Quality in e-Government services: A proposal of dimensions from the perspective of public sector employees

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ABSTRACT

The main objective of the work is to identify the key factors that must be considered by the Government when designing the web service portals used by its employees. To achieve these objectives, empirical work was then carried out to collect primary information, using the Delphi method and obtaining the opinion of 31 specialists who are experts in quality management in the university environment. The results of the study show that four dimensions must be considered to measure the quality of electronic services. These dimensions are: quality of information, technical efficiency, privacy and communication with the employee.

1. Introduction

The technological advances taking place in recent years have allowed organisations to improve their management processes. The emergence of the Internet has led to a revolution in the way that individuals, organisations and the Government carry out their tasks (Alawneh et al., 2013). It can also be seen that in recent years there has been an increase in recommendations from international organisations, encouraging Governments to use the new technologies and leading to the modernisation of the Government and an improvement in transparency and the services it provides to the public (European Commission, 2015).

Quality management in electronic services has been extensively studied, with definitions, models and measurement instruments being proposed, above all in the for-profit sector (Ladhari, 2010; Park and Gretzel, 2007; Sylvester et al., 2013; Verma et al., 2016). In this context, researchers are relatively unanimous in arguing that for these technological innovations to be effective and of benefit to both parties it is necessary to provide the best quality in the service. To achieve these improvements, it is very important that "managers of businesses with Web presences must first understand how consumers perceive and evaluate online customer service" (Parasuraman et al., 2005).

However, the studies carried out within the public sector have not examined the issue to the same extent (Alawneh et al., 2013; Papadomichelaki and Mentzas, 2012) and as indicated by Gutiérrez Rodríguez et al. (2009), there is an open debate about whether the concept of the quality of the services provided can be transferred from the private sector to the public sector.

Whilst scarce, some studies have been carried out on this issue in the areas of local government (Lee and Levy, 2014; Sá et al., 2016a), postal services (Águila-Obra et al., 2013), healthcare (Büyüközkan and Çifçi, 2012), tax management (Barnes and Vidgen, 2006; Belanche et al., 2014; Connolly et al., 2010; Lee et al., 2011), library services (Hernon and Calvert, 2005; O'Neill et al., 2001), etc. All these studies analyse, from the public's perspective, their relationship with the Government. However, only Alawneh et al. (2013) study the problem from the perspective of the public employee, measuring the satisfaction of university employees in Jordan.

Our work aims to look at this area in more depth, specifically focussing on ensuring that the managers of university websites

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understand how their employees perceive the quality of these service portals, and in this way to contribute to improving the online services that public organisations provide to their employees.

The main objective of this article is to make a proposal on the dimensions or characteristics that a Government website must have if it is to be considered by its employees as high quality. To achieve this objective, a qualitative study was carried out using the Delphi method. To do this, surveys were conducted involving experts in the field of quality management in public services.

The article is structured as follows; in Section 2 we define and classify the e-Government concept. Section 3 then contains a clarification of the electronic service concept. Section 4 is dedicated to describing the methodology used in the study. Next there is an explanation of how the participants were selected and how the two rounds with the panel of experts were performed. The article continues with a proposal of dimensions and items for measuring quality in the services provided by the Government to its employees, and it ends with the main conclusions, recommendations and limitations of the study.

2. Defining and classifying e-Government

Various definitions for the e-Government concept have been proposed in recent years. The early definitions have a clear technological orientation and focus on the use of web technologies to provide services from the Government to the public (Holden et al., 2003; Kaylor et al., 2001; Kumar et al., 2007). Subsequently, the proposals by authors have focused on the use of the new technologies to achieve greater efficiency in the service, such as obtaining time savings, reducing costs, improving the response capacity, etc. (Evans and Yen, 2006). More recently, it has been recognised that these improvements must favour the many users of the Government (Zaidi and Qteishat, 2012; Zheng et al., 2014) and, for the first time, there is talk of the need to achieve a more responsible, transparent and effective government (Nguyen Manh Hien, 2014).

Combining the different contributions from the various authors, we propose a new definition of e-government as "a system for the management of public services that, based on Information and Communication Technologies (ICTs), aims to improve the quality of the services provided by the Government to its stakeholders (citizens, companies, employees, other governments, etc.), increase its transparency, make improvements to its operation and achieve more efficient management in the different environments in which it operates".

From the above definition it can be seen that e-Government operates in various areas or contexts of activity and has relationships with different users, which allows us to make a double classification. The first, which we could call horizontal, depending on the relationships with the different stakeholders, and the second, which we could call vertical, depending on the different activity sectors in which it carries out its activities.

There are several authors who support this horizontal classification, see for example: Evans and Yen (2006), Zheng et al. (2014) and Sá et al. (2016b). Depending on the context in which the different activities and relationships with the different participants are developed, a distinction can be made between:

1) Activities by the *Government with business* (G2B), or in other words, relationships established between the Government and businesses.
2) Relationships between the *Government and its citizens or customers* (G2C), placing the emphasis on the ability of the government and the public to pass information between the parties in an efficient electronic manner.
3) Relationships between the *Government and its employees* (G2E), aimed at improving interaction between the different government bodies and their employees, with the intention of generating higher productivity when managing human resources.
4) Relationships from *Government to Government* (G2G). This point refers to the relationships between the different governments bodies, aimed at improving communication between them, achieving more efficient delivery and avoiding redundancies and duplication between them.

In addition, Evans and Yen (2006) add one more:

5) *Intra-government (IEE),* whose purpose is to improve the flow of information within the Government to improve the efficiency of the supply chain, achieving significant cost savings, reducing stocks, achieving better prices when purchasing, as well as all the changes necessary to improve this efficiency.

Another classification of the Government, which we have called vertical, is that made from a sector viewpoint. e-Government may be directed towards such diverse fields as teaching, health and social services in general, public safety, public finance, museums and cultural heritage, justice, emergency services, postal services, transport services, etc.

This research, following the above classifications, will focus on the G2E context, studying the Government's relationships with its employees. It is specifically carried out in the area of university education in Spain.

3. High quality services in e-Government

There is currently no unanimous agreement regarding the electronic service concept, there being few researchers who have proposed a definition for this (Janita and Miranda, 2013). The first definition that we find regarding quality in electronic services (e-SQ), in the for-profit sector, is that of Zeithaml et al. (2000, p. 11) who indicate that, "e-SQ can be defined as the extent to which a Website facilitates efficient and effective shopping, purchasing, and delivering of products and services". Subsequently, Santos (2003,