A Maturity Model for Digital Literacies and Sustainable Development

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INTRODUCTION

It is a given that the world is now becoming increasingly digitialised. However the speed at which this digitisation has occurred, has led to unequal progression amongst societies. A key aspect of digitisation is the notion of "digital inclusion"; the empowerment of individuals through digital participation. Successful initiatives, supported by digital literacy, have enabled those that are isolated to gain on a social and economic front (Sharma & Mokhtar, 2006). This paper recounts the role of digital literacies in supporting participative, and therefore sustainable, development. Taking a historical development perspective, the paper concludes with a maturity model that links digital policies with socio-economic well-being.

Building on the pioneering work of Gilster (1997), Belshaw (2012) offers a comprehensive definition of modern literacies in digital society:

Literacies involve the mastery of simple cognitive and practical skills. To be 'literate' is only meaningful within a social context and involves having access to the cultural, economic and political structures of a society. In addition to providing the means and skills to deal with written texts, literacies bring about a transformation in human thinking capacities. This intellectual empowerment happens as a result of new cognitive tools (e.g. writing) or technical instruments (e.g. digital technologies). (p.90)

It has been suggested that digital inclusion and participation enables the grassroots to be engaged, bridging some of the prevailing socio-economic disadvantages (SEDs) that exist within societies, as well as across countries (Armenta et al., 2012). This is the fundamental premise of digital literacies – the set of skills and tools that will empower individuals and groups to participate fully in the increasingly digital future and hence bridge the disparities in socio-economic opportunities.

BACKGROUND

The Evolution of Digital Literacy

Lanham (1995) first conceptualised digital literacy as the ability to comprehend information, regardless of the medium. This definition focused on the user's ability to navigate between the various online and offline mediums. Since this original conceptualisation, the term digital literacy has evolved along with pervasive Information and

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Communication Technology (ICT) in society. While Lanham created awareness of the need to comprehend the transformations brought about by the incorporation of ICTs, it was Gilster (1997) who popularised the concept of digital literacy and its emergence as a critical skill. His portrayal of digital literacy as "mastering ideas, not keystrokes" (1997, p.15), positioned the concept to focus more on cognitive ability, as opposed to competencies. This was considered a milestone, as society rapidly digitised and network effects arising from social media led to the development of social capital as a socio-economic advantage.

Building on this, Eshet-Alkalai (2004) presented five survival skills for the digital era: photo-visual literacy, reproduction literacy, information literacy, branching literacy and social-emotional literacy. Of these five digital literacies, four of them are largely based on specific digital skills. As the contrasting element, socio-emotional literacy is of particular interest. The definition of socio-emotionally literate users offered by Eshet-Alkalai (2004) is individuals who are able to work with others, sharing and evaluating information and knowledge, in order to construct new knowledge. This refers to the participation and communication that occurs in the digital world, as well as the opportunities offered via this medium. Where participation leads to collective intelligence, new knowledge may be developed. By situating socio-emotional literacy as a digital literacy skill, the Internet and new media present a new cultural environment, with its own unique values and practices for engagement.

The socio-cultural dimension of digital literacy is further discussed by Bélisle (2006). Although her work focuses on a re-conceptualisation of literacy and not merely digital literacy, Bélisle's research is important as it explains the changes to society as a result of the digital knowledge revolution. In fact, it could be said that Bélisle (2006) truly grasped the essence of the changes to the concept of literacy within the digital society. Bélisle (2006) examines three dimensions of literacy: Functional, Socio-cultural and Transformational. Functional literacy refers to the basic skills required to lead a day-to-day life. In the conventional sense, this refers to the skills of reading, writing, speaking and listening. In relation to digital literacies, this includes the ability to perform operational computer skills, such as input, output and searching, but also the ability to understand when and where each skill set is relevant. This dimension of digital literacy could be read in parallel with Lanham's original concept.

Bélisle's second dimension of literacies is the socio-cultural. Literacy ultimately serves to address a purpose; it "[gives] access to, and understanding of, the structures of power and authority through mastery of written texts and numbers" (Bélisle, 2006, p.53). Socio-cultural literacy includes knowledge of a society's values, attitudes, practices and conventions; and an understanding of where each of these apply. This is important in relation to digital literacy, as the digital world provides new channels for participation and communication. Literacy is only meaningful when contextualised to the cultural fabric of society; the socio-cultural dimension of digital literacy enables individuals to immerse themselves within and to participate in social and economic structures of digital society. Hence, when referring specifically to digital literacy, it may be more accurate to consider the socio-cultural dimension of literacy as a "socio-economic" function. This would better capture its *impact on* and *empowerment of* users in online communities.

The final dimension of literacy which Bélisle describes is the transformational dimension of digital literacy. This "brings a profound enrichment and eventually entails a transformation of human thinking capacities" (Bélisle, 2006, p.54). The individuals' intellectual empowerment through literacy may have the power to transform society, especially where creative cognitive ability leads to the creation of new cognitive tools (Bélisle, 2006). If Bélisle's transformative digital literacy is viewed alongside Eshet-Alkalai's socio-emotional literacy, the online world opens up new opportunities for collaboration and creation. This ultimately