Working paper:

Towards Building a Hybrid Model for the Settlement and Newcomer Services in Canada

Wired: Evaluating Settlement Online (WESO)

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Abstract

The study focuses on highlighting dimensions related to hybrid service quality within the settlement sector in Canada. The growing impact of information technology on service creation and delivery has led Service Provider Organizations (SPOs) to adopt hybrid service delivery models, integrating in-person interactions with technology-mediated ones. However, challenges arise for SPOs and clients, including newcomers with low digital literacy and limited technology access. The paper addresses the absence of a suitable hybrid service quality model within the settlement sector and aims to provide a base for a framework for evaluating service quality in hybrid environments. The study's findings will assist decision-makers in the settlement sector in devising effective service delivery strategies and promoting data-driven decision-making. The paper reviews existing models, an essential step toward proposing a hybrid model specific to the settlement sector and offers directions for future research.

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1. Introduction

The advancements in information technology have significantly transformed the landscape of service creation, delivery, and consumption (Aldrich, 2000; Reid & Bojanic, 2001). In response to the ever-evolving digital environment, Service Provider Organizations (SPOs) have initiated a digital movement to expand their service offerings through hybrid service delivery, effectively integrating in-person interactions with technology-mediated ones at every stage (Burapharat et al., 2021). Although technology has greatly improved service delivery, in-person interactions continue to play a crucial role in the hybrid model (Aldrich, 2000), enabling SPOs to offer clients more accessible, adaptive, and diverse service options.

However, the confluence of rapid digital advancements and the global spread of the COVID virus has posed challenges for service providers with limited digital awareness in continuing to offer settlement services in Canada. Additionally, clients, including newcomers facing barriers like low digital literacy and lack of access to technology, struggle to receive adequate support from service providers to access services effectively. Addressing these foundational challenges is essential.

One major challenge lies in the absence of a comprehensive hybrid service quality model within the settlement sector. While research has extensively explored measuring service quality in human-intensive and technology-enabled services, hybrid systems have been somewhat overlooked (Parasuraman et al., 1988; Bolton & Drew, 1991; Parasuraman et al., 2005; Collier & Bienstock, 2006). Consequently, SPOs must better understand the concept of service quality in hybrid environments and devise effective measurement and improvement strategies before implementing any service delivery solutions or innovations.

In light of this gap, this paper serves as a critical first step toward developing a model for hybrid service quality in the settlement sector, focusing on Canada. To achieve this, the review identifies unique dimensions specific to both service providers and newcomers. The study findings will provide valuable insights for decision-makers in the settlement sector, offering guidance on building an evaluation framework tailored to hybrid settlement service providers. By employing an importance performance

analysis, SPOs can identify key aspects of service quality that are crucial for their newcomer clients, thereby promoting data-driven decision-making in the sector.

This work aims to: a) conduct a comprehensive review to identify and highlight relevant themes related to hybrid service quality; b) present a framework for a service quality model tailored to evaluate hybrid services in the settlement sector; c) provide guidance to the settlement sector on collecting essential information for planning hybrid service strategies; and d) propose directions for future research based on the study's findings.

The paper's structure is as follows: it begins with a review of different model paradigms, followed by an exploration of conventional service quality models, technology-mediated models, and technology acceptance models. Subsequently, the paper summarizes the essential dimensions featured in the service quality model to direct future research regarding a settlement service model.

2. Literature Review

2.1. Model Paradigm: Performance-based vs. Expectation-based models

In this section, we explore the different model paradigms established for assessing service quality. Grönroos (1984) and Parasuraman et al. (1988) are among the notable contributors, as they developed models defining service quality as the discrepancy between anticipated service levels and customer expectation of the service received (see Figure 1 and 2 for illustrations of their models).

Parasuraman et al. (1988) introduced one of the most widely adopted service quality models, based on the Expectation vs. Performance approach. According to this paradigm, if service quality fails to meet client expectations, it is considered poor service quality. However, Cronin and Taylor (1992) criticized this expectation-performance gap measurement and proposed SERVPERF, a model solely based on performance evaluation. To support this viewpoint, Teas (1993) assessed the SERVQUAL scale and found that the gap between expectation and performance lacks discriminant validity and does not effectively explain the importance of service quality attributes in relation to client satisfaction. As a remedy, they suggested a performance-based scale similar to SERVQUAL, devoid of any expectation elements. Similarly, Gabbott and Hongg (1998) observed that even excellent services may fall short of meeting consumer expectations, resulting in a negative gap. Hence, for this study, a performance-based instrument is considered more appropriate than an expectation-performance gap instrument, as it facilitates assessing

the strength of the relationship between individual service quality attributes and their impact on the Acceptance of Online Services, thereby providing insights into the differential model dimensions.

However, Buttle (1996) challenges the expectation paradigm's suitability for evaluating service quality, pointing out that the differences between expectations and perceptions offer little value when using a performance-only instrument (e.g., see Babakus & Boller, 1992; Cronin & Taylor, 1992). Teas's (1993) findings highlight that attribute importance, classic attribute ideal points, and performance forecasts lack discriminant validity for the SERVQUAL expectations (E) and revised expectations (E*) measures, possibly due to respondents' misunderstandings of the questions.

To address these concerns and propose a comprehensive framework that not only overcomes the limitations of Performance-Expectation scales but also aids managers in identifying critical service quality attributes and prioritizing actions, our paper advocates the implementation of the Importance-Performance Analysis (IPA) paradigm. Developed by Martilla and James in 1977 and later modified for the education sector by O'Neil and Palmer (2004), IPA relies on client performance and importance ratings to evaluate service attributes. Clients assess both the organization's performance (how well the organization is performing) and the importance of the service attribute to them (its importance in terms of service quality). Consequently, it is based on clients' perspectives, classifying service quality characteristics based on their value to clients. This makes IPA an excellent managerial tool for setting priorities.

The IPA matrix classifies service quality aspects into four quadrants (see Figure 3.), each indicating a high or low level of simultaneous importance and performance. Its simplicity, adaptability, and diagnostic utility have increased popularity (e.g., Ford et al., 1999; Joseph & Joseph, 1999). Therefore, we recommend that the settlement sector adopts the Importance-Performance Analysis to determine service quality dimensions important to newcomer clients, assisting settlement providers in effective priority setting.

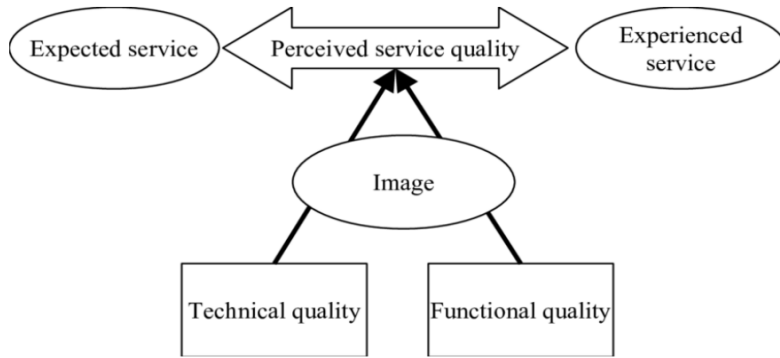Figure 1. The service quality model based on Grönroos (1984).

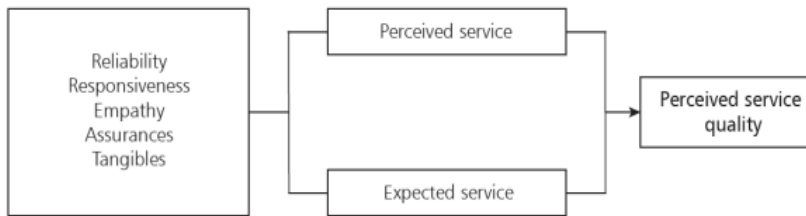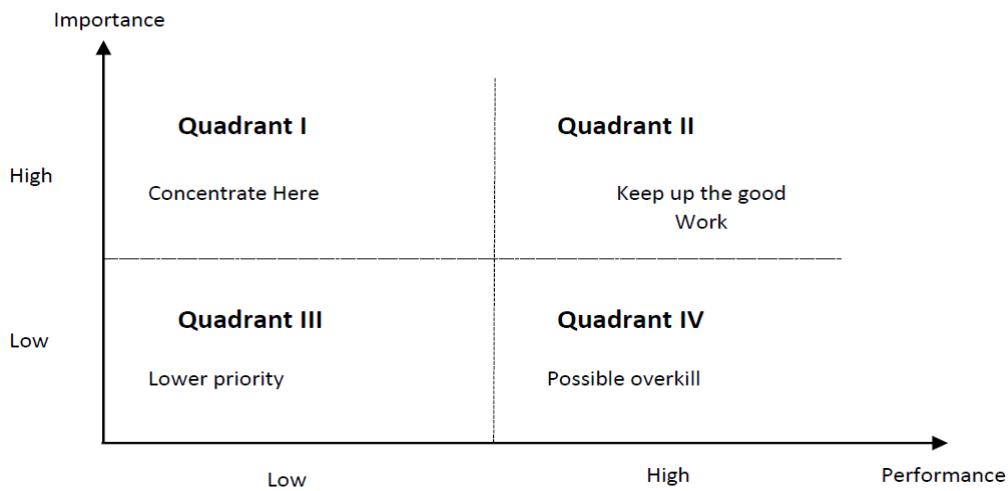Figure 2. The SERVQUAL model based on Parasuman et al. (1988).

Figure 3. The IPA Model based on Martilla and James (1977).

2.2. Selecting the dimensions for the hybrid model

As part of selecting the dimensions for the model, we reviewed the conventional models that were then progressed into technology-mediated models. We also reviewed technology acceptance models that study the behavioural intentions of using the technology.

a. Conventional Service Quality Models

One of the first investigations in the field of service quality was presented by Lehtinen and Lehtinen (1982), who proposed a service quality model with three major dimensions: interactive quality, physical quality, and corporative quality. Interactive quality highlights the interaction between the services provided and the client, whereas physical quality refers to the tangible part of the service provided. In addition, corporative quality characterizes the image perceived by clients of the service provider.

Grönroos (1984) defines technical quality as the aspects that deal with 'what' service is supplied, and functional quality which deals with 'how' this service is provided. The image of the service provider, according to Grönroos, is a third quality factor that moderates both technical and functional components of quality to arrive at a perceived level of service. The more positive and brighter an organization's image is, the less of an influence a mistake has on the perception of service quality (Grönroos, 1990). According to Grönroos (1990), the perceived degree of service quality is determined by functional and technical quality, as well as the difference between expected and perceived service.

The SERVQUAL model (Parasuraman et al., 1988) is a general instrument for assessing service quality. With 22 Likert-scale items to evaluate clients' expectations and performance, this model highlights five dimensions: tangibles, reliability, responsiveness, assurance, and empathy. The model has undergone extensive validation and testing to ensure its validity and reliability (e.g., see Babakus & Boller, 1992; Bolton & Drew, 1991; Carman, 1990; Cronin & Taylor, 1992). Despite the fact that some of the studies did not support the five-dimensional factor structure, Parasuraman et al. (1988) defended it on conceptual and practical grounds. Parasuraman et al. (1991) acknowledged that the SERVQUAL model needs to be tweaked to fit individual situations.

Client-based dimensions such as 'client expectation', 'client satisfaction', and 'client evaluation' were significantly correlated with 'reliable', 'convenient', and 'efficient' service delivery and repeated as primary dimensions of service models in the majority of the reviewed studies. More specifically, among

such studies, several conventional service delivery models have concentrated on elements of human-human interactions such as reliability, assurance, and responsiveness in banking (Levesque & McDougall, 1996), quality and tangibles in audit firms (Caruana et al., 2000), physical aspects, reliability, personal interaction, problem-solving, policy, convenience, product quality, and selection in retail stores (Dabholkar et al., 1996; Burke, 2002), perceived authenticity in the interaction, mutual understanding, provision of personal services, meeting customer expectations, service provider competence, service settings, recovery from failure, and price and performance perception in hotel and restaurant industry (Hoffman et al., 1995; Voss et al., 1998; Matilla & Enz, 2002; Gilbert et al., 2004), and effectiveness, efficiency, productivity, decor, maintenance, and interaction in airport services (Fodness & Murray, 2007).

b. Technology-Mediated Service Quality Models

With the rise of technology-mediated services, next to the dimensions identified in models such as SERVQUAL, further research has tended to the identification of additional dimensions of service quality (e.g., see Levesque & McDougall, 1996; Brady & Cronin, 2001) especially technology-related dimensions (e.g., see Parasuraman et al., 2005; Collier & Bienstock, 2006).

Considering the contributions of the above-mentioned models on one hand, and the low relevance of conventional measurement methods that do not consider the service delivery digital aspects on the other hand, has led to the creation of new dimensions of service quality- such as automated search, communication among clients, information acquisition, content, mass customization, and ease of use - to come to the light (e.g., see Bailey & Pearson, 1983; Doll & Torkzadeh, 1988; Peterson et al., 1997). In particular, research (e.g., see Dean, 2002; Curran & Meuter, 2005) identified call centres and self-service technology as two influential elements significantly correlated with clients' perceptions of service quality. These dimensions expanded our search for key terms to include 'digital literacy', 'digital capability', 'digital citizenship', and 'digital safety and security', which in turn, highlighted the e-government service delivery. With the respective terms, came technology-mediated modified models, such as COBRAS, Digital Citizenship model, and Multidimensional conceptualization of service model (client-based service satisfaction model).

With the advancement of technology, an interdisciplinary field of research, e-government, emerged in service delivery. United Nations (2010) elaborates on e-government as "the use of Information and Communications Technology (ICT) and its application by the government for the provision of information and public services to the people". In this application of ICT, the Internet is used to deliver information

and services to clients. The goal of e-government is to facilitate and encourage an electronic relationship between the government and its citizens. Further, e-governments intend to provide greater accessibility to the citizens by allowing them to acquire services without having to visit a government entity (Moon, 2002). The e-government success models were first presented by DeLone and McLean in 1992 and later modified in 2003.

The respective model (D & M) evaluates online services based on six major dimensions of system quality, information quality, service quality, system use, user satisfaction, and net benefits. Accuracy, relevancy, precision, reliability, completeness, and currency are all characteristics of information quality. Further, system quality encompasses ease of use, user-friendliness, system flexibility, usefulness, and reliability (Osman et al., 2011). This is to say that online services can be evaluated in terms of information, system, and service quality using this success evaluator model. The respective dimensions, in turn, have an impact on clients' satisfaction with the provided services and whether they will use them again (e.g., see Wang & Liao, 2008; Chen, 2010; Floropoulos et al., 2010; Jang, 2010). The D & M model places a greater emphasis on technology quality and user benefits while paying less attention to other aspects like cost, risk, and opportunity.

To evaluate e-government service quality, many researchers expanded, adapted, or updated the SERVQUAL model. For instance, Iwaarden et al. (2003) adapted the five existing dimensions of SERVQUAL to accommodate the characteristics of the websites. These characteristics include tangibles (appearance of the website, navigation, search options, and structure), reliability (ability to judge the trustworthiness of the offered service and the organization performing the service), responsiveness (willingness to help customers and provide prompt service), assurance (the ability of the website to convey trust and confidence in the organization behind it with respect to security and privacy) and empathy (appropriate user recognition and customization). Subsequently, Parasuraman et al. (2005) developed E-SQUAL as a new measure of e-service website quality. E-SQUAL is composed of a 22-item scale of four dimensions, namely; efficiency, fulfillment, system availability, and privacy.

While SERVQUAL model is often used to measure the perceptions of the clients regarding service quality, a better-suited and equipped model to measure client perception of the service delivery could be E-S-Qual which quantifies e-service quality. As described by Parasuraman (2005), the traditional SERVQUAL is not a suitable and comprehensive option for evaluating internet-based service quality, whereas the basic E-S-Qual and its sister model, E-RecS-QUAL are mostly practical choices for e-service quality

measurement. Given this, neither of these two models are solely sufficient for the purpose of our research which is focused on both in-person and online service quality.

With the priority of user experience in mind, many researchers proposed a user-centered design for e-government websites where the usability of available services to clients is a core value. To achieve this, researchers (e.g., see Huang & Chao, 2001; Holliday, 2002; Fassnacht & Koese, 2006; Balog et al., 2008) incorporated specific criteria to evaluate the level of usability and usefulness of e-government websites such as the amount of information provided, contact information, feedback options, search capabilities, and related links.

Continuation of the search revealed that studies have prioritized specific parameters in determining service quality, regardless of the service provider category. For example, elements of physical environments including ambient conditions, spatial layout and functionality, signs, symbols, and artifacts (Bitner, 1992), and delays in service delivery (Taylor & Claxton, 1994) are deemed as affecting clients' perception in evaluating service delivery. As a result, in a comprehensive evaluation of service delivery to clients, enabled by the technology element, models such as COBRAS incorporated such dimensions as part of the tangible and intangible benefits to provide the clients with.

To compensate for the shortcomings of the previous models, Osman et al. (2011) proposed the COBRAS model with four dimensions including Costs, Opportunities, Benefits, and Risk Analysis for Satisfaction. The cost construct includes measurable and tangible variables. For instance, spending time and money to access and complete a requested service is categorized under this dimension. This construct hypothesizes that client's satisfaction has a negative correlation with the service cost. The benefit construct evaluates the values of information availability, services quality, and system quality. These values were previously developed in D&M and SERVQUAL models. These benefits include both tangibles and intangibles. Among the tangible benefits, saving time and money are the major ones. Intangible benefits incorporate information quality (information availability, adequacy, accuracy, relevancy, reliability, understandability, completeness), service quality (design, well–organized site, quick delivery, accessibility, ease of navigation), and system quality (quick loads, responsive, visually attractive, adequacy of links, well-organized). Unlike the cost construct, the clients' satisfaction shows a positive correlation with the benefits of the provided services.

The risk construct involves different levels of risk ranging from electronic sharing of personal information while requesting a service, to losing information without consent. Such risks arise when the reliability of

services is jeopardized. Though such risks inevitably take place, increased trust in the infrastructure of technology and lowered risk levels can lead to the adoption of technology and the services provided via technology (e.g., see Kertesz, 2003; Zhang & Prybutok, 2005; Rotchanakitumnuai, 2008; Udo et al., 2008). Similar to the cost construct, the lower the risk associated with a service category, the higher the client satisfaction with the said service. Lastly, the opportunity construct may arise from environmental, governmental, and technological incentives. Among other variables, this construct includes the ease of service access anytime and anywhere, gaining up-to-date information on the progress of services in public areas, and making use of technological advancements such as personalized services. This construct correlates higher client satisfaction with more opportunities.

During our search for technology-mediated models adopted to evaluate the success rate of service delivery in different contexts, we came across a Multidimensional conceptualization of the service model (client-based service satisfaction model) (Chan et al., 2021) with three main components. These components investigate clients' perception of core services, facilitating services, and supporting services. Perceptions of a core service are defined as the extent to which clients perceive an e-government service delivers its primary (core) service. Given the information-centric nature of e-government services, the quality of the information provided for the clients is significantly correlated with their evaluation of such services. As the second component of the Multidimensional model, perceptions of facilitating services refer to the extent to which a client perceives an e-government service facilitates service use. This implies that these services can address barriers to service use, such as access to computing equipment and the internet. These facilitating services can help address the digital divide and the inequality of access to services among the clients. Moreover, such services can assist the category of clients whose access to service, due to their lack of technological knowledge, has been negatively impacted. Lastly, the perception of supporting services is defined as the extent to which a person perceives an e-government service as attractive. These services cover all the tangible and intangible benefits and characteristics that make services presentable. For instance, design characteristics can further accentuate the features of e-government services such as service delivery channels (i.e., websites).

EGOVSAT, a structural equation model for measuring service quality, was created with the goal of providing a scale for evaluating government-to-citizen web-based initiatives in terms of citizen satisfaction (Abhichandani et al., 2005). Various performance and emotional metrics are included in this quantitative model. This model considers concepts like utility, efficiency, and customization, as well as emotional qualities like confidence, pleasantness, frustration, and contentment. EGOVSAT satisfaction model is a

causal construct that includes qualities that encourage confidence, trust, openness, and citizen-centric delivery while implementing e-government activities.

Furthermore, the I-MEET framework developed by Osman et al. (2014) is an integrated model for evaluating e-government service transformation from the perspectives of stakeholders. It is based on a combination of value chain management and business process transformation principles to optimize the whole value chain of suppliers and users at the same time. Its goal is to bring stakeholders together around a single global value rather than the conventional disintegrating strategy of each stakeholder optimizing their own local e-service value at the expense of others. The I-MEET framework is developed from the perspective of all stakeholder groups, such as users/citizens, businesses, public administrators (employees and politicians), government agencies, and e-government project managers (Rowley, 2011). The model begins with the identification of the e-service to be evaluated and the engaged stakeholder group that contributes real-world data on the e-service. The framework is based on a mission-driven approach, with goals that are converted into strategies, objectives, and activities that promote the intended values.

c. Technology Acceptance Models

Customers are expected to use common sense when making choices, usually relying on the information they have. The Theory of Reasoned Action explains the factors that influence these decisions. According to this theory, whether customers will do something or not depends on their attitude (A) and subjective norm (SN), which is what they think others expect (Ajzen and Fishbein, 1975). Attitude (A) is shaped by what they think will happen and how they feel about it, while Subjective Norms (SN) are influenced by what others think and whether they're likely to agree with them (De Vries et al., 1988).

Some researchers added new ideas to this theory. For example, they included self-efficacy which is simply self-confidence in their ability to do something. Others expanded on the theory, adding a factor about how easy or difficult they think the action is (Ajzen, 1991).

However, Davis's Technology Acceptance Model (TAM) (Davis et al., 1989) is the most relevant addition to this theory in our context. TAM helps us understand why people choose to use technology. It points out that how easy and useful people find technology significantly affects whether they use it or not. In other words, if Newcomers perceive that online services are easy to use and useful, then they will be motivated to use them.

One of the dimensions that may affect newcomer perceived ease of use of online services is digital divide. Digital divide among newcomer clients was identified as one of the main challenges when the settlement sector pivoted online during the COVID-19 pandemic, as some clients lacked the necessary technology and digital skills to benefit themselves of remote services. Although phone technology was employed in many instances, it still posed difficulties for clients who preferred face-to-face interactions (North York Community House, Department of Imaginary Affairs & Campana, 2020). The most repeated barriers are digital skills, equipment sharing, language, and cost and speed of internet connection (See for example; The Alliance for Healthier Communities, 2020; North York Community House, Department of Imaginary Affairs & Campana, 2020; Ekmekcioglu,, Black & Campana, 2022).

Table 1. Summary of the service quality models reviewed.

	Model	Dimensions/components	Context	Source
1.	SERVQUAL scale	Reliability, Responsiveness, Assurance, Empathy, and Tangibility.	Service quality scale	Parasuraman et al. (1988)
2.	E-S-QUAL scale	Efficiency, Fulfillment, System Availability, and Privacy	A scale for website's overall quality	Parasuraman, Zeithaml and Malhotra (2005)
3.	E-RecS-QUAL scale	Responsiveness, Compensation, and Contact	Subscale for E-S-QUAL that is concerned with problem handling	Parasuraman, Zeithaml and Malhotra (2005)
4.	E-service quality model	Ease of Use, Appearance, Reliability, Customization, Communication, and Incentive	E-service quality of Internet banking in Malaysia	Raman et al. (2008)
5.	E-service quality scale	Website Usability, Information Quality, Reliability, Responsiveness, Assurance, and Personalization	E-service scale development	Swaid and Wigand (2009)
6.	E-Service quality model	Ease of Use, Appearance, Linkage, Structure and Layout, Content, Reliability, Efficiency, Support, Communication, Security, and Incentive	E-service quality model for Internet banking	Santos (2003)
7.	ETailQ	Fulfillment/Reliability, Website Design, Customer Service, and Security/Privacy.	E-retail quality	Wolfinbarger and Gilly (2003)
8.	Modified traditional and	Technology Security and Information Quality, Technology Convenience, Technology Usage Easiness and Reliability,	The banking industry in India	Ganguli and Roy (2010)

	technology based SERVQUAL	Customer Service, Staff Competence, Image or Reputation, Price, Tangibles, and Subscription Ease		
9.	Modified SERVQUAL	Web Design, Reliability, Responsiveness, and Ease of use	E-government services in Indonesia	Rasyid and Alfina (2017)
10.	Multidimensional conceptualization of service model (client-based service satisfaction model)	Perception of Core Services, Perception of Facilitating Services, Perception of Supportive Services	Immigrant settlement services literacy in multiple host countries funded by the Australian Research Council	Chan et al. (2020)
11.	D & M	System Quality, Information Quality, Service Quality, System Use, User Satisfaction, and Net Benefits	(Information Systems) Tech Sector	DeLone and McLean (1992)
12.	Hybrid service delivery models in the immigrant and refugee-serving sector based on educational models	Technology Access, Design, Safety and Security, Skill Development/ Support/ Training, Motivation, and Collaboration	Immigrant and Refugee-serving sector	Campana (2021)
13.	E-GOVSAT Model	Utility, Reliability, Efficiency, Customization, and Flexibility	The government sector in Malaysia	Alias et al. (2017)
14.	E-GOVSAT Model	Utility, Efficiency, Customization, Reliability (whether the website functions appropriately in terms of technology as well as the	E-government Services in the UK funded by the European Commission	Rowley (2011)

		accuracy of the content), and Flexibility		
15.	COBRAS	Cost, Opportunity, Benefit, Risk, Analysis for Satisfaction	E-government services in Turkey	Osman et al. (2011)
16.	Modified SERVQUAL Model	Physical Quality, Interactive Quality, Corporative Quality, University Image and Reputation, Quality of Education, Quality of Student Services Support, Campus Physical Facilities, Students' Social Life on Campus, Interaction with Faculty, and Interaction with Administrative Staff	Higher Education Sector in Lebanon	Khattab (2018)
17.	Traditional and Modified SERVQUAL	Responsiveness, Assurance, Empathy, Tangibles, and Confidence	Immigration/Settlement Sector (Focus of study: Immigrant's satisfaction with Social/Public Services) in Spain	Godás Otero et al. (2018)
18.	E-service model	Quality of Information, Technical Efficiency, Privacy, and Communication with the Employee	Public sector	Janita and Miranda (2018)
19.	E-service model	Service Delivery Outcomes, Cultural Match/Mismatch, Acculturation, Service Satisfaction, Service Employee Cultural Background and Performance, Cultural Attributions, Performance Attributions, Service Satisfaction	Financial Services Sector for Turkish Immigrants in Austria	Sichtmann and Micevski (2018)

20.	E-service quality model	Web Design, Reliability, Responsiveness, Ease of use, Efficiency, Citizen Support, Communication, Benefit and Opportunity Risk, Trust, Security, and Leadership	E-government services in the public sector	Adiyarta et al. (2019)
21.	E-service quality model	Security, Privacy, Up-To-Date Information, Responsiveness, Accessibility, and Increased Accountability	Public Sector (E-government Services)	Wong et al. (2009)
22.	Hybrid service delivery to families of specific categories	Personalization and Approach	Psychology	Timpe et al. (2021)
23.	E-service model	Customer Service, Technology Security, Technology Convenience, Technology Usage Easiness, and Reliability	Financial sector	Ganguli and Roy (2011)
24.	I-MEET	Input (Cost and Risk), Output (Benefit and Opportunity)	E-government Services in the UK	Osman et al. (2014)
25.	E-GOVSAT	Utility, Reliability, Efficiency, Customization, and Flexibility	E-government Services in the US	Abhichandani et al. (2005)
26.	A Technology Acceptance Model	Service Quality Constructs: Website Attributes, Reliability, Responsiveness, Fulfillment, Efficiency, and Privacy. Technology Acceptance Constructs: Perceived Ease of use and Perceived Usefulness	Internet banking in India	Kavitha and Gopinath . (2020)
27.	Model for explaining citizen intention to continue to use	E-Service Quality, E-Service Marketing, Compulsory Use, Staff Assistance, Digital Literacy,	E-government services in Jordan	Nawafleh (2008)

		User Friendly, Training, Performance, Trust, Design, Usability, Content, Support, Interaction, Expectation, Satisfaction, Quality, Security, Intention to use, and Acceptance		
	e-government services.	Client Intention to Continue to use E-Government Services		
28.	The E-service Technology Acceptance Model	User Friendly, Training, Performance, Trust, Design, Usability, Content, Support, Interaction, Expectation, Satisfaction, Quality, Security, Intention to use, and Acceptance	Acceptance of E-services in Malaysia	Taherdoost (2018)

3. Discussion and Conclusion

In conclusion, this paper has addressed the evolving landscape of service delivery and consumption in response to the rapid advancements in information technology. The integration of technology into service delivery, particularly within Service Provider Organizations (SPOs), has become a crucial aspect of offering accessible, adaptive, and diverse services, especially within the context of settlement services in Canada. However, while technology has enhanced service delivery, challenges persist due to the digital divide, which affects newcomers with limited digital awareness and access to technology.

A significant challenge identified in this paper is the absence of a comprehensive hybrid service quality model within the settlement sector. Existing service quality models have primarily focused on either human-intensive or technology-mediated services, with limited attention to hybrid models. This gap underscores the need for a tailored approach to assessing service quality in the context of SPOs offering both in-person and technology-mediated services.

After reviewing the existing models in the field of service quality, there are two objectives that the research aims to achieve, 1) what are the important factors related to the evaluation of hybrid settlement programs, and 2) How to help settlement organizations evaluate their programs and turn the data collected -based on the model- into meaningful information that will help them improve their service and prioritize areas that are important to newcomers.

To meet the first objective of this paper, a model is proposed to identify the relevant criteria to evaluate hybrid programs. Table 1 lists the dimensions of several models presented in the literature. This covers the context of e-service quality models, conventional models, and technology acceptance models.

The proposed model should combine elements from conventional service quality models, technology-mediated service quality models, and technology acceptance models, recognizing the importance of assessing both in-person and online service quality in a hybrid service context. Based on the Technology Acceptance Model by Davis et al. (1989), perceived ease of use and usefulness of technology significantly shape the willingness of individuals to use it. These aspects, commonly termed ease of use and usefulness, have been investigated across diverse areas, including Technology Acceptance Models (Taherdoost, 2018; Kavithah and Gopinath, 2020), e-government models (Abhichandani et al., 2005; Wong et al., 2009; Rowley, 2011; Osman et al., 2014; Rasyid and Alfina, 2017; Alias et al., 2017; Adiyarta et al., 2019), and internet banking models (Santos, 2003; Raman et al., 2008; Ganguli and Roy, 2010; Ganguli and Roy, 2011). Therefore, the proposed model covers- aspects related to newcomer acceptance of online services.

Factors affecting acceptance of online services are identified from the literature including client barriers (digital literacy, device ownership, cost and speed of internet, and language proficiency) and newcomer preference (See for example; The Alliance for Healthier Communities, 2020; North York Community House, Department of Imaginary Affairs & Campana, 2020; Ekmekcioglu, Black & Campana, 2022). Staff performance dimension is also introduced, emphasizing the importance of human interaction in settlement services. Staff performance will utilize the SERVQUAL scale developed by Parasuraman et al. (1988) to assess staff performance based on reliability, responsiveness, assurance, and empathy. From the E-service models Website content and accessibility, along with web security (see for example; Santos, 2003; Wolfinbarger and Gilly, 2003; Ojaslo, 2010; Osman, 2014; Taherdoost, 2018; Taherdoost, 2018), are also examined as crucial dimensions affecting online service acceptance.

Proposed Model
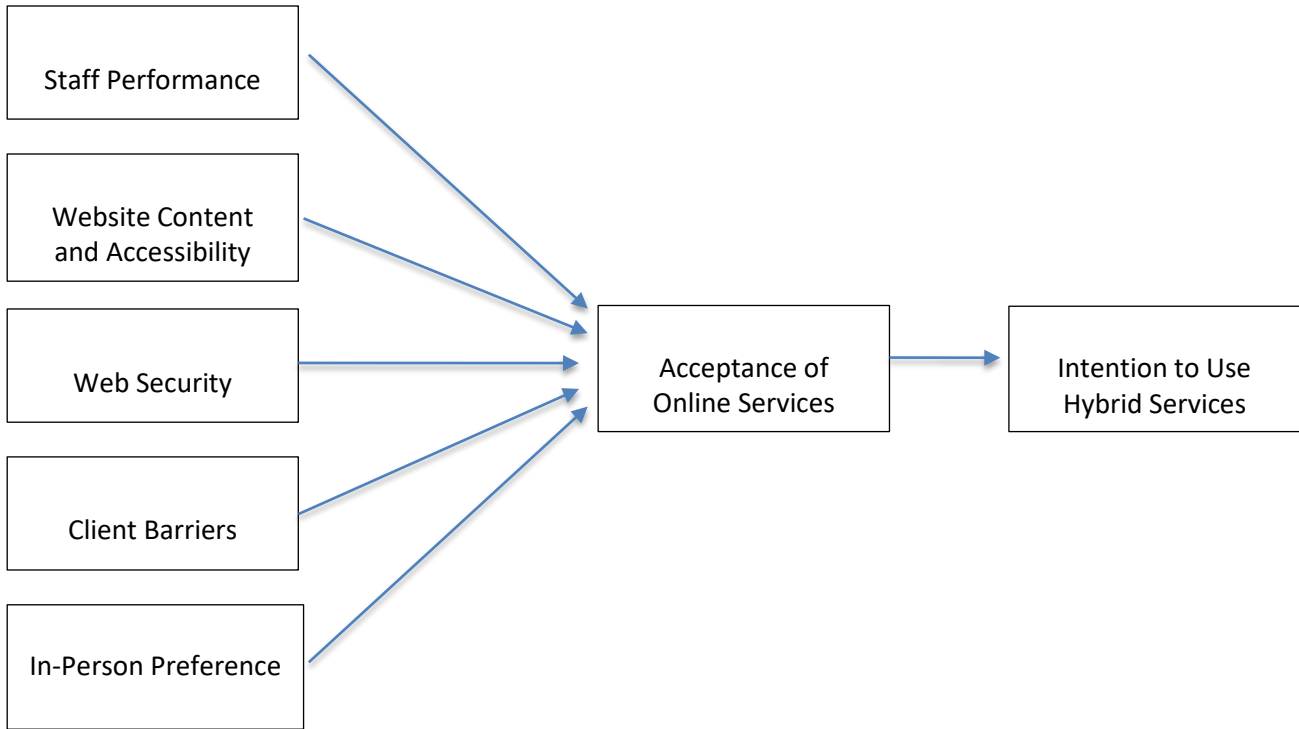
To meet the second objective of this paper, it is suggested that settlement organizations use the Importance-Performance Analysis (IPA) tool -developed by Martilla and James (1977)- to analyze data and inform decision-making. The IPA tool is a simple managerial tool that evaluates areas of service quality not only in terms of performance but also importance which makes it so valuable in identifying and prioritizing improvements based on importance to newcomer clients.
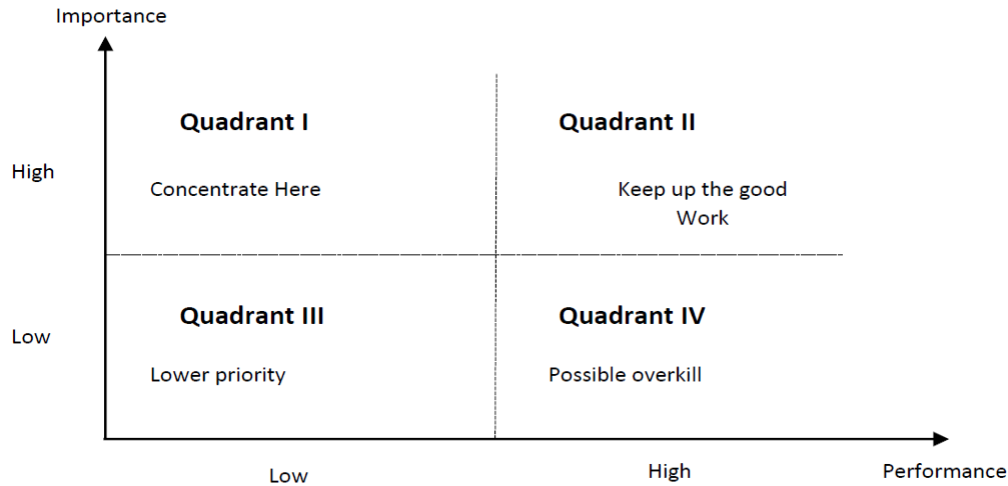
In essence, this paper aims to guide decision-makers in the settlement sector by providing a framework for assessing and improving hybrid service quality, with the ultimate goal of promoting data-driven decision-making. In the next working paper titled a "Service Quality Model for Hybrid Settlement Services, the dimensions suggested for the model are tested to ensure that the evaluation model is evidence-based and reflects the needs of the settlement sector. You can download this paper using this link: Research Results | Wired: Evaluating Settlement Online (WESO) (ymcaottawa.ca). Based on the tested model, a toolkit is created that helps organizations evaluate their hybrid programs by providing data collection tools and an automated Excel template for data analysis. The Excel template generates an automatic IPA report and service quality dashboards. You can download the toolkit from this link: Wired: Evaluating Settlement Online (WESO) (ymcaottawa.ca)

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