Who Are the Users of Digital Public Services?

A Critical Reflection on Differences in the Treatment of Citizens as 'Users' in e-government Research

Bettina Distel[1](✉) 📧 and Ida Lindgren[2] 📧

[1] University of Münster, Leonardo-Campus 3, 48149 Münster, Germany
bettina.distel@ercis.uni-muenster.de
[2] Linköping University, 58183 Linköping, Sweden
ida.lindgren@liu.se

Abstract. Despite the importance of citizens as users of digital public services, e-government research has not explicitly considered different perspectives on citizens as users of said services. This paper sets out to explore the possible variations in which the citizen as a user of digital public services is conceptualized within the e-government literature. Through a qualitative and interpretive approach, we have analysed literature from different fields of e-government research to create an overview of how citizens as users of digital public services are conceptualized in e-government research. The structure of the review departs from, and is framed by, four established value paradigms for e-government management. Our approach reveals that – depending on the perspective taken – the conceptualization of the citizen varies considerably and, as a consequence, may impact the results and contributions of each research perspective. The conception of the citizen as a user of digital public services varies from being a passive recipient of government services, to being an active co-producer of services. This article contributes to e-government theory by unboxing the conceptions of citizens as users of digital public services that are existent in current research on digital public services. In providing a framework that relates these conceptions to previously known value paradigms, the article offers a starting point for taking a multidimensional perspective in e-government research that considers the citizen as a multifaceted and heterogeneous entity.

Keywords: Digital public service · Citizens · Users · e-government · Value ideals · Theory-building

1 Introduction

As part of e-government initiatives worldwide, public services are being provided through digital channels. Repeatedly, citizens are conceptualized as the major beneficiaries of e-government, e.g. [16], including digital public services, by having ubiquitous access to services [3] and a wide range of information. The implementation of digital public services also aims at making communication and interactions between public administrations and citizens more efficient and easier for the citizen; accordingly, much e-government research treats citizens as a unit of analysis, e.g. [8].

Despite the importance of citizens, as users of digital public services, only few research attempts exist that closely examine who the citizens are and what they expect from e-government initiatives of this kind, e.g. [25, 30, 31]. Instead, e-government research mostly treats citizens as a homogenous group, without specifying subgroups, e.g. [7]. Often, citizens are clustered along rather unspecific, mostly socio-demographic variables, e.g. [24]. Related to public service provision in general, researchers agree that the mutual expectations and behaviors are dependent on the role in which the citizens interact with public administrations [18], e.g. as a citizen, or as a customer. The necessity to view the interactions of citizens and public administrations from different perspectives does not become obsolete by simply conceptualizing the citizen as a 'user' of a digital service. Rather, the differentiation into separate roles must be made for the digitally mediated interactions and for the citizen as a user of these digital services. However, e-government researchers have so far mostly refrained from opening this black box. Whereas the need for understanding who the user is has been acknowledged in other lines of research, e.g. [23], e-government research has not explicitly considered different perspectives on citizens as users. Against this background, this paper sets out to explore the possible variations in which the citizen as a user of digital public services is conceptualized within the e-government literature.

With the term *digital public service,* we refer to public services that are provided through a digital channel [22], typically using Internet-based technology, meaning that the citizens' interaction with public authorities is partly or completely mediated by the technology [17, 20]. The technology used can serve different purposes; a digital public service can refer to a clearly delimited IT-system, but also to larger service processes in which the digital interface towards the citizen is merely a small and limited part of the process [21]. Digital public service denotes a "fuzzy" phenomenon, in the sense that it can take on many different shapes in practice, and is referred to under several different labels in the e-government literature [17, 20]. As argued above, only few researchers attempt to differentiate the user of digital public services but mostly do so by using socio-demographic variables to distinguish users. In an attempt to further our understanding of how the citizen as a user of digital public services is conceptualized, we explore the citizen concept from a value position perspective. We use the work by Rose et al. [29] as a point of departure, who present four different value paradigms visible in e-government research and practice. These value paradigms (professionalism ideal; efficiency ideal; service ideal; and, engagement ideal) highlight the underlying drivers behind implementations of digital public services. However, the framework by Rose et al. [29] does not include how the user (citizen) is understood in each of these value paradigms. In this paper, we discuss the view on citizens as users of digital public services by relating e-government research that considers the citizen's role in digital public service provision to the value paradigms presented by Rose et al. [29]. As a result of this analysis, we present a framework that distinguishes between different views on citizens and highlights the need to understand the citizen as a user of e-government from multiple perspectives.

This paper contributes to our understanding of digital service provision in the public sector. Succeeding in providing digital services is difficult, due to the complex nature of the public sector context, the service processes being digitized, and the technology used to digitize these processes. The framework presented in this paper can

be used to further conceptualize this complex phenomenon and hence help both researchers and practitioners to understand digitization of public services in a more nuanced manner.

The paper is organized as follows; first, we present our research approach. Second, we present the different perspectives that we have identified, and discuss the view on the citizen present in these views. We then proceed to a comparative analysis of these strands, concluding with a conceptual framework that gives and overview of these various conceptualizations. We conclude this article with a short summary and outlook for future research.

2 Background

E-government is not a value-neutral endeavour; in fact, the values driving e-government initiatives, such as the implementation of digital public services, is gaining increasing attention in the research literature [6]. In this context, values are understood as the general aims and drivers of a project [29]. Building on both theory and e-government practice, Rose et al. [29] distinguish between four value positions for managing e-Government initiatives; as described in Table 1. For each value position, they focus on the prevalent tradition of public administration, representative values, how the purpose of e-Government is described, and the role of IT for fulfilling these emphasized values. This framework, however, refers to the ideals of public sector managers and the implementation of e-government projects in public agencies. Thus, it is focused on practice rather than on e-government research and does not include any conceptualization of citizens as participants in this implementation process. Especially against the background that citizens are repeatedly treated as the main beneficiaries of e-government projects, a value framework for e-government research should contain this perspective.

Within e-government research, citizens are understood as users of e-government who generate benefits through the use of digital public services [31]. The citizens' use of digital public services is, from this perspective, focused on consuming public services through electronic means: "[…] citizens and businesses can use e-government for three purposes: to access information; to engage in electronic transactions with government; and to participate in government decision making" [25, p. 212]. Accordingly, types of usage are focused on the *search for information and policies*, *service use*, and *participation* in political processes [11, 25]. Scott et al. [31], for example, refer as well to these categories but name them differently. In their study, users of e-government are grouped into *passive users* who browse content and download forms or documents, *active users* who communicate and interact with public administrations by digital means, e.g. by electronically transmitting a form, and *participatory users* who take part in the political process of opinion forming through electronic channels. Detached from the channel of communication and interaction, respectively, other researchers have attempted to define different roles in which citizens interact with public administrations and that, as a consequence, may define the type of (digital) service use. For example, Thomas [33] argues that citizens can take three different roles: as *customers* who are served by public administrations and 'consume' public services, as *citizens* who

Table 1. Four value positions for e-Government (shortened version of [29], p. 542)

	Professional ideal	Efficiency ideal	Service ideal	Engagement ideal
Public administration tradition	Providing an independent, robust and consistent administration, governed by a rule system based on law, resulting in the public record, which is the basis for accountability	Providing lean and efficient administration, which minimises waste of public resources gathered from taxpayers	Maximising the utility of government to civil society by providing services directed towards the public good	Engaging with civil society to facilitate policy development in accordance with liberal democratic principles; articulating the public good
Representative values	Durability, equity, legality and accountability	Value for money, cost reduction, productivity and performance	Public service, citizen centricity, service level and quality	Democracy, deliberation and participation
e-Government purpose	Provide a flexible and secure digital public record and support standardised administrative procedures	Streamline, rationalise and transform public administration around digital technologies	Improve the availability, accessibility and usability of government services by providing them online	Support deliberative interactions with the public and the co-production of policy

participate in political processes, and as *partners*, when "[…] the broader pursuit of public ends supposedly occur[s] mostly through networks of private and non-profit entities, members of the public, and governments […]" [33, p. 788]. Especially this last aspect of citizens becoming partners of public authorities is so far a lesser studied topic in our field.

3   Research Approach

This work is interpretive and builds on a hermeneutic literature review [6]. We have analysed literature from different lines of research related to e-government in order to create an overview of how the citizen as a user of digital public services is treated and conceptualized in e-government research. The structure of the review departs from the four value paradigms presented by Rose et al. [29]; these four paradigms therefore function as a frame for the analysis. We have included papers on e-government

services, public e-services, web-site channels, etc. that deal primarily with the citizens' perspective. We have searched for literature in an 'unstructured' manner; and have aimed for a more exploratory approach, identifying examples of different conceptualizations of citizens as users of digital public services.

In a first step, the articles were analysed with regard to the question of whether they can be assigned to one or more of the four value paradigms by Rose et al. [29]. The conceptualizations and definitions of the citizen and user, respectively, were extracted for each article. This analysis was focused on the question of how the citizen is understood with regard to her role within the public sector and as a user of digital public services; e.g., whether she is actively involved in the provision of public services or rather seen as a passive receiver of services. We extracted the specific perspective on the citizen from each article and compared the articles with each other to gain a better understanding of each individual viewpoint. Only then, the four existing value paradigms were compared in order to understand what types of definitions and conceptualizations of the citizen and user, respectively, exist (see Sect. 4). While in most of the works on which this article is based one view was dominant, these perspectives are not disjoint and one article may be based on more than one conceptualization.

4 Different Perspectives on Citizens as Users of Digital Public Services

The analysis of e-government research reveals that the understanding of citizens as users of e-government corresponds with the types of value positions presented by Rose et al. [29]. In the sections below, we discuss different perspectives on citizens as users of e-government and depart from these four value positions. For each value position, we have found exemplary articles that we use to illustrate the various interpretations of the citizen as a user of digital public services.

4.1 Citizens as Clients and Consumers of Public Services (Professionalism Ideal)

In the first value position presented by Rose et al. [29], the *professionalism ideal*, IT is seen as important infrastructure that can provide an independent, robust and consistent administration in accordance with the law. Important values guiding e-government initiatives include durability, equity, legality and accountability.

Literature associated with this ideal views the citizen more as a client or a customer. Thus, interactions between public agencies and citizens occur in the process of service delivery. Research from this perspective deals, for example, with changing internal and legal structures that occur with the introduction of IT in the public sector. In this view, public agencies do not simply introduce new infrastructure for improving service delivery but "[…] have the power to dictate the rules and regulations, and thus create a legal obligation" [34, p. 158]. Here, the need for citizens to trust their administrations is often referred to, because public agencies cannot only dictate the rules for online activities but also "[…] may be required by law to share information with other agencies or with the citizenry, further intensifying the need for trust in the maintenance

of accurate citizen information" [34, p. 158]. Although the need for citizens' trust is recognized in this line of research, the understanding of the citizen is not further defined; the citizen is simply treated as an external entity to the public administration.

4.2   Citizens as Receivers of Public Services (Efficiency Ideal)

The *efficiency ideal* [29] is characterized by wanting to provide lean and efficient administration, reducing waste of public resources gathered from taxpayers. Hence, value for money, cost reduction, productivity and performance are salient values. The dominant view on technology is that IT can be used for automation of administrative tasks.

Much research on e-government has focused on digitalization of public services and internal administrative processes from a government perspective; in fact, e-government research is often criticized for being too supply-side and efficiency oriented [10, 28]. When looking at digital public services from an efficiency perspective, the external user – the citizen – is most often treated as a homogeneous and faceless group of people [9]. An example can be seen in Heeks' [14] description of stakeholder roles in e-government projects, in which he describes six different types of stakeholders within the project management (project manager/team, suppliers operators, champions, sponsors, and owner), but merely two outside the project (clients and other stakeholders). The 'clients' are subsequently described as being one out of two types; *primary clients* are on the immediate receiving end of what the e-government system does or outputs. Sometimes these will be outside the government (e.g. citizens or businesses). Sometimes, though, these will be inside government (i.e. public servants): in this case, there may also be *secondary clients* who will be affected indirectly by the system since they are served by the primary clients (e.g. citizens served by those public servants) [14]. In this line of thinking, the citizen as a user is mostly described in terms of its 'uptake' and 'adoption' of digital public services. The adoption of e-government by users outside the public administration is necessary to ensure the efficiency and effectiveness of administrative actions [3]. This perspective is reflected in the use of maturity models and benchmarking studies that most often focus on the development of digital public services from a public administration viewpoint and do not consider the use of these services from the citizens' perspective.

Although some research exists that addresses the efficiency ideal from the citizens' perspective [1], citizens are most often not further defined and treated simply as users of e-government [12]. From the citizens' perspective, efficiency gains are related to the use of their personal resources: "Based on […their] capabilities, the individuals decide how they will use these resources in order to achieve their functioning, that is, the result of the effective use of these resources, which, in a last analysis, will lead to their utility, for example, exercise of rights, welfare […]" [1, p. 243]. Although the use of e-government by citizens can also be viewed from the perspective of efficiency gains, within this ideal the purpose of IT use is more often related to organizational efficiency: "Information technology (IT) is potentially capable of changing government organizational structures and business processes and, if implemented correctly, of producing substantial organizational, technical, and business benefits […]" [12, p. 121]. As such,

interactions between public administrations and citizens take place within the service delivery process and citizens are here also treated as an undefined external entity.

4.3 Clients as Users and Adopters of Digital Public Services (Service Ideal)

In the *service ideal* [29], maximising the utility of government to civil society by providing services directed towards the public good is in focus. Hence, public service, citizen centricity, service level and quality are dominant values. From this perspective, IT enables improved accessibility, availability and quality of services for citizens.

Interestingly, this ideal is mostly prevalent in studies on e-government adoption although the adoption issue is also closely related to debates around efficiency gains for public administrations. The main rationale underlying this ideal is the use of ICT to better serve citizens: "Nevertheless, all the definitions [of e-government] are headed towards a single notion and encompass a generic and unique mission of e-Gov – presenting government systems using information and communication technology (ICT) to serve citizens better […]" [32, p. 17]. Similarly, Nam [25, p. 211] expresses: "For a government to move toward a citizen-centric, outward-looking approach, understanding citizens' use of e-government and identifying determinants of e-government use has a central importance for both researchers and practitioners." Notably, although the citizens and their adoption behaviour are focused in this ideal, only Nam [25] makes an attempt to better delineate who the citizen or user of e-government services are by differentiating three types of usage (access to information, transactions, participating). In accordance with the general service orientation expressed within this perspective, the use of IT for governmental purposes is predominantly focused on providing services by electronic means. Whereas articles mainly rooted in the efficiency ideal consider IT as a means to increase the public agency's internal efficiency, articles rooted in the service ideal are mainly geared towards providing better services for citizens: "The term electronic (e-) or digital government describes the utilization of information and communication technologies (ICT), predominantly internet-based applications, by administrative institutions to provide citizens and other stakeholders with directions and services related to a wide field of state functions […]" [11, p. 637].

In addition to the adoption discourse, two further debates in the e-government community can – at least partially – be related to this ideal. The first discussion is on user participation. Here, the involvement of citizens in the development process of digital public services is discussed as a way of attaining two main goals; system quality and democratic decision making. Conceptualizations of the user are often taken from more traditional IS literature on IT development. Thus, researchers in this field state that "[…] all types of users of a new system must be involved in different ways in the design of the relevant parts of a system" [5, p. 120]. Similarly, Iivari et al. [15, p. 111] state that: "[u]sers usually are the best experts on the local work practices to be aligned with and to be supported by a system. Users also are the final 'implementers' of the system and evaluation of the system without any attention to subjective user-oriented criteria, such as perceived usefulness, perceived ease of use, perceived usability and user satisfaction, is seriously limited". In other fields, the question of who the users are

has already been addressed and the integration of users in the design process is discussed [23]. Often however, the users remain a largely undefined mass when examining existing studies [15].

The second discussion, on website quality, has its roots in the work on system quality, e.g. in terms of usability. In the e-government field, this is seen in applications of frameworks such as E-S-Qual [27], resulting in e-government context specific quality assessment frameworks such as E-GovQual [26] and quality dimensions for e-service design and evaluation [17]. These frameworks typically construct quality based on several different constructs, e.g. *efficiency, reliability, citizen support* and *trust* [26], and *usability, functionality,* and *technical performance* [17, 26].

An underlying idea for both of these sub-perspectives is that a digital public service should be of high quality, assessed in relation to a set of quality dimensions, and that service of high quality is more likely to be used by the external user – the citizen. Through high usage of these services, the supplying organization can achieve the effectiveness and efficiency goals set in relation to these services. Hence, the user is seen both as the external actor whose behaviour determines the success of the system, but also as an important input in the design process, in which the system's quality is determined.

4.4 Citizens as Co-producers of Public Policy and Service (Engagement Ideal)

The fourth value position, the *engagement ideal* [29], departs from the public administration tradition of engaging with civil society to facilitate policy development in accordance with liberal democratic principles. Democracy, deliberation and participation are dominant values and IT is seen as a networking facilitation, as IT enables communicative interaction between governments and citizens.

Here, we see literature under a multitude of labels that we, in this paper, choose to treat together; e.g. on e-participation and digital divides. The common denominator is the underlying idea that, from a societal perspective, it is necessary that public services are accessible for all citizens, regardless of their personal abilities or preferences. Often, this research relates to the digital divide debate and discusses the relation between socio-demographic variables and the use of digital public services. The digital divide refers to a gap in the society that exists between those who have access to information and those who do not have access to information. This divide is aggravated by the use of technologies. Bélanger and Carter [4] argue that this phenomenon relates (i) to the access to technologies such as the Internet and (ii) to the skills needed to use these technologies. Consequently, researchers in this area define different groups of citizens according to their access to digital public services and their resulting ability to participate in the digital administration, e.g. [2].

With the increased digitisation of public services, scholars with various backgrounds have reported that in addition to the digital divide debate, not all citizens *want* to use e-government services [19]. In this line of literature, the citizen as a user of public services is therefore often discussed in terms of being an agent that actively chooses between different channels for communication with public administrations. An underlying argument is that understanding how citizens decide on channels for

interacting with public administrations might ensure the accessibility of public services for all citizens. Accordingly, authors argue that public administrations are responsible for ensuring social inclusion through digital public services: "In its purest form, citizens are all of us. We live our lives; we vote in elections; and we form special interest groups to influence decisions. In this way, the role of government is to create a society that presents for the individual citizen a possibility to live this kind of life" [13, p. 72]. Thus, the citizens are not only treated as users of digital public services or an external entity, but are assigned different roles with varying degrees of involvement – and power [13].

5 Discussion

In this section, the results of our explorative literature analysis in the preceding section is transposed into a framework of different conceptions of citizens as users of digital public services in relation to the four value positions by Rose et al. [29]. In order to better understand how the citizen is treated in each of the value paradigms and the related debates in e-government research, we focused our analysis of exemplary articles (i) on how the citizen is conceptualized, (ii) which role research assigns to the citizen in interactions with public administrations, and (iii) how much attention the citizen is given (see Table 2). When describing citizens, literature from the field of administrative science often focuses on the role they play in the structure of 'public administration' as a whole as well as their way of interacting with public administration [18, 33]. Therefore, our analysis also focuses on these aspects. Lastly, as our analysis is on the conceptual level, we have added the question of what kind of attention is given to the citizen within each research direction.

In our exploration of possible variations of how the citizen as a user of digital public services is conceptualized within the e-government literature, the analysis revealed several interesting aspects. *First*, the four value positions as proposed by Rose et al. [29] differ with regard to the inherent conceptions of citizens as users of digital public services; presented in Table 2. It is noticeable that within each perspective, the citizen is conceptualized differently. For the professionalism ideal, we find examples for the treatment of the citizen as a client or a customer. Within the efficiency ideal, the citizen is understood as a passive receiver of digital services. Both ideals view the citizen as a more passive interaction partner. Similarly, both perspectives reduce the citizens' role in interactions with public administrations to a point of contact within the service delivery process. In contrast to this, research rooted in the service and engagement ideals promotes the active involvement of the citizen not only in the service process, but also in the design and policy process. Citizens are here treated as users and adopters of e-government, as a source of design input (service ideal), and as co-producers of public policy (engagement ideal). In accordance with these conceptions, the citizens receive differing degrees of attention within each ideal. Whereas within the first two ideals the citizen is put in the background and views as a homogenous group, the service and engagement ideals treat citizens as heterogeneous entities. It is only within the latter ideal that the citizen is focused during the entire process. Surprisingly though, none of the analysed articles provided a definition of the

Table 2. Conceptions of citizens as users of digital public services

	Professional ideal	Efficiency ideal	Service ideal	Engagement ideal
How is the citizen conceptualized?	Client/customer	Receiver of digital service	Users and adopters of technology and source of design input	Co-producer of public policy
What is the citizens' role in interactions with public administrations?	Interaction with the citizen takes place in the service process	Interaction with the citizen takes place in the service process	Promotes active interaction with citizens in design process	Promotes active involvement of citizens in policy processes
How much attention does research give to the citizen?	The citizen is put in the background – treated as a homogeneous group	The citizen is put in the background – treated as a homogeneous group	The citizen is focused during the design and implementation processes. Treated as a heterogeneous entity	The citizen is focused during the entire process. Treated as a heterogeneous entity

term 'citizen' and only conceptualized the citizens and her role in interactions with public administrations implicitly.

Secondly and detached from our proposed framework, the attribution of e-government research to one of the ideals by Rose et al. [29] reveals that they were merely implicitly present in the papers. The most prevalent ideal in this regard was the service ideal, i.e. e-government research often deals with the delivery of public services to external stakeholders such as businesses and citizens. While research related to other ideals often is concerned with interactions between citizens and public administrations that occur within the service process, within this ideal the citizen is often treated as a source of input already within the development and design process of public services. Whereas the efficiency and engagement ideal are as well present in the e-government research, we hardly found any examples for the professionalism ideal. This might be due to the fact that the professionalism ideal takes an organizational and processual perspective on e-government, in which legal aspects and changes to internal structures are focused rather than interactions with external partners. Therefore, there are considerably fewer articles for the professionalism ideal in our work than for the other three ideals. Furthermore, the analysis indicates that the perspectives taken in each article are neither disjoint nor mutually exclusive. Rather, they seem to overlap, at least in part, by taking a similar view, or building on each other. For example, we see that the service ideal is often combined with the engagement ideal, e.g. [25] or that aspects of the engagement and efficiency ideal are treated together in one article, e.g. [12]. In addition to the combination of two ideals, we found only two articles that took multiple

perspectives on the citizen and explicitly served purposes that can be related to all four ideals [30, 31]. *Finally*, we find that when analysing e-government papers in relation to the value ideals, it became apparent that each article takes a limited perspective on users of (digital) public services and focuses only certain aspects that serve specific research goals. To our knowledge, our article is the first attempt to collect these perspectives and to take a multi-dimensional look at different treatments of the citizen as a user of digital public services.

6   Conclusion and Outlook

This paper aimed to explore the possible variations in which the citizen as a user of digital public services is conceptualized within the e-government literature. Starting from the value framework proposed by Rose et al. [29], we employed an exploratory approach to analyze the existence of these ideals within e-government research and their manifestation in different conceptions of citizens as users of digital public services. In accordance with these ideals, articles from the field of e-government research differ with regard to their conception of citizens as users of digital public services. These differences are reflected in three aspects; (i) the conceptualization or definition of the citizen, (ii) the role citizens play in the respective research perspectives, and (iii) the emphasis placed on the citizen in the provision of digital public services (see Table 2).

This study contributes to e-government research by opening the lid of the black-box containing the 'citizen' as a user of digital public services. While a majority of studies in e-government consider the citizenry to be a homogenous group of people, our approach reveals that the citizen can be conceptualized in a variety of ways. As a consequence – depending on the perspective taken – different conceptualizations may impact the results and contributions of e-government research. For each of the identified perspectives, it is important to understand how the citizen or the user is treated, and to open the discussion to other perspectives. A too limited treatment of the citizen, as a user of digital public services, may hinder a deeper understanding of when and why citizens chose (not) to interact with the government through digital channels.

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