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INFORMATION AND DIGITAL LITERACY: THE INFORMATION PROFESSIONAL SKILLS IN THE GLOBAL LABOR MARKET

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Abstract: The objective of this work is to promote a study on how the market demand for information skills boosted the training of professionals in this field and influenced the study of information and digital literacies from the first years of basic education to undergraduate and professional courses. . This theoretical and qualitative research was designed on the search and reading of articles in databases and specific references in the field of Information and Education. As a result, it offers a holistic overview of the professional information market and an educational process that begins at an early age and builds citizens as democratic pillars in the knowledge society in the information age.
Keywords: information literacies, digital literacies, information professionals, global labor market.

INTRODUCTION

The 21st century environment is affected by the intense flow of media, information and digital technology. Continuous innovation in research and practice becomes a crucial point, both to understand this phenomenon and to formulate new arrangements in the social, political, cultural and economic fields.

New logics are configured to incorporate the skills of the new millennium, moving between sharing and producing multifaceted content. This arrangement is reflected in services and economic functions, which reinvent themselves to coexist with traditional work practices. Digital resources have become a major variable in the requirements demanded of professionals in the 21st century, tasks that range from the basic manipulation of software and hardware to the production of content in a sophisticated morphology. Naturally, a trend that has been required from professionals denotes a greater involvement of training that prepares its students for the challenges of the digital age.

However, the challenge of forming a critical and autonomous citizen in an informational environment precedes the higher level of education and becomes a task of the most basic levels of education. In this way, the concepts of information literacies and digital literacies become prominent in this context, which assumes some attention in transdisciplinary research between Communication, Information and Education.

Passarelli (2010) defines that information literacy "encompasses both knowledge of information resources and the ability to identify, locate, evaluate, organize them, and the power to recreate them to solve problems" (PASSARELLI, 2010, p. 74). *Information literacy* has meaning beyond the sum of its parts (*information* e *literacy*), admitting information as a complex concept.

According to Carlsson, Tayie, Jacquinot-Delaunay et al. (2008) information literacies are skills in using information and communication technologies, applied to access and creation of content and production of knowledge. This extends from knowing how to use computers (*software*s e *hardware*s) to the critical reflection of the nature of information. It is also the ability to assess technical infrastructure and social, cultural and philosophical impact, and enable people to search, evaluate and create content effectively, in order to achieve personal, social and educational goals.

The expression was coined by Paul Zurkowski in his report "*The Information Service Environment: relationships and properties*", published in 1974. In his work, Zurkowski (North American librarian) described a range of products and services provided by the private sphere and its associations with Libraries. Two years later, the term: *literacy* reappeared (in a more comprehensive way) linked to skills and knowledge (connotation currently adopted),

since it was not only about the search for information in the context of the library, but also its use and application in education. However, the information age dates back approximately 40 years.

Digital literacies are a concept close to information literacies, mainly because they were developed through technological advances in the late 1980s and early 1990s. Brasilina Passarelli (2010) points out that the definition of Digital Literacy is difficult to be precise. and, for this reason, it leads to the expansion of the term, in order to characterize processes in the environment of digital communication and in the context of the network society.

Paul Gilster (American writer and specialist in medieval English) coined the term in 1997 in his book "*Digital Literacy*", using the concept to designate "the ability to understand and use information in multiple formats and from diverse sources when presented through computers" (GILSTER *apud* PASSARELLI, 2010, p. 83). The term is not limited to the acquisition of skills, but expands to the forms of the subjects' daily lives. According to Passarelli (2010), this logical extension of Literacy itself is directly proportional to the extension of the experience of traditional reading.

In addition, the concept of digital literacies implies the effective and creative uses of information in the multimedia environment or when applied to the informational field, it is thought of as a process lived by the subject, in his interactions with technology in a conscious way, mediated by hyper-interactions. media provided by the connected contemporary. The permanent development of these skills is covered under an emancipatory perspective, making the subject autonomous and potentially capable and creative.

The objective of this work is to explore in the sub-theme "Training in Information Science and Professional Perspectives" the approach to the job market and the training of the information professional from the point of view of the user experience as an individual who develops their digital and information literacies. in this context not only for professional purposes, but as training for life.

This article will be divided into two sections: one that will describe trends and research on information and digital literacies aimed at professional training and the second that will address how the market responds to the digital phenomenon and demands these skills from its professionals not only in the field of Information and Technology.

This is a qualitative research of theoretical character. The survey of the theoretical framework of reference for the construction of the state of the art was designed by searching for articles in the following databases: *Scientific Search Engine* – OJOSE; USP Database; SCOPUS; SCIELO; *Web of Science/Knowledge* - Thomson Reuters; ERIC; *Google Academics*; *Google Books*; CONTECSI/reports since 2005; *American Psichological Association Data Base*; and CAPES Periodicals Portal. Articles from journals or scientific journals with registered impact (Qualis or JCR), with a process of *double peer-review* and with dates from 2005 onwards. The selection of articles was carried out in two stages: the first was related to the reading of the title, abstract and keywords; if the three questions above were adequate to the scope of the work, the second step was to read the texts.

METHODOLOGY

The delimitation of terms and sources of information has instilled significant research in Campello (2006) describes the bibliographic control instruments with emphasis on their applications in the country. He argues in his

text that the informational environment has become complex, not only as a result of the volume of publications, but also the wide range of types of material to be cataloged. The cataloging [1] remains an efficient working tool. However, in a digital age, it depends on the articulation with the new informational resources.

Among the catalog proposals of documents in the network environment, Campello (2006) introduces the *Dublin Core*, a set of 15 types of metadata [2] that the documents fill in to be inserted into digital platforms. The *Thesaurus*[3] of UNESCO (for example) makes use of Dublin Core, contemplating some of its 15 metadata. The *Dublin Core* includes:

1. Title - name by which the document is formally known;
2. Creator - entity responsible for creating the content of the document: it can be a person, an organization or a service;
3. Subject - usually expressed by keywords, phrases or a classification code that describe the subject of the document: it must be extracted from a controlled vocabulary or a formal classification system;
4. Description - information about the content of the document: it can be represented by abstract, summary or graphic illustration;
5. Producer - entity responsible for making the document available: it can be a person, an organization or a service;
6. Contributor - entity responsible for contributions to the document: it can be a person, an organization or a service;
7. Date - related to an event in the document's life cycle: usually corresponds to the date of creation or availability;
8. Type - nature or genre of the document's content: includes terms that describe the category, genre or level of value addition of the content; it must be extracted from controlled vocabulary;
9. Format - physical or digital manifestation of the document;
10. Identifier - symbol that unambiguously identifies the document: it must be extracted from a formal system (DOI, ISBN, ISSN or URL);
11. Source - reference from which that document derives: must reference the source using a formal identifier code;
12. Language - language in which the intellectual content of the document is;
13. Relationship - reference to related documents: must use codes taken from the formal identification system;
14. Coverage - extent or scope of document: includes spatial location, time period, jurisdiction; and
15. Rights - information about the copyright of the document;

Not all metadata need to be used, as the institution uses the characteristics it intends to define and catalog. Understanding the metadata is important, as it concerns the effectiveness of the database search itself.

Commonly refers to the database as a target of the search tool, but it seems important to check its definition, which is also available in Cunha and Cavalcanti (2008). According to the dictionary.

> "1 Collection of interrelated data values of such a nature that, according to the database management system, the files containing the data can be temporarily integrated into a single connected structure or only integrated at the time of query. 2 Coordinated and

1. Definition of cataloging: "description of the characteristics of the documents that form the collections in libraries and databasess" (Campello, 2006, p. 57).

2.Metadata can be defined as information useful for identifying, locating, understanding and managing data. (Source: http://www.metadados.ibge.gov.br/consulta/default.aspx)

3. Definition of *Thesaurus*: Repository of useful information or collection of diverse texts. It is also an indexing language, with the lexicon of all the words in a language or a database. (Cunha. Cavalcanti, 2008, p. 362)

> structured set of files and computer programs that constitute a repository of information that can be accessed by several users [..] 3. Collection of interrelated, stored data, with controlled redundancy to serve one or more applications" (2008, p. 43).

In this case, it is also worth bringing the definition of "search tool", which is defined as a "search tool" which:

> "Helps in preparing the search strategy, eg. manual on a database or database, thesaurus on a specific topic, list of indexing terms and common questions" (2008, p. 207).

When checking its meaning, the search was directed to the entry "search strategy", which is the "question (or set of questions) formed by natural language words, keywords or descriptors, which may be joined by logical operators, which enable the retrieval of information" (2008, p. 158). Of paramount importance is the Boolean strategic search [4] by references in a database that can be directed from interjections such as "OR" (union) expanding the spectrum of results or "AND" (intersection) and "NO" (exclusion) in case of restriction of findings. It can be simple, by typing characters in a general field; or advanced, with words directed to specific fields. These strategies are prominent when encountering a massive volume of data.

For the purpose of searching the documents and data to be described in this work and other materials for the composition of the theoretical framework, it was identified that the first step, to determine the quality of the material to be accessed, is the origin of the database. Therefore, this Guide was used to map the bases accessed in this work. From then on, based on the strategies described in the previous session, the following evaluation procedures were established:

- To check the quality of the collected materials:
  - o Origin of the author (institutional affiliation and other publications);
  - o Origin of the publication vehicle (publishers, newspapers and magazines); and
  - o Process of *Double Peer Review* (in the case of articles or chapters of collections).
- To check the relevance of materials in relation to the research:
  - o Selection by material title;
  - o Reading of the *abstract*;
  - o Review of the *key-words;*
  - o Reading the text (if it meets the three requirements listed above); and
  - o Assessment of content relevant to the study.

LITERACIES

The emergence of the use of the radical "literacias" as a literal translation of the word "*literacy*" is contextualized in the emergence of analog and digital technologies, mainly from the 1950s onwards. Authors such as Richard Hoggart (1956), Paulo Freire (1969) and Edward Hirsch (1980) contributed to the alteration of the lexicon that previously denoted something connected to the skills of "literacy" and became closer to the meaning of "culture".

The scenario of the network society reverberates this panorama, as explained by Passarelli (2010), when he talks about the use of this expression, defining it as the set of capacities and skills on the use of information in an effective and creative way.

> "In the passage from literate culture to the culture of media and convergence, marked by non-linearity and interactivity, the concept of literacy expands, encompassing the user's skills to explore this multimedia potential. The literate of the network society are those capable of reading, writing,

4. Boolean search is named after mathematician George Boole and is based on set theory. The Boolean operators AND (AND), OR (OR), NOT (MINUS) combine terms in the same search. (Source:CUNHA; CAVALCANTI, 2008, p. 159)

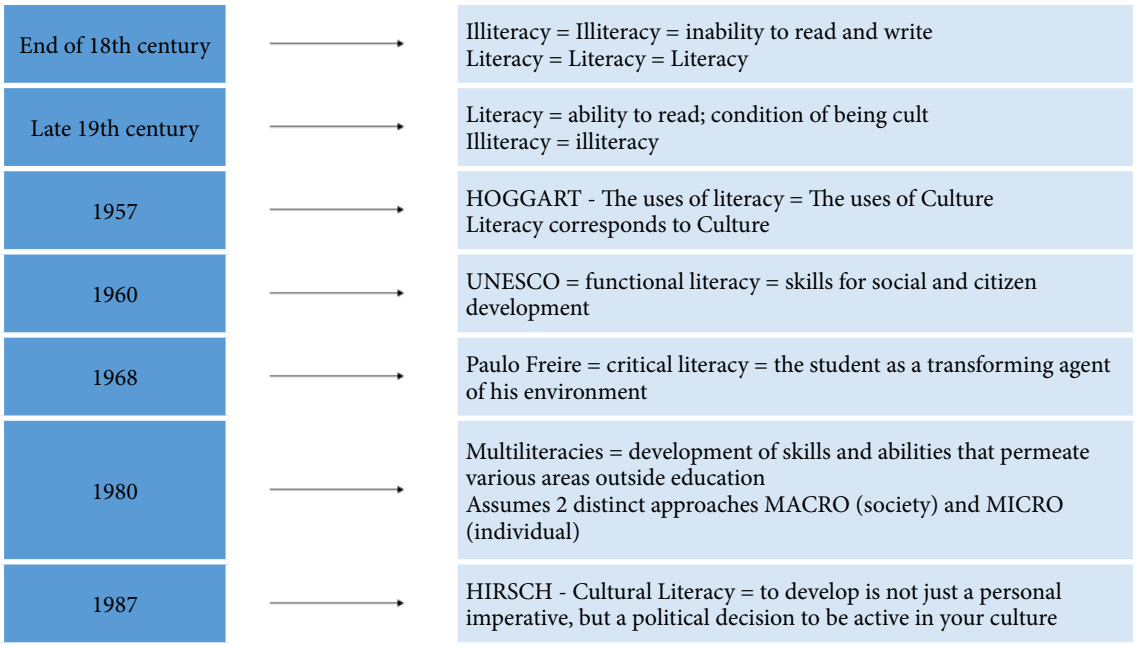

Figure 1: Summary Table on the Emergence of the Concept of "Literacy" between the 18th Century and 1987 (SOURCE: Bonami, 2016)

> interacting, communicating through this multimedia language, recognizing the social practices and textual genres that involve each element of this interface" (Passarelli, 2010, p. 73)

Following Passarelli's (2010) statement, it is interesting to point out that the option to use the literal translation of the term "*literacy*" seems to make sense in current social, cultural, political, economic and educational settings. However, Williams (2008) points out that words have their meaning contextualized and when using them, it is prudent to consider the scenarios that accompany them and, therefore, the contextualization of the use of the word literacy is valued.

INFORMATION LITERACY

Professionals in librarianship are presented as potential protagonists in the process of expanding information literacies beyond the library environment, so that the expression integrates the social, professional and educational spheres. With due regard for translation into other languages, the concept of "information literacies" is similar to the expression "Infoeducation" (Perrotti & Pierrucini, 2005) which, despite the latter being derived from a more recent scenario, deals with the information demand of its users a complex set of skills, a situation emphasized by the panorama of the WEB, due to the massive volume of data available on the network.

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According to Holmberg (2013), it was in 1931 that he was concerned with scientific approaches to the education of librarians. The mission of library schools began to expand in the 1960s, moving away from the library field and expanding research in the direction of information sciences.

The change in the librarian lexicon was gradual and in the 1970s was the first nomenclature change. In 1974 Syracuse University in the United States changed the name of its Library Science course to *School of Information Studies*, operating on a new logical base, constituted by its name "*Information*". The intention was to double the panorama of the Librarianship program - of finding and using information - by expanding the academic disciplines.

In the 1980s, the notion of *information literacy* took on a meaning of information empowerment. This training became necessary in the curricula (whether school or professional). It was an integrated set of skills, knowledge, tools and resources, developed from attitudes taken by the subject. Zurkowski declared that "people trained in applying information resources at work can be called information-savvy" (Zurkowski apud Addison & Meyers, 2014, p. 2 – Our Translation). The term has become part of the constellation of literacy meanings.

Information literacies can be analyzed under three aspects: information literacies as an acquisition of information age skills; as the cultivation of habits of mind; and how to engage in information-rich social practices. According to Addison & Meyers (2013) these perspectives are seen as the historical phases of the term represented by three different approaches.

The first approach refers to information literacies as a set of skills and behaviors acquired by users of information systems. According to Addison & Meyers (2013), the *American Library Association* (ALA) describes that "in order to have information skills, a person must recognize when information is needed and have the ability to locate, evaluate and effectively use the information". necessary information" (Meyers & Addison, 2013, p. 3 – Our Translation).

From an educational perspective, this approach positions information literacies as a set of skills, but combined with the specifics developed by students associated with skills dependent on behavioral and environmental issues.

Many institutions support this version of information literacies as the acquisition of skills and competences in order to foster a sustainable educational model. One of the

challenges in this approach is the deficiency of behaviors in relation to information technologies, causing a hierarchy between those who teach techniques and the use of tools, over those who depend on these instructions to develop their skills, because:

> "The conceptualization of Information Literacy as a set of skills acquired by the individual through direct instructions, commonly through the intermediation of information professionals, is prominently and strongly situated in the references on Librarianship and Information Sciences. This perspective has strong institutional support, due in part to the emphasis on measurement and accountability. However, it can lead to fragile teaching and learning opportunities and may find little support among new learners who access their competencies with current information technologies" (Meyers & Addison, 2013, p. 5 – Translation Our).

The second perspective on information literacies is fundamentally cognitive and associated with the notion of developing habits of mind to facilitate the work of information. In this approach, the individual develops information literacies, not through a tutor, but through a new logic and way of thinking from the moment he connects to the information or problems related to it.

This bias is a *Problem Based Knowledge* and defends the development of the individual when exposed to problems, whether in the classroom or in their daily lives. However, they are limited as they do not deal with various types of problems to be solved, but only a few model questions. In addition, some of the problems worked on in class are not related to the student's social, cultural and political context, thus causing a disparity between these environments.

> "The contextualization dimension of information literacy is a point of contention among scholars in the field. Another important challenge is the fragility of these models, both in their ability to describe the users' world, as well as in the student's ability to understand the model and apply it correctly in the situation at the moment they demand it" (Meyers & Addison, 2013), p. 7 – Our Translation).

The third perspective views information literacies as a set of practices developed involving tools and media in social and educational contexts. These practices are socially constructed and situated both inside and outside the school walls. It is a perspective close to "Multiliteracy", in which literacies are capacities exercised autonomously, in the face of the new challenges of new media and technologies. However, while it privileges the development of these skills, there is the difficulty of access and the very complexity of information systems, which can be a barrier to learning.

An important aspect of information literacies is its relationship with libraries and information science, since it was a concept from this context and for a period of time, its scholars were the maintainers of its validity. Thanks to the librarians of the 1980s, the concept moved beyond the bookshelves and began to be applied in a broader educational context. It was with the third approach that information literacies were related to the media and left their restriction in the field of librarianship, complemented by the notion of media literacies and digital literacies, concepts derived from the same root (literacies) and developed practically at the same time. (in the case of media literacies).

The three perspectives represent the conceptual progression of Information Literacy. Naturally, they are not rigid or exclusive, but flexible, admitting interpretations throughout their brief history. However, they carry many of the characteristics of the field of information science, as well as of professionals in librarianship. Furthermore, they bring interdisciplinary similarities with

both media literacies and digital literacies.

Humrickhouse (2011) highlighted the transition from information literacies to digital literacies, observing the changes in the information acquisition process, due to the WEB phenomenon. The biggest challenge for information literacies is not the technology itself, as it is in constant transition, but the user who adapts to one change or another. The central point of his study evaluates the alteration of the information hierarchy as the main issue.

This hierarchical change concerns digital resources that change access to information. Before, libraries maintained power and control over their collection and in the connected contemporary, it is not possible to affirm a greater validity of the information in books in relation to the information contained in the networks, in the same way that one cannot say about the lack of veracity of information produced. by a user when compared to content published by a newspaper. This judgment is in terms of content and not in terms of the vehicle of perpetuation.

Digital natives seem to prefer information accessed quickly by a digital device, rather than investing time and space looking for books in a library. These are some examples why digital literacies have become so important in the context of information literacies: because they encompass skills aimed at accessing digital technologies, especially access to the Internet. However, these skills are not clearly identified due to constant technological change.

> "While there is broad consensus that Media Literacies and Digital Literacies are of vital importance for today's students, the skills that constitute digital literacies are not well defined, nor have they been universally considered. The challenge is exacerbated by the fact that digital technologies transform and change rapidly, at a level that goes beyond curriculum development" (Humrickhouse, 2011, p. 11 – Our translation).

However, it is interesting to understand what these skills are developed by digital literacies, despite the ephemeral morphology of network resources. According to Borges (in Passarelli, B., Malheiro, A. & Ramos, F. 2014), an important transition from information literacies to digital literacies is the position of the individual within the communication process, since before he assumed a position participatory and from then on, assumes the position of protagonist.

> "The use of cyberspace as a means of individual expression and social communication requires skills that allow the effective and creative action of producers, consumers and information managers. What skills are these? Some authors have been referring to them as a set of competencies required to exercise command over the production of meaning and knowledge potentially provided by the Internet" (Borges, 2014, p. 129).

However, the information hierarchy as well as the phenomenon of digital networks have important institutional applications, changing curricula and nomenclature of Information Science schools. The field of Information Sciences itself was established by the constant technological advance and the need to adapt to increasingly complex communication standards.

The KALIPER Report (apud Scripps-Hoekstra, Caroll & Fotis 2014), published in 2000 by the Library and Information Science Education Association, named digital technologies as the most influential phenomenon in the curriculum of the 55 ALA-accredited undergraduate courses. Recently, the ALA Higher Education Accreditation Secretariat began requiring program curricula to integrate theory, practical application, and the use of technology.

Scripps-Hoekstra, Caroll & Fotis (2014) diagnosed that for students, digital

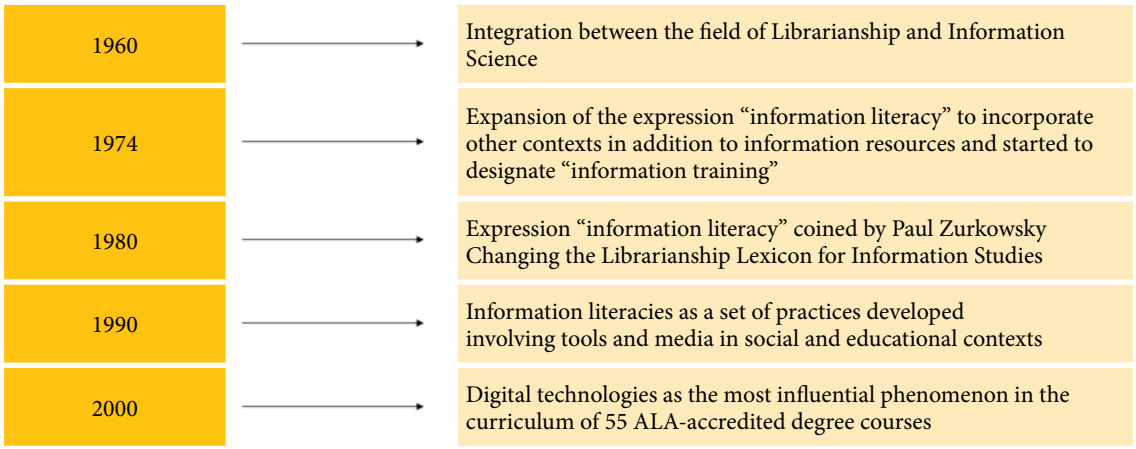

Figure 10: Summary Table on the Emergence of the Concept of "Information Literacy" from the 1960s to the 2000s (SOURCE: Bonami, 2016)

literacies are fundamental in graduation. Employing companies or institutions expect students, when they graduate, to work with various knowledge applications, from text and document management to website development.

The summary table above offers a systematization of the main milestones in the development of the term information literacies.

It is because of the technological emphasis that it becomes mandatory to delimit digital literacies and establish how they influence, modify, improve, hinder and transform education, both basic and higher. This set of competencies will be described in the next section.

DIGITAL LITERACY

Digital literacies are a concept close to information literacies, mainly because they were developed through technological advances in the late 1980s and early 1990s. Passarelli (2010) points out that the definition of Digital Literacy is difficult to be precise and, for this reason, leads to the expansion of the term, in order to characterize processes in the environment of digital communication and in the context of the network society.

Paul Gilster (American writer and specialist in medieval English) coined the term in 1997 in his book "*Digital Literacy*", using the concept to designate the ability to understand and use information in multiple formats and from diverse sources when presented through computers. The term is not limited to the acquisition of skills, but expands to the forms of the subjects' daily lives. According to Passarelli (2010), this logical extension of Literacy itself is directly proportional to the extension of the experience of traditional reading.

Digital literacies approach the meaning of information literacies. Yoram Eshet-Alkalai (Israeli professor at the Open University of the State of Israel) developed in 2004 a study called "*Digital Literacy: A Conceptual Framework for Survival Skills in the Digital Era*" (Digital Literacy: a conceptual framework with skills to survive in the Digital Age) in which he defines "like any term in fashion, Digital Literacy has taken advantage of the range of use in literature, through the reference of the technical aspect [..] to the cognitive, psychological meaning and sociological" (Eshet-Alkalai, 2004, p. 94 – Translation Our).

In his study, the author proposes five types of literacies: photovisual literacy; reproduction literacy; information literacy; the literacy of hypermedia thinking; and socio-emotional literacy. These types of literacies include cognitive skills when using digital environments.

This conceptual framework was applied in a survey with 30 people (10 high school students, 10 university students and 10 adults over 30 years old) and concludes, through application, how individuals place themselves in digital networks using their skills in this context. According to Junqueira in his doctoral thesis "Digital Literacies in Teachers' Teaching and Learning", defended in 2014, these types of literacies can be defined as follows (Junqueira, 2014, p. 41):

- Hypermedia thought literacy: interaction with hypermedia structures, which require spatial orientation and abstract thought navigation;
- Reproduction Literacy: as the name implies, editing, reproducing and producing content online;
- Information literacy: admitting that digital literacies encompass information literacies, they refer to skills related to information resources, involving the tracking of sources, creation, dissemination and communication of information;
- Photovisual literacy: capabilities related to graphical interfaces, as well as activities in online environments; and
- Socio-emotional literacy: it is the relationship between network skills and the social context (inside and outside cyberspace).

Digital literacies are seen by Eshet – Alkalai (2004) as essential skills of the era of communication and digital cultures. Once their types of literacies are employed, users improve their network performance. The concept of digital literacies must be considered both in its technical dimension (through the development of ICTs – Information and Communication Technology), and in its cognitive and social-emotional dimensions.

Van Deursen & Van Dijk (2009), study behavior when using the Internet. Four categories of skills can be listed when observing the behavior of the user in the network.

The first category involves operational issues, while the second refers to the formal structures on which the media are built. The third is content-focused, taking into account skills related to information resources, while the fourth addresses a personal perspective on the goals and benefits of using digital media. These four approaches to the use of digital communication must be considered together, since separated, they can give little meaning.

The *Operational Internet Skills* can be considered as competences and technical proficiencies or as literacies in information technologies (IT literacies, according to the authors). It is a bias that considers the subject's relationship with hardware, physical facilities and mobile devices. Still, it views these skills as basic and fundamental digital literacies (like opening a website or downloading an app).

As a second category, it was listed the *Formal Internet Skills*, viewed as a complement to operational skills. Traditional media is composed of a certain linearity, giving the individual control over information. With hypermedia, linearity is lost and becomes a heterarchical mixture of vectors. This demands from the individual guidance throughout the informational path, knowing how to circumvent the morphologies of each virtual environment.

It is not surprising to have a dizzying feeling in relation to digital media, because once you don't orient yourself, the path can easily get lost. As pointed out by the authors, it is a "loss of the sense of direction that can

involve not knowing where you are, where to go next, how to return to a previous site, which way to go or where to look for information" (Van Deursen & Van Dijk, 2009). , p. 2 – Our Translation). According to the authors, Eshet-Alkalai (in a work in partnership with Amichai-Hamburger in 2004) develops the concept of *branching literacy*[5], the ability to avoid becoming disoriented when navigating the maze of layers of digital context. Browsing the Internet must be a specific skill:

> "Browsing the Internet: being able to recognize and click on links that are embedded in different formats, such as text, images, menus and website maps. Maintaining a sense of location while browsing the Internet, which means: not getting disoriented when navigating within a website; do not get disoriented when navigating between sites; and not be disoriented when visiting new pages" (Van Deursen & Van Dijk, 2009, p. 2 – Translation Our)

The *Information Internet Skills* were listed as the third of the four categories. As the name suggests, they are information-related skills and equivalent to information literacies, exposed in the previous topic. According to the ALA, a person with information skills is able to recognize when information is needed and has the skills to locate it.

There are a few steps involved in this process, the first of which is choosing an appropriate information system. After that, the user must formulate the necessary and specific questions to search for content (tools such as Google may be ineffective if the user does not know how to ask the correct question to find what interests him). Finally, the source of the information must be evaluated, as the quality of the source is directly proportional to the quality of the information, which Gilster called "the art of critical thinking".

And as a last category, Strategic Internet Skills are related to the purpose of using information and technology. These are skills developed to achieve personal goals and are commonly used for professional and educational development. Political, economic and social factors encourage the use of network strategies and the tendency is to obtain better results as skills are more refined. They are the most complex set of competencies when compared to the previous three and are exponentially improved with the regular use of information resources.

To develop them, some stages are also necessary. The first step is defining the main objective and being attentive to the opportunities of the WEB, while the second is making the right decisions. When combining various types and sources of information, it is necessary to know the usefulness of the findings to achieve the objective, which leads to the third stage, the selection of the collected information. The last step is to know how to evaluate the personal, social, educational or professional benefits and at the end of these four steps, the user used the Internet in the best way to achieve his purposes.

Several authors dedicate themselves to writing, characterizing and understanding Digital Literacies, expanding the definitions, readings and understanding of the meanings of the written text. The set of digital literacies linked to the digital field configures "the construction of meanings, enabling independent and autonomous learning and reasoning" (Singh apud Junqueira, p. 37).

Overcoming the concept of the term linked to literacy, linked to the universe of teaching and learning, "literacies are understood as a continuous and constantly evolving process in which the ability to communicate, interact and select using ICT becomes the basis of network society" (Passarelli, Junqueira & Angeluci, 2014, p.163). Currently, network actors need

5. Next to the Literacies of Hypermedia Thought (Eshet- Alkalai, 2004).

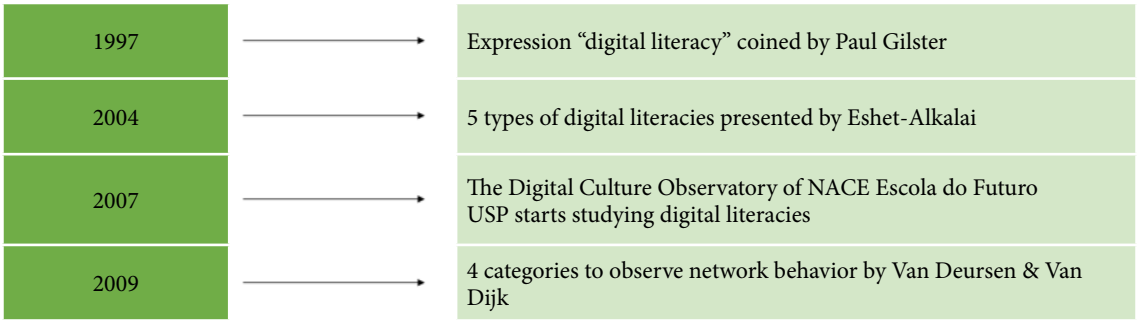

Figure 11: Summary Table on the Emergence of the Concept of "Digital Literacies" between 1990 and 2014 (SOURCE: Bonami, 2016)

a series of skills to interact and select, in a multimedia way, the content produced and consumed on contemporary screens - TV, games, computer with Internet and mobile technologies (cell phones and tablets).

Ample offers and access possibilities generate opportunities for transforming the interactions of individuals with their own subjectivities and expressivities. This generates "new perspectives for social relationships and citizen participation that profoundly impact the ways of accessing, building and learning knowledge about oneself and the world" (Junqueira, 2014, p. 29). Therefore, unraveling the state of the art of knowledge, handling and appropriation of ICT to measure and evaluate their impacts, has become necessary in the process of construction and development of the information and knowledge society.

Regarding digital literacies, the following summary table can be considered. Compared to the table above, the difference in the development period between the two is remarkable. While information literacies began to be thought of in the 1960s, digital literacies began to be considered in the 1990s, with the advent of the Internet and digital devices.

Furthermore, it can be observed that terminological sedimentation follows trends such as the concept of "e-Infocommunication", articulating research on high connectivity rates and on the complexity of knowledge that emerges from this context.

This contemporary hybridism and Digital Literacies are established as fertile ground for elements that make up the web of relationships between man and technology. The acquisition, development, use and appropriation of Digital Literacy categories are capable of influencing the change of attitudes, behaviors and production of new narratives and meanings by the researched subjects. This changes daily life, community, political and citizen relations, giving it greater protagonism, critical, creative and participatory autonomy.

In addition, the concept of digital literacies implies the effective and creative uses of information in the multimedia environment or when applied to the informational field, it is thought of as a process lived by the subject, in his interactions with technology in a conscious way, mediated by hyper-interactions. media provided by the connected contemporary. The permanent development of these skills is covered under an emancipatory perspective, making the subject autonomous and potentially capable and creative.

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