

# Computing in a New Zealand Urban Community

**Barbara J. Crump**

*Massey University, New Zealand*

**Keri Logan**

*Massey University, New Zealand*

**Andrea McIlroy**

*Massey University, New Zealand*

## INTRODUCTION

Governments and international organisations have expressed concern regarding what has been labeled the digital divide, that is, the gap between those people who have access to, and the ability to use, modern information technologies—such as computers, the Internet, e-mail, and other mobile technologies, often referred to as information communication technologies (ICTs)—and those who do not. As a result a range of measures have been put in place by public agencies in an attempt to reduce the inequities between the “haves” and the “have nots”. One strategy which has commonly been used is the establishment of free and easy access to computing and Internet facilities within communities identified as needing such assistance.

In Wellington, New Zealand, a project called Smart Newtown has been implemented whereby free public access to computers and the Internet and free introductory classes are made available to all citizens. The researchers were employed to evaluate the implementation and sustainability of this project and this chapter discusses how, over a period of three years, the participation of women has changed. The questions asked were “How did the women benefit from their attendance?” and “What caused this change in participation?”

The article begins with a brief background on gender and ICTs, followed by a short review of the literature regarding the digital divide and community computing. One of the successful computing centers in the Smart Newtown project is then examined from a gender viewpoint.

## BACKGROUND

While the term ICT does not exclusively refer to the Internet and its applications, but to other modern technologies, applications and services used to organize, transform, and transmit information (Marcelle, 2000), the Internet remains the main focus. From its inception, the Internet has been dominated by male “geeks”, but when the World Wide Web became accessible to the general public, much was made of its potential to reshape and reorganize our work and “enhance the quality of human life” (Huyer & Sikoska, 2003, p. 1). It soon became clear that gender inequalities of access to, and understanding of, the Internet and its potential benefits continued, and Spender (1995) in her seminal book “Nattering on the Net: Women, power, and cyberspace” highlighted some of the specific inequalities which were becoming evident.

The first phase of the World Summit on the Information Society held in Geneva in 2003 raised gender-equality awareness by insisting on the critical relevance of gender to ICTs. This was timely as the adoption of ICTs has become internationally widespread amongst both developed and developing countries and it is of concern that many women are still not participating in the emerging information society (UNDP/UNIFEM, 2004). This is despite the programs that have been put in place by many governments, the United Nations, and international organizations to encourage adoption and use of ICTs as a means of helping reduce poverty and promote sustainable human development.

In New Zealand, groups identified as being likely to be excluded from the digital society include Maori and Pacific peoples, those on low incomes, solo parents (usually women), people with no or low qualifications or poor literacy, the unemployed, people with disabilities and people living in rural areas that lack a sound telecommunications structure (Community Employment Group, 2002). The consequences of exclusion from the digital era is noted in a recent report (The Economist, 2005, p. 11) where “the real digital divide” is defined as “but a symptom of deeper, more important divides: of income, development and literacy.”

## **THE DIGITAL DIVIDE**

Early definitions for the term digital divide, believed to be a “simplifying metaphor” by van Dijk and Hacker (2003, p. 322), refer to the gap that exists between those who have and those who do not have access to these modern technologies. The focus was initially on access and adoption rates to the technologies by different sectors of society within the developed world. DiMaggio, Hargittai, Neuman, and Robinson (2001) described the digital divide as being the inequality in access to the Internet including the degree to which it is used, knowledge of how to extract and evaluate information, and the variety of uses to which it is put. Others define it more broadly as the difference between those people who do or do not have access to technologies such as telephone, television, or Internet (Gurstein, 2003).

Gender, race, and class are factors, highlighted in many studies, where inequity of access exists. Often women have less money than men and this can prevent them purchasing the equipment necessary to gain access and training (Wylie, 1995). Two of the most critical issues regarding the ‘gender digital divide’ relate to access and control, and education, training and skill development (UNDP/UNIFEM, 2004) and it is in these areas where community ICT initiatives can play a pivotal role.

## **COMMUNITY COMPUTING**

Community ICT projects with the objectives of increasing social capital and reducing the digital

divide are recognized as being complex and often fail to meet these goals. Warschauer (2002) believes ICTs must have a social inclusion focus. He suggests a model that involves access to physical artifacts (computers and telecommunications), relevant content, human resources and skills, and social support in the form of community, institutional and societal structures that help access to ICTs. Warschauer considers these four sets of resources have an iterative relation with ICT use. The combining of all four sets of resources contributes to successful and efficient use of ICTs and, once effectively used, feed into promotion and extension of the resources.

Pinkett and O’Bryant (2003) take an “asset-based” view to community development and recommend leveraging the resources within a community by “mapping” these assets and then “mobilizing” them to “facilitate productive and meaningful connections” (p. 192). Asset-based community development uses existing resources (assets) within the community (thus being internally focused) and encourages the ongoing establishment of productive relationships among community members. Users are empowered through technology supporting their interests and become active producers, not consumers where the emphasis is on outcomes instead of access.

The approaches to community ICT taken by Warschauer (2002) and Pinkett and O’Bryant (2003) are underpinned by the principle that ICTs should be useful, effective, meaningful, and relevant. These theorists agree the end result should be user-focused.

The usefulness and relevance of ICTs is especially important for women in the early adoption stages of ICTs. Females need to perceive computers as a “tool to use within a broader context” (Fisher, Margolis, & Miller 1997, p. 4). The provision of a non-threatening, culturally suitable environment where women are able to learn how to use the technologies, with encouraging assistance is therefore vital. The next section presents an example of how a community ICT initiative has increased the participation of women and contributed to social capital through education, training, and skill development.

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