

Communities, Learning and Democracy in the Digital Age

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Communities, Learning and Democracy in the Digital Age

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Abstract

Access to information networks constitutes the essential tool for enabling citizens to participate in the economic, political, and social life of their communities; and, as such, forms the basis of participatory democracy. This paper presents and examines four components of access to telecommunications services: context, connectivity, capability, and content.

The Historical Importance of Access

Access to information networks constitutes the essential tool for enabling citizens to participate in the economic, political, and social life of their communities; and, as such, forms the basis for participatory democracy. Indeed, Jefferson, Madison, and the new Congress made concrete their commitment to an informed public as the foundation of America's nascent democracy; when, in 1789, Congress mandated the first post road. As they did 200 years ago, information networks contribute the glue that binds communities together economically, politically, and socially.

Hence, while the democratic principle for participation is inclusion, the economic principle is contribution; that is, to maximize the potential of each individual is also to maximize a community's wealth. Lack of access to a community's central networks impedes quotidian routines as well as occasional expressions of public duty; and, if persistent, enforces isolation and its derivative alienation. Accordingly, the costs and benefits of inclusivity through access may be measured in a community's progress toward maximizing the contributions of each member and of the whole.

The Challenge of Achieving Access in the Information Age

In the 21st century, the development of the Internet offers new hope for providing universal service in the public interest--new hope that everyone will have the opportunity to participate in our information society. Even if a household cannot afford nor chooses not to connect to the Internet from home, people can logon at their local library. Thanks to the universal service provisions of the

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Telecommunications Act of 1996, nearly every community is now connected, thus providing on-ramps to the information superhighway. Nevertheless, the latest research indicates that many low income, minority, disabled, rural, aging, and inner city groups remain behind in their ownership of computers and access to telecommunications networks. No matter whose data is used to describe the "digital divide" between rich and poor, between black and white, between urban and rural, between English and Spanish-speaking, between old and young, between immigrants and Native Americans, we can be certain that there is and promises to remain differential access to the Internet and other communications tools.

The Components of Access: Context, Connectivity, Capability, and Content

Access to telecommunications services will not, by itself, guarantee success for communities. The other side of the equation requires an understanding of the resources a community must marshal to make the most of access to national and global networks. At the community level, successful access depends on four primary determinants or 4C's of access: context, connectivity, capability, and content.

Context

For access to be achieved, a wide array of internal and external forces and trends must be considered. These include environmental (e.g., air and water pollution, waste management), economic (e.g., business incentives, tax structures), and social equity (e.g., crime, poverty, unemployment) indicators of community well-being and sustainability. And although context does not determine a community's developmental trajectory, it does suggest the pertinent needs faced by communities, what types of technology-based interventions might help to fulfill these needs, what kinds of barriers are likely to be encountered, and perhaps more importantly, what kinds of assets the community possesses. By conceptualizing the Internet as a pluralistic domain that includes the broader context in which the technical components are embedded, we explicitly connect social with technical to form the intimate interdependency of the Internet as a socio-technical network. A socio-technical perspective emphasizes the importance of context in determining community-level interventions and their evaluation, as well as the inherent difficulty in developing "best practices" that can be applied across diverse settings.

Connectivity

The seemingly simple fact of laying a cable to connect a household or community belies the complexity of attaining a level of connectivity sufficient to constitute a community asset. Though the Telecommunications Act of 1996 defines high-speed Internet as connection speeds above 256 kbps, higher connection speeds are required to effectively utilize many WWW applications in use today. Telemedicine applications call for connections of 1.5 mbps (T1.5) connections; whereas, many Internet business applications necessitate bandwidths of at least T1.5 or multiple T1.5 connections. To be sure, the level of a community's high-speed connectivity can be measured in different ways: a) points of access "availability at public sites such as schools, libraries or community centers, in the home, in businesses or institutions, b) the number of Internet Service Providers (ISPs) that offer high-speed Internet service in a community, c) and/or, the type and speeds of service offerings available from high-speed Internet providers "DSL, cable modem, wireless, T1.5, DS3, etc. Underserved communities may experience a "broadband digital divide" as governments, businesses and content providers increasingly develop products and services that require high-speed Internet connections.

Capability

Because the utility of any technology derives directly from the skill of the user as well as from the delivery capacity of local institutions, capability gauges the ability to deliver or acquire the service. For individuals, capability encompasses both formal and informal educational attainment and levels of technical sophistication and understanding, along with the willingness to adapt to new technologies and ways of thinking. At the institutional level, capability also relates to the amount of resources a community and its businesses commit to workforce development including teaching effective use of information technology tools and encouraging creativity, productivity, and innovations of local entrepreneurs. Capabilities are cumulative and recursive because individuals and institutions must migrate to new hardware platforms, learn new software applications, and develop new skills as new technologies are introduced and as existing technologies are upgraded. Thus, existing and emerging gaps in proficiency, knowledge, skills, and experience may lead to considerable differences in communities' abilities to leverage the Internet.

Content

Content is interdependent upon the other three C's. Once individuals and communities become connected and have the capabilities and necessary skills to use the Internet, they need a reason for

use. Low-income and underserved communities face significant content barriers that include the lack of neighborhood-level information such as housing, childcare, and transportation news; limited information written at a basic literacy level; and inadequate content for culturally diverse populations, including non-English speaking Internet users. If content that is relevant to individuals and members of the community is not available, it will be difficult to encourage and sustain use. Relevant content is necessary because it provides a forum for interacting within local communities as well as a window to the outside world.

Lifelong Learning --The Persistent Challenge of Access

In contemporary communities, the 4Cs converge to facilitate decentralized low or no cost delivery of interactive learning opportunities that enable more active, democratic participation from early childhood through adulthood. No longer confined to a classroom or educational institutions, learners are afforded greater opportunities to take advantage of emerging information and telecommunications technologies to achieve more successful outcomes. Shared spaces, both real and virtual, provide environments where people with common interests and concerns gather and benefit--the greater the participation, the more valuable the resource. These learning networks, often referred to as communities, encourage collaborative knowledge creation and sharing using all forms of media. Within these networks, learners can interact by communicating ideas and engaging in discourse and problem solving. Participants contribute new creations after they gain and benefit from access and participation. These learning spaces, or commons, may enhance both human and social capital. When they incorporate democratic values, free expression and intellectual freedom prevail.

While online opportunities have the potential to serve a multitude of lifelong learning needs of all people, they are only available to those who have access to these new technologies, can afford and comprehend the content, and possess the capabilities necessary to navigate these complex systems successfully. Without equitable access within each of the 4Cs, these learning opportunities pose major challenges to the democratic promise of these open anytime/anyplace educational experiences.

