strategic Capabilities:** An ambitious digital strategy requires the cultivation of new skills and a cultural shift within the organization. This entails acquiring new

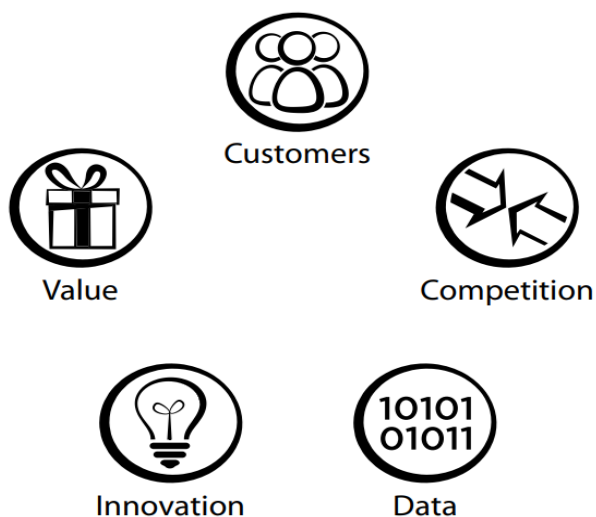
digital talent and reorienting existing employees towards initiatives that maximize their potential, fostering a culture that supports agility and innovation.

- **Actively Managing the Transformation:** Digital transformation demands active oversight, adapting to the rapid evolution of underlying technologies and market dynamics. This involves a flexible approach to strategy development, balancing long-term vision with the agility to respond to immediate market changes.

2.1.6.3 The domains for digital strategy

It is evident that digital dynamics are profoundly altering five crucial elements of strategy : (Rogers, 2016)

Figure 01: five crucial elements of strategy



Source: Rogers, D. L. (2016). The Digital Transformation Playbook: Rethink Your Business for the Digital Age (Columbia Business School Publishing) .

- **Customers:** Within the domain of digital transformation, the emphasis on customers represents a significant departure from traditional approaches. Traditionally, corporations perceived customers as general groups to be reached through mass marketing campaigns, striving for efficiency by employing standardized manufacturing and communication methods. Nevertheless, the advent of the digital era brings about a shift in which traditional markets are substituted by interconnected networks of clients. These networks exhibit dynamic interactions and interconnectedness, which modify the way customers engage with businesses and with each other. Contemporary customers, utilizing digital technology, have fundamentally changed the way brands are engaged with, discovered, evaluated, and maintained. This transformation requires a fundamental reconsideration of the marketing funnel and purchasing routes, which now include a wide range of touchpoints from digital platforms to physical locations. By acknowledging customers as integral members of a network, they are transformed into valuable assets for providing feedback, advocating for the brand, and driving innovation.

- **Competition:** The digital transformation's effect on competition indicates a shift towards flexible industry borders and the rise of non-traditional, asymmetrical rivals. In the past, companies used to compete against similar rivals, but now they are facing competitors from different industries that provide different value propositions. The current age of digital disintermediation poses a challenge to traditional partnerships and requires strategic collaboration, even with competitors. This highlights the importance of platform-based business models that utilize digital technologies to connect various participants, resulting in the creation and capture of value in innovative ways.

- **Data:** Data plays a fundamental role in the process of digital transformation, moving from organized, internal means of data gathering to a time period characterized by the immense amount of unorganized data produced through digital interactions. The proliferation of data, which goes beyond conventional collection methods, provides businesses with valuable insights through sophisticated analytics. This process converts data into a crucial strategic asset that is essential for driving innovation, differentiation, and value generation. The adoption of "big data" facilitates the use of predictive analytics and pattern recognition, which are crucial for modern business strategy.

- **Innovation:** The essence of innovation in digital transformation is in transitioning from a focus on products to prioritizing ongoing learning and swift experimentation. Digital tools enable prompt market feedback, enabling iterative development methods that favor the creation of minimal viable prototypes and client validation over judgments based on intuition.

This method not only reduces the financial impact of failure but also improves the ability of the business to learn and adapt in the process of developing products.

- **Value:** In the digital age, the concept of value is subject to a dynamic transformation that questions the idea of fixed value propositions. Traditional perspectives saw company value statements as unchanging elements within an industry. Nevertheless, the ever-changing digital environment requires constant adaptation of valuable services to anticipate potential disruptions and take advantage of emerging possibilities. Businesses must continuously improve and adjust their value propositions, utilizing technological breakthroughs to satisfy evolving consumer expectations and sustain a competitive edge.

2.1.6.4 The tools for digital strategy

Strategic Ideation Instruments: These are tools designed for crafting innovative solutions to specific problems by examining various aspects of a strategic concept, such as the Customer Network Strategy Generator and the Data Value Generator.

Strategy Visualization Tools: These are graphical aids employed to dissect an existing business model or strategy, or to investigate and devise a new one, examples include the Platform Business Model Map, Competitive Value Train, and Disruptive Business Model Map.

Strategic Decision-Making Tools: These tools offer frameworks for evaluating and selecting among various strategic options for critical business decisions, such as the Disruptive Response Planner.

Strategic Planning Methods: These are systematic approaches or methodologies that guide the creation of a strategic plan, tailored to address particular business situations or challenges, including the Convergent Experimental Method, Divergent Experimental Method, and Value Proposition Roadmap (Rogers, 2016).

2.1.7 The digitalization in Algeria

In response to the significant and swift global transformations, including the rapid advancements in information and communication technology, the Algerian government formulated a strategic plan in 2008 known as "E-Algeria 2013". This strategy seeks to facilitate extensive internet access, convert public services into digital formats, expedite the integration of information and communication technology (ICT) in public administration, economic institutions, and among individuals, establish high-speed communication infrastructure, encourage research and innovation in this domain, and strengthen the legal framework governing the utilization of this technology (Bachari, 2020).

The Ministry of Finance has incorporated digitalization as a fundamental aspect of the recently established (Algeria Vision 203) strategy. This strategy, implemented by the State, seeks to

enhance and broaden the national economy across various sectors including tourism, agri-food, chemistry, construction, automotive, electronics, electricity, renewable energies, and textiles. In addition, Algeria has launched initiatives to advance digitalization, including the Osratik project, the smart city project in Sidi Abdallah, and the online learning project for university students. Nevertheless, it is crucial to highlight that this intended process of digitization is currently in its first stage and is characterized by notable setbacks in its distribution and implementation in the domains of healthcare, education, industry, commerce, and public administration (Bachari, 2020).

Despite the implementation of multiple projects and strategies since 2008, as well as years of executing the "E-Algeria" strategy, the progress made in digitization in Algeria has been slow compared to the significant advancements made by countries such as Singapore, the United Arab Emirates, Qatar, and Bahrain. Despite their considerably lower incomes in comparison to Algeria, other nations such as Vietnam, Ukraine, Moldova, and Rwanda have successfully attained higher rankings. This indicates that there is an issue with the implemented strategy in Algeria (Bachari, 2020).

According to (Bouras, 2020) the e-Algeria 2013 strategy is a multi-sectoral plan, created in 2008, aimed at embodying a national program for the use of ICT in citizen services. It advocates for a coherent and vigorous action plan, aimed at enhancing the performance of the national economy, businesses, and administration, improving capacities in education, research, and innovation, increasing the country's attractiveness, and encouraging the diffusion and use of ICT to improve citizens' lives. Thus, this strategy aimed to lead Algeria towards an information society and digital economy by improving access to communication services in the country and providing electronic public services.

2.1.8 The digitalization in public service

The public sector is seeing an inevitable trend of digitization, or more accurately, dematerialization, in an increasingly connected world where technology is always changing.

Digitalization is the economic and societal revolution resulting from the widespread use of digital technologies to create, process, distribute, or exchange information. Digitalization in public services is the result of the interaction between digital technology and the users/providers of those services. The digitization of public services is not a recent development. There has been a clear change in the strategies used for digitalization (Vereycken, 2020).

The objective of digitalizing public services is to make them easily accessible to users, wherever they are, regardless of their circumstances.

Digitalization in the 1990s primarily concentrated on categorizing, consolidating, storing, exchanging, and preserving internal information flows. The digitalization of information improved administrative management and decision-making, aiming to enhance operational performance. The new millennium has hastened the digitization of public services, transitioning the emphasis from internal services to outward services for residents and enterprises (Vereycken, 2020).

2.2 Service Quality

This section will begin by defining the notion of service and the service production system before discussing the methods used to evaluate service quality. The text will examine the method of overseeing service quality, encompassing its elements, importance, features, and essential tools. It will finally explore several quality methodologies.

2.2.1 Theoretical Foundations of the Service and E-service Concept

In this section, we delve into the theoretical underpinnings of the service and e-service concepts. By exploring these foundations, we aim to establish a solid understanding of the fundamental principles that shape our research framework.

2.2.1.1 Definition of Service

According to LAPERT: "A service is an action or a service offered by a natural or legal person to another natural or legal person. Although the process may be linked to a physical product, the service is transient, often intangible in nature, and does not realize the possession of one of the factors of production" (Denis Lapert, 2009).

According to KOTLER: "a service is an activity or service subject to exchange, essentially intangible and not giving rise to any transfer of ownership. A service may or may not be associated with a physical product" (Philip Kotler, 2012).

According to LOVELOCK: "a service is an economic activity that creates value and provides benefits to consumers at a given time and place to bring the desired change in favor of the recipient of the service" (Christopher Lovelock, 2008).

Based on the definitions provided below, we can observe that a service is an intangible offering resulting from an interaction between the company and the customer to meet the customers' needs

Table 01: The difference between goods and services

Goods	Services
Products are manufactured repetitively	Services are provided on demand
Products are produced in large quantities	Services are unique
Products are storable	Services only exist at the time of their execution
Products are tangible objects	Services are intangible
Products are adapted over time	Services are adapted immediately
Products are manufactured without direct contact with the customer	Customers are involved in the service delivery process

Source: J.P.BARUCHE. (1992). *La qualité du service dans l'entreprise : satisfaction et rentabilité*. Editions d'Organisation.

2.2.1.2 Characteristics of the service

A service can have four essential characteristics Services, intangible, variable, perishable, and indivisible: (Kotler, 2002)

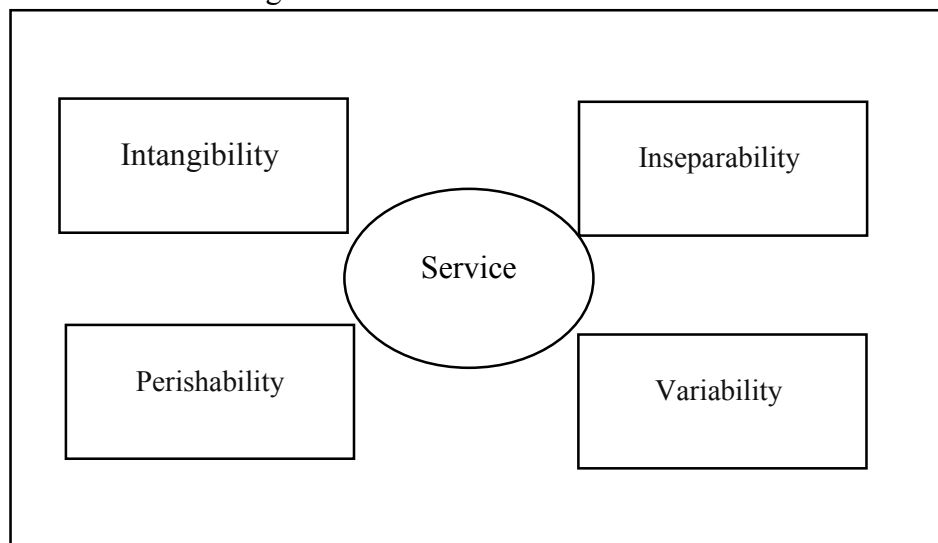
Services are intangible: Intangibility refers to the inability to perceive a service through the senses of sight, taste, touch, hearing, or smell.

Services are variable: Variability refers to the idea that the quality of a service depends on both the provider and the location, timing, and manner in which it is delivered.

Services are perishable: Services cannot be stored for future sale or use under any circumstances.

Services are indivisible: Material goods are first manufactured, then stored, and finally sold for future consumption. Services are sold first, then produced and consumed simultaneously.

Figure 02: Characteristics of the service



Source: Prepared by the researcher

2.2.1.3 Types of Services

The fundamental objective of services is to cultivate and sustain amicable and individualized connections with clients in order to secure their allegiance throughout the duration of their engagement. On the basis of their characteristics, services can be divided into two primary categories: (Christopher Lovelock, 2008)

- **Essential Services:** The primary rationale for a customer's interaction with a service-providing organization is its core services. Instances encompass dining at a restaurant, hotel accommodations, as well as academic credentials and certifications conferred by a university or school. Nevertheless, the provision of these fundamental services does not suffice to differentiate oneself or entice clientele.

- **Services Peripheral:** Enabling services, which facilitate the use of the core service, and differentiating services, which add value to the core service and help the business differentiate itself from competitors, are both examples of peripheral services.

2.2.1.4 Service Classification

Services can be provided either separately or together with tangible objects. Sales and consumption are frequently linked to services, many of which necessitate a physical medium for distribution. Services can be categorized to five: (KOTLER, 2009)

- **Pure Product:** This category includes only physical products like soap, toothpaste, or salt, with no accompanying service component.

- **Product with Multiple Services:** Here, a main product is provided combined with additional services. An automotive manufacturer not only sells a vehicle but also offers a warranty, maintenance services, and more.

- **Service Provided with Products or Additional Services:** The company's offer consists of a central service together with specific products or additional services. One example is air transport, which includes the primary service of transport as well as other products such as food, beverages, newspapers, magazines, and other supplementary services.

- **Hybrid Product/Service:** This classification comprises offerings that consist of product and service components in equal measure.

2.2.1.5 E-service

E-services, the product of an increasingly computerized society, play an important role in the lives of today's consumers.

According to De Ruyter, "An e-service is an interactive, content-centric, Internet-based service powered by consumers and integrated with organizational customer support processes and technologies designed to strengthen the relationship between the consumer and the service provider" (Ko de Ruyter, 2000).

-Rust and Lemon (2001) define E-Service as: "An electronic service is defined as a service that is delivered via electronic networks such as the Internet." (Rust, 2001).

2.2.2 Generalities on Quality

The term "quality" is subject to diverse interpretations. In common parlance, high-quality items are referred to as goods and services that satisfy customers, with quality being synonymous with contentment. For a firm, quality refers to factors such as the quick availability of items and cost-effectiveness.

2.2.2.1 Definition of Quality

According to ISO 9000 V 2015 (ISO: International Organization for Standardization) the quality of an organization's products and services is determined by the ability to satisfy customers and by the expected and unanticipated impact on relevant interested parties.

According to AFNOR a quality product or service is one whose characteristics satisfy the expressed or implicit needs of consumers. Quality is therefore a relative notion based on need. Quality, as defined by F. Caby and C. Jambart, is the capacity of a product, encompassing both material goods and services, to meet consumers' expectations and fulfill promised commitments (Francois Caby, 2002).

2.2.2.2 History of Quality

ISO 8402 (1994) defines quality assurance as the planned and organized operations carried out within a quality system. The activities are essential to ensure that an entity will meet quality standards with confidence. It predicts flaws and helps remove or prevent them to uphold internal proficiency and build external consumer trust. In the early 1980s, major firms recognized the universal benefits of adopting quality concepts to maintain a competitive edge. This era saw the rise of Quality Management, which shifted the emphasis from solely satisfying customers to meeting the requirements of all stakeholders, such as employees, end-users, suppliers, NGOs, and the environment. Later on, a new leadership strategy called Total Quality Management (TQM) was introduced. TQM developed in reaction to changes in corporate goals, with a focus on long-term objectives, enhancing customer relationships, transforming supplier relationships into partnerships, flattening organizational structures, promoting teamwork, and motivating employees through continuous improvement and performance enhancement. TQM's management style is founded on the notion of Leadership. TQM is still widely used in large businesses, consistently implemented to accomplish strategic goals.

2.2.2.3 Characteristics of Quality

The concept of quality includes various aspects that differ based on the specific product or service being provided. Tangible items have quality features including dimensional, physical, chemical, and sensory properties, as well as operational performance criteria such as meeting projected performance levels and consumption standards. Furthermore, quality comprises durability, reliability, ease of maintenance, preservation capacities, safety, and minimizing nuisances to users, third parties, and the environment. Qualitative features in services encompass relational aspects including client welcome, engagement, ambiance, comfort, timeliness, and methods aimed at enhancing user experience, such as shortened forms and clear instructions. These diverse characteristics together help meet the users' needs. Quality is an essential attribute of a product or service, intrinsic to its nature rather than an additional characteristic added after design. The intended quality is accomplished through an integrated product development process by incorporating relevant qualities from the early phases of design and execution. Quality is determined by meeting stated performance standards, rather than achieving maximal performance. This highlights that quality does not always mean being

positioned as high-end. Product or service quality should be evaluated based on certain criteria within a particular category and price range (Canard, 2012).

The necessary quality is one that satisfactorily fulfils requirements while staying within specified cost limitations. It can be comprehended through multiple levels of definition, such as: (Canard, 2012)

Ensuring that the product or service meets the specified requirements precisely.

Ensuring long-term compliance by maintaining the product or service's functions without quick deterioration throughout regular use.

Implicit contentment occurs when consumers achieve the desired well-being by purchasing a product or service.

Economic contentment occurs when consumers consider the quality-price ratio of a product or service satisfactory, giving them the ultimate decision-making authority in determining its economic success.

If the features of a product or service fail to match the specified usage criteria, it is deemed to have a flaw in design, execution, or realization. Conformity is the phrase used when a non-conformity is related to the requirements. Anomaly is a phrase that encompasses any departure or divergence from what was anticipated.

2.2.2.4 Quality approach

A quality initiative is a change instrument that fosters continual improvement in a company's internal processes and external client satisfaction. It is a procedure put in place to create a quality system and dedicate to continuous enhancement, now following the ISO 9001 standard. This applies to all organizations, including public, private, nonprofit, or commercial sectors, requiring a comprehensive effort that involves the entire company and typically results in changes to work practices or organizational structures. A "quality initiative" is an organizational strategy that enables continuous improvement in dealing with non-quality concerns.

The ISO 9001:2008 standard emphasizes a quality approach based on continuous quality improvement culture, process approach, and control choices. Enhancing both internal and external quality allows a company to function optimally with its stakeholders, fostering trust, financial success, and improved human resource productivity.

2.2.3 Generalities on service quality

The concept of service quality is inherently abstract, stemming from the unique attributes of the service sector. Unlike tangible products, where quality can be measured through technical specifications, the evaluation of service quality is subjective, relying solely on customer perception and experience.

2.2.3.1 Definition

Jaqueline Herovitz defines service quality as the level of excellence that a business strives to reach to meet the needs of its specific consumers. It is the degree to which it fulfills this criteria (HOROVITZ, 1987). Service quality refers to the overall satisfaction obtained from the fundamental services provided by a firm to its clients, which determines the level of performance. Service quality includes the provision, availability, support, guidance, and post-sales service related to the core service, reflecting the human element present throughout the service (Harmel (L), 2005).

According to DUBREUIL (S) and ROGER (V), service quality is defined as the ability of a service provider to deliver a service that meets customer expectations. The performance of the service is closely linked to customer satisfaction and, consequently, to the success of the offered services (DUBREUIL (S), 2003).

Based on these definitions, it can be said that service quality encompasses two primary factors: customer expectations and perceived service. This highlights that the essence of service quality lies in the close interplay between these two variables.

2.2.3.2 Characteristics of service quality

Characteristics of a service may encompass relational factors, atmosphere, comfort conditions, punctuality, and amenities that facilitate user duties. These traits collectively meet the requirements of users. Zeithaml, Berry, and Parasuraman created ten criteria in 1985 that consumers use to evaluate service quality through specialist study groups. In 1991, a substantial link was discovered among various characteristics, which were then condensed into five broad dimensions. These dimensions are considered to constitute important evaluation criteria for customers:

- Tangibles (the appearance of physical elements).
- Reliability (dependable and accurate performance).
- Responsiveness (willingness to help).

- Assurance (competence, courtesy, credibility, and security).
- Empathy (ease of access, effective communication, and understanding of the customer) (Achour, 2015).

2.2.3.3 The Importance of Service Quality for companies

Service quality is a commonly debated topic, with a focus on behavior rather than technological elements. Staff should focus on persuasion rather than imposition when communicating with customers. Customers across all income brackets are willing to pay a premium for services that match their expectations. High service standards are essential due to the continual rise in expectations (DENIS, 2005).

2.2.3.4 The Tools for Analyzing Service Quality

- **The SERVQUAL model:** The SERVQUAL model, introduced by Parasuraman in 1991, has gained widespread acceptance for its versatility and practicality in various service quality studies. Its ability to be adapted for different contexts makes it especially valuable in the hospitality industry, where researchers have tailored its constructs to fit specific scenarios. Originating from the gap model developed by Parasuraman in 1985, SERVQUAL aims to pinpoint and quantify the discrepancies between what customers expect and what they actually perceive in service delivery. The quality of service, as seen through the eyes of the consumer, hinges on the nature and extent of this gap between anticipated and received service. By measuring the difference between expected and perceived services, service providers, like hotels, can assess the adequacy of their service standards. The perceived level of service quality is essentially determined by this gap. The SERVQUAL tool employs 22 statements to evaluate consumer perceptions and expectations of service quality. It asks respondents to express their agreement or disagreement with these statements, which reflect the critical dimensions of service quality. These perceptions are shaped by the actual service delivered, while expectations are formed from past experiences and the information obtained (Base, s.d.).

- **The Ishikawa diagram:** The Ishikawa diagram, also known as the fishbone diagram, an analytical tool utilized to pinpoint controllable internal causes of an issue to establish the required corrective actions. This strategy entails working with internal stakeholders participating in the manufacturing or service delivery process by conducting interviews to pinpoint issues causing non-conformity or quality decline. Lovelock's diagram originally divides causes into five broad groupings, but it can be enlarged to eight by particularly

differentiating between back office workers (internal operations) and front office staff (direct customer contact) to provide a more extensive study of problem sources (Denis Lapert, 2009).

- **Service Blueprinting:** service blueprint is a tool designed to visualize the process of service delivery, mapping out customer interactions in the front stage, as well as the behind-the-scenes locales, equipment, and activities that are not part of the customer's direct experience. As such, it serves as a powerful method for identifying potential issues. Blueprints can be employed to spot potential problems and highlight weaknesses within the system, including any chain reactions that might occur and require special attention.

In instances where problems are not easily identifiable or predictable, solutions should consider the development of contingency plans or service recovery procedures to address these challenges effectively.

- **Financial Outcomes of Quality Improvement Initiatives:** a core purpose of Return on Quality is to align quality improvement efforts with productivity enhancement programs. Quality improvement programs should undergo thorough financial evaluation, considering customer feedback. A business experiencing low service quality levels can achieve rapid quality improvements with modest investment efforts (Pinson, 2009).

2.3 Customer satisfaction

2.3.1 Definition

Satisfaction is "a complex term and a difficult concept" because it refers to the psychological aspect of man. Nevertheless, in order to define the different contours of this notion, we thought it would be useful to have recourse to various authors, both recognised and authors on the subject.

(Philip Kotler B. D., 2005) define satisfaction as being:

"satisfaction is like the positive or negative impression felt by a customer with regard to a purchasing and/or consumption experience. It results from a comparison between the customer's expectations of the product and its perceived performance".

According to (Daniel, 2001): "Satisfaction is the impression of being adequately or inadequately rewarded for the sacrifices made during a purchasing situation".

As for (Chirouze, 1995): "Satisfying customer needs is the very purpose of marketing; it expresses the degree of satisfaction provided by the response to a need or desire".

Based on the insights provided by various authors we can say that Satisfaction can be defined as a comprehensive view that arises from the realisation of goals and aspirations within a transactional or experiential framework. It represents the alignment between expected advantages and real results, recognising the equilibrium between sacrifices made and rewards obtained. It not only indicates the effectiveness of a product or service, but also the emotional impact and satisfaction of individual requirements. The fundamental nature of consumer experience and the efficacy of marketing efforts in meeting and exceeding customer expectations are ultimately encapsulated by satisfaction.

2.3.2 The Characteristics of Satisfaction

According to (Philip Kotler B. D., 2005) there is three of characteristics:

Subjective satisfaction: Each customer perceives the product or service differently. A customer's satisfaction depends only on his or her own perception and not on reality. It is therefore highly likely that the perception of service is far from the reality.

Relative satisfaction: Satisfaction is relative depends on the perception of the customer, it varies according to the levels of expectations. If you take an example of two customers and ask them for their opinion about a particular service, it is quite possible that they are different, simply because their initial expectations for that service are not the same. The important thing is not to provide the best product or service, but to offer the one that is best suited to customer expectations.

Progressive satisfaction: It is rare today that the consumer is satisfied for a long time with a service or product. Satisfaction varies over time according to changing expectations and standards as well as during the product/service usage cycle. The consumer is increasingly demanding and knowledgeable, nowadays an innovation has an increasingly shorter lifetime and the right to error no longer exists. This phase of understanding the concept of satisfaction is the first phase that any company that wants to implement a customer-centered strategy must accomplish. This requires a measure of Customer satisfaction.

2.3.3 The dimensions of satisfaction

The dimensions of satisfaction are characteristics of a service experience. In fact, there are a multitude of satisfaction dimensions that an organization may wish to evaluate. We can cite the most frequently cited in the literature: courtesy; empathy; security; cost; readiness; confidentiality; speed; service accessibility.

However, according to (BROWN, 2001), there are four types of dimension to customer satisfaction with a service, namely:

-Dissatisfaction dimensions: if the dimensions are perceived as inadequate, the customer will be very dissatisfied, but any improvement beyond an adequate threshold will have no impact.

- **Satisfaction dimensions:** the absence of a dimension has little impact on satisfaction, but its presence has a major positive influence.

- **Critical dimensions:** these dimensions are both satisfaction and dissatisfaction dimensions. Their presence has a strong positive influence on satisfaction, while their absence has a very negative influence.

- **Linear dimensions:** a change in the performance of these dimensions will have a proportional effect on customer satisfaction.

2.3.4 Measuring customer satisfaction

Customer satisfaction has long been at the heart of marketing policy and the concerns of companies seeking to improve customer relations and reenchant the customer experience.

The reasons why companies seek to measure customer satisfaction are presented in the next section.

Measuring customer satisfaction is a feedback exercise that involves finding out what customers think about their needs, expectations and experiences of the services they receive and that enables companies to check the extent to which they are improving customer satisfaction.

2.3.4.1 The reasons for measuring customer satisfaction:

To find out whether customers are really satisfied, companies are turning to customer satisfaction measurement. Measuring customer satisfaction has become an essential and even a strategic pillar for companies in order to improve the level of customer satisfaction. What's more, the digital world is changing enormously, and so are customers' needs, as well as the competition, whether direct or indirect, customers' habits, and the market as a whole in which the company will be operating. The company therefore needs to listen constantly, measure customer satisfaction and identify its strengths and weaknesses.

A company that measures customer satisfaction can (Valarie A. Zeithaml, 1990):

Identify dissatisfied customers and thus make improvements.

Find satisfied customers so that they become ambassadors and attract new customers.

Identify common problems that occur regularly and proactively prevent them in order to deliver a better customer experience.

To identify weaknesses and decide what improvements to make.

Make employees accountable for the level of service they deliver by incorporating ways of measuring satisfaction and their impact on the customer.

Encourage a customer-centric culture within the company, which is a huge competitive advantage.

2.3.4.2 The tools for measuring customer satisfaction

The company must always be attentive to its market and carefully monitor changes in customer needs and expectations in order to satisfy them as best as possible. In this section we will present the main methods available for measuring satisfaction:

- **The satisfaction survey:** The customer satisfaction survey is the standard approach to collecting data on customer satisfaction. It simply consists of asking customers whether they are satisfied. It requires relatively little effort on the part of the customer, but is invaluable to the company. By using one or more of the following approaches, the company can obtain useful answers:

Online surveys: this is a method with a high response rate that involves asking customers one or two short questions on the website about their opinion of the company.

Post-service surveys: or post-service satisfaction surveys, consist of asking customers, just after the service, if they are satisfied, but customers must receive this survey as quickly as possible: real-time interaction is what makes this type of survey relevant.

Detailed e-mail surveys: these are used to obtain in-depth information about the customer experience. E-mail surveys or polls are a good way of obtaining information. Although they have low response rates (usually only 10-15% complete the survey).

- **Mystery shoppers:** Mystery shoppers are a tool for measuring customer satisfaction. They are fake customers sent by a company's marketing department to measure the quality of its products or services. This fake customer will give their opinion or impression of these products or services. Following a detailed scenario, this customer will draw up a report for the person who gave the order and will be rewarded by the offer of a product or service or by the reimbursement of what he or she bought.

- **The Smiley terminal:** This tool consists of asking a customer on the spot about their level of satisfaction with a question asked in real time, by pressing a button containing four small buttons, each with a smiley face representing a level of satisfaction. It's anonymous, quick and fun. Some terminals also allow more information to be collected in the event of a negative

review. However, there may sometimes be a degree of uncertainty as to who the users are, e.g. children, employees, etc. Generally, it is not possible to specify the reason for dissatisfaction.

- **Qualitative interviews:** Qualitative interviews are based on active listening to customers. Either individually or in a group, this method is used to identify the customer's expectations, needs, motivations and obstacles. Or to better understand their purchasing and decision-making process. Qualitative interviews can be used at the start of an innovation process to gather customer expectations. This type of interview must be conducted by a professional who is able to construct the interview grid, put the customer at ease and lead the discussion in a structured way to obtain the expected answers.

- **Internal feedback:** this is a tool used to collect customer satisfaction during interactions between the company and the customer. This is done at the time of sale, delivery, payment, or even when making contact or creating a service for public establishments. This is done by taking note of all useful comments and trying to convey customer perceptions.

2.3.5 Prerequisites for improving customer satisfaction

A recommendation process is necessary to improve customer satisfaction; it is as follows (Jacques Lendrevie, 2006):

- Listening: listening to customers is based on a good service quality information system, which makes it possible to listen to complaints, post-purchase surveys, group interviews, mystery customers and overall satisfaction surveys.
- Reliability: reliability is the central core and the first expectation customers have of a service. It is achieved by setting standards, providing information and measuring the number and types of failures.
- Meeting basic expectations: customers' basic expectations must be met, and companies must continually perform well in delivering the basic service and handling complaints by developing a good problem-solving system, in particular through good staff training.
- Exceeding customer expectations: service reliability reduces the causes of dissatisfaction. To satisfy customers and build loyalty, the company must go beyond the acceptable level of expectation to get closer to the desired level of expectation.
- Developing a team spirit: to develop an excellent service, the company must encourage teamwork.
- Salary surveys: employees have ideas on how to improve the service.
- Being an example: the management of a company must come down from its pedestal and set an example, loving and visiting teams, being on the ground. The company

always seeks to satisfy its customers in the face of its competitors' proposals, in order to win their loyalty and retain them by meeting their expectations and reducing the number of unfaithful customers.

In conclusion, we can say that customer satisfaction is considered to be the driving force behind the company's development.

CHAPTER 2

Host ORGANIZATION AND

METHODOLOGY OF RESEARCH

The next chapter describes the Host Organization Presentation using data from various documents and information gleaned from the group itself. It also includes a methodological framework that includes quantitative studies, as well as information about the research's procedures and an epistemological approach.

Section 01: Host Organization Presentation

We provide a summary of the company's history, mission, structure, and overall presentation in the part that follows.

1.1 History

During French colonization, the Post Office's mission was to maintain links with the metropolis by receiving money orders, issuing postal cheques, subscribing to newspapers, selling stamps, depositing money in savings banks, paying pensions, and paying the salaries of teachers, municipal employees and public administrations.

At the time, it was known as Poste, Telegraph & Telephone (PTT), and these three initials were maintained well after independence. In 1962, the mass repatriation of pied noirs and metropolitan postmen and women left a gap, forcing Algerian staff to take up the challenge and keep more than 800 post offices operational.

The first postage stamp of the Algerian Republic was issued on 1 November 1962, marking a new page in the history of the Algerian postal service.

1.2 Algérie Poste presentation

Following the restructuring of the postal and telecommunications sector under Law 2000-03 of 05 August 2000, Executive Decree no. 02-43 of 14 January 2002 created a National Public Industrial and Commercial Establishment (EPIC) called "ALGERIE POSTE".

The establishment is administered by a Board of Directors chaired by the Minister of PTIC or his representative, and is managed by a Director General.


This establishment is responsible for implementing the national policy for the development of postal services and postal financial services throughout the country, and for renewing and developing the related infrastructures.

In this respect, EPIC Algérie Postee may optimize its structure like any other commercial operator in order to fulfil its public service vocation throughout the national territory.

Under the authority of the Director General, the organizational structure of Algérie Postee is based on:

- Divisions and Central Divisions;
- Directors of stats Postal Unit.

Table 02: Algérie Poste Data Sheet

Logo	
Organization Name	Algérie Poste
Slogan	Always at Your Service
Legal Form	Public Establishment of Industrial and Commercial Nature (EPIC)
Creation	2003
Headquarters	Business Area Bab Ezzouar 16024 Algiers, Algeria
Directorate	Hannoufi Baya (Interim)
Activity	Mail, Parcels, Financial Services, Public Services
Services	Distribution of Mail and Parcels, Financial Transactions, Other Services (Invoice Payment and Other Partner Services)
Subsidiaries	EMS Champion Post Algeria
Headcount	28 264 (2021)
Revenue	43.4 Billion DA, 362.81 Million USD (2021)
Net Income	16.2 Billion DA, 135.43 Million USD (2021)
Website	www.poste.dz

Source: Done by the researcher

1.3 The missions of Algérie Postee

- The operation of activities covered by the exclusivity regime provided for in article 63 of law no. 2000-03 of August 05, 2000, in terms of mail service, in all its forms, in domestic and international relations;
 - The establishment and operation of all related services, in connection with the exercise of its activities, in the fields of mail, parcel post, logistics and postal financial services, including savings bank services;
 - Management of savings services through the Postal Savings Bank, in accordance with article 12 of law no. 2000-03 of August 5, 2000;
 - The management of all other services whose list is determined by the State in consideration of the Treasury's needs for the accomplishment of its missions, in accordance with the provisions of article 116 of law n° 2000-03 of August 5, 2000;
 - The project aspects of workers and their status, in accordance with article 146 of law n° 03-2000 of August 5, 2000;
 - The implementation of all other actions aimed at achieving its object;
 - The creation of any organization or structure related to its purpose, anywhere in the country;
 - The implementation of the necessary means to ensure the operation, maintenance and functioning of the infrastructures within its sphere of activity;
- Drawing up and implementing the commercial policy in accordance with the performance contract to be approved by order of the Minister of PTIC;
- Implementing the universal service policy in accordance with the sector policy, the regulations in force and the specifications agreed with the postal and telecommunications regulatory authority.

1.4 The General Directorate

- Division Directorates:

- Mail and Parcel Division Directorate;
- Network Division Directorate;
- Monetics and Postal Financial Services Division Directorate;
- Competence and Innovation Division Directorate.

- Central Directorates:

- Human Resources Directorate;
- Training Directorate;
- Finance and Accounting Directorate;
- Heritage and General Means Directorate;
- Information Technology and Network Security Directorate.
- Standardization and Quality Directorate.
- Strategy, Organization, and Management Control Directorate.
- Communication Directorate.
- Central Inspection Directorate.
- Audit and Internal Control Directorate.
- Legal Affairs and International Relations Directorate.
- Internal Security and Security of Installations and Environment Directorate.
- Postage Stamp Structure and Philately Directorate.

- **Local Level:** Locally, there are post offices placed under the authority of postal units directorates in every district. Only the capital city of Algiers has three directions: East, Central, and West where our internship took place. Moreover, Algérie Postee is present on the whole national territory with 4062 post offices:

- 543 of full exercise and 466 secondary establishments.
- A postal density of 10025 inhabitants per post office.
- More than 3000 offices are connected to the computer network allowing to

offer the same services to all categories of customers and in real time, such as:

Withdrawal, payment on CCP or CNEP accounts

- Electronic transfer of funds
- Collection, distribution and electronic follow-up of fast mail (EMS)
- Salary allocation

1.5 The Central Directorate of Standardization and Quality

The Central Directorate of Standardization and Quality was established as part of the implementation of the new reorganization of Algérie Poste set by Ministerial Order referenced 002/SP/MPTIC of 21/01/2010, in order to ensure the development and proper execution of Algérie Poste's quality policy, which is committed to a continuous improvement approach to the quality of services offered to customers to increase their satisfaction.

1.5.1 Organization of the Central Directorate of Standardization and Quality

The Central Directorate of Standardization and Quality is composed of:

1.5.1.1 Central Sub-Directorate of Studies, Development, and Quality Promotion

- Central Department of Studies and Development.
- Central Department of Standardization and Quality Promotion.

1.5.1.2 Central Sub-Directorate of Control and Quality Assurance

- Central Quality Control Department.
- Central Quality Assurance Department.

1.5.2 Missions of the Directorate of Standardization and Quality

1.5.2.1 The Central Directorate of Standardization and Quality

- Define the content of the "quality" policy and objectives and develop the necessary support materials.
- Establish benchmarks and quality measurement standards for each profession in line with the establishment's objectives.
- Ensure the dissemination and promotion of manuals and procedures related to quality;
- Monitor the implementation of quality programs across various departments, conduct audits, and coordinate stakeholders.
- Contribute to the formalization of action plans in terms of service quality with the Business Directions.

1.5.2.2 The Sub-Directorate of Studies, Development, and Quality Promotion

- Defining the guidelines of the establishment's quality policy.
- Developing the action plan, both short-term and medium-term, for the Directorate focusing on operational processes and related resources.
- Implementing an appropriate quality system based on quality measurement indicators.
- Formalizing procedures and processes, in collaboration with user structures after their upgrading.
- Initiating the implementation of procedures with users while ensuring methodological support.
- Developing standards and norms for Algérie Poste.

1.5.2.3 The Department of Studies and Development

- Defining the guidelines of the establishment's quality policy;
- Developing the action plan, both short-term and medium-term, for the Directorate focusing on operational processes and related resources;
- Implementing an appropriate quality system based on quality measurement indicators;
- Ensuring statistical monitoring of the evolution of quality;

- Reviewing established quality systems;
- Collaborating with the Human Resources and Training Directorate to define quality training programs, including identifying the personnel involved and selecting themes;
- Establishing a link between quality approach and economic impact;
- Identifying, in collaboration with the management controller, the costs resulting from poor quality and the corrective actions to be undertaken to improve it;
- Raising awareness among operational staff through quality seminars;
- Preparing and conducting periodic management reviews related to quality.

1.5.2.4 The Department of Standardization and Quality Promotion

- Formalizing procedures and processes in collaboration with user structures after their upgrade.
- Initiating the implementation of procedures among users while ensuring methodological support.
- Developing standards and norms for Algérie Poste.
- Utilizing national and international recommendations .
- Documenting the tracking of national and international standards.
- Overseeing the certification process.
- Developing membership and certification programs for quality standards.
- Designing quality support materials such as manuals, charters, guides, etc.
- Disseminating various information, decisions, recommendations, charters, rules, and manuals related to quality.
- Contributing to the promotion and communication of the establishment's brand image and values through the publication of communication bulletins and participation in events such as exhibitions, open days, etc.

1.5.2.5 The Sub-Directorate of Control and Quality Assurance

- Planning, implementing, and supervising the execution of quality audit programs.
- Maintaining quality dashboards through the utilization of periodic quality templates and flash reports.
- Participating in the continuous monitoring of priority mail delivery internationally.
- Conducting customer satisfaction surveys at various points of contact such as post offices, the website, etc.
- Analyzing customer behavior at post offices.
- Anticipating and identifying evolving customer needs and requirements regarding the quality of services offered by the establishment.

1.5.2.6 The Quality Control Department

Preparing, implementing, and overseeing the execution of quality audit programs.

Maintaining quality dashboards by utilizing established quality templates and periodic quality flashes.

Participating in the ongoing monitoring of priority mail delivery internationally.

Conducting continuous checks on services provided to customers to gauge the evolution of service quality.

Identifying weak and strong points in the implemented quality systems through dashboard monitoring and proposing actions for quality improvement.

Providing reporting to the General Management and business units.

1.5.2.7 The Quality Assurance Department:

- Conducting customer satisfaction surveys at various touchpoints such as post offices, the website, etc.
- Analyzing customer behavior at post offices.
- Anticipating and identifying evolving customer needs and requirements regarding the quality of services provided by the establishment.
- Participating in the design of new products and services until their implementation.
- Assisting in the operational implementation of quality.
- Promptly addressing customer complaints related to the quality of services and products introduced to the market.
- Measuring, through surveys, the level of acceptance of new products and services introduced to the market by customers.
- Conducting studies among customers who have left the establishment to identify the reasons for their departure and implement customer loyalty programs by business segment.

1.6 Digital services:

1.6.1 Consulting CCP balance:

This service allows you via the web to:

- Check the balance of your CCP account.
- View and download your CCP account statement.
- Change the confidential code.
- Order a checkbook.

To benefit from these services, you must have a confidential code that will be provided to you at the postal establishment of your choice upon presentation of a copy of a valid identity document.

Go to <https://eccp.poste.dz/>

1.6.2 BaridiMob

BaridiMob is a separate application, it is necessary to perform the first steps of registration to it via the web. Once the account has been activated and validated (for only 1 mobile device), Algérie Poste customer will be able to access.

the many services offered by the application, including:

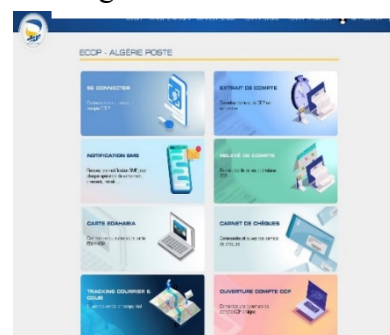
- Checking your postal current account.
- Managing your debit card (EDAHABIA).
- Account to account transfer.
- ATM location services.
- Blocking the EDAHABIA card.
- Unblocking the card after a block initiated by the client;
- Viewing the mini statement of the last ten transactions made by the EDAHABIA card.
- Saving transfer operations as templates for future use.

After enrolling in the BaridiMob service on the Algérie Poste website, the client must:

1.6.3 BaridiWeb

Algérie Poste launches a new service called BaridiWeb for its clients holding EDAHABIA cards, providing them with a secure and user-friendly web portal at <https://baridiweb.poste.dz>. The BaridiWeb service allows Algérie Poste customers to benefit

Figure 03 : ECCP



Source: Algeria Post website

Figure 04 : BaridiMob



Source: Algeria Post website

from a range of postal financial services through the Internet (Internet Banking), with astonishing ease and rapid execution of transactions at any time (7 days a week, 24 hours a day). To avail themselves of the BaridiWeb services, Algérie Poste assists you in all your registration and service utilization procedures by providing an operational mode, illustrated through a video, explaining the various steps to follow.

In summary, BaridiWeb is a web portal offering several services for our EDAHABIA card-holding clients. Clients can set up permanent automatic transfers (Auto-Payment), request reissuance of their card's PIN code, make transfers, and access other services detailed in this operational mode.

1.6.4 Withdrawal without card (Cardless)

Algérie Poste announced through its website that withdrawing money without the Edahabia card is now possible with the launch of the new Cardless service.

Indeed, Algérie Poste specifies that the cardless service allows its customers, holders of the Edahabia card, to withdraw money from all ATM machines throughout the national territory, without using the debit card.

This new service offered by Algérie Poste allows for withdrawing money for oneself in case of forgetting the debit card or PIN code. But also on behalf of a third party using a reference number and a secret code received by SMS.

1.6.5 Application for the Edahabia card

It is quite possible to apply for the famous Edahabia card from Algérie Poste via a 100% online procedure by simply filling out a form provided for this purpose.

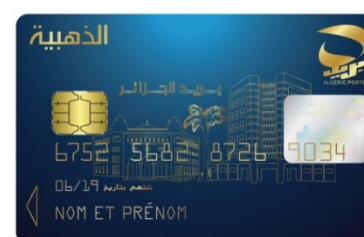
The card can be used not only to have access to services such as BaridiMob and BaridiWeb, but also to pay bills online and pay certain online purchases (Air Algeria, etc.) and on TPE in supermarkets.

Figure 05: BaridiWeb



Source: Algeria Post website

Figure 06: Edahabia card



Source: Algeria Post website

1.6.6 Mobile and internet recharge

Following partnerships signed between Algérie Poste and certain telephone operators, it is possible to top up your credit and pay your telephone bill via the BaridiNet portal on condition that you first have an Edahabia card.

Figure 07: Mobile and internet recharge



Source: Algeria Post website

1.6.7 Payment of invoices

Many state and private companies offer their customers the option of paying bills online using the Edahabia card.

- Online payment of water bills at ADE.
- Online payment of electricity and gas bills at Sonelgaz.
- Online payment of water bills at SEAAL.
- Payment of Mobilis invoices.
- Payment of Algeria Telecom's telephone bill.

Figure 08: Online bills



Source: Algeria Post website

1.6.8 Purchase of plane tickets and insurance

For more than a year, it has become possible to book and pay for your plane ticket at the current price directly online using “Edahabia”. A similar service makes it possible to pay for different insurances with certain providers, always via a 100% online procedure.

Figure 09: Airplane companies



Source: Algeria Post website

1.6.9 Parcel tracking

Algérie Poste also offers a tracking service for registered parcels, whether sent or received, via its official website.

Figure 10: Tracking service



Source: Algeria Post website

Section 02: Methodological framework

In the next section, we provide a high-level overview of the steps we took to conduct our research.

2.1 The methodological approach

Since we have adopted deductive reasoning, which is a process that allows us to conclude an assertion from hypotheses, premises, or a theoretical framework, we will adopt for our research work an approach that is related to documentary research with a quantitative method in order to collect data on the quality of digital services and its impact on customer satisfaction

2.2 Data Collection Method

In our exploration in the impact of digital service quality on customer satisfaction, we adopted This approach for data collection. This approach is designed to capture a comprehensive and multifaceted understanding of the phenomenon under study, aligning seamlessly with our research objectives and queries.

Primary Data Collection

Central to our empirical investigation is a carefully designed quantitative online survey, targeting users of Algérie Poste's digital services. We opted for this survey method due to its effectiveness in gathering accurate and relevant data, which is crucial for validating our hypotheses. The survey is structured to collect detailed responses about users' engagement patterns, their perceptions of the service quality, and their overall satisfaction with the digital services offered by Algérie Poste. Leveraging the online distribution of the survey enable us to extend our reach, ensuring participation from a wide and diverse audience across different geographic regions. This strategy is instrumental in enriching our dataset with a broad spectrum of insights and experiences.

Secondary Data Collection

To complement the primary data, our study also incorporates an extensive array of secondary data sources. This includes a thorough review of relevant literature such as existing research, corporate documents from Algérie Poste, academic articles, books, international publications, and reports focusing on digitalization in the postal service domain. The integration of secondary data is crucial for situating our empirical findings within the broader scholarly and practical discussions on digitalization's impact on service quality. It enables us to draw on established theories and insights, thereby enriching our analysis and understanding of the subject matter.

The synergistic combination of primary and secondary data collection methods lies at the core of our research strategy. This holistic approach ensures a comprehensive examination of the the impact of service quality on customer satisfaction at Algérie Poste, facilitating a deep dive into relevant trends, patterns, and insights. The outcomes of this methodological framework form the backbone of our study, guiding the development of informed conclusions and recommendations that contribute significantly to the discourse on digital transformation in the postal sector.

2.3 Research Instrument Design

To investigate the impact of service quality on customer satisfaction at Algérie Postee, our research employed a structured questionnaire divided into four main sections. This instrument was meticulously designed to capture a wide array of data pertinent to our study's objectives, facilitating a comprehensive analysis of user experiences and perceptions regarding Algérie Poste's digital services.

Section One: Demographic Information

The initial section of the questionnaire is dedicated to gathering demographic data from respondents. This includes questions about age, gender, and profession. Collecting this information is crucial for understanding the diverse backgrounds of the survey participants and allows for a nuanced analysis of how different demographic groups perceive and interact with Algérie Poste's digital services

Section Two: Usage Patterns

In the second section, the focus shifts to the usage patterns of Algérie Poste's digital offerings. Respondents are asked to specify which digital services they utilize, the frequency of their usage, and the duration of their engagement with these services. This part of the questionnaire aims to identify popular services, understand user engagement levels, and pinpoint trends in digital service utilization.

Section Three: Service Quality Evaluation

The third section is designed to evaluate the quality of Algérie Poste's digital services across several key dimensions: **reliability, responsiveness, assurance, empathy, and tangibility**. Through targeted questions, this section assesses various aspects of service quality such as accuracy, availability, customer support, security, and the user interface. The inclusion of these dimensions is intended to provide a holistic view of the service quality, capturing both functional and emotional aspects of the user experience.

Section Four: Overall Satisfaction and Recommendations

Concluding the questionnaire, the fourth section probes into respondents' overall satisfaction with Algérie Poste's digital services. Questions in this section explore the willingness of users to recommend these services to others and solicit feedback on areas for improvement. This final part is pivotal for gauging general satisfaction levels and gathering actionable insights that can inform future enhancements to Algérie Poste's digital service offerings.

2.4 The survey period

After validating our questionnaire with our research supervisor, the questionnaire was put online on March 13, 2024. The online survey lasted for 4 days. We were able to collect responses at the end of our survey.

2.5 Sampling method

In our study examining the impact of service quality on customer satisfaction at Algérie Postee, which targets the 12 million users of its digital services, determining an accurate sample size was a critical step to ensure the statistical significance and reliability of our findings. Utilizing a statistical formula that accounts for a 95% confidence level and a 5% margin of error, and assuming maximum variability ($p=0.5$) for the most comprehensive application, we made an adjustment for the finite nature of our population with the finite population correction formula. This led us to conclude that a sample size of approximately 384 respondents would be sufficient. This size is robust enough to representatively capture the usage patterns, satisfaction levels, and opinions of the users of Algérie Poste's digital services, ensuring our findings are accurate and relevant within the specified confidence and error margins, thus confirming the validity and applicability of our research outcomes.

CHAPTER 3
RESULTS AND DISCUSSION

The analysis of the results that we will carry out will revolve around the impact of digital service quality on customer satisfaction. After having accomplished our quantitative survey with Algérie Poste costumers, we will present results collected through the latter.

Section 1: Results

In this section, we present the quantitative data analysis from our study focusing on the impact of digital service quality on customer satisfaction among Algérie Poste customers.

1.1 Questionnaire design and statistical methods for the stud

1.1.1 Design the questionnaire

In this study, we relied on the questionnaire as a basic tool for collecting information and then the possibility of translating and processing it to come up with some answers. To achieve the objectives of the study, we designed and prepared the study questionnaire, taking advantage of previous studies in this field and the theoretical framework of the study, by following several sequential preliminary steps.

We have prepared the questionnaire taking into account the following:

- The first section:

Part 01: Personal Demographic Information

Related to personal and occupational information related to the respondent, by knowing his gender, age, and profession

- The second section: It was devoted to the variables of the study and was divided into three axes

Part 02: Usage of Algérie Poste's Digital Services It includes three (3) questions

Part 03: Service Quality Dimensions It includes ten (10) questions Distributed into five dimensions:

Reliability

Responsiveness

Assurance

Empathy

Tangibility

Part 04: General Satisfaction It includes tow (2) questions

1.1.2 Measuring the extent of agreement with the axes of the questionnaire

If the aim of this study is to measure the degree of agreement of sample members with the statements of the questionnaire, then the appropriate measure is the measure of the degree of agreement, and one of the most famous of these measures is the “Likert scale”, where the researcher places a group of statements that are directly related to the phenomenon studied, and in front of them is a group of scores ranging from one to five, according to the chosen Likert scale. In this study, the five-point Likert scale was chosen as a basis for expressing degrees of agreement by giving the following weights to the statements:

Table 03: Degrees of the five-point Likert scale

Response	Strongly Disagree	Disagree	No opinion	Agree	Strongly Agree
Class	1	2	3	4	5

Source: Prepared by the student based on the five-point Likert scale

As for the limits that we relied on in the study to comment on the arithmetic mean of the variables in the study model and to determine the degree of the scale, we defined five levels: very weak, weak, average, good, and very good) based on the following equation:

Class length = (alternative upper limit - alternative lower limit)/number of levels

Table 04: Scale for determining the relative importance of the study variables

Suitability level	1.49 -1	2.49 – 1.5	3.49 – 2.5	4.49 – 3.5	5 – 4.5
The relative importance of the arithmetic mean	Very weak	Weak	midl	good	Very good

Source: Prepared by the student based on the results of the questionnaire

1.3 Statistical processing methods

For the purpose of analyzing the sample data, the Statistical Package for Social Sciences (SPSS) program was used. Among the most important statistical treatment methods employed in this study are the following:

- **Frequencies and percentages:** Frequencies and percentages were used to describe the characteristics of the research sample, and to determine the answers of its members regarding the various research axes.

- **Arithmetic mean:** It is used to determine the relative importance of the respondents' answers towards the axes of the study tool. The arithmetic mean is used to arrange the respondents' answers according to the degree of agreement and to find out how high or low the individuals' opinions are on each of the statements of the questionnaire axes.

- **Standard Deviation:** It was used to identify the extent of the deviation of the answers of the study individuals towards each statement, as well as the dispersion in the answers of the sample members, as the closer its value to zero, this means that the answers are concentrated and not dispersed.

- **Alpha de Cronbach coefficient:** It was used to find out the stability of the questionnaire statements, so that it takes values ranging from 0 to 1. If there is no complete stability in the data, the value of the coefficient is equal to zero, but if there is complete stability in the data, then The value of the coefficient is equal to one, meaning that an increase in the value of this coefficient means an increase in the credibility of the data.

- **Pearson correlation coefficient:** It is used to measure the validity of the internal consistency of each statement of the questionnaire with the axis to which this statement belongs.

- **Simple and multiple linear regression test:** It is based on studying two variables, one of which is independent and the other is a dependent variable, in order to find a relationship between these two variables. It also helps in explaining the change that may occur in the dependent variable according to the independent variable, and then answering the hypotheses of the study.

- **Kolmogorov Smirnov Normal Distribution Test:** This test is used to find out the nature of the distribution of the data of a particular phenomenon, whether or not it follows a normal distribution.

- **Simple Regression:** It was used in order to test the hypotheses of the study and to test the effect of the independent variable on the dependent variable.

1.1.4 Inferential statistics methods

- **Cronbach Alpha reliability coefficient:** It is one of the most important statistical tests for analyzing questionnaire data, to give it legitimacy. In light of the results of this test, the questionnaire will be modified or accepted. This test is used to determine whether the questionnaire questions are consistent with each other.

$$\alpha = \frac{k}{k-1} \left[1 - \frac{\sum s_i^2}{s_i^2} \right]$$

Calculated from Eq

K :Number of test items

$(\sum s_i^2)$:Variation of scores for each item in the test

(s_i^2) : .Total variance of the test items

1.2 Testing the reliability and validity of the study tool

1.2.1 Stability of the study tool

The stability of the questionnaire means that this questionnaire gives the same result if it were redistributed more than once under the same circumstances and conditions. Or in other words, the stability of the questionnaire means stability in the results of the questionnaire and not changing them significantly if it were redistributed to the sample members several times during certain periods of time.

To ensure the stability of the study tool, the Cronbach's Alpha reliability coefficient was extracted, and the results for the dimensions of the study tool and the questionnaire as a whole were as shown in the following table:

Table 05: Cronbach's alpha reliability coefficient

Statement	number of phrases	Cronbach's alpha coefficient
Usage of Algérie Poste's Digital Services	3	0.793
Service Quality Dimensions	10	0.825
Reliability	2	0.709
Responsiveness	2	0.705
Assurance	2	0.698
Empathy	2	0.646
Tangibility	2	0.676
General Satisfaction	2	0.711
The overall questionnaire	15	0.767

Source: Prepared by the researcher based on the outputs of the SPSS V26 program.

From Table No. (3), it is clear that the value of Cronbach's alpha coefficients was high, as it reached in the axis: Usage of Algérie Poste's Digital Services (0.793), while in the axis: Service Quality Dimensions (0.742), and the validity coefficients reached a good degree in the dimensions of this axis, as we find In the Reliability dimension, the reliability rate reached (0.709), and in the Responsiveness dimension, the reliability rate reached (0.705). In the Assurance dimension, we find that the reliability value reached (0.698), while we find the reliability value in the Empathy dimension reached (0.646), while in the Tangibility dimension, the reliability value reached (0.676). While the reliability value in the General Satisfaction axis was (0.711), which is a good reliability percentage, the value of the Cronbach's alpha coefficient for the overall questionnaire is 0.767, and this means that the reliability coefficient is high and is greater than the acceptable percentage estimated at 60%, which reflects the character of reliability and validity of the questionnaire and its dimensions.

1.2.2 Validity of the study tool

The validity of the questionnaire tool means that the questionnaire measures what it was designed to measure. Validity also means that the questionnaire includes all the elements that must be included in the analysis on the one hand, and the clarity of its statements on the other hand, as it is understandable to everyone who uses it, and is expressed by the square root of Cronbach's alpha, which reached 0.875, i.e. a percentage 87.5%, which indicates homogeneity and consistency between the statements.

It should be noted here that we presented the questionnaire to the supervisors, after which some statements were deleted and modified. Thus, the stability and validity of the questionnaire was confirmed, which makes us completely confident in the validity of the questionnaire and its suitability to analyze the results, answer the study questions, and test the hypotheses.

1.2.3 Internal consistency validity of the study

Internal consistency means the extent to which each statement of the questionnaire is consistent with the axis to which this statement belongs, by calculating the correlation coefficients between each dimension of the questionnaire and the final score for the axis itself (conducted from the part to the whole), in this case the Pearson coefficient is used. To determine the correlation coefficient.

This factor was applied based on the data collected from the survey sample to determine the extent to which the components of the questionnaire relate to the questionnaire as a whole, and to measure the validity of its internal consistency through the following table

Table 06: Validity of the internal consistency of the dimensions of the questionnaire

Statement	Pearson correlation	coefficient level of significance
Usage of Algérie Poste's Digital Services	0.796**	0.000
Service Quality Dimensions	0.951**	0.000
Reliability	0.656**	0.000
Responsiveness	0.754**	0.000
Assurance	0.617**	0.000
Empathy	0.776**	0.000
Tangibility	0.731**	0.000
General Satisfaction	0.761**	0.000

*at the significance level ($\alpha = 0.05$)

** at the significance level ($\alpha=0,01$)

Source: Prepared by the researcher based on the outputs of the SPSS V26 program.

We found, through Table No. (4), that the correlation coefficients between the dimensions of the study and the axis as a whole are high, as the correlation coefficient for the axis: Usage of Algérie Poste's Digital Services is equal to 0.796**, while we also find that the correlation coefficient for the axis: Service Quality Dimensions reached 0.796** 0.951**, and we find that in the dimensions of this axis, their correlation coefficient between the two areas reached [0.617** and 0.776**], while we find that the correlation coefficient for the General Satisfaction axis reached: 0.761**, all of which were fairly high. It reflects the extent of the validity of the internal consistency among the dimensions of the questionnaire.

1.2.4 Semnerov-Kolmogorov normal distribution test

Through this test, we aim to know which of the probability distributions is followed by the distribution of the study data, and by that we mean the normal distribution through the following two hypotheses:

Null Hypothesis H0: The study data follows a normal distribution

Alternative hypothesis H1: The study data do not follow a normal distribution

The null hypothesis is accepted and the alternative is rejected when the probability value (SIG) is greater than the significance level approved in the study. The following table shows the normal distribution test using (Kolmogorov Smirnov)

Table 07: Normal distribution Semenrov-Kumlengrove

Axes questionnaire	K. S	sig
Usage of Algérie Poste's Digital Services	0.513	0.247
Service Quality Dimensions	0.643	0.200
Reliability	0.541	0.374
Responsiveness	0.812	0.389
Assurance	0.773	0.401
Empathy	0.239	0.126
Tangibility	0.734	0.554
General Satisfaction	0.113	0.487
Usage of Algérie Poste's Digital Services	0.881	0.387

Source: Prepared by the researcher based on the outputs of the SPSS V26 program

The table above shows that the value of the significance level of the test for all dimensions of the questionnaire is greater than the significance level of the null hypothesis (0.05), and therefore we accept the null hypothesis and reject the alternative hypothesis, meaning that the data of our study follows a normal distribution, and since most of the study variables follow a normal distribution, this allows us Follow up on the analysis of the study using analysis tools for parametric tests.

1.3 Analysis of the characteristics of the study sample

Here we will analyze the first section of the personal information questionnaire related to the studied sample.

1.3.1 Age

We collected the questionnaires and classified them on the basis of age, so we got the following results:

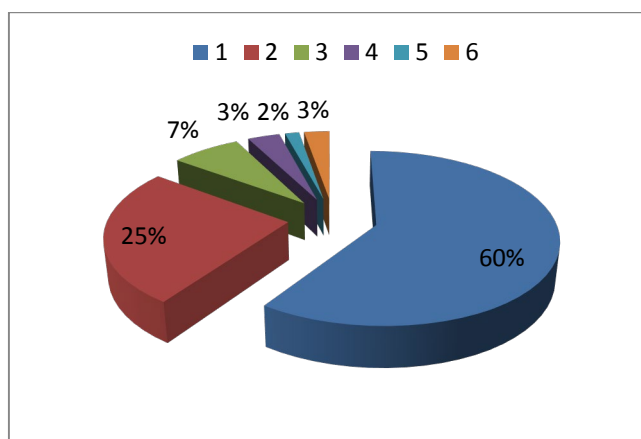
Table 08: Distribution of respondents according to age

AGE	Repetition	Percent %
- 18-24 years old	245	59.6
- 25-34 years old	105	25.5
- 35-44 years old	30	7.3
- 45-54 years old	14	3.4
- 55-64 years old	6	1.5
- 65 years old and above	11	2.7
Total	411	100 %

Source: Prepared by the researcher based on the outputs of the SPSS V26 program.

From Table No. (6), we note that the participation rate of individuals aged 18-24 years old was the highest, reaching 59.6, equivalent to 245 individuals, followed by individuals aged 25-34 years old, who participated at a rate of 25.5%, or 105 individuals. While we find that the sample members who are aged 35-44 years old have a percentage of 7.3%, that is, with the participation of 30, followed by the research sample members who are between the ages of 45-54 years old, their percentage reached 3.4% individuals, then those who are 65 years old and Above, we find their percentage at 2.7%. As for the weakest participation, it was for those aged 55-64 years old, where their percentage reached 1.5%, with an average of 6 individuals. The distribution of the sample members according to their age can be clarified through the following figure

Figure 11: Distribution of respondents according to age



Source: Prepared by the researcher based on the outputs of the Excel program.

1.3.2 Gender

The distributed questionnaires were collected and classified on the basis of the gender of the respondents, so we obtained the results shown in the following table:

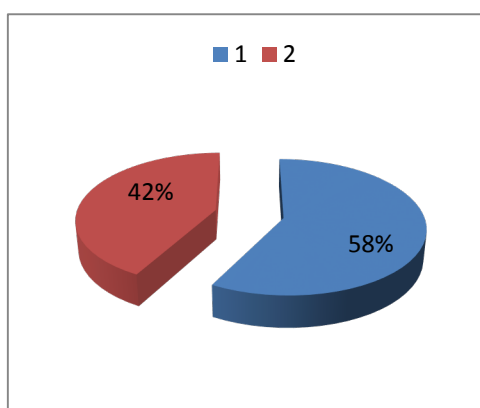
Table 09: Distribution of respondents according to Gender

Gender	Repetition	Percent%
Male	238	57.9
Female	173	42.1
Total	411	100 %

Source: Prepared by the researcher based on the outputs of the SPSS V26 program

Through Table No. (7), we notice that the male participation rate ranked first, with a percentage of 57.9%, meaning 238 males, while we find a percentage of 42.1% for females, meaning a rate of 173 females. The distribution of the sample members according to gender can be clarified through The following figure:

Figure 12: Distribution of respondents according to gender



Source: Prepared by the researcher based on the outputs of the Excel program

1.3.3 Profession

The distributed questionnaires were collected and classified on the basis of the profession of the respondents, so we obtained the results shown in the following table:

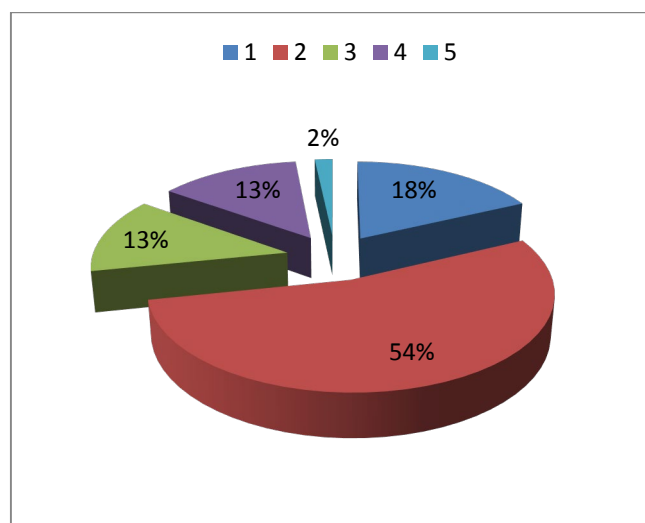
Table 10: Distribution of respondents according to profession

Profession	Repetition	Percent%
Employee	74	18.0
Student	221	53.8
Indepndent worker	54	13.1
Civil servent	55	13.4
Retired	7	1.7
Total	411	100 %

Source: Prepared by the researcher based on the outputs of the SPSS V26 program

Through Table No. (8), we notice that the individuals in the research sample who are Students ranked first with a percentage of 53.8%, i.e. an average of 221 individuals, while those in the Employee category had a percentage of 18.0%, i.e. an average of 74 individuals, while we find that the Civil Servent category received a percentage of 13.4. %, meaning an average of 55 individuals. As for individuals in the Indepndent worker category, their percentage was 13.1%, equivalent to 54 individuals. Then we find the Retired category had a percentage of 1.7%, an average of 7 individuals. The distribution of the sample members according to occupation can be clarified through the following figure:

Figure 13: Distribution of respondents according to profession



Source: Prepared by the researcher based on the outputs of the Excel program

1.4 Statistical description of the study variables

Table 11 :Usage of Algérie Poste's Digital Services

N°		Repetition	Percent%	
01	Which digital services of Algérie Poste do you frequently use?	ECCP	126	30,65
		Baridi mob	145	35,27
		E-EDHABIA	140	34,08
02	How often do you use these digital services?	Daily	91	22,6
		Weekly	87	21,2
		Monthly	98	23,8
		Occasionally	92	22,4
		- Rarely/Never	41	10,0
03	How long have you been using Algérie Poste's digital services?	Less than a month	42	10,2
		1 to 6 months	57	13,9
		6 months to 1 year	49	11,9
		More than a year	263	64,0
TOTAL		411	100	

Source: Prepared by the researcher based on the outputs of the SPSS V26 program.

From the results of the table above we find:

Which digital services of Algérie Poste do you frequently use?

The study sample primarily uses baridi mob, as this answer received a rate of 35.27%, followed by the answer E-EDHABIA, with a rate of 34.08%, and lastly, we find ECCP, with a rate of 30.65.

As for the results of the question:

How often do you use these digital services?

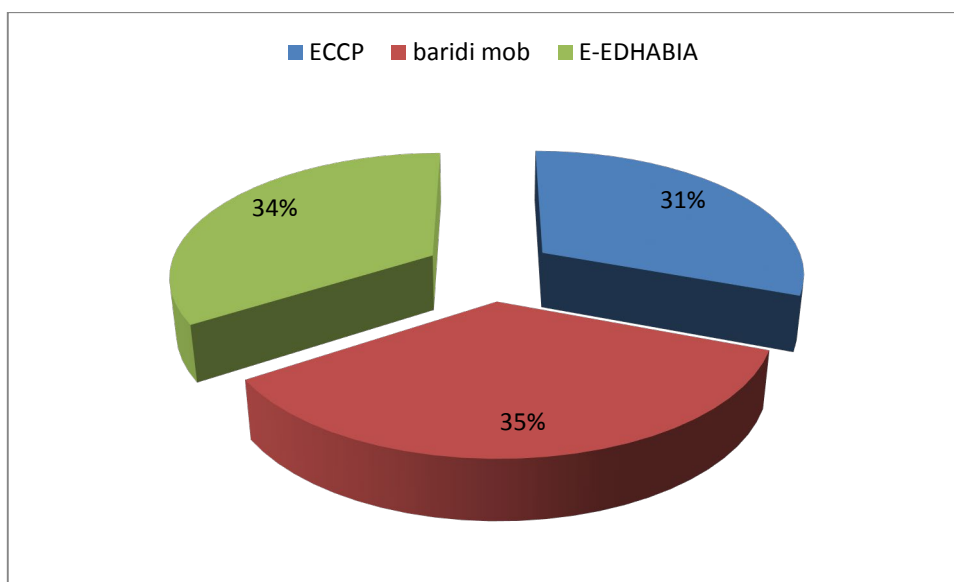
It represented that the sample members believed that it was Monthly with a response rate of 23.8%, followed by the answer Occasionally with a percentage of 22.4%, then Daily with a percentage of 22.6%, then followed by the answer Weekly with a percentage estimated at 21.2, and finally we find Rarely/Never with a percentage of 10.0%

As for the question:

How long have you been using Algérie Poste's digital services?

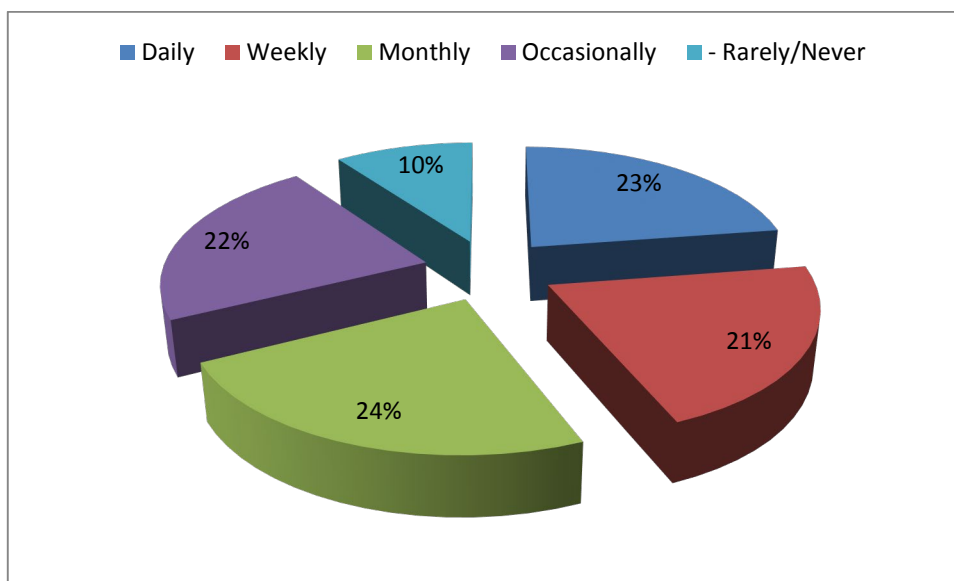
The choice More than a year gets the highest percentage, which is 64.0%, followed by 1 to 6 months with a percentage of 13.9, then 6 months to 1 year with a percentage of 11.9, and finally Less than a month with a percentage of 10.2%. The following figure shows that.

Figure 14: Which digital services of Algérie Poste do you frequently use?



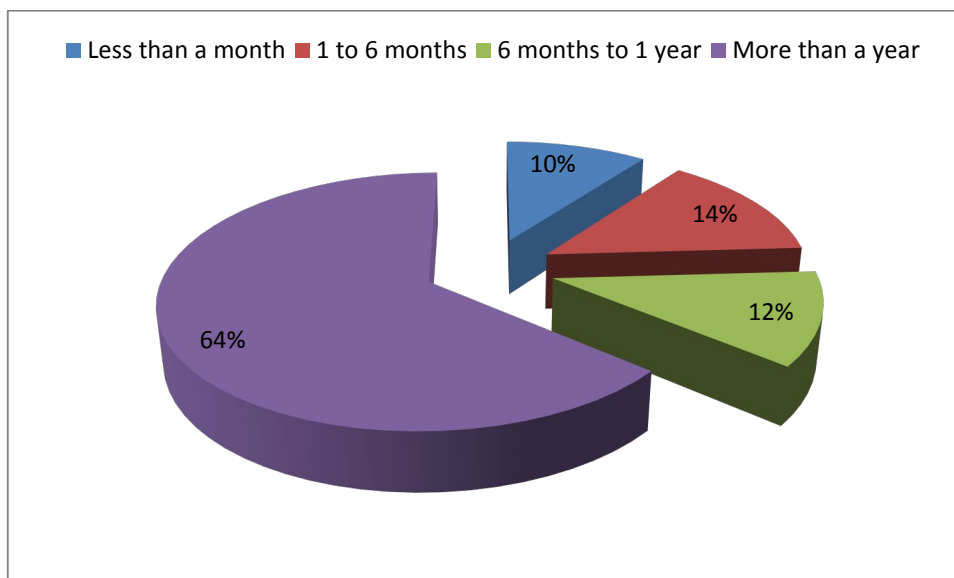
Source: Prepared by the researcher based on the outputs of the Excel program

Figure 15: How often do you use these digital services?



Source: Prepared by the researcher based on the outputs of the Excel program

Figure 16: How long have you been using Algérie Poste's digital services?



Source: Prepared by the researcher based on the outputs of the Excel program

Table 12: Analysis of the extent of agreement regarding: Service Quality Dimensions

	Statement	standard deviation	Arithmetic mean	relative importance	Admission score	
N°	Service Quality Dimensions					
Reliability						
01	The information provided by the digital services is accurate and reliable	1.03	3.74	0.75	good	1
02	The digital services are available without interruption.	1.18	3.01	0.60	mild	2
TOTAL		0.10	3.37	0.67	midl	
Responsiveness						
03	I am satisfied with the speed at which Algérie Poste responds to my requests or issues via digital services.	1.17	3.13	0.63	midl	1
04	It is easy to contact customer support for digital services.	1.05	3.06	0.61	midl	2
TOTAL		0.08	3.09	0.62	midl	
Assurance						
05	I trust in the security of my transactions and personal data with Algérie Poste's digital services.	1.00	3.81	0.76	good	2
06	The instructions and information provided by the digital services are clear and understandable.	0.93	3.94	0.79	good	1
TOTAL		0.05	3.87	0.77	good	
Empathy						
07	Algérie Poste staff appear attentive and ready to help when I use digital services.	1.13	3.15	0.63	midl	2
08	Digital services are personalized to meet my specific needs.	1.01	3.54	0.71	good	1
TOTAL		0.08	3.34	0.67	midl	
Tangibility						

09	I rate the visual aspect and user interface of Algérie Poste's digital services as:	0.86	3.58	0.72	good	1
10	The updates to digital services are regular and useful.	1.07	3.28	0.66	midl	2
TOTAL		0.14	3.43	0.69	midl	
TOTAL G		0.10	3.42	0.68	midl	

Source: Prepared by the researcher based on the outputs of the SPSS V26 program.

• Through Table No. (10), it is clear to us that the answers of the study sample members regarding the Service Quality Dimensions axis were in agreement with all of its statements in moderate degrees, and their importance was estimated at %68, as the average of their opinions reached 3.42, and this value falls within the third category, and the direction of their answers is agreement in degree Medium with a standard deviation of 0.10

In Reliability, we find that the arithmetic mean for the total statements ranges between (3.01-3.74), while the general mean for this dimension reached (3.37). Thus, they all fall within the third category, which indicates that individuals' opinions about all statements tend to agree to a moderate degree in Mostly,

As for Responsiveness, we find that the arithmetic mean for the total statements ranges between (3.06-3.13), while the general mean for this dimension reached (3.09). Thus, they all fall within the third category, which indicates that individuals' opinions about all statements tend to agree to an average degree in Mostly,

In the Assurance dimension, we find that the arithmetic mean for the total statements ranges between (3.81-3.94), while the general mean for this dimension reached (3.87). Thus, they all fall within the fourth category, which indicates that individuals' opinions about all statements tend to agree to a good degree. mostly

In the Empathy dimension, we find that the arithmetic mean for the total statements ranges between (3.15-3.54), while the general mean for this dimension reached (3.34). Thus, they all fall within the third category, which indicates that individuals' opinions about all statements tend to agree to a moderate degree. mostly

In the Tangibility dimension, we find that the arithmetic mean for the total statements ranges between (3.28-3.58), while the general mean for this dimension reached (3.43). Thus, they all fall within the third category, which indicates that individuals' opinions about all statements

tend to agree to a moderate degree. mostly Based on these results that were extracted from the SPSS program and based on the general arithmetic mean and the standard deviation, and since the standard deviation is less than one, this means that there is agreement and weak dispersion of the opinions of the sample members on this axis, and we also conclude that the sample members agree, in a mostly moderate degree.

Table 13: Analysis of the extent of agreement regarding: General Satisfaction

	Statement	standard deviation	Arithmetic mean	relative importance	Admission score	
N°	General Satisfaction					
01	Overall, my satisfaction with Algérie Poste's digital services is	0.84	3.65	0.73	good	2
02	I would recommend Algérie Poste's digital services to my friends or family	0.93	3.95	0.79	good	1
	TOTAL	0.06	3.80	0.76	good	

Source: Prepared by the researcher based on the outputs of the SPSS V26 program

Through Table No. (11), it is clear to us that the answers of the study sample members on the General Satisfaction axis were in agreement with all of its statements in moderate degrees, and their importance was estimated at %76, as the average of their opinions reached 3.80, and this value falls within the fourth category, and the direction of their answers is in agreement with a good degree. With a standard deviation of 0.06

Based on these results that were extracted from the SPSS program and based on the general arithmetic mean and the standard deviation, and since the standard deviation is less than one, this means that there is agreement and weak dispersion of the opinions of the sample members on this axis, and we also conclude that the sample members agree, in a mostly moderate degree.

1.5 Validity of hypotheses and discussion of results

1.5.1 Testing the validity of the first hypotheses

- **H1** The quality of digital services provided by Algérie Poste has a statistically significant positive impact on customer satisfaction.

To test the validity of this hypothesis, appropriate statistical methods were used, namely correlation as a first step to discover the strength and type of the relationship between service quality and its relationship to customer satisfaction, then regression as a second step to determine the effect of the independent variable on the dependent variable.

Table 14: Results of simple linear regression analysis for the first hypothesis

Results of analyzing the relationship between customer satisfaction and service quality					
0.658			R Pearson correlation coefficient		service quality
0.000			sig		
Results of simple regression analysis to measure the impact of service quality on customer satisfaction					
4.94749		Standard error of the estimate		0.434 (R²) The coefficient of determination	
0.00		Significance		313.061 : (F) value	
Significance T	T value	beta β	SE	B	variable
0.000	11.030		1.209	13.332	Constant
0.000	17.694	0.658	0.156	2.752	service quality

Source: Prepared by the researcher based on the outputs of the SPSS V26 program

Through the results of analyzing the correlation between customer satisfaction and service quality, it is noted that the correlation coefficient is $R = 0.658$, which is a statistically significant value because the significance probability value is 0.000, less than 0.05. We note that there is a moderate direct correlation between the two variables.

Through the results of simple regression analysis to measure the impact of service quality on customer satisfaction, the coefficient of determination (R^2) of 0.434 appears to be a measure that indicates service quality, as %43.4 of the changes in the dependent variable are explained by the independent variable service quality and the remaining 56.7% is due to Other

factors: The value of the standard error of the estimate, which amounts to: 4.94749, indicates the small size of the random errors, and therefore the quality of representing the regression line with points in the form of the spread. As for the value of the variance (F) of 313.061, as the tabular F value is smaller than the calculated one, it is statistically significant and was estimated as 0.000, which is less than the level of significance $\alpha = 0.05$. The table also shows the value of the slope parameter b, which reached 0.658, which indicates the presence of an effect between the two variables. Any increase in improving service quality by one degree corresponds to an increase in service quality by 65.8%.

Also, parameter is statistically significant and was estimated at 0.000, less than the significance level of 0.05, which indicates the presence of significance for the slope parameter. As for the intercept parameter (fixed term), it reached 17.694, below the significance level of 0.000, which is less than 0.05, which indicates its significance, and therefore The appearance of significance for the two regression parameters indicates the presence of an effect between the two variables, and this is shown by the outputs of the SPSS V26 program.

From the above, it can be said that service quality has a statistically significant effect on customer satisfaction at a significance level of $\alpha=0.00$, and therefore we accept the alternative hypothesis which states that there is a positive correlation between service quality and customer satisfaction.

1.5.2 Testing the validity of the second hypotheses States

- **H2:** The reliability of digital services positively influences customer satisfaction.

We used the T test (One Sample Test) and the results were as follows:

Table 15: Results of the second question test

T test	mean difference	SIG	DF	MEAN	STDEVA	test result
75.316	6.75912	0.000	410	6.7591	1.81938	acceptable

Source: Prepared by the researcher based on the outputs of the SPSS V26 program.

We note from the results of the above table that the calculated T amounted to **75.316**, which is greater than the tabular T, and the arithmetic mean was **6.7591** and the standard deviation **1.81938**. We also note from the results of the above table that the significance level of **.000** is

less than its value (0.05), and since the rule of the decision is to accept the hypothesis If the significance value is less than (0.05) and the calculated T value is greater than the tabular T value, and reject it if the significance value is greater than (0.05) and the calculated T value is less than the tabular T value, and therefore we accept the hypothesis that answers the following question: does the reliability of digital services at Algérie Poste influence customers' likelihood to recommend these services to others?

1.5.3 Testing the validity of the third hypotheses

- **H3:** Among the dimensions of service quality, assurance is the most significant predictor for Algérie Poste customers.

We used the T test (One Sample Test) and the results were as follows:

Table 16: Results of the third question test

T test	mean difference	SIG	DF	MEAN	STDEVA	test result
95.967	7.75426	0.000	410	7.7543	1.63810	acceptable

Source: Prepared by the researcher based on the outputs of the SPSS V26 program.

We note from the results of the above table that the calculated T amounted to **95.967**, which is greater than the tabular T, and the arithmetic mean was **7.7543** and the standard deviation **1.63810**. We also note from the results of the above table that the significance level of **.000** is less than its value (0.05), and since the rule of the decision is to accept the hypothesis If the significance value is less than (0.05) and the calculated T value is greater than the tabular T value, and reject it if the significance value is greater than (0.05) and the calculated T value is less than the tabular T value, and therefore we accept the hypothesis that answers the following question: Which dimension of digital service quality is perceived as most crucial by Algérie Poste's customers?

Section 2 summary of the results

In our study, we explored the impact of digital service quality on customer satisfaction at Algérie Poste, employing a comprehensive approach that integrated questionnaire design,

theoretical insights, and rigorous statistical analysis. Our research meticulously crafted a questionnaire that covered demographics, digital service usage, service quality dimensions' reliability, responsiveness, assurance, empathy, tangibility—and overall satisfaction, utilizing a five-point Likert scale for precise measurement. Statistical analysis through SPSS highlighted the importance of service quality dimensions, employing methods like Cronbach's Alpha for reliability, Pearson correlation, linear regression, and the Kolmogorov-Smirnov test for normal distribution. The results of the three hypotheses confirmed: 1) a significant positive correlation between service quality and customer satisfaction, indicating that enhancements in digital service quality substantially increase customer satisfaction; 2) the reliability of services positively influences customers' likelihood to recommend services to others, underscoring the critical role of reliable digital services in fostering positive word-of-mouth; and 3) assurance emerged as the paramount dimension of service quality for Algérie Poste customers, highlighting security, clarity, and trust as key drivers of customer satisfaction.

2.1 Discussion

The findings of this study shed light on the intricate relationship between digital service quality and customer satisfaction within the context of Algérie Poste. Through a comprehensive analysis, incorporating quantitative methods, several key insights have emerged, warranting a thorough discussion.

First and foremost, the positive correlation between digital service quality and customer satisfaction reaffirms the strategic importance of prioritizing digital excellence within service delivery frameworks. The notion that customers value reliability and assurance in their digital interactions underscores the imperative for organizations, including Algérie Poste, to invest in robust infrastructure and security measures to instill trust among their clientele. The study's identification of assurance as the most significant dimension of digital service quality further emphasizes the critical role of building credibility and confidence in online service offerings.

Moreover, the prominence of reliability as a driver of customer loyalty underscores the strategic imperative for organizations to prioritize consistency and dependability in digital service provision. In an era where customer retention is increasingly challenging, ensuring seamless and reliable digital experiences emerges as a cornerstone for fostering long-term relationships with customers. This finding resonates with broader literature on service quality and customer loyalty, reaffirming the timeless importance of reliability as a key determinant of customer satisfaction.

The implications of this study extend beyond Algérie Poste, offering actionable insights for postal services and public sector entities worldwide embarking on digital transformation

journeys. By adopting a customer-centric approach to digital innovation and prioritizing digital service quality, organizations can cultivate stronger relationships with their customers, driving sustainable growth and competitive advantage in today's digital landscape.

Furthermore, the study underscores the need for organizations to continually assess and enhance their digital service offerings in response to evolving customer preferences and technological advancements. As customer expectations continue to evolve in tandem with technological progress, organizations must remain agile and responsive, adapting their digital strategies to meet the changing needs of their clientele.

In conclusion, this study provides valuable insights into the critical dimensions of digital service quality and their impact on customer satisfaction within Algérie Poste. By embracing the findings and recommendations outlined herein, organizations can position themselves as leaders in the digital age, delivering unparalleled value and experiences to their customers while driving sustainable growth and competitive advantage in an increasingly digitalized world.

CONCLUSION

conclusion

In conclusion, our study represents a pivotal contribution to the ongoing discourse surrounding the intersection of digital service quality and customer satisfaction, particularly within the context of Algérie Poste. Through a meticulous examination of digitalization's impact on service delivery and customer experiences, we have unraveled the intricate dynamics that underpin the relationship between digital service quality dimensions and customer satisfaction levels.

To understand the concept of digital service quality, we drew from bibliographical resources to theoretically frame our research topic. Furthermore, through our documentation work and observations during our internship, we have observed that the postal sector has undergone significant development in terms of electronic service. Customer expectations have increased significantly, prompting this sector to focus more on quality electronic service to better understand expressed needs and customer expectations in order to satisfy them.

The comprehensive analysis conducted in this study has revealed valuable insights into the critical dimensions of digital service quality reliability, responsiveness, assurance, empathy, and tangibility and their nuanced influence on customer perceptions and satisfaction. Our findings confirm the hypothesis that there exists a positive correlation between digital service quality and customer satisfaction, emphasizing the transformative potential of digital technologies in enhancing the postal service experience.

Notably, assurance emerged as the most significant dimension of service quality for Algérie Poste's customers, highlighting the paramount importance of building trust and confidence in digital interactions. Additionally, the study uncovered the instrumental role of reliability in driving customer advocacy and loyalty, underscoring the strategic imperative for organizations to prioritize investments in consistent and dependable digital services.

In this research, we focused primarily on the quality approach, which finds its entire logic in a fundamental idea: directing all actions towards customer satisfaction, especially in the postal sector in Algeria, with a specific emphasis on the Algerian Post company, where we undertook our internship.

The implications of our research extend beyond Algérie Poste, offering actionable insights for postal services and public sector entities worldwide embarking on digital transformation journeys. By adopting a customer-centric approach to digital innovation and prioritizing digital service quality, organizations can cultivate stronger relationships with their customers, driving sustainable growth and competitive advantage in today's digital landscape.

As we navigate the complexities of the digital era, the findings from our study serve as a guide for organizations seeking to leverage the power of digital technologies to enhance service delivery and customer satisfaction.

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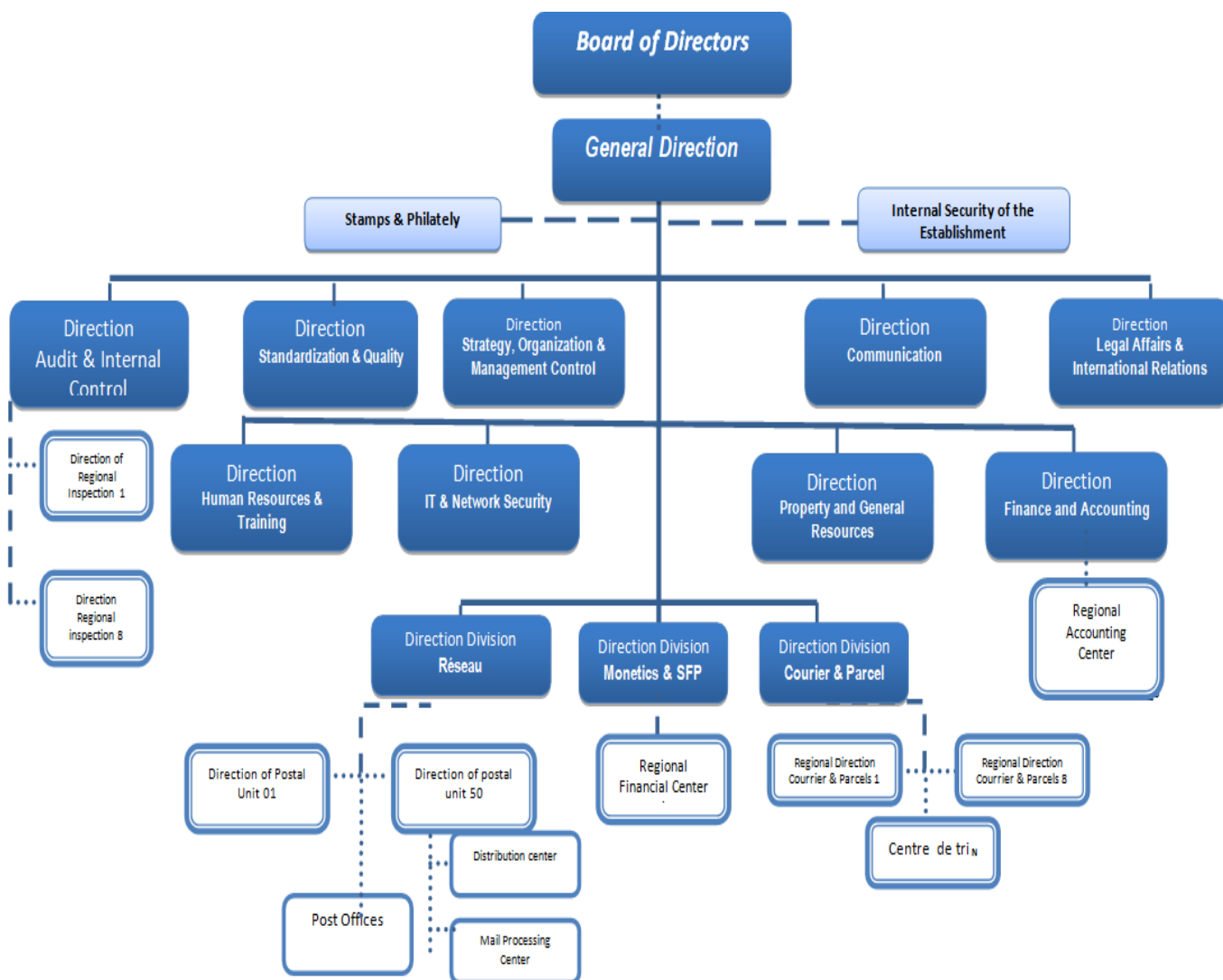
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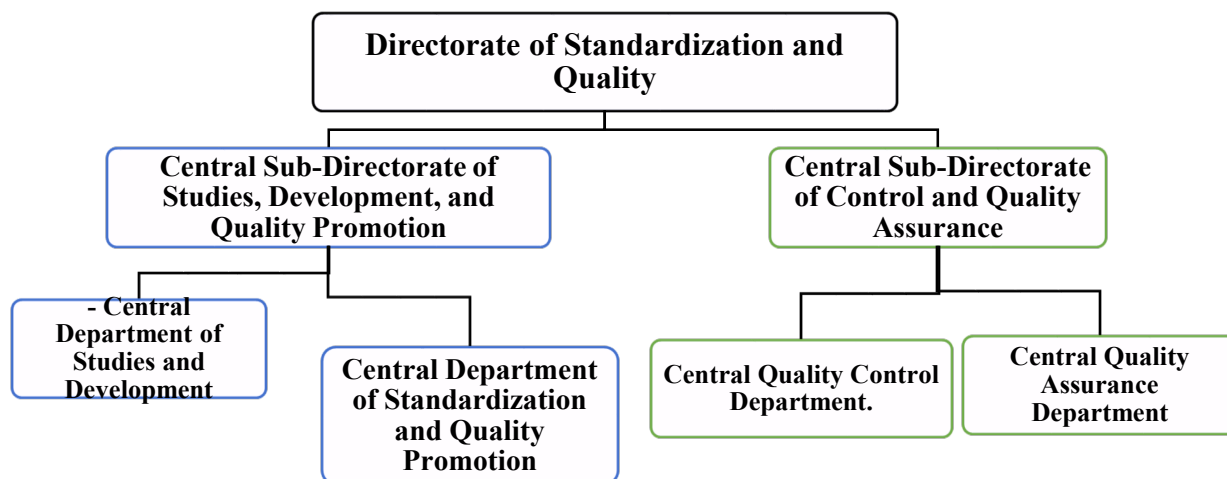
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ANNEXS

ANNEX A :



Annex B:



Annex C:

L'impact de la qualité des services numériques sur la satisfaction des clients cas « Algérie Poste »

Cher(e) participant(e),

Je mène actuellement une étude dans le cadre de ma thèse de master sur

L'impact de la qualité des services numériques sur la satisfaction des clients cas « Algérie Poste ». Votre opinion est d'une importance capitale pour comprendre comment les services numériques influent sur votre expérience avec Algérie Post.

Ce questionnaire vise à recueillir vos avis et suggestions concernant les services digitaux proposés par Algérie Poste, ainsi que sur la manière dont ils pourraient être améliorés pour mieux répondre à vos attentes.

Votre participation est essentielle pour nous aider à mieux cerner vos besoins et à améliorer les services d'Algérie Poste. Nous vous serions reconnaissants de prendre quelques instants pour remplir ce questionnaire. Soyez assurés que vos réponses seront traitées de manière confidentielle.

Nous vous remercions sincèrement pour votre contribution,

HADJ MAHAMMED Lyes .

** Indique une question obligatoire*

1. Quel âge avez-vous ? *

Une seule réponse possible.

- 18-24 ans
- 25-34 ans
- 35-44 ans
- 45-54 ans
- 55-60 ans
- 60 ans et plus

2. Quelle est votre civilité ? *

Une seule réponse possible.

- Homme

- Femme

3. Quelle est votre profession ? *

Une seule réponse possible.

- Employé(e)

- Étudiant(e)

- Travailleur indépendant

- Fonctionnaire

- Retraité(e)

4. Quels services numériques d'Algérie Poste utilisez-vous fréquemment ? *

Plusieurs réponses possibles.

- ECCP

- BARIDI Mob

- E-DAHABIA

5. À quelle fréquence utilisez-vous ces services numériques ? *

Une seule réponse possible.

- Quotidiennement

- Hebdomadairement

- Mensuellement

- Occasionnellement

- Rarement

6. **Depuis combien de temps utilisez-vous les services numériques d'Algérie Poste ?** *

Une seule réponse possible.

- Moins d'un mois
- 1 à 6 mois
- 6 mois à 1 an
- Plus d'un an

La Qualité de Service

Fiabilité

7. **Les informations fournies par les services numériques sont précises et fiables** *

Une seule réponse possible.

- Tout à fait d'accord
- D'accord
- Aucun avis
- Pas forcément
- Pas du tout

8. **Les services numériques sont disponibles sans interruption** *

Une seule réponse possible.

- Tout à fait d'accord
- D'accord
- Aucun avis
- Pas forcément
- Pas du tout

12. **Les instructions et les informations fournies par les services numériques sont claires et compréhensibles** * **demandes** *

Une seule réponse possible.

- Tout à fait d'accord
 - D'accord
 - Aucun avis
 - Pas forcément
 - Pas du tout

Empathie

13. **Le personnel d'Algérie Poste me semble attentif et prêt à aider lorsque j'utilise les services numériques** * **ues** *

Une seule réponse possible.

- Tout à fait d'accord
 - D'accord
 - Aucun avis
 - Pas forcément
 - Pas du tout

14. **Les services numériques sont personnalisés pour répondre à mes besoins spécifiques** *

Une seule réponse possible.

- Tout à fait d'accord
 - D'accord
 - Aucun avis
 - Pas forcément
 - Pas du tout

onnelles *

Une seule réponse possible.

- Tout à fait d'accord
 - D'accord
 - Aucun avis
 - Pas forcément
 - Pas du tout

Tangibilité

15. **J'évalue l'aspect visuel et l'interface utilisateur des services numériques d'Algérie Poste comme**

*

Une seule réponse possible.

- Excellent
- Bon
- Moyen
- Mauvais
- Très mauvais

16. **Les mises à jour des services numériques sont régulières et utiles ***

Une seule réponse possible.

- Tout à fait d'accord
- D'accord
- Aucun avis
- Pas forcément
- Pas du tout

Satisfaction Générale

17. **Globalement, quant aux services numériques d'Algérie Poste, est je suis : ***

Une seule réponse possible.

- Très satisfait
- Satisfait
- indifférent
- Insatisfait
- Très insatisfait

18. **Vous recommandez les services numériques d'Algérie Poste à vos amis ou à votre famille** *

Une seule réponse possible.

- Très probable
- Assez probable
- indifférent
- Peu probable
- Très peu probable

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Google Forms

ANNEX D :**Reliability Statistics**

Cronbach's Alpha	N of Items
.767	15

Reliability Statistics

Cronbach's Alpha ^a	N of Items
.793	3

Reliability Statistics

Cronbach's Alpha	N of Items
.825	10

Reliability Statistics

Cronbach's Alpha	N of Items
.709	2

Reliability Statistics

Cronbach's Alpha	N of Items
.705	2

Reliability Statistics

Cronbach's Alpha	N of Items
.698	2

Reliability Statistics

Cronbach's Alpha	N of Items
.646	2

Reliability Statistics

Cronbach's Alpha	N of Items
.676	2

Reliability Statistics

Cronbach's Alpha	N of Items
.711	2

Correlations

	AL	CH1	CH2	CHA	CHB	CHC	CHD	CHE	CH3
AL	Pearson Correlation	1	.796**	.951**	.656**	.754**	.617**	.776**	.731**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000
	N	411	411	411	411	411	411	411	411
CH1	Pearson Correlation	.196**	1	-.077	-.116*	-.069	-.007	-.087	.000
	Sig. (2-tailed)	.000		.118	.019	.164	.893	.079	.996
	N	411	411	411	411	411	411	411	411
CH2	Pearson Correlation	.951**	-.077	1	.718**	.805**	.628**	.769**	.783**
	Sig. (2-tailed)	.000	.118		.000	.000	.000	.000	.000
	N	411	411	411	411	411	411	411	411
CHA	Pearson Correlation	.656**	-.116*	.718**	1	.493**	.274**	.379**	.492**
	Sig. (2-tailed)	.000	.019	.000		.000	.000	.000	.000
	N	411	411	411	411	411	411	411	411
CHB	Pearson Correlation	.754**	-.069	.805**	.493**	1	.344**	.531**	.577**
	Sig. (2-tailed)	.000	.164	.000	.000		.000	.000	.000
	N	411	411	411	411	411	411	411	411
CHC	Pearson Correlation	.617**	-.007	.628**	.274**	.344**	1	.429**	.335**
	Sig. (2-tailed)	.000	.893	.000	.000	.000		.000	.000
	N	411	411	411	411	411	411	411	411
CHD	Pearson Correlation	.723**	-.087	.769**	.379**	.531**	.429**	1	.509**
	Sig. (2-tailed)	.000	.079	.000	.000	.000	.000		.000
	N	411	411	411	411	411	411	411	411
CHE	Pearson Correlation	.776**	.000	.783**	.492**	.577**	.335**	.509**	1
	Sig. (2-tailed)	.000	.996	.000	.000	.000	.000	.000	
	N	411	411	411	411	411	411	411	411
CH3	Pearson Correlation	.761**	.034	.658**	.417**	.482**	.458**	.501**	.592**
	Sig. (2-tailed)	.000	.489	.000	.000	.000	.000	.000	.000
	N	411	411	411	411	411	411	411	411

** Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

What is your age?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24 years old	245	59.6	59.6	59.6
	25-34 years old	105	25.5	25.5	85.2
	35-44 years old	30	7.3	7.3	92.5
	45-54 years old	14	3.4	3.4	95.9
	55-64 years old	6	1.5	1.5	97.3
	65 years old and above	11	2.7	2.7	100.0
	Total	411	100.0	100.0	

What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	238	57.9	57.9	57.9
	Female	173	42.1	42.1	100.0
	Total	411	100.0	100.0	

What is your profession?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employee	74	18.0	18.0	18.0
	Student	221	53.8	53.8	71.8
	Independent worker	54	13.1	13.1	84.9
	Civil servant	55	13.4	13.4	98.3
	Retired	7	1.7	1.7	100.0
	Total	411	100.0	100.0	

Descriptive Statistics

	N	Mean	Std. Deviation
Which digital services of Algérie Poste do you frequently use?	411	3.4307	1.39404
How often do you use these digital services?	411	2.7591	1.29836

How long have you been using Algérie Poste's digital services?	411	3.2968	1.04972
The information provided by the digital services is accurate and reliable	411	3.7421	1.03436
The digital services are available without interruption.	411	3.0170	1.18206
I am satisfied with the speed at which Algérie Poste responds to my requests or issues via digital services.	411	3.1338	1.17871
It is easy to contact customer support for digital services.	411	3.0633	1.05963
I trust in the security of my transactions and personal data with Algérie Poste's digital services.	411	3.8127	1.00556
The instructions and information provided by the digital services are clear and understandable.	411	3.9416	.93261
Algérie Poste staff appear attentive and ready to help when I use digital services.	411	3.1533	1.13840
Digital services are personalized to meet my specific needs.	411	3.5401	1.01463
I rate the visual aspect and user interface of Algérie Poste's digital services as:	411	3.5888	.86885
The updates to digital services are regular and useful.	411	3.2847	1.07032
Overall, my satisfaction with Algérie Poste's digital services is:	411	3.6545	.84527
I would recommend Algérie Poste's digital services to my friends or family.	411	3.9562	.93602
Valid N (listwise)	411		

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.658 ^a	.434	.432	4.94749

a. Predictors: (Constant), CH3

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7663.013	1	7663.013	313.061	.000 ^b
	Residual	10011.366	409	24.478		
	Total	17674.380	410			

a. Dependent Variable: CH2

b. Predictors: (Constant), CH3

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients Beta		
1	(Constant)	13.332	1.209		11.030	.000
	CH3	2.752	.156	.658	17.694	.000

a. Dependent Variable: CH2

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
CHA	411	6.7591	1.81938	.08974
CHC	411	7.7543	1.63810	.08080

One-Sample Test

Test Value = 0

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
CHA	75.316	410	.000	6.75912	6.5827	6.9355
CHC	95.967	410	.000	7.75426	7.5954	7.9131