

# Chapter 19

## E-Services and the Digital Divide:

### The Role of Tertiary Education in Improving Public Engagement and Trust in E-Delivery of Services

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#### ABSTRACT

*This chapter considers aspects relating to the role of tertiary (i.e. higher) education in improving the engagement of the public with government provided E-services. Some of the issues considered include those of tackling the digital divide – which can exist because of technical issues in provision of the actual infrastructure, financial issues limiting access to available provision and educational barriers – as well as how to develop trust in online technologies. The challenges of the networked society include a number that can be best addressed through education. These include: 1) Engagement with new technologies and new paradigms; 2) Trust in a virtual environment; 3) Understanding of processes and engagement with online services; 4) Mapping of existing personal paradigms to the virtual world. Education itself faces challenges in the networked world. Tertiary education in particular is potentially vulnerable to the changes that the modern networked world brings; however, it can also gain through some of the new opportunities. Of particular note is the potential to unlock students' research skills and enable true inquiry by students within their studies – skills which should prepare them as active participants in the knowledge rich and information easy society within which they will be developing.*

#### INTRODUCTION

E-government or public e-services offer ways for governments to engage with their citizens and for the citizens to find information and potentially to interact with and even direct government. Glob-

ally, governments have recognized the importance of this and numerous projects to develop e-government facilities have been developed; for example, within the U.K. the move to make 100% of public services available online (HMSO, 2002). This chapter considers these issues in the global context - whilst a number of the examples

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are based on the author's knowledge within the U.K. the issues are relevant to other nations.

Similarly, citizens around the world have been appreciating the benefits of being able to access services online, for example to submit tax returns and purchase state based services online. However, the take up of such services are necessarily limited to those who are able and willing to take advantage of them. Whilst the availability of internet access is increasing, there are still large differences in the availability within certain countries, and even within a country variability can exist of the availability across socio-economic groups.

Improving the provision and level of engagement with e-government may be achieved through an acknowledgement of the issues by the policy makers and service providers, as well as by improving the education of the population – in this context, information literacy can be considered a key skill, and is recognized by some education systems as such, where information skills are developed alongside language and numeracy skills (Eisenberg, 2008). However, there can be a tension between developing more traditional skills and subjects – for example, history, literature and science – and finding space in the curriculum in which to teach the new information skills. A further concern amongst some is the unknown affect of exposing developing minds to information technology at too early a stage, with the increasing influence and penetration of such skills into all aspects of a child's life that their development is affected in ways that are potentially detrimental to their longer term well being (Guardian, 2009). With this in mind, tertiary education can be particularly influential – as university level students are at a suitable level to learn the skills needed to engage with modern e-services whilst not being so juvenile as to suffer potential ill effects. Furthermore, these students will provide the future policy makers and technology implementers who can influence future systems.

## **THE CONTEXT**

A well known way to characterize business with consumer interactions is in terms of the Business-to-business (B2B), Business-To-Customer (B2C), customer-to-business (C2B) and customer-to-customer (C2C) models. Similarly, with respect to governments and citizens, we can characterize interactions as G2C and C2G (Carter, 2005). G2C are familiar – in that governments provide information to citizens has long been done using traditional media, such as paper based publishing or public television broadcasts. C2G, whilst available in limited ways – for example by direct lobbying of representatives – has been more of a problem. Traditional approaches – such as taking marketing type samples of the population, or public led mechanisms such as petitions have been harder to organize and run on a mass scale. However, the potential to gather information from the population is now much greater through distributing the work out to the public themselves.

In the context of e-government, another aspect to consider is the global nature of the Internet, and the potential impact this has on an individual. The rights and responsibilities of individuals as members of the Internet community – the netizens - complement and can conflict with those as members of nation states. A key feature for governments to consider when rolling out e-government services is to not exclude their own citizens through dangerous assumptions. One feature which is relevant across the world is the extent to which the population has the basic skills to engage with e-services. For example, taking the latest figures for the U.K. on the education at age 16 (key stage 4), only 47.2% achieved 5 passes including mathematics and English at grade C (see DCSF 2008). This indicates potential problems should services be provided mainly, or in some cases exclusively, online.

The opportunities referred to above can be broadly characterized as those of finding information about public services, and of providing

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