DIGITAL LITERACY X COMMUNICATION RESEARCH

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The paper offers tools to study communicative activities provided by the Information Communication Technology (ICT) resources, particularly Internet and virtual environments (VE) through data analysis techniques. It is proposed that the research of communicative activities provided by ICT tools can be understood by the conceptual model of digital literacy which covers most of the cognitive skills users and scholars employ in digital environments. The conceptual digital literacy model of Eshet-Alkalai integrates photo-visual digital thinking skill, reproduction digital thinking skill, branching digital thinking skill, information digital thinking skill, socio-emotional digital thinking skill and real-time thinking skill. The model integrates the main cognitive and non-cognitive abilities to realize tasks in digital environments. It is suggested the adaptation of the conceptual digital literacy model of Eshet-Alkalai to develop methods to research communicative activities in ICT’s resources like e-mail, instant message, blogs, virtual communities participation, games, publishing and reading in Internet and virtual environments (VE).

It is proposed that the research of communicative activities provided by ICT tools can be understood by the conceptual model of digital literacy. It makes possible survey measures of people’s online skills through methods of analysis and in determining qualitative research and quantitative research design.

Keywords: Internet Research, Communication Research, Digital Communication, Model of Digital Literacy, Method.
INTRODUCTION

The factors that contributed to ICT development are related to the creation and transmission of knowledge and meanings in oral or written form. The technology development follows the humanity journey and it is driven by the evolution challenge in incessant process. The implications of this new technology and its multiple effects open possibilities yet unknown.

The paper aims to contribute to the development of research methods that can be adapted to the study processes evolving human communication through Internet and in virtual environments.

The Internet and VE research are a relatively new field of endeavor particularly because it integrates different modes of communication and forms (written, oral, sound, color and others) of contents at the same time. The implications of the Internet and VE constitute a magnificent opportunity to build and test theories.

DIGITAL LITERACY

The word digital is originated from the Latin *Digitalis* and was used as a measure system. Nowadays it indicates data in binary digit format and it is used to define digital communication signal.

The Literacy concept is related to the person`s ability to read and write. Although it has assumed new meanings, it is still related to the person`s ability to use and communicate information.

According to Gilster (1997), Digital Literacy is the ability to understand and use information in multiple formats from a wide range of sources when it is presented via computers. It is a term used to describe the ability of users to perform in digital environments.

Eshet-Alkalai proposed a new theory, Digital Thinking Skills (2004; 2005), that is a refinement of the term digital literacy, describing the variety of thinking skills that comprise digital literacy. The author classified digital literacy in 6 (six) groups that cover the main cognitive and non-cognitive abilities to realize tasks in digital
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The model of the author is considered one of the most complete and coherent to program digital environments (Akers, C. (2005) and Lankshear, Colin & Knobel (2008)). It is also an important tool for research in particular making possible survey measures of people`s online skills.

**The Photo-Visual Literacy - Learning to Read from Visuals**

The photo-visual literacy helps users understand communication and information displayed in a visual-graphical form. It is one of the most important abilities to deal with graphical interfaces.

**Reproduction Literacy: The Art of Creative Duplication**

The digital reproduction literacy is defined as the ability to create new meanings or new interpretations by combining pre-existing, independent shreds of information in any form of media – text, graphic, or sound (Gilster, 1997). It includes the ability to organize and create new meanings with multimedia resources.
Branching literacy: Hypermedia and thinking or multiple-domain thinking
The web's structure requires the navigation ability in order to remain oriented in hypermedia environments.

Information Literacy: The Art of Always Questioning Information
According to Eshet-Alkalai (2004; 2005), the ability of information consumers to make educated, smart, information assessments requires a special kind of literacy skill; information literacy. Although it is not unique to the digital era, it has become a fundamental skill.

Socio-Emotional Literacy: How to live together?
According to Eshet-Alkalai (2004; 2005), these skills include the ability not only to share formal knowledge, but also to share emotions by means of digital communication, to identify pretentious people in chat rooms, and to avoid Internet traps, such as virus. The author considers socio-emotional literacy as the highest-level and most complex one.

Real-Time Thinking Literacy: processing large volumes of digital information simultaneously
The real-time thinking skill is related to the ability of users to perform effectively in advanced digital environments, mainly high-tech machines, multimedia games, and multimedia training environments that require the user to process simultaneously large volumes of stimuli which appear in real time and at high speed.
DIGITAL LITERACY VENN DIAGRAM

The Digital Literacy Venn Diagram demonstrates that the literacies are linked and related to each other. So the literacies can be understood as a complex and nuclear set of abilities (cognitive and non-cognitives) that have an indicated potential to make possible the research and study of communication processes between people in the Internet and in digital environments.

Image 1: Digital Literacy Venn Diagram

The Internet communication activities like e-mail, chat, instant message, blog, online courses, virtual communities’ participation can be framed in one or more digital literacy thinking skill.
DIGITAL LITERACY X COMMUNICATION

The correspondences between Digital Literacy and Communication are presented by the Venn diagram and the chart. The chart has been done considering the relation between literacies and communicative activities provided by ICT resources.

Table 1: Communicative Activities in Internet and VE x Digital Literacies

<table>
<thead>
<tr>
<th>Communication Tool</th>
<th>The Photo-Visual Literacy</th>
<th>Reproduction Literacy</th>
<th>Branching Literacy</th>
<th>Socio-Emotional Literacy</th>
<th>Information Literacy</th>
<th>Real-Time Thinking Literacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-mail</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Instant Message</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
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<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Multimedia VE</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Games</td>
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<tr>
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<td>X</td>
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<td>X</td>
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<tr>
<td>Virtual Communities</td>
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<td>X</td>
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<td>X</td>
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</tr>
<tr>
<td>Publishing</td>
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<td>X</td>
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<tr>
<td>Blog</td>
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</tbody>
</table>

The digital literacy model linked with the ICT tools presented in the chart constitutes a method to classify and analyze communicative activities in digital environments. The data gathered can be analyzed and interpreted by research methods. The results can provide a general view of the process as well as specific details about the use of contemporary communication technologies providing material for others studies. The ICT resources can be framed in several digital literacy characteristics. The model of Digital Literacy x Communication considers the complex set of factors and elements integrated in the communicative process.
CONCLUSION

Digital literacy resources can promote the integration of many knowledge areas and also contribute to plan virtual environments adapted to the users’ necessities. It is suggested the use of the digital literacy and communication activities model that has been adapted to reveal communicative activities in Internet and VE.

The research about ICT human communication tools contributes for a better understanding of issues related to evolutionary processes of communication through ICT.

The central idea is to investigate efficient research methods to study the dynamics of communicative processes in digital environments.

The studies about communicative evolutionary processes require specific methods of research that could reveal data for further research. Many others studies can be developed with data concerning to human communication through ICT’s considering each scientific field issues.

REFERENCES


