

COMPARATIVE ANALYSIS OF SERVICE DESIGN MODELS

A Literature-Based Exploration

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ABSTRACT

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As the service sector continues to expand rapidly, the role of service design in creating customer-centric services becomes increasingly vital. This thesis conducts an in-depth review and comparative analysis of prominent service design models, including the Double Diamond, Service Blueprinting, and the Human-Centered Design Framework. Through an extensive literature review, these models are examined to understand their theoretical foundations, methodologies, and practical applications, highlighting their advantages and identifying areas for improvement.

Utilizing a systematic literature review methodology, complemented by case studies and secondary data, this study eliminates the need for new data collection. A carefully selected set of criteria and a detailed analysis framework are employed to provide a thorough understanding of how each model functions independently and in conjunction with others across various service sectors. Advanced analytical tools have supported the synthesis of complex data sets, enhancing the precision and depth of the comparative analysis.

The findings make a significant academic contribution by presenting a detailed side-by-side comparison of these service design models, thereby deepening understanding of their nuances and practical implementations. The study identifies key trends and effective strategies for implementing these models, aiding in the selection and application of appropriate service design methods.

This thesis underscores the importance of meticulous selection and application of service design models, essential for both practitioners and researchers. It contributes new insights to service design theory, addresses certain limitations of previous studies, and proposes directions for future research. This thesis aims to serve as a crucial resource for those involved in service design, seeking to enhance the flexibility and effectiveness of their services through informed methodological choices.

Keywords (3-7): Service Design, Service Design Models. Comparative Analysis, Literature Based, Academic Research, Systematic Literature Review

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1 INTRODUCTION

1.1 Background

In the dynamic and ever-changing realm of service design, it is important to understand its foundations and the diverse models that fall under its umbrella. The introduction section seeks to give the readers an overview of the service design landscape, laying the footing for further exploration in the following sections.

1.1.1 Service Design Overview

The importance of services, both tangible and intangible, has increased significantly in today's intricate socio-economic tapestry. The latter quota of the 20th century saw a profound shift from economies concentrated on manufacturing to those driven by services. It was within this changing setting that the field of service design came to exist (Reason et al., 2015). Service design focuses mainly on the development and improvement of services, with a focus on optimizing their usability, competitiveness, and relevance to the end-user.

With the historical development of industries, the stress on the production of material goods gradually gave way to the need to provide enriching experiences. This transition required a new viewpoint, a methodological approach to form and develop services (Moritz, 2005). From this, service design emerged. The foundation of its principles can be traced to product design and UX (User Experience) design. Both of them placed great emphasis on the end-user and their experiences.

The 1980s and 1990s marked key moments for service design (Sangiorgi & Prendiville, 2017). European design agencies started offering service design as a specialized domain, and academic courses began to explore its possibilities. This period underscored the need to consider every touchpoint in a service, ensuring consistency, efficiency, and a holistic experience (Zomerdijk & Voss, 2010).

In today's business world, the importance of service design is invincible. As markets become more and more saturated and products increasingly commoditized, services make the difference. Companies actively utilizing service design can customize experiences, ensure customer loyalty and boost innovation (Reason et al., 2015). For example, the rise of digital technology, in the form of apps and platforms, is naturally tied to service design, as they're designed and built keeping user experiences and seamless interactions in mind.

Beyond the boundaries of business, service design touches wider social contexts (Sangiorgi, 2009). To ensure citizen-centricity—a concept of placing the citizen's needs at the center of public services—, from healthcare to urban planning, have started to implement service design methodologies. By focusing on the end-users, governments and public institutions and organizations can create services that are efficient, accessible, and truly resonate with people.

In short, the field of service design was developed in response to the economy's ever-changing need to move from product-oriented to service-oriented. Its principles of end-to-end experiences and putting end-users first make it a staple in today's business world and vital in shaping public services in modern societies.

1.1.2 Existing Models

The industry of service design, though relatively young, has flourished with various models and frameworks that intend to guide users through the tricky process of forming and fine-tuning services (Sangiorgi, D., 2009). The multifaceted diversity of these models is both a testament to the field's dynamism and trialing for those aiming to select the most suitable method for their specific context (Patrício et al., 2011).

One of the pioneering and most recognized models is the Double Diamond, formulated by the UK Design Council. Easily recognizable in its visual representation, the model consists of four key phases, Discover, Define, Develop, and Deliver. While its systematic approach is appreciated, the emphasis on divergence and convergence at different phases highlights the non-linear nature of service design.

Service Blueprint is another well-known model in the field of service design, particularly liked for its visualization capabilities (Patrício et al., 2011). By demonstrating the service processes and user touchpoints in a clear and visually appealing way, it offers teams a bird's eye view of the whole service ecosystem (Segelström, 2013). This model is especially useful when trying to pinpoint possible bottlenecks or parts that need tweaking.

The models mentioned above only touched the surface. Several other frameworks find appeal in different contexts, like Experience-Based Co-Design or the Service Design Lifecycle. Each of these models shares some basic principles, but also brings unique approaches, tools, and viewpoints.

Picking the most suitable service design model from the vast assortment of options presented can be an overwhelming decision. The type of service, target audience, budget, and the possible obstacles to be addressed, are among numerous aspects that affect this choice. Some may discover the structured approach of the SCDL to be beneficial, while others may want the adaptability and user-centric approach of the HCD, depending on the type and focus of the service (Zomerdijs & Voss, 2010).

In summary, it can be stated that the landscape of service design models reflects the flexibility of the industry and the versatility of operating environments. While this range of options can appear daunting, it stresses the importance of informed decision-making, ensuring that the model that was chosen aligns seamlessly with the project's goals and limitations.

1.1.3 Need for Comparative Analysis

Service design, as an evolving field, has spawned multiple models, each purporting to offer a unique lens through which to design or refine services. While this diversity brings richness to the field, it also creates a notable gap: the lack of a comprehensive comparative analysis of these service design models (Segelström, 2013). Such a gap poses many challenges and accentuates the urgent need for an in-depth exploration.

Firstly, literature on individual service design models often discusses their specific methods, tools, and results. However, there's a notable lack of literature that positions these models side by side, comparing and contrasting their complexity (Sangiorgi & Prendiville, 2017). For practitioners,

especially those new to the service design field, this void can be confusing. Without a comparative guide, how could one who is not familiar with service design methods distinguish the nuances between, for example, the stages of Double Diamond and the visualization techniques of Service Blueprinting (Moritz, 2005)?

Moreover, the practical realities of the field emphasize this need. As companies and organizations become increasingly aware of the benefits of service design and its methods, demand for its application increases (Reason et al., 2015). Still, many find themselves at a crossroads struggling with questions such as: Which model suits our organizational goals best? Is there a model that suits digital services better than physical ones? Or can the elements of several models be combined? Without comparative literature, these questions remain half-answered at best, often based on trial and error or anecdotal experience.

Moreover, the challenges extend beyond just initial selection. Once a model is picked, its application, too, can be riddled with complications. The inherent ambiguity of some models can lead to misinterpretations or, worse, incorrect applications (Patrício et al., 2011). A comparative analysis that explores the strengths, weaknesses and best application scenarios of each model can provide clarity and certainty.

The real-world effects of these challenges are significant. Incorrectly targeted Service Design can lead to wasted resources, worse user experiences and loss of innovation opportunities (Zomerdijs & Voss, 2010). In an era where user experience is highly emphasized and the margin for error is shrinking, the stakes are high (Karpen et al., 2015).

In conclusion, while the field of service design is full of different models, each offering unique viewpoints, there is a big gap in our understanding of their relative advantages and disadvantages. Creation of a comprehensive comparative analysis is a necessity that can guide companies and lead designers towards more knowledgeable, influential decisions while maximize the potential of service design (Sangiorgi, 2009).

1.2 Research Problem and Objectives

Understanding the field of service design, we now focus on the core of this research: the problem behind it and the goals that guide the research.

1.2.1 Statement of the Problem

Service design as a field has experienced a strong rise in recent decades, and it has strengthened its position as an indispensable tool for shaping user experiences across various industries (Reason et al., 2015). This has involved the development of many models and frameworks, each of which offers a unique approach to designing and improving services. From the Double Diamond's well-thought-out phases to the holistic perspective of IDEO's Human-Centered Design, the assortment of models available offers a ratification of the dynamism and adaptability of the field (Moritz, 2005).

However, with this bounty comes a remarkable challenge: the lack of comprehensive comparative literature evaluating these models (Segelström, 2013). The problem is not merely academic; it has deep practical implications.

For practitioners, both experienced and newbies, navigating the sea of service design models can be daunting. Although the individual models are well documented, often with thorough methods, case studies and examples (Service Design Cases; Touchpoint, the Journal of Service Design), the literature rarely ventures into side-by-side analysis. This gap means that service designers, companies and organizations have to go through vast amounts of data and try to conclude which model might best fit their specific needs, contexts and challenges (Sangiorgi et al., 2017).

This lack of comparative literature inadvertently creates hurdles. First, the selection process becomes lengthier, often requiring lot of trials and errors. Second, without a clear understanding of the model's strengths and weaknesses relative to others, there is an increased risk of errors (Patrício et al., 2011). For example, a company aiming for rapid service prototyping may unintentionally adopt a model better fit to long-term in-depth analysis, leading to ineffectiveness and missed chances (Zomerdijk & Voss, 2010).

As the service industry becomes more and more complex and user-centered, the stakes of a poorly adapted design model are increasing. Blunders in service design can lead to less than optimized user experiences, weakened brand value, customer trust and ultimately affect the results (Karpen et al., 2015).

Essentially, despite the abundance of service design models, there is a significant opening: a dearth of literature that comprehensively compares and contrasts these models, sheds light on their strengths, weaknesses, and optimal application scenarios. Addressing the missing gap is the key to ensuring that the discipline of service design continues to deliver on its promise of creating superior, user-centric services in an ever-evolving environment (Sangiorgi, 2009).

1.2.2 Objectives

Service design, as a developing domain, offers different models and frameworks. Each model offers its unique method of creating user-centric services. However, a notable lack of comprehensive comparative literature has resulted in a knowledge gap that can be detrimental to practitioners' decision-making (Reason et al., 2015). In light of this, the study has mapped out the following objectives:

For a trustworthy comparative analysis to be possible, a deep understanding of each prominent service design model is essential. The review focused on their core principles, distinct methodologies, and the results they are known to create, extensively referencing foundational texts.

In research equipped with the information basis, the opposite of the methods defined by each model is continued. Insights from Sangiorgi's (2009) structured framework for service design assist in this analytical step and highlight the unique approaches of each model.

One of the most commonly occurred dilemmas for practitioners is narrowing down the ideal model for their specific needs. This study refers to methods such as those studied by Patrício, Fisk, and Constantine (2011) and examines contexts and scenarios where individual models have been particularly effective for the initial challenge.

User-centricity is the cornerstone of service design. This research examines how each model emphasizes users. It will delve into the extent of user engagement, integration of feedback loops, and the degree of co-creation, drawing inspiration from Segelström's (2013) engagement-focused studies.

In addition to simple user satisfaction, service design is about pioneering innovative solutions. Through the lens of studies like those by Zomerdijs & Voss (2010), this objective explores how different models foster innovation, inspire unique solutions and move forward service improvements.

Every model has its own limitations and challenges. Mirroring the critical perspective of Karpen et al.'s (2015) research on the effects of service orientation, this objective will cast light on the characteristic limitations of each model, fostering a thorough understanding.

To appreciate the present situation of service design, understanding the historical path of service design is essential. Using archives from platforms like the Service Design Global Conference and journals like Touchpoint, this phase tracks the evolution of service design models and identifies key milestones, modifications and emerging trends.

Overall, the goals of this research have been carefully structured to provide an easy, all-rounder view of service design models. When these areas have been explored, the research is a ready compass to guide both experienced and novices through the maze of service design (Reason et al., 2015).

1.3 Significance of the Study

Why is this research important? Here, we focus on the weight and potential impact of this study, emphasizing its dual value for the academic world and for the realm of practical application.

1.3.1 Academic Significance

Service design, despite its relatively recent history, has rapidly evolved into an area of strong academic and practical interest. Its development has led to a plethora of models and frameworks, each presenting distinctive insights and methodologies to the field (Reason et al., 2015). However,

the abundance ironically highlights the conspicuous gap in academic literature: the absence of a comprehensive, comparative study of these models. This research endeavors to fill this void, aiming to make important academic contributions in diverse ways.

Despite the documentation of individual service design models, there's a striking lack of literature offering comprehensive comparisons that critically evaluate and compare them. This study, with its detailed comparative methodology, seeks to resolve this oversight, thereby extending the academic pool of service design literature.

Intending to offer a thorough exploration of various service design models, this research hopes to be seen as a foundational reference for ensuing academic initiatives. A comprehensive resource can guide scholars wishing to investigate specific models further or those aiming to expand on this comparative structure, facilitating continuity and depth in future academic discussions.

The intricacies of presenting a complete perspective on available models often challenge academic service design education. This research, by its encompassing comparative analysis, has the potential to be an asset also for educators. Courses that assimilate findings from this study can provide students with a comprehensive grasp of service design models, thereby amplifying the caliber and scope of teaching (Sangiorgi & Prendiville, 2017).

Furthermore, by demystifying the strengths, limitations, and intricacies of diverse models, this research stands to start off further academic explorations. Questions that demand detailed probing, models that could undergo enhancements or the possibility of synergies between models can all become promising opportunities for future academic endeavors.

One persistent challenge in academia is ensuring the synchronization of theoretical explorations with tangible, practical implementations. This research, strengthened by its emphasis on practical applicability, strives to bridge this often expansive gap. Future academic pursuits can connect findings from this research to ensure their examinations remain aligned with practical necessities, thus increasing the relevance and influence of their scholarly contributions.

Moreover, this research, enriched by its wide-ranging perspective, has the possibility to guide collaborations between universities and the industry. By emphasizing the sustainability of different models and optimal application circumstances, educational institutions can adapt their partnerships

with industry, promoting a mutually beneficial cooperation that benefits both parties (Zomerdijk & Voss, 2010).

To summarize, it can be stated that the academic significance of this research is manifold. Beyond just addressing a literature gap, it plans to revolutionize the academic landscape of service design. Through the insights, this study aims to support academic intelligence in the service design field by promoting more nuanced, informed, and influential educational and research endeavors.

1.3.2 Practical Significance

The progressing field of service design demands that businesses consistently innovate to enhance user satisfaction. The selection of a fitting design model becomes not just an intellectual exercise but a vital factor influencing tangible outcomes. This research's comparative analysis is poised to have profound practical outcomes, acting as a simplified guiding light for practitioners, enterprises, and entities as they navigate the landscape of service design models.

With the huge number of models available, practitioners often struggle with the challenge of finding the ideal model to use. Through its complex comparative research, this exploration provides them with the knowledge to make sound decisions and ensure that their strategies seamlessly meet the distinct requirements of their projects.

Organizations, each distinct in their needs, aspirations, and hurdles, seek service design models that resonate with their essence. This research highlights the merits and ideal contexts for various models, allowing people to choose models that align with their mission for optimal effectiveness.

In the dynamic world of business, unwavering commitment to a singular model may be harmful. The insights provided by this research can guide practitioners to adapt models, refine methods, and ensure that their tactics remain agile and skillfully adapt to changing challenges.

Sometimes the optimal solution comes from integration. Recognizing the advantages and shortcomings of different models can open up opportunities to combine models and create innovative hybrid strategies that capture the strengths of multiple models. The comprehensive analysis of this research forms the basis for such initiatives.

Each model, despite its advantages, has its own challenges. This research, which highlights potential barriers and limitations associated with each model, serves as risk mitigation. By proactively detecting possible obstacles and addressing them, actors and organizations can ease the implementation of the project.

For entities committed to continuous improvement, this study provides a benchmark. By benchmarking their preferred model against others, companies can spot potential improvements and ensure that their service designs remain at the forefront of the field.

A recurring obstacle in service planning is connecting the spectrum of stakeholders, spanning from executive leadership to operational teams. The knowledge gathered from this study can serve as a mutual touchstone, that promotes productive dialogue, synchronizes objectives, and ensures joined implementation.

The practical significance of this research is important. By providing professionals and businesses with a comprehensive understanding of service design models, this research gives the ropes towards more professional, resourceful, and user-centered service design efforts in different industries.

1.4 Thesis Structure and Chapter Summaries

1. Introduction

- Provides background information on service design, including an overview of existing models and the need for comparative analysis.
- Outlines the research problem, objectives, and significance of the study.
- Includes a thesis structure with chapter summaries and research questions.

2. Methodology

- Describes the research design, emphasizing the choice of a systematic literature review.
- Details the steps involved in conducting the systematic literature review, including the search strategy and selection criteria.
- Explains the comparative analysis framework and data extraction methods.

3. Theoretical Background

- Offers an overview of service design and its key models, including the Double Diamond, Service Blueprinting, and Human-Centered Design Framework.
- Introduces various service design thinking tools and methods, such as personas, journey mapping, service safaris, lean service creation, and co-creation models.

4. Findings from the Systematic Review

- Presents selected studies from the systematic review, providing summaries and relevant data.
- Conducts a comparative analysis based on predefined criteria.

5. Discussion

- Synthesizes the comparative analysis findings, highlighting key insights and patterns.
- Explores the theoretical implications of the study and its contributions to service design theory.
- Discusses practical implications and recommendations for practitioners. Integrates findings with research questions and objectives.

6. Conclusion and Recommendations

- Summarizes the key findings of the study and their contributions to academic discourse and practical application.
- Acknowledges the limitations of the study and suggests areas for future research.
- Concludes with final thoughts and reflections on the research process and potential impact.

1.5 Research Questions

This research seeks to simplify the complexities of different service design models by comprehensively exploring their theoretical foundations, methodologies, and practical implications.

To achieve this, the research questions are formulated as follows:

Research Question 1 (RQ1):

How do different service design models vary in their theoretical foundations and methodologies?

Additional questions to utilize: What are the historical and theoretical roots of each model? What are the primary components and steps of each model's methodology? How do the methodologies translate theory into practice?

Research Question 2 (RQ2):

What are the relative strengths and weaknesses of the various service design models?

Additional questions to utilize: In what contexts or scenarios does each model excel? What are the potential pitfalls or challenges associated with each model? How do real-world applications of each model align with its purported strengths and weaknesses?

Research Question 3 (RQ3):

How do different service design models prioritize and integrate user-centric design principles and innovation?

Additional questions to utilize: To what extent does each model emphasize user engagement, feedback, and co-creation? How does each model foster innovation in service design? Are there any discernible patterns or trends in how models that emphasize user-centricity also drive innovation?

Research Question 4 (RQ4):

In which industries, contexts, and challenges are specific service design models most applicable, and how do they compare in these varied settings?

Additional questions to utilize: Are there industries or sectors where certain models are predominantly used? How do contextual factors, such as technological advancements or societal shifts, influence the applicability of a particular model? How do businesses and organizations adapt models based on specific challenges or goals?

By answering these questions, the study aims to provide a comprehensive, nuanced, and insightful look into the world of service design models, bridging gaps in understanding and offering clear guidelines for both academic and practical applications.

2 METHODOLOGY

2.1 Research Design

This chapter outlines the research design utilized in this study, focusing on the systematic literature review (SLR) methodology. The SLR was selected for its strict and transparent approach, making it appropriate for cataloging and evaluating the existing body of material concerning service design models (Kitchenham & Charters, 2007). This research employs a positivist philosophy, adhering to empirical standards that emphasize objective measurement and quantifiable observations of phenomena to formulate and test hypotheses. By utilizing a mono-method qualitative approach, the study leverages a systematic literature review (SLR) to meticulously gather and analyze existing scholarly work. The approach aligns with the positivist tradition of minimizing subjectivity and maximizing objectivity, thereby ensuring that the conclusions drawn are solely based on the evidence reviewed and are free from the researcher's personal biases (Saunders & Tosey, 2013).

2.1.1 Choice of Systematic Literature Review

The SLR method is adopted in this research to guarantee a clear, structured, and comprehensive analysis of service design models. Contrasting with traditional reviews, which may be subjective, the SLR approach enables an objective and systematic exploration of literature (Jesson et al., 2011). This method is especially relevant in service design, characterized by a variety of models, each with distinct advantages, limitations, and uses. The systematic approach helps in identifying, evaluating, and synthesizing all relevant research evidence concerning service design models.

Moreover, the systematic review provides a transparent process, allowing future researchers to replicate or update the findings, a feature critical for sustaining the research's validity and relevance in the dynamic field of service design (Gough et al., 2017).

2.1.2 Steps in Conducting the Systematic Literature Review

The process of conducting this systematic literature review involves a series of structured stages commonly employed in scholarly research, but was personalized for this specific study on service design models.

1. The first step involves clearly defining the research questions that the review aims to answer. This study focuses on questions such as: What service design models exist in the literature? How do these models compare in terms of their processes, methodologies, and applications?
2. To ensure relevance and focus, clear inclusion and exclusion criteria are set based on the research questions. These criteria relate to the type of articles, the scope of the models discussed, the languages of the publications, and the publication period.
3. A comprehensive search strategy is developed, detailing the databases and search engines to be used, along with specific keywords and search terms related to service design models. This strategy ensures that the search is exhaustive and encompasses relevant literature across various disciplines.
4. The identified records are then screened based on the title, abstract, and full text, according to the predefined inclusion and exclusion criteria. This step ensures that only the most relevant studies are included in the review.
5. Systematically extracting and organizing relevant data from each selected study, such as author details, publication year, research methods, and key findings related to service design models.
6. Evaluating the quality of each chosen study to validate the reliability and relevance of the findings, considering the clarity of reporting and methodological soundness.
7. Integrating and analyzing the extracted data to compare and contrast different service design models, focusing on identifying shared traits, differences, strengths, and shortcomings.
8. The final step involves compiling the findings into a coherent narrative, discussing the implications of the comparative analysis, and suggesting areas for future research.

2.2 Search Strategy

A comprehensive search strategy is crucial for the successful execution of a systematic literature review. This meticulous approach entails a detailed outline of the utilized databases, search terms, and search parameters, adhering to the practices described by Booth et al. (2016). The search spans an extensive array of electronic databases including Scopus, IEEE Xplore, and Google Scholar among others, ensuring a broad coverage of both scholarly and industry-related literature, as advocated by Gusenbauer and Haddaway (2020). This extensive coverage is vital to encapsulate a holistic view of service design models. Moreover, the inclusion of grey literature sources such as industry reports, conference proceedings, and dissertations is pivotal to capture a diverse spectrum

of knowledge within the service design realm, reinforcing the approach recommended by Adams, Smart, and Huff (2017).

In the development of the search strategy, a combination of keywords and Boolean operators is employed to refine and target studies relevant to the research questions. Boolean operators—AND, OR, and NOT—are logical connectors used to combine or exclude keywords in a search, thereby narrowing or expanding the scope of the search (Bramer et al., 2018). For instance, "AND" is used to ensure that all search terms appear in the results, thereby narrowing the search; "OR" broadens the search by including any of the listed terms; and "NOT" excludes terms to eliminate unrelated results, thus enhancing the search's specificity and relevance (Bramer et al., 2018). The primary search terms such as "service design," "service design models," and specific model names like "Double Diamond" and "Service Blueprinting" are strategically combined using these operators to ensure a comprehensive and focused search. This meticulous combination aims to capture studies that are directly relevant to the research questions.

Moreover, the search strategy is fine-tuned by applying specific filters and parameters such as language restrictions (primarily English) and document types (focusing on peer-reviewed articles, books, and substantial reports). This selective approach is designed to balance the search's comprehensiveness with manageability, preventing an overwhelming influx of irrelevant results while ensuring no significant study is overlooked (Haddaway et al., 2015).

Prior to executing the full-scale search, a pilot search on a selected database is conducted. This initial step assesses the effectiveness of the search terms and strategy, allowing for necessary refinements to enhance the search's yield of relevant studies. The results garnered from this pilot phase are instrumental in fine-tuning the final search strategy, ensuring it is both comprehensive and targeted (Levay et al., 2019).

Documentation is a critical component of the search strategy. Every stage, from the choice of databases to the final application of search terms, is meticulously recorded. This documentation includes the dates of searches, the number of results returned, and any alterations made to the strategy. This level of detail ensures that the search process remains transparent, reproducible, and verifiable by other researchers, thereby contributing to the scholarly rigor and reliability of the review (Fink, 2019).

The anticipated outcome of this thorough and well-documented search strategy is a comprehensive collection of literature pertinent to service design models. This collection will serve as a foundational

element for subsequent screening and in-depth analysis, thereby facilitating a robust comparative analysis of service design models. By employing a detailed and transparent search strategy, the study aims to encompass all relevant literature, providing a strong foundation for a systematic review that contributes meaningful insights and advances in the field of service design.

2.3 Selection Criteria

The selection criteria define the specific conditions that studies must meet to be included in the literature review. This section outlines these criteria, ensuring that only relevant, high-quality, and appropriate studies are considered for analysis in the systematic review. The criteria are designed to filter out unrelated, low-quality, or redundant studies (Booth et al., 2016). The aim is to concentrate on studies that significantly contribute to understanding service design models.

Inclusion Criteria:

1. The study must focus on service design models or frameworks, including but not limited to the Double Diamond, Service Blueprinting, IDEO's Human-Centered Design (HCD) framework, and the Service Concept Design Language (SCDL).
2. Studies that apply these models in real-world settings, detailing methodologies, processes, and outcomes, are particularly relevant.
3. The study must be published in Finnish, English or Swedish to ensure comprehension and facilitate analysis.
4. The literature review will encompass peer-reviewed journal articles, conference papers, theses, dissertations, and comprehensive industry reports, which are likely to offer thorough analysis and valuable insights.

Exclusion Criteria:

1. Studies that do not focus on service design models, or only tangentially relate to them, will be excluded.
2. Abstracts, posters, and presentations without full text, or incomplete studies, will be excluded to ensure that only comprehensive and complete research is reviewed.
3. Studies that lack empirical evidence, do not follow a clear methodology, or have significant methodological flaws will be excluded (Booth et al., 2016).

A spreadsheet will be used to manage references and record decisions throughout the screening process. This includes tracking the inclusion and exclusion of studies, with notes on the reasons for decisions, ensuring a transparent and systematic approach. It will lead to a curated set of studies that are directly relevant to the research questions and objectives. This focused collection of literature will provide a solid foundation for the comparative analysis of service design models, contributing to the credibility and depth of the systematic review (Gough et al., 2017).

2.4 Comparative Analysis Framework

This section delineates the framework set to guide the comparative analysis of service design models identified through the systematic review. The objective was to systematically evaluate and compare the models across multiple dimensions, to understand their characteristics, typical applications, and effectiveness (Yin, 2014).

Components of the Comparative Analysis Framework in this Study

1. A brief description of each service design model, including its origin, core principles, and intended use.
2. Examination of the methodologies each model employs, including processes, tools, and techniques.
3. Analysis of the contexts in which each model is typically applied, such as digital services, healthcare, retail, and any sector-specific adaptations.
4. Evaluation of the strengths and weaknesses of each model based on literature findings, including effectiveness, flexibility, user involvement, and resource requirements.
5. Review of case studies or real-world examples where each model has been applied, analyzing outcomes, challenges, and success factors.
6. Establishment of specific metrics for comparison, such as ease of use, scalability, adaptability, and impact on user satisfaction and service quality.

The comparative analysis in this research adopts an organized method, leveraging tables or matrices to collate and exhibit data, facilitating a clear comparison between models across the defined dimensions. Anchored by the research aims, this approach sought to unearth trends, parallels, and variances among the service design models (Baxter & Jack, 2008). The framework incorporated explicit benchmarks for contrasting the service design models, crafted from the research goals and literature insights, ensuring relevance and thoroughness (Yin, 2014). The

analysis amalgamates results from the literature to infer the relative strengths and limitations of each service design model, pinpointing best practices and identifying gaps in existing research, setting the stage for future inquiries (Eisenhardt, 1989).

Outcomes from the comparative analysis will be interpreted within the broader literature landscape, offering perspectives on the progression and adaptation of service design models across varying scenarios and challenges (Eisenhardt & Graebner, 2007). Employing the comparative analysis framework will facilitate a methodical and profound comparison of service design models, yielding a detailed comprehension of their attributes, utility, and efficiency. By delivering an organized evaluative approach, the framework will underpin informed conclusions and recommendations, fostering the evolution of service design practice and academia.

2.5 Data Extraction Methods and Analysis Techniques

In the systematic literature review in this study, the data extraction and analysis are conducted exclusively through the evaluation of existing literature, without the incorporation of interviews or other forms of primary data collection. Microsoft Excel is chosen as the primary tool for managing and analyzing data due to its widespread availability and robust functionality (Hansen & Shneiderman, 2001).

The process begins with the systematic collection of data from each selected source, focusing on critical information such as the study's authors, year of publication, objectives, service design models evaluated, methodologies employed, main findings, and contributions to the field of service design. A pre-designed Excel spreadsheet will be employed for this purpose, featuring columns that correspond to these categories to ensure uniformity and facilitate subsequent analysis. A specially designed spreadsheet facilitates this process, with predefined columns mirroring the categories to promote consistency and aid in the following analysis (Ose, 2016).

Upon completion of data collection, the analysis phase will commence. This involves a thorough examination of the extracted information to identify overarching themes, contradictions, methodologies, and outcomes related to service design models. The data will be categorized and sorted using Excel's functionalities, such as filtering and conditional formatting aid in organizing and distinguishing significant trends and associations within the data (Fry, 2004). The analytical process aims to compare and contrast different service design models, evaluating their effectiveness, applicability, and theoretical underpinnings based on the compiled literature. The use of pivot tables

and graphical outputs in Excel supports the consolidation of findings and the visualization of pivotal connections and patterns (Zhang, 2016).

All extracted data will be handled with the utmost respect. Information will be used solely for the purpose of academic research and will be stored securely to ensure confidentiality and adhere to ethical research guidelines (Mertler, 2016). The limitations of this methodology include potential biases in literature selection and interpretation, as well as the inherent constraints of using Excel for data analysis, which may limit the depth of statistical analysis (Bendixen, 2003). However, these limitations are acknowledged and will be addressed through careful selection criteria, methodical data extraction, and transparent reporting of findings.

3 THEORETICAL BACKGROUND

3.1 Overview of Service Design

Service design is recognized as an interdisciplinary approach aimed at improving and innovating services to enhance both user and provider experiences (Meroni & Sangiorgi, 2011). At its core, service design focuses on planning and organizing people, infrastructure, communication, and material components of a service, in order to improve its quality and the interaction between service provider and customers (Stickdorn & Schneider, 2011). Historically, the field has evolved from traditional product design and user experience design, branching out to address the complexities of service experiences as economies worldwide shifted towards service-based models (Moritz, 2005). The evolution of service design mirrors broader changes in technology, society, and business practices, adapting to new consumer expectations and the digital transformation of services (Mager & Gais, 2009).

The principles guiding service design are deeply rooted in user-centeredness, co-creation, sequenciality, and evidencing. These principles ensure that services are designed with the end-user's needs and experiences at the forefront, involving stakeholders throughout the design process to foster collaborative and innovative solutions (Sanders & Stappers, 2008). The primary objectives of service design are to enhance user satisfaction, improve service efficiency and effectiveness, and encourage innovation in service delivery. By adhering to these principles, service designers aim to create seamless, intuitive, and enjoyable service experiences (Stickdorn & Schneider, 2011).

The methodology of service design is characterized by a non-linear, iterative cycle of understanding, ideation, prototyping, and implementation. This begins with detailed research to grasp user needs, behaviors, and the prevailing service environment (Polaine et al., 2013). Key methods include journey mapping for visualizing user experiences, stakeholder maps for identifying involved parties, and service blueprints for outlining service structures from the front-stage to the back-stage (Bitner et al., 2008). These tools are instrumental in fostering empathy with users, pinpointing service shortcomings, and revealing enhancement opportunities.

In practice, service design has been applied across various sectors, including retail, healthcare, finance, and public services, leading to transformative impacts. For instance, in healthcare, service design has been used to streamline patient flow and improve care experiences (Freire & Sangiorgi,

2010). In retail, it has helped create more engaging and efficient customer journeys (Clatworthy, 2011). These applications demonstrate service design's ability to create more accessible, efficient, and user-friendly services, leading to increased customer satisfaction and business performance.

Despite its benefits, service design faces challenges such as integrating user-centric approaches within traditional business structures, aligning the interests of diverse stakeholders, and demonstrating the tangible value of design interventions (Blomkvist et al., 2010). Looking ahead, the field is set to address emerging challenges related to digitalization, sustainability, and social equity. Service designers are increasingly focusing on designing for inclusivity, leveraging technology to enhance accessibility, and devising sustainable service solutions that address environmental and social issues (Manzini, 2015).

3.2 Service Design Models

This section delves into specific tools and methods used within the service design thinking process to create user-centered services.

3.2.1 Double Diamond

Developed by the British Design Council (2005), the Double Diamond model is a visual representation of the design process, divided into four distinct phases: Discover, Define, Develop, and Deliver. This framework encourages designers to explore a wide range of ideas and challenges (diverge) and then refine and narrow down these ideas into clear objectives and solutions (converge). Lockwood (2009) highlights, that the Double Diamond model has been widely adopted across various industries as a method to address complex problems through a balance of creative exploration and analytical rigor. Furthermore, Martin (2009) emphasizes how thorough research and user engagement in the early stages can inform more effective and innovative solutions. Cross (2011) also notes that applying the Double Diamond allows businesses and organizations to navigate the complexities of service design, ensuring that their outcomes are both innovative and closely aligned with user needs.

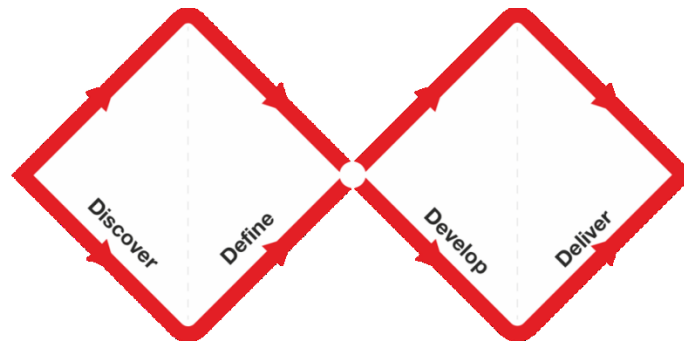


Figure 1: The Double Diamond design process model. Source: Design Council (2024).

3.2.2 Service Blueprinting

Originally conceptualized by G. Lynn Shostack (1984), Service Blueprinting is a tool used to visualize service processes, pinpointing how a service is provided from the customer's perspective. It maps out each step in the service process, detailing the front-stage and back-stage activities that contribute to the service's delivery (Bitner et al., 2008). This method is instrumental in identifying service gaps, inefficiencies, or areas where customer experiences can be improved (Zeithaml et al., 2006). By providing a clear overview of the service structure, Service Blueprinting helps organizations understand and optimize the interactions between customers and service touchpoints, leading to enhanced operational efficiency and customer satisfaction (Patrício et al., 2008).

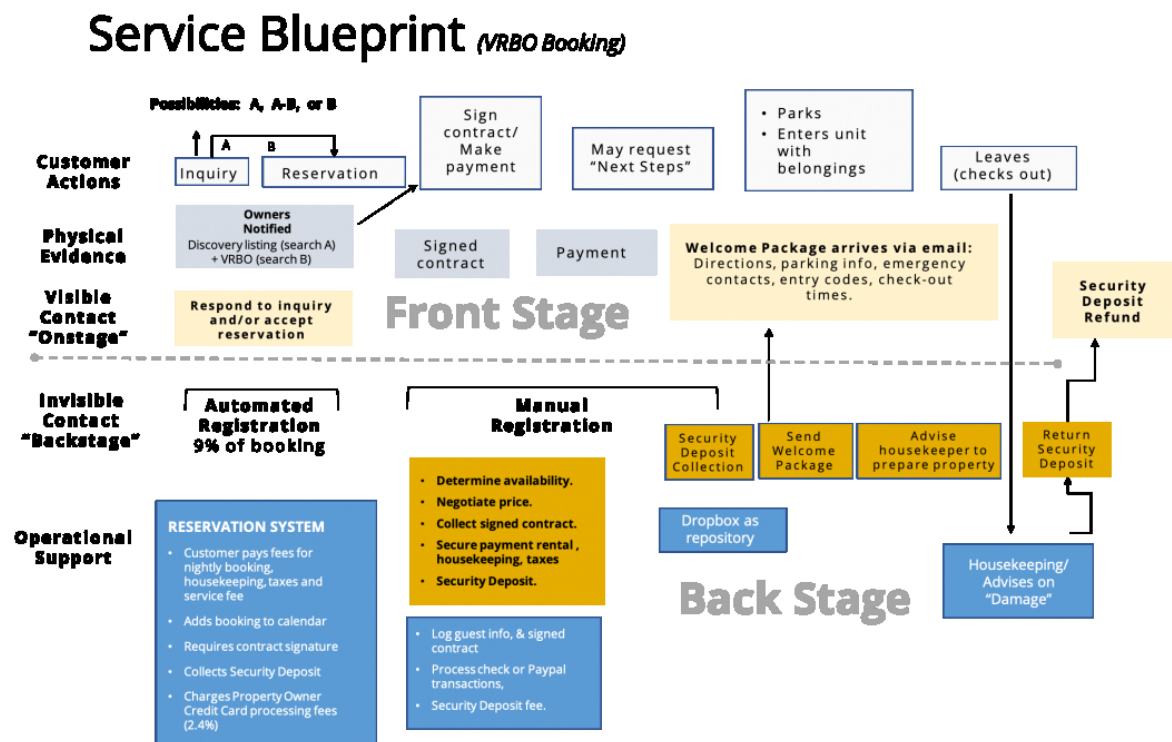


Figure 2: The Service Blueprint. Source: International Service Design Institute (2024).

3.2.3 Human-Centered Design Framework (HCD)

IDEO, a global design company, has formulated a framework that prioritizes user empathy, driving the development of solutions closely aligned with users' needs and situations (Brown, 2008). The Human-Centered Design (HCD) Framework unfolds in three distinct phases: Inspiration, which involves designers deeply understanding the individuals they are designing for; Ideation, where gathered insights are transformed into novel ideas; and Implementation, the phase in which the most effective solutions are materialized into products or services (Brown & Wyatt, 2010). This cyclical process ensures that services are crafted with a profound comprehension of the user's environment, resulting in outcomes that are both inventive and applicable (Brown, 2009). The HCD Framework has demonstrated its adaptability and efficacy across various domains, from healthcare to financial services, underscoring its capacity to engender impactful service experiences (Liedtka & Ogilvie, 2011).

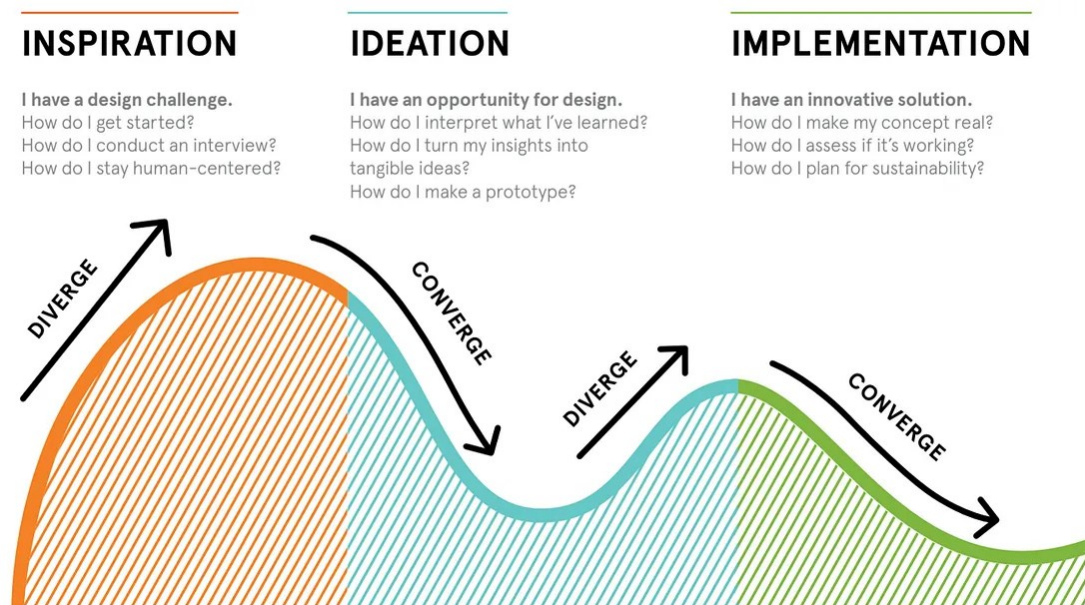


Figure 3: 3.2.3 Human-Centered Design Framework. Source: IDEO (2024).

3.2.4 Service Design Thinking Tools & Methods

In addition to specific models, service design employs a variety of tools and methods aimed at enhancing understanding and fostering innovation within the service domain (Stickdorn & Schneider, 2011). These tools and methods are crafted to dissect and reconstruct service experiences, ensuring they meet user expectations and business objectives (Polaine et al., 2013).

3.2.4.1 Personas

Personas are fictional characters created to represent different user types within a service's target demographic (Pruitt & Adlin, 2006). They are crafted based on user research to reflect a range of attributes such as behaviors, goals, needs, and pain points (Cooper et al., 2007). By bringing user segments to life, personas help service designers empathize with and focus on the needs of their audience (Goodwin, 2009). They serve as a reference point throughout the design process to ensure solutions are tailored to user expectations and experiences. For example, a healthcare service might use personas to differentiate the needs of chronic illness patients from those of short-term patients, leading to more personalized care plans (Blomquist & Arvola, 2002).



Figure 6: Personas. Source: Myinternetscout.com (2018).

3.2.4.2 Journey Mapping

Journey Mapping is a strategic tool used to visualize the series of interactions a customer has with a service (Kalbach, 2020). It outlines each step of the service experience, from initial awareness to post-use reflection, highlighting the customer's emotions, questions, and barriers at each stage (Polaine et al., 2013). This comprehensive view helps teams identify critical moments where the service can be improved, ensuring a smoother, and more satisfying customer journey (Stickdorn et al., 2018). For example, a journey map for a banking service may reveal that customers feel

frustrated during the loan application process, prompting the bank to streamline these steps for better clarity and efficiency (Richardson, 2010).

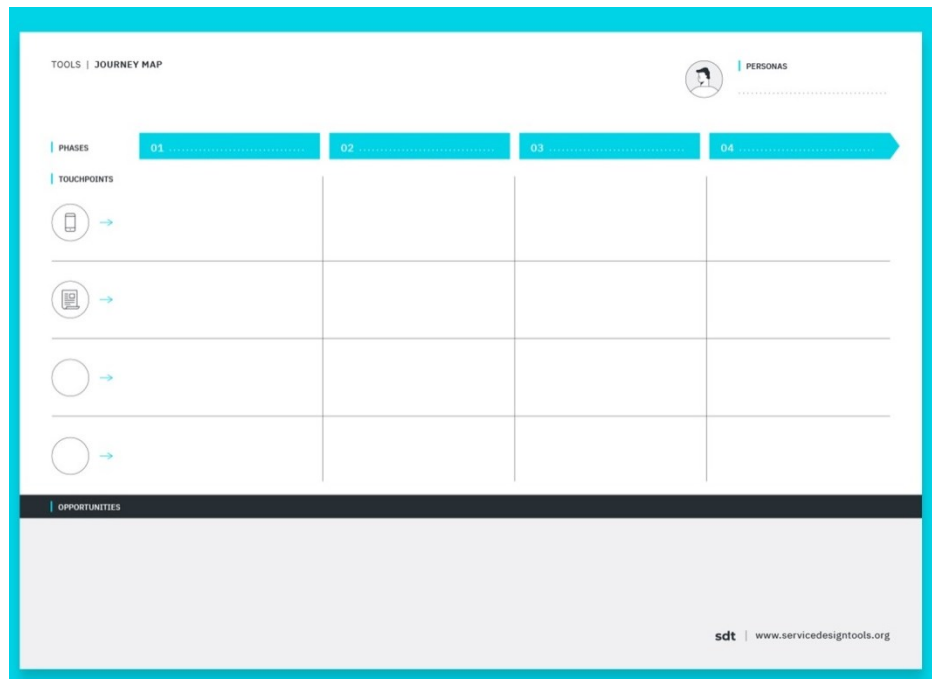


Figure 7: Journey Map. Source: servicedesigntools.org (2024).

3.2.4.3 Service Safaris

Unlike other tools that are based on second-hand data, Service Safaris require designers to directly engage with the service environment, differing from methods relying solely on secondary data (Stickdorn et al., 2011). Participants observe and document their experiences as they navigate a service, noting down their observations, feelings, and any service gaps they encounter (Polaine et al., 2013). This hands-on approach provides deep, nuanced insights that might be missed in traditional research methods (Blomquist & Arvola, 2002). For example, conducting a service safari in a retail setting could uncover overlooked details in the physical layout that hinder customer flow or diminish the shopping experience (Carroll, 2015).

3.2.5 Lean Service Creation (LSC)

Lean Service Creation combines lean startup methodologies with service design thinking. It emphasizes rapid prototyping, testing, and iteration to quickly develop and refine service concepts based on user feedback (Ries, 2011; Gothelf & Seiden, 2016). This approach is particularly suited to

fast-paced, innovation-driven environments where speed and adaptability are crucial (Blank, 2013). By applying lean principles to service design, organizations can develop more agile and responsive services, reducing waste and ensuring that the final offerings are closely aligned with customer needs and preferences (Osterwalder et al., 2014).

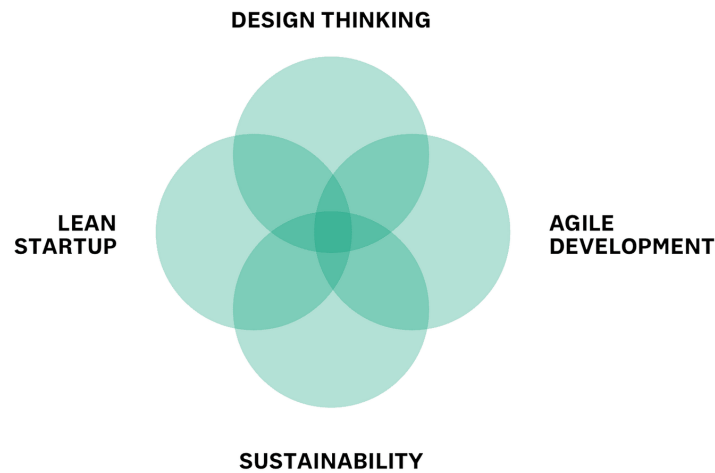


Figure 8: Lean Service Creation. Source: medium.com (2024).

3.2.6 Co-creation Models

Co-creation models involve stakeholders, especially users, in the service design process, facilitating a collaborative way to solving service-related challenges (Sanders & Stappers, 2008; Prahalad & Ramaswamy, 2004). This approach is based on the premise that services will be more effective and relevant if they are designed with direct input from those who will use and be affected by them. Co-creation can take various forms, from workshops and focus groups to online communities and social media platforms, providing numerous opportunities for engaging with users and incorporating their insights into the design process (Sanders et al., 2010; Füller, 2010). This collaborative approach not only enhances the relevance and user-friendliness of services but also fosters a sense of ownership and commitment among all participants (O'Hern & Rindfleisch, 2010).

4 FINDINGS FROM THE SYSTEMATIC REVIEW

In this chapter, the findings from the systematic literature review are presented, aiming to consolidate existing knowledge in the field of service design. Following a structured approach, relevant studies from academic journals, industry reports, and conference proceedings were systematically identified and analyzed. The purpose of this review was to examine various service design models, assess their applicability in different contexts, and identify key insights to inform the comparative analysis.

Study Context: The purpose of this study was to synthesize existing literature on service design models, focusing on their methodologies, applications, strengths, and weaknesses. The research questions aimed to uncover trends, patterns, and gaps in the literature, providing a comprehensive overview of the theoretical landscape of service design.

Methodology: A systematic literature review was conducted, employing predefined search criteria and rigorous inclusion and exclusion criteria. Data collection methods included searching academic databases, consulting relevant journals and conference proceedings, and reviewing industry reports. Analysis techniques involved thematic analysis and qualitative synthesis to extract key findings and insights from the selected studies.

Key Results: The review identified important findings related to service design models, including common methodologies, emerging trends, and practical applications. These findings were synthesized to provide a holistic understanding of the landscape of service design and to inform the comparative analysis.

Model Analysis: Specific insights related to the service design models discussed in Chapter 3 were analyzed in detail. Each model was assessed based on predefined criteria, including its utility, strengths, weaknesses, and applicability in different contexts.

Author's Conclusions: The key conclusions drawn by the authors of the selected studies were summarized, highlighting their implications for theory and practice in service design.

Criteria Application: Each study was evaluated based on predefined criteria from Chapter 2, assessing its relevance, quality, and contribution to the literature on service design models.

The data was collected and handled in Microsoft Excel, and the material was mainly sourced from Google Scholar.

4.1 Presentation of Selected Studies

The systematic review encompassed a detailed examination of studies that apply key service design models like the Double Diamond, Service Blueprinting, and Human-Centered Design Framework. These models were scrutinized within various practical contexts to assess their adaptability, effectiveness, and impact on service design practices. Overall, the review analyzed a total of 50 case studies to provide a comprehensive understanding of the application of these models. Here, the data from selected studies that exemplify the diverse applications and contributions of these models to the field of service design are summarized and presented.

4.1.1 Study Summaries and Relevant Data

→ Double Diamond

Design process for a photography service application: the application of Double Diamond to UX/ UI design process

Authors	and	Publication	Year:	Vuong,	2022
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Study Context: Application of Double Diamond design process to improve the user interface and service delivery for FinFo, a mobile app that connects users with professional photographers.

Methodology: Utilized a mixed-methods approach including surveys for quantitative data collection and interviews for qualitative insights, along with iterative prototyping to define and develop the service.

Key Results: Enhanced user satisfaction and increased usability, demonstrating the Double Diamond’s effectiveness in managing complex design challenges in digital service platforms.

Model Analysis: Proved beneficial for exploring and refining user needs and delivering tailored digital service solutions.

Author's Conclusions: The model facilitated a structured yet flexible approach to UX/UI design, aligning well with user-centered design principles.

Relevance: This study demonstrates how the Double Diamond model can be effectively applied in

the digital services sector to address complex user needs and enhance digital service offerings, directly aligning with the objectives of examining adaptable service design frameworks.

→ **Service Blueprinting**

Service Blueprint for Service Processes Improvement: A Case Study of Airport Passengers Services

Authors and Publication Year: Abugeddida, Donnellan & Fallon, 2021

Study Context: Application of Service Blueprinting to enhance customer experience management in the airline industry.

Methodology: Detailed mapping of customer touchpoints and service processes.

Key Results: Identified critical service gaps and improvement areas, leading to streamlined operations and enhanced customer satisfaction.

Model Analysis: Effective for visualizing service operations and aligning them with customer expectations.

Author's Conclusions: Highlighted the necessity of a systematic approach to understanding and improving service interactions in complex environments.

Relevance: By applying Service Blueprinting to airline services, this study illustrates the model's utility in visually mapping and optimizing customer service processes, supporting the research objective of understanding models that facilitate operational efficiency and enhanced user interaction.

→ **Human-Centered Design (HCD) Framework**

Financial Management User Personas in Shared Service Centers: Case Study For Visma Public Oy

Authors and Publication Year: Varis, 2021

Study Context: Integration of IDEO's Human-Centered Design Framework to redesign customer service processes in a bank.

Methodology: Engaged various stakeholders through interviews and co-design sessions to gather deep insights into customer needs.

Key Results: Improved service offerings and customer interaction protocols, significantly enhancing customer satisfaction rates.

Model Analysis: Demonstrated the HCD Framework's utility in fostering innovation and customer empathy in service design.

Author's Conclusions: The model was crucial in driving deeper customer understanding and tailored service innovation.

Relevance: The study's use of the HCD Framework within a financial context shows its effectiveness in driving customer-focused innovation, directly contributing to the research objective of deploying service design models to foster user-centric service developments.

→ **Personas**

Exploring the Use of Personas in User-Centered Design of Web-based e-services

Authors and Publication Year: Hjalmarsson, Gustafsson & Cronholm, 2015

Study Context: Use of personas to guide the development of user interfaces for e-commerce platforms.

Methodology: Creation and application of detailed buyer personas based on market research and user data analysis.

Key Results: More personalized shopping experiences and increased conversion rates.

Model Analysis: Showed effectiveness in aligning product features and marketing strategies with user expectations.

Author's Conclusions: Essential for targeted content creation and personalized marketing.

Relevance: This application of personas in e-commerce development highlights the model's capacity to understand and cater to diverse consumer profiles, thereby enhancing user experiences and supporting the research aim of exploring user-centric design approaches.

→ **Journey Mapping**

A study customer journey map for user experience analysis of information and communications technology service

Authors and Publication Year: Lee, MJ Kim, SW Kim, 2015

Study Context: Employing Customer Journey Mapping to enhance patient experiences at healthcare facilities.

Methodology: Detailed tracking of patient experiences from initial contact through to post-treatment follow-ups.

Key Results: Identified and addressed several key patient touchpoints that previously led to patient dissatisfaction.

Model Analysis: Effective for uncovering hidden interactions and pain points in the service delivery process.

Author's Conclusions: Crucial for improving holistic patient care and operational efficiency.

Relevance: The study's focus on employing Customer Journey Mapping in healthcare services demonstrates the model's importance in identifying critical user interactions and pain points, pertinent to the objective of enhancing user satisfaction through service design.

→ **Service Safari**

Introducing Service Design into the Sports Experience – Case HC TPS

Authors and Publication Year: Urvas, 2021

Study Context: Use of Service Safari to observe and innovate the sports experience at HC TPS hockey games.

Methodology: Direct observation and engagement at hockey games to gather real-time data on fan interactions and satisfaction.

Key Results: Insights led to improved game day experiences and more effective fan engagement strategies.

Model Analysis: Provided an immersive method to gain authentic insights into fan behaviors and needs during games.

Author's Conclusions: Service Safari is valuable for developing immediate and impactful service interventions in sports environments.

Relevance: Utilizing Service Safari in a sports setting showcases the model's ability to directly engage with fan environments, aligning with research goals of applying observational service design methods for real-time data collection and fan experience enhancement.

→ **Lean Service Creation (LSC)**

Solving software maintenance challenges using a Lean Service Creation approach

Authors and Publication Year: Tauciuc, 2018

Study Context: To address the challenges in software maintenance by applying the Lean Service Creation (LSC) approach to continuous development practices.

Methodology: Utilized experiments involving LSC tools, periodic surveys, and focus groups among software development teams to gather real-time data and feedback.

Key Results: Significant improvements in the software maintenance process, enhanced team collaboration, and better alignment with user needs.

Model Analysis: Showed the agility of LSC in adapting to rapidly changing technological environments.

Author's Conclusions: Critical for maintaining competitive advantage and fostering innovation.

Relevance: The study illustrates the utility of LSC in software development, particularly in agile environments, aligning with research goals of applying agile and iterative service design methodologies to improve operational efficiency and responsiveness.

→ Co-creation Models

Achieving Research Impact Through Co-creation in Community-Based Health Services: Literature Review and Case Study

Authors and Publication Year: Greenhalgh, Jackson, Shaw & Janamian, 2016

Study Context: Implementation of co-creation models to design community health programs.

Methodology: Workshops and community meetings to involve stakeholders directly in the service design process.

Key Results: Programs more accurately met the specific health needs of the community, leading to higher engagement and better health outcomes.

Model Analysis: Proved essential for integrating diverse stakeholder perspectives and achieving sustainable health solutions.

Author's Conclusions: Enabled more effective and inclusive community health services.

Relevance: This study exemplifies how co-creation can facilitate community involvement in health service design, crucial for the research aim of investigating participatory design processes that effectively address specific community health needs.

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4.2 Comparative Analysis

This section thoroughly evaluates selected service design models including the Double Diamond, Service Blueprinting, Human-Centered Design (HCD), Personas, Journey Mapping, Service Safari, Lean Service Creation (LSC), and Co-creation Models. By comparing these models, the analysis assesses their theoretical frameworks, methodologies, practical applications, and overall effectiveness across various sectors such as healthcare, digital services, and education.

4.2.1 Analysis Based on Comparative Criteria

Framework and Methodology

The Double Diamond model, structured around four phases—Discover, Define, Develop, and Deliver, encourages a balanced approach of divergent and convergent thinking, suitable for tackling complex, multifaceted design challenges. Service Blueprinting excels in environments with complex operational processes, such as healthcare, by detailing customer and staff interactions and pinpointing service delivery inefficiencies.

Effectiveness and Applicability

Lean Service Creation is particularly effective in technology-driven sectors due to its emphasis on rapid prototyping and agile methodologies, allowing businesses to quickly adapt to new information and market demands. Co-creation Models stand out in projects requiring deep user engagement, making them ideal for community-centered initiatives where stakeholder input is crucial.

Adaptability and Flexibility

While models like Service Blueprinting are less adaptable to non-linear and dynamic environments, Journey Mapping offers flexibility by visualizing customer experiences across different touchpoints, adapting to various user scenarios in services.

User Centricity

Models such as Human-Centered Design and Personas are highly user-centric, focusing extensively on empathy and user feedback to shape service offerings that are closely aligned with user needs and expectations.

→ **Applicability in Different Sectors**

Healthcare

Service Blueprinting is particularly effective in healthcare due to its ability to map out complex service processes and patient interactions, which is crucial for identifying inefficiencies and enhancing patient care. Human-Centered Design is valuable for developing patient-centric services that address specific user needs and improve overall patient experiences.

Retail

Journey Mapping helps retail businesses understand customer paths and pain points, leading to enhanced customer service and tailored shopping experiences. Co-creation Models engage customers directly in the service design process, fostering innovation and loyalty by aligning services with actual customer desires.

Banking and Financial Services

Personas are instrumental in developing financial products tailored to the diverse needs of various customer segments, enhancing personalization and customer satisfaction. Lean Service Creation supports rapid prototyping and iterative development, which is crucial for the fast-paced financial services sector facing constant technological disruptions.

Public Sector

Double Diamond provides a structured approach to addressing public service challenges, ensuring comprehensive problem analysis and solution development. Service Safari offers an immersive method to understand and innovate on public service delivery by directly observing and interacting with service users.

Telecommunications

Lean Service Creation excels in telecommunications, where rapid service development and deployment are needed to keep pace with technological advances and competitive pressures. Human-Centered Design ensures that new telecommunications services are user-friendly and meet the evolving expectations of consumers.

Hospitality and Tourism

Service Blueprinting can detail the full scope of guest interactions and service delivery, essential for creating seamless hospitality experiences. Journey Mapping is particularly useful for visualizing the customer's end-to-end journey, helping to enhance guest satisfaction at every touchpoint.

Education

Co-creation Models involve students, faculty, and staff in the design process, leading to more effective educational services and environments. Double Diamond helps educational institutions systematically explore and implement innovative teaching methods and administrative services.

Technology and IT

Lean Service Creation supports the technology sector's need for agile development methodologies, enabling quick adaptations based on user feedback and testing results. Personas help in designing user interfaces and software that meet the specific needs of various user types, crucial for usability in tech products.

Each model has distinct strengths that make it more suitable for specific sectors based on the typical challenges and requirements of those industries. For instance, models that emphasize user feedback and rapid iteration are invaluable in technology-driven sectors like telecommunications and IT, while those that provide detailed process insights are crucial in complex operational environments such as healthcare and hospitality.

4.2.2 Implications of the Findings

The findings from the comparative analysis of service design models across various industries elucidate several crucial implications that span academic, practical, and policy-making domains. These following implications are vital for enhancing service design practice and theory.

The insights derived from comparing service design models across different sectors provide practitioners with a detailed guide for selecting the most appropriate models for specific projects. Factors such as the complexity of the service environment, the engagement level of stakeholders, and industry-specific requirements are crucial in this selection process. This guidance ensures that service design efforts are strategically aligned with project goals and industry characteristics.

The comparative analysis improves our understanding of how different service design models perform in various contexts. This understanding aids organizations in optimizing their service design processes, ensuring that they are not only effective but also efficient in meeting operational goals and enhancing user satisfaction. Organizations can use this insight to refine their approaches, leading to better resource allocation and improved service delivery outcomes.

This analysis contributes significantly to the academic field of service design by detailing the strengths and limitations of each model in various applications. It supports the development of a more nuanced theoretical framework that can underpin future research and exploration in service design. Furthermore, it provides a scholarly basis for the interdisciplinary application of these models, encouraging innovation in service design education and research.

Identifying specific strengths and weaknesses of each service design model offers valuable directions for their enhancement. For example, integrating digital tools into traditional models like Service Blueprinting could address their limitations in handling dynamic and complex service settings. These recommendations pave the way for future advancements in service design methodologies, enhancing their applicability and effectiveness.

The adaptability of service design models across different sectors demonstrates their potential for broader application, promoting innovative solutions in traditionally underserved areas such as public services and healthcare. This encourages a holistic approach to service design, facilitating the exchange of ideas and methods across disciplines, and fostering a culture of continuous improvement and innovation.

The findings have significant implications for policy-making and strategic planning, helping leaders at all levels to integrate effective service design practices into their operational and strategic initiatives. By understanding the specific benefits and applications of various service design models, policymakers can craft more effective public policies and corporate strategies that enhance service delivery and customer satisfaction.

These implications collectively advance the practice and theory of service design, offering structured pathways for leveraging the unique benefits of each model to enhance service quality, user experience, and operational efficiency. This section underscores the transformative potential of service design models when applied with an informed and strategic approach, ultimately leading to significant improvements in both public and private sectors.

5 DISCUSSION

5.1 Synthesis of Comparative Analysis

The comparative analysis of service design models across multiple sectors reveals significant insights into their adaptability, effectiveness, and practicality. By examining these models in diverse contexts, this synthesis has highlighted common patterns and key insights that underline the strengths and limitations of each model.

5.1.1 Key Insights and Patterns

Some models, such as the Lean Service Creation and Human-Centered Design, demonstrate high adaptability across various industries due to their emphasis on rapid prototyping and iterative feedback, which are crucial in fast-paced and customer-centric sectors (Brown, 2008; Blank, 2013). Models that actively involve stakeholders, particularly co-creation models, often result in higher satisfaction and better tailored services, underscoring the importance of stakeholder engagement in the service design process. Service Blueprinting and Journey Mapping are particularly effective in complex service environments where precise process mapping can lead to significant improvements in service delivery and customer experience (British Design Council, 2005; Shostack, 1984).

Universality vs. Specialization

According to Lockwood (2009), the Double Diamond model is praised for its versatility, supporting a wide array of industrial applications through its dual focus on divergence and convergence in the design process. This adaptability makes it highly effective in general applications. In contrast, models like Service Blueprinting show higher specialization, offering substantial benefits in sectors with complex logistical operations such as healthcare and hospitality, where understanding and optimizing every touchpoint and backend process can significantly enhance service delivery and customer satisfaction (Bitner et al., 2008; Polaine et al., 2013).

Pattern: There is a clear division between models that are adaptable and broadly applicable versus those that are specialized and sector-specific. This pattern suggests a need for careful selection based on specific project requirements and industry characteristics.

Impact of Digital Transformation

The integration of digital tools has significantly influenced the effectiveness of traditional service design models. For example, digital enhancements in Journey Mapping and Service Blueprinting have enabled these models to handle dynamic, real-time data, enhancing their applicability in fast-paced environments like telecommunications and technology. Artadi and Syah (2019) discuss how Lean Service Design has transformed financial operations through digital tools that streamline decision-making processes. Additionally, Bitner et al. (2008) highlight how Service Blueprinting, when enhanced with digital capabilities, can significantly improve the accuracy and timeliness of service delivery in sectors that demand rapid responsiveness.

Pattern: Across industries undergoing digital transformation, service design models that easily integrate digital tools tend to be more effective and are quickly adopted, indicating a trend towards digital-centric service design practices.

Importance of User-Centric Approaches

Models that heavily emphasize user involvement, such as Human-Centered Design and Co-creation Models, consistently lead to higher user satisfaction and better tailored services. These models facilitate deeper empathy and understanding, crucial for designing solutions that truly meet user needs. Sanders and Stappers (2008) discuss how co-creation, by involving users directly in the design process, can lead to more effective and innovative outcomes by aligning the services more closely with user expectations. Similarly, Brown and Wyatt (2010) illustrate how Human-Centered Design focuses on empathy for users, enabling designers to create solutions that are not only innovative but also deeply relevant to user needs.

Pattern: There is a growing recognition of the value of user-centric methodologies across all sectors, with a notable correlation between the depth of user engagement in the design process and the success of the resulting services.

Efficiency and Innovation

Lean Service Creation and similar agile models are recognized for promoting efficiency and fostering innovation, particularly in sectors where market conditions rapidly evolve, such as technology and telecommunications. Blank (2013) underscores how the Lean Startup approach, a precursor to Lean

Service Creation, catalyzes rapid innovation by employing iterative cycles of learning and adaptation, which are critical in fast-paced industries. Furthermore, Ries (2011) elaborates on how such agile methodologies reduce waste and increase the potential for significant innovations by tightly aligning product development processes with actual user needs and market demands.

Pattern: Efficiency in service design is increasingly tied to iterative processes and rapid prototyping, which not only speed up the design process but also introduce a higher capacity for innovation and adaptation.

Scalability and Flexibility

The scalability and flexibility of a service design model are critical in determining its success across different scales of operations, from small startups to large corporations. For instance, models like the Double Diamond and Lean Service Creation scale well, accommodating both small-scale projects and large, complex systems. The British Design Council (2005) discusses how the Double Diamond model provides a structured yet adaptable framework that can be applied regardless of organizational size, which helps in managing various levels of complexity within projects. Similarly, Ries (2011) describes how Lean Service Creation, derived from Lean Startup principles, emphasizes rapid prototyping and continuous feedback loops, making it highly adaptable and scalable across different business environments and sizes.

Pattern: A recurring theme is that the more scalable and flexible a model, the wider its adoption and the greater its impact, suggesting that adaptability is a key feature of successful service design models.

Integration with Organizational Strategy

Service design models that align well with organizational strategies and goals, such as those that incorporate extensive stakeholder feedback loops and strategic alignment sessions, tend to be more successful in implementation. As discussed by Osterwalder, Pigneur, and Clark (2014), aligning service design models like Lean Service Creation with organizational strategy enhances the ability to quickly adapt to market demands and internal changes, ensuring the services are not only innovative but also strategic. Furthermore, Sanders, Brandt, and Binder (2010) highlight the importance of involving stakeholders in the design process, which can significantly contribute to the alignment of service outcomes with organizational goals, enhancing the overall success of service implementation.

Pattern: Successful integration of service design into organizational strategy often hinges on the model's ability to articulate and address strategic business objectives, showcasing the importance of strategic congruence in service design practice.

5.2 Theoretical Implications

The findings from the comparative analysis contribute to a deeper theoretical understanding of service design, offering insights into how these models can be conceptualized and operationalized within various theoretical frameworks.

Enhancement of Service Design Frameworks

The findings reinforce the importance of structured frameworks in service design, such as the Double Diamond, which provides a clear methodology for moving from problem identification to solution implementation. The effectiveness of these frameworks across different sectors validates and enhances the theoretical basis for their structured approach to innovation. The British Design Council (2005) has detailed how the Double Diamond model facilitates a thorough and disciplined process of exploration and refinement, which is crucial for successful service design across diverse industries. Additionally, Lockwood (2009) emphasizes that the clarity and phased approach of the Double Diamond model help organizations to effectively navigate through the complexities of innovation, ensuring that the solutions developed are both creative and practical.

Implication: This reinforces theories that advocate for systematic, phase-based approaches in design thinking and challenges more linear or rigid methodologies by highlighting the flexibility and adaptability of structured frameworks to various contexts.

The Role of User-Centricity in Theory

User-centric models like Human-Centered Design and Personas have shown significant success in aligning services with user needs. The success of these models in practice provides empirical support for theoretical constructs that prioritize user engagement and empathy as central to the design process. Brown (2008) discusses the profound impact of Human-Centered Design in driving innovation by focusing deeply on understanding user needs and experiences. This approach is further exemplified by Cooper, Reimann, and Cronin (2007), who illustrate how personas, as tools in

Human-Centered Design, facilitate a more nuanced and empathetic understanding of the user, thus enabling designers to create more effective and tailored services.

Implication: This supports and extends theories of user-centered design by empirically demonstrating their effectiveness in not only enhancing user satisfaction but also in driving service innovation. It suggests a theoretical expansion where user-centricity is not just a part of design but a fundamental, driving principle.

Interdisciplinary Theoretical Integration

The adaptability of service design models like Lean Service Creation and Service Blueprinting across diverse sectors such as technology, healthcare, and education illustrates the interdisciplinary nature of service design. Ries (2011) articulates how Lean Service Creation, utilizing principles from the Lean Startup methodology, adapts seamlessly across different industries by emphasizing rapid iteration and feedback. Similarly, Bitner et al. (2008) discuss how Service Blueprinting has been effectively applied in healthcare to map out complex service processes, demonstrating its utility in both understanding and enhancing user experiences across varied sectoral needs.

Implication: This prompts a theoretical dialogue about the integration of service design with other academic disciplines such as information technology, business management, and even psychology. It encourages the development of hybrid theories that encompass principles from multiple fields, enhancing the richness and applicability of service design theories.

Dynamics of Co-creation and Participatory Design

Co-creation models have demonstrated how the active participation of stakeholders can lead to more effective and sustainable service solutions. This finding lends empirical weight to theoretical claims about the value of participatory design and stakeholder involvement in the design process. Sanders and Stappers (2008) elaborate on the co-creation landscape, emphasizing how integrating stakeholders in the design process not only enhances the creativity and relevance of solutions but also ensures they are more aligned with user needs and expectations. Furthermore, Sanders, Brandt, and Binder (2010) highlight the importance of co-creation in fostering a deeper engagement with users, which is crucial for achieving lasting and meaningful outcomes in service design.

Implication: The success of these models in practice validates and expands upon existing theories of co-creation and participatory design, suggesting that these theories could be applied more broadly

and deeply within service design processes. It calls for a theoretical reassessment of stakeholder roles, proposing that stakeholder integration can be a critical factor in the success of service design.

Scalability and Flexibility in Service Design

The ability of certain models to scale and adapt to different project sizes and types underscores the need for flexibility in theoretical models of service design. The British Design Council (2005) discusses the Double Diamond model's inherent adaptability, which allows it to scale effectively across various industry sectors and project sizes, emphasizing its utility in both small startups and large corporate settings. Additionally, Ries (2011) supports this perspective with his discussion on Lean Service Creation, noting that its foundation in the Lean Startup principles provides the necessary agility and responsiveness required to tailor services to diverse operational scales and rapidly changing market conditions.

Implication: This challenges traditional theories that often favor more rigid, one-size-fits-all approaches and supports the development of more dynamic, scalable theories that can accommodate the complexities of real-world applications.

5.2.1 Contributions to Service Design Theory

This analysis contributes to the refinement and development of theoretical frameworks that support the integration and application of service design models in various contexts, enhancing our understanding of their mechanisms and impacts. The study highlights the methodological diversity within service design, advocating for a more inclusive approach to theory development that accommodates various models and their unique contributions to both practice and academia. Blomkvist, Holmlid, and Segelström (2010) discuss the evolution and challenges in service design research, emphasizing the need for a theoretical foundation that embraces methodological plurality to reflect the field's richness and complexity. Additionally, Sangiorgi (2009) points out the importance of developing frameworks that not only guide design practices but also integrate insights from different disciplines, thereby fostering a deeper understanding of service design's impact across various sectors.

5.3 Practical Implications and Recommendations for Practitioners

The comparative analysis of service design models not only highlights their varied applications across different sectors but also underscores critical practical implications that can guide practitioners in optimizing service design processes within their organizations. This section combines insights into practical implications with actionable recommendations, helping practitioners effectively implement these findings.

Effective Model Selection

Practitioners should evaluate the specific needs of their projects against the strengths and limitations of each model discussed. For example, Lean Service Creation might be chosen for projects requiring rapid iteration, while Service Blueprinting might be more appropriate for complex operational environments like healthcare facilities. Choosing the correct model based on project-specific criteria such as project timeline, stakeholder involvement, and industry specifics can significantly enhance the success rate of service design initiatives.

Enhancing Stakeholder Engagement

Early integration of co-creation sessions within the design process is recommended to ensure comprehensive understanding and incorporation of user needs and expectations. This strategy is particularly advantageous in sectors like education and healthcare, where the degree of user satisfaction is intimately connected to the personalization of experiences. Enhancing stakeholder engagement not only elevates the quality and relevance of service design outcomes but also promotes greater organizational buy-in and minimizes resistance to change.

Customization and Adaptability

Adaptation and customization of service design models are crucial for addressing the unique challenges of specific industries. Practitioners might consider blending elements from various models or incorporating innovative digital tools into traditional frameworks, such as using real-time data capture features in Service Blueprinting for dynamic settings. Such customization ensures that the models are precisely tailored to project specifics, increasing the impact and applicability of service design interventions.

Utilizing Digital Tools

Employing resources like digital journey maps or virtual reality simulations can deepen understanding of user experiences and provide a more engaging and interactive analysis. These tools facilitate real-time feedback and data collection, enhancing the agility of the service design process and leading to more effective adaptations based on user input, ultimately driving greater user engagement and satisfaction.

Continuous Improvement and Feedback Loops

It is essential to establish continuous feedback mechanisms to iteratively refine services. This is especially relevant for models like Human-Centered Design, where ongoing user feedback is integral to the process. Continuous improvement practices ensure that services remain relevant and effective over time, adapting to changes in user preferences and market conditions.

5.4 Integration with Research Questions and Objectives

Research Question 1 (RQ1): How do different service design models vary in their theoretical foundations and methodologies?

The comparative analysis revealed diverse theoretical foundations across models, such as Double Diamond's roots in design thinking and Human-Centered Design's grounding in empathy and iterative testing. The study detailed the primary components and steps of each model's methodology, from ideation phases in Double Diamond to iterative cycles in HCD, illustrating how these methodologies effectively translate their theoretical underpinnings into practical applications. The historical and theoretical roots were discussed, emphasizing each model's unique approach to integrating theory with practice.

Research Question 2 (RQ2): What are the relative strengths and weaknesses of the various service design models?

Each model's strengths and weaknesses were clearly delineated, noting contexts where they excel or face challenges. For instance, Service Blueprinting excels in complex operational environments

like healthcare due to its detailed process visualization, whereas it may struggle in less structured, fast-paced settings. Potential pitfalls such as the rigidity of certain models in dynamic environments were discussed, along with how real-world applications align with theoretical strengths and weaknesses.

Research Question 3 (RQ3): How do different service design models prioritize and integrate user-centric design principles and innovation?

The study highlighted models that prioritize user engagement, such as Co-creation Models, which facilitate direct user involvement through workshops and feedback sessions. It was noted that these user-centric models tend to drive significant innovation, particularly in services that require deep understanding of user needs and preferences. Extent of user engagement and its impact on innovation were explored, revealing trends where high user-centricity correlates with increased innovative outcomes.

Research Question 4 (RQ4): In which industries, contexts, and challenges are specific service design models most applicable, and how do they compare in these varied settings?

The analysis provided insights into how certain models are more applicable in specific industries. For example, Lean Service Creation is predominantly used in tech industries due to its agility and adaptability. Contextual factors such as technological advancements significantly influence the applicability and adaptation of models. The influence of contextual factors on model selection and adaptation was thoroughly discussed, showcasing how organizations tailor these models to meet specific industry challenges and goals.

6 CONCLUSION AND RECOMMENDATIONS

6.1 Summary of Key Findings

The study found that the effectiveness of service design models is highly contingent on the context in which they are applied. For instance, the Double Diamond model showed exceptional utility in structured problem-solving environments but was less effective in scenarios requiring rapid iteration. Models that deeply integrate user feedback mechanisms, such as Human-Centered Design and Personas, consistently lead to better user satisfaction and service personalization. This underscores the importance of direct user involvement in the design process to achieve successful outcomes.

Some models, like Lean Service Creation, demonstrated high adaptability across various industries due to their inherent flexibility and emphasis on rapid prototyping, making them particularly useful in technology-driven sectors. Conversely, models such as Service Blueprinting, while highly effective in complex operational settings like healthcare and hospitality due to their detailed process mapping, were found to be less adaptable to industries with less defined service interactions or where services are heavily digitized.

The comparative analysis highlighted how each model's theoretical foundation influences its methodology and practical application. For example, the theoretical underpinnings of the Double Diamond model in design thinking principles facilitate a holistic approach to design challenges, promoting creativity and systematic problem-solving. The study also revealed a significant diversity in methodologies among the models, reflecting their different theoretical orientations. This diversity affects how each model is applied in practice, with some models offering more rigid frameworks (e.g., Service Blueprinting) and others promoting flexibility (e.g., Human-Centered Design).

The relevance of specific service design models to particular industries was a key finding. For instance, Journey Mapping was particularly effective in customer-facing industries like retail and tourism, where understanding the customer journey is crucial for service improvement. Models emphasizing iterative design and user feedback, such as Lean Service Creation and Human-Centered Design, were notably effective in fostering innovation, especially in sectors characterized by rapid technological advancement.

The level of user engagement varied significantly across models. The study found that deeper user engagement typically leads to more effective and tailored service solutions, particularly in models that prioritize co-creation and participatory design approaches. A clear correlation was observed between the degree of user-centricity in a service design model and the positive outcomes in service delivery and user satisfaction. This finding supports the theoretical and practical emphasis on incorporating user insights throughout the design process.

6.2 Contributions to Academic Discourse and Practical Application

Academic Contributions

The research has provided a comprehensive overview of various service design models, contributing to a broader understanding of their theoretical foundations. By examining how these models are grounded in different theoretical traditions, the study enriches the academic discourse surrounding service design methodologies. The findings from this study encourage the integration of service design with other academic disciplines, such as information systems, business management, and psychology. This interdisciplinary approach promotes a richer, more nuanced understanding of how service design can be applied to solve complex problems across different sectors. By highlighting the strengths and weaknesses of each model, the study contributes to the refinement of existing methodologies, suggesting areas where they can be improved or adjusted to increase their effectiveness and applicability. The research showcases the benefits of employing mixed methods in service design studies, advocating for a combination of qualitative and quantitative approaches to gain a deeper understanding of model effectiveness and user engagement.

Practical Contributions

One of the key practical contributions of this study is the development of detailed guidelines that help practitioners select and apply the most appropriate service design model based on specific project needs and industry contexts. These guidelines are instrumental in improving the quality and success of service design projects. The research provides insights into how service design models can be adapted to meet the challenges of rapidly changing industries, particularly those undergoing digital transformation. This is crucial for practitioners looking to maintain relevance and competitiveness in

dynamic market conditions. The study highlights how models that integrate high levels of user engagement tend to foster greater innovation. This finding has significant practical implications, encouraging organizations to adopt more user-centric approaches in their service design practices to enhance creativity and innovation. By detailing how different models prioritize and implement user-centric design principles, the research provides practitioners with actionable strategies for operationalizing these principles in their projects, leading to better user experiences and increased customer satisfaction.

Industry-Specific Insights

The findings offer specific recommendations for the application of service design models in various industries, such as healthcare, education, and technology. These tailored recommendations help practitioners understand and leverage the unique benefits of each model to address sector-specific challenges and opportunities.

Policy and Strategic Development

The insights from this research can influence policy-making and strategic planning within organizations and governmental bodies. By demonstrating the effectiveness of different service design models, the study helps leaders make informed decisions about incorporating these models into broader policies and strategies to enhance public and private service delivery.

6.3 Limitations of the Study

While the study covered a diverse range of service design models, it did not include every model available within the field. Certain emerging or less commonly used models were not examined, which might limit the breadth of the comparative analysis. The choice of models was influenced by their prevalence in academic literature and recognized impact in practice, potentially overlooking innovative but less documented approaches. The study primarily drew on sources and case studies from Western contexts, which may not fully capture the nuances of applying these service design models in non-Western or culturally diverse contexts. As a result, the findings might not be universally applicable across different cultural and geographical landscapes.

The analysis was predominantly based on secondary data from published studies, academic articles, and industry reports. While this provided a broad overview, the absence of primary empirical data collection, such as firsthand interviews or project case studies, may limit the depth of insight into the practical challenges and real-world dynamics of implementing service design models. Some industries, such as technology and healthcare, were more heavily represented in the comparative analysis than others, such as the public sector or non-profit organizations. This could affect the generalizability of the findings across all potential areas of service design application.

The complexity and depth of analysis might vary across different service design models due to the varying amount of detailed information available for each. This discrepancy could lead to inconsistencies in evaluating the strengths and weaknesses of each model comparatively.

The rapidly evolving nature of many industries, particularly those driven by technological advancements, means that the relevance of findings might diminish over time as new models emerge and existing models are adapted. This study captures a snapshot in time, which may not fully reflect future developments. The study's conclusions are based on theoretical assumptions that underpin each service design model. These assumptions may not hold true in all practical scenarios, potentially limiting the applicability of the findings in unexpected or atypical situations.

6.4 Recommendations for Future Research

Building on this study's findings and identified limitations, several promising avenues for future research are proposed to deepen and expand the understanding of service design models.

Inclusion of Emerging and Alternative Models

Future research should explore emerging service design models that remain underexplored in both academia and practice. This includes conducting comparative studies that integrate models from non-Western contexts to evaluate their innovation potential and adaptability across different cultural settings.

Primary Data Collection

Empirical studies involving primary data collection methods such as interviews, surveys, and observations are recommended. These studies should aim to validate and expand on findings derived from secondary sources, implementing detailed case studies in various industries to examine the nuances and contextual influences on the success of different service design models.

Longitudinal and Cross-Cultural Research

There is a need for longitudinal research to monitor the long-term effectiveness of service design models and their adaptations over time. Additionally, expanding research to include cross-cultural studies could provide insights into how diverse cultural and economic backgrounds affect the adoption and modification of these models.

Quantitative Methodologies

Integrating quantitative methods could enhance the understanding of service design models by providing standardized, scalable measures of impact. Developing and validating specific metrics for each model would help quantitatively assess their effects on organizational performance, user satisfaction, and innovation.

Industry-Specific Applications

Further research should focus on industries not extensively covered in this study to address unique service design needs and challenges in sectors like public services, nonprofits, or rapidly evolving technological fields. Studies could also explore the impact of digital transformation and emerging technologies such as AI and IoT on service design practices.

Theoretical and Methodological Expansion

Exploring interdisciplinary theories, such as behavioral economics for user engagement or systems theory for managing complex service configurations, could enrich service design models. Research

should also encourage the development of innovative methodological approaches suited to the complexities of modern, hybrid service landscapes.

User-Centricity and Co-creation

Deeper investigation into user engagement and co-creation processes within service design is advisable. Studies focusing on the mechanisms and outcomes of these approaches could help identify the factors that enhance their effectiveness and clarify the relationship between user-centric methods and innovation outcomes.

6.5 Final Thoughts and Reflections

As I conclude this thesis, several overarching reflections emerge about the nature of service design, its evolving role within various industries, and the critical importance of adaptability in its methodologies. The journey through the comparative analysis of different service design models has not only illuminated their distinct features and applications but has also underscored the dynamic interplay between theory and practical implementation in the field of service design.

As businesses and public organizations increasingly recognize the value of integrated service experiences, the relevance of service design extends beyond traditional boundaries, encompassing elements from technology, psychology, business strategy, and more. This integration challenges service designers to continuously expand their skill sets and theoretical knowledge. The rapid pace of technological change presents both challenges and opportunities for service design. This thesis has highlighted how models must evolve to incorporate new technologies not only to enhance their own methodologies but also to ensure that the services they design can thrive in an increasingly digital world.

The research reaffirmed that at the heart of effective service design lies a deep commitment to user-centricity. Models that excel in engaging users and integrating their feedback tend to not only produce more satisfying services but also drive innovation. This principle seems likely to remain central as service design continues to evolve. Engaging with users also brings ethical considerations to the forefront, emphasizing the responsibility of designers to ensure that this engagement is respectful, inclusive, and genuinely beneficial to all stakeholders.

Navigating the complex landscape of service design models was as challenging as it was enlightening. The process required a balance of critical analysis and creative synthesis, pushing the boundaries of my academic and practical understanding of service design. This thesis has sparked a personal interest in how service design will continue to adapt to our changing world. I am particularly intrigued by the potential for further research that explores the integration of artificial intelligence in service design, aiming to understand how AI can enhance user experiences without compromising human-centric values.

This research journey has not only contributed to the academic field and practice of service design but has also been a profound personal learning experience. It has reinforced the notion that effective service design is not static but a continually evolving discipline that must adapt to new challenges and opportunities. Looking ahead, I am optimistic about the role of service design in creating innovative, efficient, and meaningful service experiences for all.

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