Chapter 15
Conceptualizing a Contextual Measurement for Digital Divide/s:
Using an Integrated Narrative

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ABSTRACT

Measurements for the digital divide/s have often engaged in simplified, single factor measurements that present partial and static conceptualization and, therefore, measurements of the digital divide/s. The following chapter encourages policy makers to choose appropriate tools and programs to measure digital divide/s according to three dimensions: (1) the purpose of the tool; (2) levels of observation; and (3) methods of approaching the data. Then it describes an integrated contextual iterative (ICI) approach suggested by the authors as an effective way to assess digital divide/s including perspectives of different stakeholders. The approach is illustrated with examples from a research project studying public access venues in 25 countries around the world.

INTRODUCTION

The digital divide is a concept that has broadly come to signify a range of phenomena referring to disparities of access, use, skill, background and environment in the context of information and communication technologies (ICTs). The issue of digital inequalities was already addressed and studied at the beginning of the 90s. However, the concept of the digital divide, which was first introduced by the Clinton-Gore administration

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in 1996, quickly gained popular acceptance as a concept that highlighted the importance of access to ICT in society among different populations and countries. The digital divide, it was feared, would exacerbate the gap between rich and poor communities as well as nations (United States, 1999). Early interventions aiming to narrow the gap between the digital haves and have-nots focused on access to computers and technologies, in the hope that such access would bring about more equitable distribution of resources, knowledge and solutions to people's problems.

This simplistic approach has long been criticized, with growing voices insisting that access alone is not enough to promote social inclusion or bridge the digital divide (Barzilai-Nahon, 2006; Potter, 2006; DiMaggio, Hargittai, Celeste, & Shafer, 2004; Fink & Kenny, 2003; Gomez & Ospina, 2001; Norris, 2001; Warschauer, 2003; Wilson, 2004). These voices are aimed towards broadening the conceptualization of the digital divide and overcoming the dichotomous interpretation the nomenclature 'divide' might entail. Barzilai-Nahon (2006) suggests that the digital divide is multifaceted and offers the label digital divide/s as a way to highlight the multiple dimensions included in it. Digital divide/s, she argues, should be understood as a concept that reflects inequalities derived from the digital environment, and at the same time be studied in a continuum with other socio-economic inequities.

This chapter briefly introduces the concept of the digital divide/s. Next, it provides a roadmap for policy makers which helps them assess how appropriate each methodology is to their particular decision making scenarios by suggesting three stages of evaluation that can be applied to each such methodology: first, the purpose of the tool or method; second, the level of observation implicit in this tool; and third, the method of approaching the data. We then propose a framework for assessment and measurement of the digital divide/s that is contextual, integrated and iterative - the Integrated Contextual Iterative Approach (henceforth, ICI). By proposing the ICI we provide decision makers with a tool to arrive at comprehensive and contextual measures of the digital divide/s. We then discuss the pros and cons of this approach and illustrate the use of ICI by referring to an ongoing research project that is being carried out in 25 countries across the world.

BACKGROUND

The definition of the digital divide/s and the empirical analysis of its components have been much debated in existing literature on the subject (Dewan & Riggins, 2005; Hargittai, 2003; James, 2008; Warschauer, 2003). Traditional thinking in disciplines like communications, sociology, information systems and science on the issue of digital divide/s revolved around the issue of access. Policy makers attached overriding importance to the physical availability of infrastructure and connectivity – a function, perhaps, of the reality of resource allocation to address the digital divide/s in the 90s. However, as Warschauer (2003) argues,

a digital divide is marked not only by physical access to computers and connectivity, but also by access to the additional resources that allow people to use technology well. However, the original sense of the digital divide term - which attached overriding importance to the physical availability of computers and connectivity, rather than to issues of content, language, education, literacy, or community and social resources - is difficult to overcome in people's minds.

In recent years, this traditional access-oriented thinking moved beyond technology to focus on people and communities to understand – for example, the influence of skills, usage patterns and influence of the environment such as political and economic development (Bridges.org, 2005a; Wilson III, 2006). The focus of funding and the resulting practical implications also exemplify