



WHAT IS THIS THING CALLED ELECTRONIC SERVICE (E-SERVICE)? – A REVIEW OF DEFINITIONS

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Abstract

There are many reasons to study services marketing, (1) the global service economy growth in terms of contributions to Gross Domestic Products (GDP); (2) the growth of the global service workforce; (3) the emergence of technologically based e-services that have transformed many service industries; and (4) the importance of developing sustainable services marketing business practices. E-service is becoming increasingly important not only in determining the success or failure of electronic commerce but also in providing consumers with a superior experience in the interactive flow of information. The range of specialties involved in the delivery of e-service leads to the lack of consensus on the definition of E-Service. In this paper, an examination of definitions of E-Services is reviewed. This paper might be useful for prospective researchers in their future research.

Keywords: *Traditional Services, Electronic Services, Information and Communication Technology, Self-Service Technology.*

INTRODUCTION

Advancements in information and communications technology (ICT) in general, and the Internet, in particular, are having a major impact on services marketing Bitner et al., (2000). The rapid expansion of ICT had a tremendous impact on all areas of human life Schneider, (2006). Many of the traditional services have been changed first into self-services, then with the arrival of the World Wide Web (WWW) into e-services and more recently into m-services with the spread of mobile networks Scupola (2011). With the rapid growth of the Internet and the globalization of market, companies accepted and adopted the new ICT to offer e-services to their customers Li, H., & Suomi, R. (2009).

The concept of electronic service (e-service) represents one of the prominent applications of information and communication technologies (ICTs). ICT is defined as a collective term for a wide range of software, hardware, telecommunications and information management techniques, applications and devices, that are used to create, produce, analyze, process, package, distribute, receive, retrieve, store, and transform information Brady, M., Saren, M., & Tzokas, N. (2002).

Increasing labor costs and advances in technology are encouraging service firms to offer technology-based self-service options to consumers Dabholkar, P. A. (1996). Typically, self-service is defined as “service in which there is no direct assistance from or interaction with a human service agent”. This definition can be applicable to retailing through vending machines, car park ticketing through pay stations, and eating outlets in which customers select and carry their own food and drink. Rowley (2006).

Surjadaja et al. (2003) differentiate between e-service and self-service. They argue that in self-service operation, a customer has to go to the technology (such as an ATM) to receive a service, whereas, in e-service, a customer can receive the service through the Internet at home or in other places. E-service is becoming increasingly important not only in determining the success or failure of electronic commerce Yang et al., (2001), but also in providing consumers with a superior experience with respect to the interactive flow of information Santos, (2003).

There has been much debate on the exact definition of e-services, but there is no consensus on the definitions of E-service. The terms E-service, Self-service, Online Service, Web-based service, Virtual service, Digital Service etc. are often used to denote the same concept.

This Paper examines the various definitions of E-service to understand the concept. The Objective of this Paper is to review the Literature Pertaining to E-service and contribute to the body of Knowledge for the benefit of the researchers who are undertaking their Research in E-Service.

REVIEW OF LITERATURE

A literature review has been undertaken in order to reveal the different definitions of the concepts “e-service”. The Study reviewed literature pertaining to E-service, from Journal articles, published editorials and books by taking the keywords like web service, Self-service etc and all the definitions are tabulated as shown in **Table -1**.



Table 1: E-Service Definitions

S. No	Author/s (Year)	Definition
1	Berthon, P., Pitt, L., Katsikeas, C. S., & Berthon, J. P. (1999).	E-Services represent services which are available on the Internet to facilitate, execute and process any stages of services, including informing, transacting, interacting, and distributing.
2	Saanan, Y.A., Sol, H.G. and Verbraeck, A. (1999)	E-service can be defined as the electronic provision of a service to customers.
3	Voss, C., (1999).	E-service refers to delivery of services through the internet either paid or free.
4	Reynolds, J., & Mofazali, R. (2000).	E-service is defined as web based service.
5	Voss, C. (2000).	E-Service is the delivery of service using new media such as the web.
6	Zeithaml (2000)	E-service is web services which are delivered through the Internet.
7	Casati, F., Shan, M. C., & Georgakopoulos, D. (2001).	An e-service is often defined as an application accessible via the Web that provides a set of functionalities to businesses or individuals.
8	Chidambaram, L. (2001).	The term e-service is typically used to describe a variety of electronic interactions, ranging from basic services, such as the delivery of news and stock quotes, to smart services, such as the delivery of context-aware emergency services.
9	De Ruyter, K., Wetzels, M., & Kleijnen, M. (2001).	E-service is defined as an interactive, content centered and Internet-based customer service, driven by the customer and integrated with related organizational customer support processes and technologies with the goal of strengthening the customer-service provider relationship.
10	Galbreath, J., & Hoffman, K. D. (2001).	E-service is a service available via the Net that completes tasks, solves problems, or conducts transactions. E-services can be used by people, businesses, and other e-services and can be accessed via a wide range of information appliances.
11	Gartner (2001) as Cited in Zhang, X., & Prybutok, V. R. (2005).	E-service is defined as including the processes, policies, procedures, people, tools, and technologies that enable enterprises to provide assisted and unassisted customer service using the Internet as its platform.
12	Kotov, V. (2001).	E-services as “the realization of federated and dynamic e-business components in the Internet environment”, not putting the emphasis on how these e-business components are realized (i.e. by applications).
13	Rust and Lemon (2001).	E-service can be defined as the role of service in cyberspace.
14	Rust and Lemon (2001).	E-service can be conceptualized as an interactive information service. Interactive information service is critical to understand the role of e-Service.
15	Rust, R. (2001).	In some government agencies, e-service is viewed as a means of holding government accountable to its citizens. Other IT companies, such as Micro strategy, for example, view e-service as a purely IT-driven concept. In the academic community, e-service is seen as an overarching customer-centric concept.
16	Sahai, A., & Machiraju, V. (2001).	An e-service is defined as a service available via the Internet that completes tasks, or conducts transactions and is accessible at a particular Uniform Resource Locator.
17	Tiwana, A., & Ramesh, B. (2001)	E-services as Internet-based applications that fulfill service needs by seamlessly bringing together distributed, specialized resources to enable complex, (often real-time) transactions. Examples of e-services include supply chain management, customer relationship management, accounting, order processing, resource management, and other services that are electronically delivered through the Internet.



18	Boyer, K. K., Hallowell, R., & Roth, A. V. (2002).	E-service is defined as “the e-service encounter is the initial landing on the home page until the requested service has been completed or the final product has been delivered and is fit for use”. E-service is comprised of all interactive services that are delivered on the Internet using advanced telecommunications, information, and multimedia technologies.
19	Piccinelli, G., & Stammers, E. (2002).	E-service is defined as ... any asset that is made available via the Internet to drive revenue streams or create new efficiencies.
20	Rust, R. T., & Kannan, P. K. (2002).	E-service is the term used to represent a development which is characterized by the link between the service sector and information technology.
21	United Nations Conference on Trade and Development, 2002a, b	E-service can be broadly defined as those services that can be delivered electronically. These e-services include computer-related services, personal, cultural and recreational services, communications services, financial services, and royalties and license fees.
22	Zeithaml, V. A., Parasuraman, A., & Malhotra, A. (2002).	E-Services are all cues and encounters that occur before, during, and after the transactions.
23	Bolton, R. N. (2003).	E-services are those services that can take place without buyer involvement. For instance, automatic collection of road tolls as a car passes through a tolling booth is an example of this.
24	Colby, C. L., & Parasuraman, A. (2003).	E-Services are all services delivered via an electronic medium (usually the Internet) and comprising transactions initiated and largely controlled by the customer.
25	De Antonellis, V., Melchiori, M., Pernici, B., & Plebani, P. (2003).	E-Service can be defined in terms of: Interface: specifying the provided operations and exchanged information. Behavior: specifying the effects in terms of pre- and post-conditions and the order in which the provided operations have to be invoked. Quality of service: defining e-Service features like availability, performance level, and cost.
26	Featherman, M. S., & Pavlou, P. A. (2003).	E-services are interactive software-based information systems received via the Internet.
27	Hoffman, K. D. (2003).	E-services are "electronic offerings for rent" made available via the Net that complete tasks, solve problems, or conduct transactions.
28	Hull, R., Benedikt, M., Christophides, V., & Su, J. (2003).	An e-service is a collection of network-resident software services accessible via standardized protocols, whose functionality can be automatically discovered and integrated into applications or composed to form more complex services.
29	Kim, D. J., Agrawal, M., Jayaraman, B., & Rao, H. R. (2003).	E-service is defined as an integrated solution for customized services that are delivered through the Internet, enabling the dynamic discovery, composition, and delivery of services.
30	Lambrou, M. A. (2003)	E-service is defined as the provision of services over electronic networks and is much broader than the concept of Information and Communication Technologies, Web services or infrastructure services, It also and foremost it encompasses the respective business model characteristics.
31	Luarn, P., & Lin, H. H. (2003).	E-Services as an interactive content centered and Internet-based customer service, driven by customers and integrated with related organizational customer support processes and technologies with the goal of strengthening the customer-service provider relationship.
32	Marchetti, C., Pernici, B., & Plebani, P. (2003).	An e-Service is defined as an abstraction of a functionality, or a set of functionalities, exported by a system through a standard interface.
33	Rust, R. T., & Kannan, P. K. (2003).	E-service is defined as Provision of services over electronic networks.
34	Su, S. Y., Meng, J., Krithivasan, R., Degwekar, S., & Helal, S. (2003).	E-service as any service or functionality that can be accessed by a business or a consumer programmatically over the Internet by using a standard service specification and a standard communication protocol.



35	Surjadjaja, H., Ghosh, S., & Antony, J. (2003).	The concept of e-service is not simply a combination of the words electronic and service. In a true e-service operation, part or all of the interaction between the service provider and the customer is conducted through the Internet.
36	Yang, J. (2003).	Web services are self-contained, Web-enabled applications capable not only of performing business activities on their own, but also possessing the ability to engage other Web services in order to complete higher-order business transactions.
37	Baida, Z., Gordijn, J., & Omelayenko, B. (2004).	In business science literature the term E-services are a web-based version of traditional services, defined as business activities, deeds, and performances of mostly intangible nature.
38	Haas, H., & Brown, A. (2004).	In computer science context, a web service is defined as a “software system designed to support interoperable machine-to-machine interaction over a network.”
39	Hsu, M. H., & Chiu, C. M. (2004).	E-services as highly specialized electronic service for users and suggest that they include support services such as consulting, outsourcing, website design, electronic data interchange, payment transfer and data storage backups. Such complex e-services are sometimes known as web services.
40	Jarvinen, R., & Lehtinen, U. (2004).	E-service is a benefit providing an object of transaction that can be characterized as an intangible process that is at least partially produced, marketed and consumed in a simultaneous interaction through electronic networks.
41	Javalgi, R. G., Martin, C. L., & Todd, P. R. (2004).	E-services are interactive services that are delivered using the Internet, requiring the use of advanced telecommunications technology architecture.
42	Pavlichev, A., & Garson, G. D. (Eds.). (2004).	E-Service is a highly generic term, usually referring to the provision of services via the Internet (the prefix ‘e’ standing for ‘electronic’, as it does in many other usages), and thus e-service may also include e-commerce, although it may also include non-commercial services (online), which is usually provided by the government.
43	Umaphy & Puro, (2004)	Computer and information scientists view e-service as a self-contained, web-enabled application capable of not only performing business activities on their own but also possessing the ability to communicate and engage with other e-services in order to complete higher-order business transactions.
44	Van de Kar, E. A. M. (2004).	An e-service is an activity or series of activities of intangible nature that take place in interaction through an Internet channel between customers and service employees or systems of the service provider, which are provided as solutions to customer problems, add value and create customer satisfaction’.
45	Bauer, H. H., Hammerschmidt, M., & Falk, T. (2005).	E-service is conceptualized as an interactive information service that provides a means by which a firm can differentiate its service offerings and build a competitive advantage.
46	Laffie, L. S. (2005).	According to the IRS Web site, “e-services” is a suite of Web-based products that allows tax professionals and payers to do business with the IRS electronically, 24/7.
47	Wareham, J., Zheng, J. G., & Straub, D. (2005).	E-Services are broadly defined as the provision of services that are substantially differentiated from traditional retailing, such as professional services like legal, medical or accounting services, entertainment or education.
48	Fassnacht, M., & Koese, I. (2006).	E-service is defined as services delivered via information and communication technology where the customer interacts solely with an appropriate user interface (e.g., automated teller machine or Web site) in order to retrieve desired benefits.
49	Kardaras, D., & Karakostas, B. (2006).	An e-service is an activity or series of activities that take place during the interaction between a provider and a customer through an electronic channel. Increasingly e-services are being realized using the technology of web services.



50	Korba, L., Song, R., & Yee, G. (2006).	E-services are described as an emerging paradigm that offers increased efficiency, enhanced services, and stronger customer relationships through Internet-enabled applications that are reusable and customizable to user needs.
51	Rowley, J. (2006).	E-service is deeds, efforts or performances whose delivery is mediated by information technology (including the Web, information kiosks, and mobile devices). Such e-service includes the service element of e-tailing, customer support and service, and service delivery.
52	Sousa, R., & Voss, C. A. (2006).	E-service is defined as services produced by customers by interacting with a website, excluding any interactions with service employees.
53	Zhang, X., Prybutok, V., & Huang, A. (2006).	E-service is defined as an integration of business processes, policies, procedures, tools, technologies, and human efforts to facilitate both assisted and unassisted customer services using the Internet and other networks” (p 279).
54	Hofacker, C. F., Goldsmith, R. E., Bridges, E., & Swilley, E. (2007).	E-service is defined as an act or performance that creates value and provides benefits for customers through a process that is stored as an algorithm and typically implemented by networked software.
55	Jiang, P. Y., Zhou, G. H., Zhao, G., Zhang, Y. F., & Sun, H. B. (2007).	E-service is defined as a new kind of service mode. It is the extension of service that is introduced into the networked manufacturing environment and makes the traditional service processes have a network, digital and electronic-payment natures. The successful implementation of e-service mainly relies on digital information, e-commerce, and networked technologies.
56	Lee, J. S., & Szymanski, B. K. (2007).	E-service is defined as a modular, nimble (agile), Internet-based service that most often requires various computational resources such as bandwidth, computational cycles or memory to guarantee the Quality of Service.
57	Scupola, A. (Ed.). (2008).	E-services are defined as services that are produced, provided and/or consumed through the use of ICT-networks such as Internet-based systems and mobile solutions.
58	Wu, X.B., Chen, Q., Li, J., 2008.	E-service is defined as using technology media for service delivery based on modern communications, information and multimedia technology.
59	Johnston, R., & Clark, G. (2008).	E-service is the delivery of service using new media such as PCs but also via other technologies such as digital TV, mobile phones and PDAs (personal digital assistants).
60	Burgess, S., Breen, J., & Quiazon, R. (2009).	E-services are those professional services, traditionally performed face-to-face, which are now predominantly delivered online. These might include those services where at least one of the parties (business or consumer) is not required to actively participate for the service to be delivered or, at the less-sophisticated end, where the technology facilitates the delivery of the service.
61	Scupola, A., Henten, A., & Nicolajsen, H. W. (2009).	The term e-service stands for electronic service and consequently, it is a service delivered electronically.
62	Ho, C. T. B., & Lin, W. C. (2010).	E-service is defined as web-based service or interactive service provided through the internet. In e-services, the interaction or the connection of the customer with service providers is through the websites through the agency of technology.
63	Hoffman, K. D., & Bateson, J. E. (2010).	E-service pertains to customer service support provided on the net that is meant to enhance the customer’s overall experience.
64	Gera, R., & Singhvi, S. R. (2011).	E-service has been defined as the electronic provision of a service to customers.
65	Hassan, H. S., Shehab, E., & Peppard, J. (2011).	E-service is defined as the initial visit of a home page until the requested service has been completed or the final product has been delivered and is fit for use.



66	Kandampully, J. (Ed.). (2011).	E-service to be all cues and encounters that occur before, during, and after a consumer interacts with a user interface.
67	Riedl, C., Leimeister, J. M., & Krcmar, H. (2011).	An E-service will be defined as a business activity of value exchange that is accessible through an electronic interface. In this sense an e-service, as it will be understood within the context of this work, lies at the intersection of the business definition of a service (i.e., business activity of value exchange) and the technical implementation of a web-service. Such a service is more than the pure technical implementation of a web-service or another software implementation.
68	Chen, J., Yuan, L., & Mingins, C. (2012)	An e-service is an act or performance that creates value and provides benefits for customers through a process that integrates stored algorithms and other (manual) processes, normally in an interactive manner and significant portions of the e-service typically implemented by networked software.
69	Taherdoost, H., Sahibuddin, S., Ibrahim, S., Kalantari, A., Jalaliyoon, N., & Ameri, S. (2012).	E-service as the provision of interactional, content centered and electronic-based service over electronic networks.
70	Tahira, R., Butt, M. M., De Run, E. C., & Ramay, I. A. (2012).	E-service is defined as an interactive information service that provides opportunities for firms to build competitive advantage through service differentiation.
71	Wilson, A., Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2012).	E-services are web services that are delivered through the Internet.
72	Lindgren, I., & Jansson, G. (2013).	The term e-service contains two parts: the e- and the service. These two parts can be seen to represent two different things. The 'e' represents that something is done 'electronically' and can thus be linked to an electronic artifact. The 'service' represents something intangible a process in which value is created for someone. Hence, the e-service concept can be explored from both (1) an electronic artifact (technology) perspective, and (2) a service perspective.
73	Mou, J., & Cohen, J. F. (2014).	E-service is defined as any service whose delivery is enabled by Internet technologies and incorporates a large self-service component i.e. where consumers co-produce the service outcome through their interaction with these technologies.
74	Cardoso, J., & Fromm, H. (2015).	An electronic service is a service system (with elements, a structure, a behavior, and a purpose) for which the implementation of many of its elements and behavior is done using automation and programming techniques.

CONCLUSION

In the field of electronic services, researchers need to know the complete view of the e-service definitions to select one based on their scope of the study. This Study attempted to review and examine the different definition of electronic services. A Comprehensive definition applicable to e-service can be defined as the provision of interactional, content-based and electronic mediated service through electronic networks. Stafford (2003) suggests that experts have not yet come upon a clear definition of what e-services actually are. One reason for this, as Stafford argues, could be attributed to the range of specialties involved in the delivery of e-services.



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