Perception of media literacy and training in teachers from Chile

Percepción de la competencia mediática y la formación en maestros chilenos

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Abstract

This paper analyzes the educational reality of Los Andes area with respect to the technological knowledge that teachers have in the field of new technologies (ICT), it also seeks to know the resources they have in the classroom and the use they make of them. In the study an analytical and quasi-experimental methodology has been used through several surveys (pretest and postest). The data obtained are intended to justify the use of ICT in schools and the knowledge that the participating teachers possess. In addition, attention is focused on the importance of ICTs in the education curriculum in Chile and the pedagogical programs and strategies that exist in Chile.

Keywords

media literacy, skills, curriculum, training, teachers, Chile.

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Resumen

El presente trabajo analiza la realidad educativa de la zona de Los Andes respecto a los conocimientos tecnológicos que los maestros poseen en el ámbito de las nuevas tecnologías (TIC), también busca conocer los recursos con los que cuentan en el aula y el uso que realizan de los mismos. En el estudio se ha utilizado una metodología analítica y cuasi experimental a través de varias encuestas (pretest y postest). Los datos obtenidos pretenden justificar el uso de las TIC en las escuelas y el conocimiento que los maestros participantes poseen. Además de ello, focaliza la atención el peso que las TIC tienen en el currículo de educación en Chile y los programas y estrategias pedagógicas existentes en el país.

Palabras clave

Alfabetización mediática, competencia, currículo educativo, formación, maestros, Chile.

Introduction and state of the issue

Today, in the digital society referred to by authors such as Terceiro (1996) or Tornero (2005), native and digital immigrants or digital and media literacy are relatively common terms. Thus, education at its different levels and regardless of the country to which we refer, must be echo this reality. The surrounding technological ecosystem demands an irreversible turn in the educational field, a modification that must be carried out at the global level in the different educational levels. A statement maintained, among others, by López, Opertti and Vargas (2017) in the report on adolescents and young people in changing realities.

From the current reality, there is a prevailing need for large-scale innovations, improvements that justify the interest of organizations of a global character such as UNESCO. Organizations that focus attention on improving and transforming systems, a fact that concerns the administration of different countries and the various governments that try to provide technological tools to most institutions and schools. In this sense, the United Nations examines what functions ICTs can play in the design of educational policies by giving UNESCO a normative and informative role, justified by the collection of data and examples on the use of ICT in the field of

education. In addition, it intends to design and produce various reports that show the information in this regard.

In this changing context, of normative, social and political renewal, we develop the research we present, an analysis of the current mediatic reality that occurs in the so-called "liquid society" (Bauman, 2000), where everything changes and few things remain, society in which the programmed obsolescence prevails, both of tools and contents. In this space where the presence of the media is robust (González-Fernández, Salcines-Talledo and Maraver-López, 2016), information and audiovisual content have a perishable value that can be attributed to multiplicity of screens, interactivity or virtuality. Aspects that prevent that reality is obviated and oppose to the continuous use in the classroom of tools and didactic strategies proper to previous moments where previous pedagogies prevailed. Beyond the vision of apocalyptic and integrated, in the era of interactivity it can be affirmed emphatically that the perspective of one and others has been surpassed as much by the technology as by the own principles; (Ramírez-García, Renés-Arellano, Aguaded, 2016) that show the reality in the classroom and justify the need to include new projects focused on the development of media competence by the students. To this end, it is committed to the continuous training of teachers as indicated by Caldeiro and Aguaded (2012). A training that UNESCO in its website identifies with the advancement and quality of teaching that transcends the theoretical framework and is based on technological standards referred not only to this dimension but also to the reflective and critical production of content. Especially today, teachers must be able to help students to work, solve problems and develop creative learning through ICT. For this, UNESCO establishes in its web a categorization in levels that determines the degree of development and reach of the digital competence teacher.

-Firstly, it refers to the learning of the basic elements of technology, which allows the use of ICT by students and favors active learning.

-The second level focuses on deepening knowledge, which allows students to acquire more advanced knowledge of school subjects and apply them to complex real-life problems.

-The third level is related to the development of the capacity to create new knowledge that contributes to the forging of harmonious societies.

Regarding the scope of knowledge, it is important to emphasize that it is committed to literacy and lifelong learning adapted to the needs of each person, regardless of their situation or background. In this regard, the focus is on lifelong learning encompassing all knowledge acquisition activity, whether formal or informal, in order to improve skills and competencies, requiring a change of model that emphasizes learning (UNESCO, 2014) in a way that promotes a change in values and attitudes (Quendler and Lamb, 2016).

This situation is not unique to the European continent and addresses, as UNESCO (2016) points out in the section on good practices, "the experiences of the National Open Education Institute of India or the RVA programs of Chile, Mexico and Brazil ". To these examples is added the one of Colombia where initiatives are being developed that favor the reach of the media-competence in the citizenship and specifically between the students and the professors (Sandoval et al., 2016).

A reality that not only extends to other countries such as Brazil, Ecuador or Chile, but also is present in educational policies that refer to the use of ICT and its presence in curricula. A presence that, as in the case of Spain, appears timidly in the curriculum where transverse or specific content linked to the dimension of technology is included rather than content analysis and production.

Digital and media literacy

The surrounding social reality has raised the need to assist in the development of new ways of learning according to the existence of new digital media and tools. Throughout the last decades of the twentieth century different organisms advocated the need to prepare to live together in a world dominated by images and sounds. The value and character of their power was then foreseen, although the presence of the media was neither general nor widespread. Over the years the situation has reached unsuspected limits, nowadays technology has become a frame of reference not only of communication but also of teaching and learning.

In this sense, literacy has lost the initial value that referred to the learning of literacy strategies and has reached a digital dimension inherent to the media era where the tools and technological means that transmit content instantly. In this context digital literacy is no longer an option but has become a necessity that can be explained by a series of criteria such

as: the operation of search engines and the selection of information that is disproportionately disseminated today, the management of the information, the privacy or the rights and freedoms that derive from the emission and the reception of contents. In this line, digital literacy does not consist only of "teaching to use the computer and different computer applications, but must offer the basic elements for understanding and mastering the language in which the programs are codified" (Levis, 2006, p. 78). Technology and its general implementation in today's ecosystem demands prepared subjects, capable not only of decoding properly, but of discerning and knowing how to seek information correctly (Badwen, 2002). This idea runs parallel to the principles that emerge from the European policy that focuses on the interest in teacher training as a basic strategy to strengthen the improvement of educational quality.

If we refer to the European context, training is considered compulsory in 28 European education systems, being indispensable for the promotion in many of them. Although teachers are prepared in their subjects, they consider that they require training in didactic methods, that is, in the design of materials adapted to the most recent needs. Therefore, this idea links directly with the media literacy advocated by the CML (2003) when referring to the set of tools needed for media literacy. Likewise, CML believes it is fundamental to know: who is the creator of the message, what creative techniques are used to draw attention, what forms or ways of behavior the audience of a message experiences, what values they incorporate and why they are sent. Therefore, it defines the process of literacy in media as the set of skills that enable access to messages, analyze them, evaluate them and create them, all in a critical and reflective way. An idea that has been complemented and propagated throughout the last decade in such a way that today, in different countries, not only in the European context but also in the Latin American context, we have experiences in literacy that affect the training of teachers of initial levels (Unesco, 2014b). Different ways of literacy that influence the development of "emerging pedagogies" (Pérez-Lisboa and Caldeiro, 2017), ways of learning and teaching that promote the achievement of "critical competence" (Caldeiro and Aguaded, 2015) based on learning for all (Unesco, 2016). Criteria that in turn must be evaluated in order to assess the level of achievement of the objectives and to standardize them; in this line, studies such as the one directed by Pérez-Tornero (2009) that although referred to the European scope, could be used

as a model in other contexts since it seeks to facilitate the analysis and the appropriate criteria for the evaluation of the levels of media literacy taking into account the set of policies that are developed in this area. Similarly in countries such as Chile, teacher training programs (Bitar, 2011) have been developed, inspired by various researches that have come to light during the first decade of the current century and describe the ICT standards for initial teacher training (Unesco, 2008). Initiatives whose value is significant and at the same time serve to analyze the differences and similarities that can be established at the international level.

Nevertheless, there are no specific projects that can be identified with the media competence and its development, although in this sense the effort of the Alfamed International Network is being developed in different countries in the Latin American context, including Chile. In addition to this, there are initiatives like Mediabus that seek to reconcile positions that link education in the media and the mainly rural school. Projects that are carried out within the framework of agreements that the foundation that promotes innovation and educational inclusion establishes with several universities that impart the careers of pedagogy in its different branches. These initiatives can be linked in an indirect way with the development of the media competence in favor of autonomy, reflection and creativity. These are projects that focus on the scope of critical competence based on the production and analysis of audiovisual content by future teachers.

Media competence as a form of critical expression:
beyond the audiovisual and digital competence

Information technology, teaching practice and the objectives of education, understood in a generic way and not as mere school education, must tend towards the reach of reflexive, participatory and critical subjects, capable of interacting in the society of the information, knowledge and virtuality. For this, it is essential to include new tools in the pedagogical field, an inclusion to which must be added the reach of high levels in media competence understood as the ability formed by the dimension of: technology, languages, interaction, production and dissemination of values and aesthetics. These are all dimensions, following (Ferrés and Piscitelli, 2012) around two broad areas: analysis and expression and that involve the development of indicators that can be used to define the level of production

of contents of the receiver, also known as "Prosumer" (Sánchez-Carrero and Contreras, 2012).

In this sense the media competence transcends the digital and audiovisual completing them in that it emphasizes not only in the technological use and the management of the digital tools nor in the analysis of contents but it establishes a set of dimensions that a receiver must develop which belongs to the multi-screen society (Ortiz, 2008) in which, beyond consumerism, it is sought the scope and development of the reflexive and critical attitude that opposes the proliferation of harmful behaviors derived from the incorrect management of technological devices and the misreading of audiovisual content. In addition, there is now a need to empower users, for example, social networks that have become one of the most used media, especially among the teenagers. In this sense and as stated (Tejedor and Pulido, 2012) it is appropriate to take into account the challenges and risks of the network and virtuality. Nowadays, in addition to reading the information constitutes a peremptory necessity its correct decoding and adequate production, especially in a moment in which it is disseminated in an immediate and sometimes irregular manner.

Therefore the development of media competence in each of its dimensions is fundamental; it is also imperative to literate not only the minors, but also the population in general and especially the teachers and parents belonging to the group of "digital visitors" (White and Le Cornu, 2011). In the current digital mobile society, the "natitantes" (Fernández-García, Blasco and Caldeiro, 2016), meaning the natives and the digital visitors, should interrelate whether they coexist in the same face-to-face space or the virtual one. Regardless of the level of development and management of technologies and the ability to decode audiovisual content "visitors and digital residents" (White and Le Cornu, 2011) must develop the optimal level of media competence that enables them to express themselves critically and autonomously and to develop in the midst of an overabundance of information that tends to the excessive overload also called "infopolution" or "infoxication" (Aguaded, 2014).

For this purpose, media education is also called "educommunication" which advocates training for the media, a task that is complex considering that media competence is not among those that make up the curriculum is proposed. Although it can be linked transversally and interdisciplinarly in practically all subjects and training programs.

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The Chilean reality

In the last decades, the educational policies that have been promoted in Chile in search of improving the quality have allowed to innovate and modernize the learning in the classroom. In this context, it is worth highlighting the one begun in 1992, with the creation of the Enlace pilot project that aims to integrate ICT in education to improve learning. Due to the obtained results, this project was transformed in 2005 into the Enlace Program, under the Ministry of Education as the Center of Education and Technology of Chile. Its objectives include the incorporation of computers, software and Internet in schools across the country. At the curricular level, with the Educational Reform of 1998, IT has been incorporated into Media Education, in order to develop software management skills and information search and selection, objectives that coincide with those of the CML mentioned above. Later, in 2001, the portal educarchile.cl was created, with the aim of improving the quality of education, providing resources, services and educational experiences for teachers, students and families. The following year, the program of Information Technologies and Effective Communication for ICT Education EDU of FONDEF (Fund for the Promotion of Scientific and Technological Development) was implemented. This ICT EDU program aims to contribute to raising the quality of education through the development of innovative ICT products or services aimed at improving learning processes. At the end of 2014 the results of the second national application of ICT Skills Assessment for Learning were presented. Results indicate that 46.9% of the students are at an Initial level, compared to 51.3% of students reaching an Intermediate level and only 1.8% at advanced level. To strengthen public education, the current government of President Michelle Bachelet created another program called 'Me conecto para aprender' (I connect to learn), which allows computers to be provided to all students of municipal establishments in 7th grade basic education. In addition, this program includes a free mobile broadband and various educational resources that students have at their disposal by subject, with simulators and programs of images and audio to carry out their tasks and work researching in different places of the internet. This government hopes to reach the centers, among which has included adult students in 2016, a total of 300 thousand computers. The reality reinforces, in the case of Chile

that there is a great presence of the new technological devices and a slight and continuous inclusion of the same in the academic field.

Therefore, describing the current media context and the presence of these contents in the educational field and its corresponding policies, it is necessary to outline in a concrete way the main objectives of the research that is presented. The general objective is to analyze the perception of media competence and training in Chilean teachers. To this end, the following specific objectives are proposed:

> Objective 1: to analyze the educational reality of the Andean area with respect to the technological knowledge that teachers have in the field of ICT.

> Objective 2: to know the resources they have in the classroom and the use they make of them.

> Objective 3: to investigate the importance that teachers give to ICT for current education and analyze their perception of the skills they believe to have and knowledge of the interests and preferences of their students.

> Objective 4: to know the advantages and limitations that teachers show regarding the use of technological tools in the classroom.

> Objective 5: to analyze the impact of a training course on media competence for teachers.

Materials and methods

In order to meet the proposed objectives, an analytical methodology has been used. Specifically, this is a pre-post study, which allows a clear, rigorous and reliable data collection. The type of research of the quasiexperimental type that will allow determining the degree of relationship or non-causal association between the study variables.

Procedure

The present study was carried out in the educational context of the Andes region in Chile. The information provided by the above data has been extracted from the analysis and impact of a training course offered to the faculty in which a general presentation on competency learning started in

the DeSeCo Report (1998) and more specifically on media competence. The data was collected through two ad hoc questionnaires that aim to analyze the knowledge and skills of teachers in the face of ICT.

Participants

In this study, a total of 31 teachers participated in a school in Los Andes (Chile). It is an institution that has computers and that is immersed in the program of digitization of the government although, as indicated by the participants, they lack adequate training for the insertion of the tools in the daily work.

Instruments

For this research two instruments have been used: an initial questionnaire about the knowledge and perceptions that the teachers of pre-school and primary have about ICT in education and a second questionnaire assessing a training activity on ICT in which teachers has participated. That is, at first the faculty has responded to an initial questionnaire and at the end of the training have completed the final questionnaire.

Analysis and results

The results set out below follow the same order as the objectives of the research.

Objective 1: Results on the technological knowledge
that teachers have in the field of ICT

In order to respond to this objective, teachers were asked several questions regarding their knowledge about the term literacy, the term media competence and the need for teacher training for the use of ICT in the classroom (Figure 1).

In this first survey, prior to the training activity, 93.5% of teachers surveyed said they knew the term literacy. At the same time, 45.2% say they know the term media competence, compared to 54.8% who do not yet know it. On the other hand, 96.8% of the people surveyed consider that teacher training is necessary for the use of ICTs in the classroom.

Figure 1
Technological knowledge of teachers in the ICT field
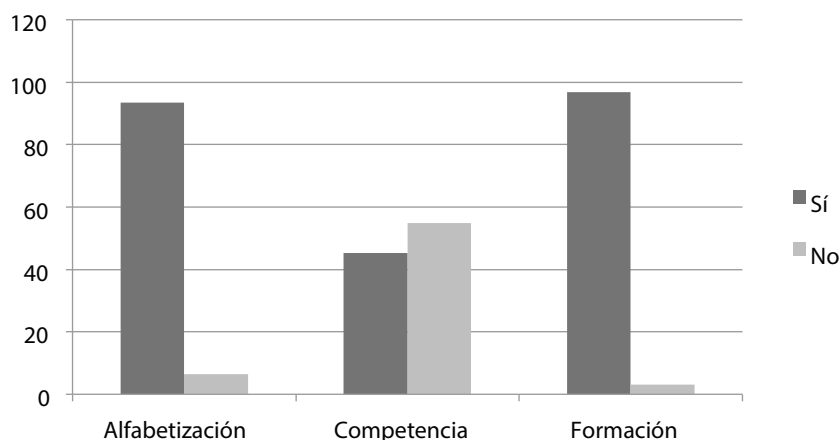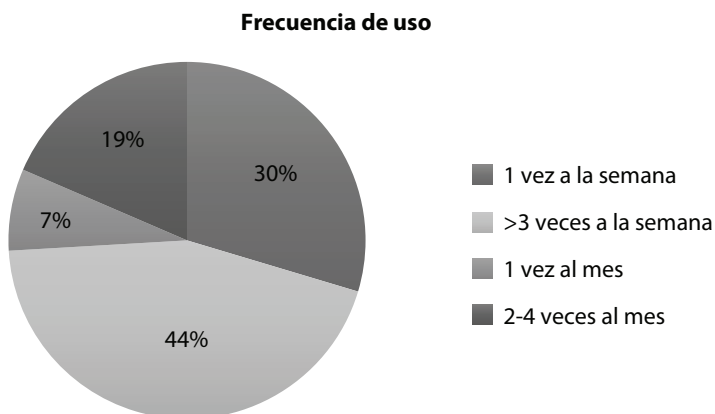

Source: own elaboration

Objective 2: Results about the resources they have in the classroom and the use they make of them.

100% of the surveyed teachers confirm that their center has technological tools.

Despite this, 77.4% use technological tools in their classes compared to 22.6% who do not use them. The frequency of use of people who do use ICT in their classes can be seen in Figure 2.

As shown in Figure 2, 29.6% use ICT once a week; 44.4% more than three times a week; 7.4% use it once a month; And 18.5% use ICT more than once and at least 4 times.

Figure 2
Frequency of use of ICT by teachers

Frecuencia de uso

Source: own elaboration

Objective 3: Results on the importance that teachers give to ICT
for current education and analyze their perception of the skills they believe
to have and knowledge of the interests and preferences of their students

In the survey, 97% of teachers have fully agreed with this statement "ICT is necessary in education today".

In addition, 94% have responded that they know the needs of today's student.

Another issue addresses "What are the preferences of students". Thanks to the open answers obtained we can observe that the teachers detect that the interests and concerns of their students are:

- To learn in a meaningful way, information of interest for the students, through the use of ICT and innovate.
- Find information, play online, communicate through social networks.
- Conducting interactive classes, students want to do and participate, do not want a teacher to only talk throughout the class.
- Communicate with peers.

- Search information and create their own works
- Use programs of interest for the students
- Connect the subject to the social networks
- Play, research, manipulate, learn concepts, navigate, and chat
- Being fashionable, being part of society
- Being up to date with social networks
- Being connected to the world and study
- Share knowledge
- Motivate themselves
- Social, sexual and technological interests

Objective 4: Results on the advantages and limitations teachers show regarding the use of technological tools in the classroom.

In this respect, teachers describe a series of advantages and limitations on the use of ICT in the classroom (Chart 1).

Chart 1
Advantages and limitations of the use of ICT in the classroom

Technological tools favor	Technological tools make it difficult
"Meaningful and playful learning"	"Before so many options do not know what to choose"
"Agil search of information"	"It depends on the rules that parents set in their homes"
"Children like to build using ICT so the class becomes meaningful, it improves the enviroment within the classroom"	"It does not allow to develop communication or to reinforce, typecasts and restricts the answers"
"They help develop competences, express knowledge, skills, learning ..."	"They only want to use social networks and not to learn, they do not know how to summarize or extract information"
""Facilitates the learning of knowledge"	"It affects the communication of more isolated people"
"They favor, motivate to learn, they help teachers who use it didactically"	"Hinders"
"It facilitates learning especially in math, the audiovisual medium is motivating to develop and stimulate the senses"	"Information is not always reliable"
"It facilitates exposing the appropriate contents, favors the knowledge and the research"	"It is a double-edged sword"
"Facilitate and improve the quality of learning, greater interest in learning through ICT"	"Difficult if there is misuse in the classroom and distracts"
"Facilitate because it is interactive and concrete"	"Difficult by the increase of obesity and lack of physical activity"

Technological tools favor	Technological tools make it difficult
"Facilitate for it provides immediate information and complements it"	"Difficult when the teacher does not handle ICT"
"It favors the attention of the children, more knowledge of the modern era"	
"Promotes easy access to information"	
"Facilitate work, obtaining pedagogical information"	
"It favors the teaching work being a support of interest for students, motivating and dynamic classes"	
"Favor for the development of the future in technology"	
They favor because they are motivating and innovative "	
It favors therefore gives tools and information for learning"	
"It favors because information is obtained at the moment and it is striking for students"	
"It favors if they are well used, with material that facilitates learning"	
"Favors the level of development and interest of children, provides resources and significant learning"	
"Favors because it will serve them in the future"	
"Favors because they show a world of possibilities to discover"	
"Favors because it makes it more motivating and participatory, more contextualized"	

Source: own elaboration

From the options reflected in Table 1, it can be deduced that the participant sample considers that technological tools and the use of ICT in the classroom bring more advantages than disadvantages and highlight among the positive aspects the search for information that is one of the dimensions that highlighted in the Teaching Competence Framework (2017).

Objective 5: Results on the impact of a teacher training course

Approaching this last objective, 90.3% of the teachers responded that the information received in the training activity has interested them a lot.

In addition, 87.1% considered that the information worked in the training activity helped him a lot to clarify concepts. For their part, 93.5% were

interested in knowing more information about this subject. In relation to the materials used for the training activity, 84% of the participants indicated that they did find them adequate.

Finally, comparing the scores obtained in the questionnaire prior to the training activity, with the final questionnaire, statistically significant differences (p <0.05) were obtained from the question "Do you know the term literacy" 100%, compared to a lower percentage of teachers that claimed to know the term literacy before training which means that, as pointed out in this research, training according to the new needs is essential. In response to the question "You know the term media competence" 97% claim to know the term media competence compared to 45% who claimed they knew it before starting the workshop. A response confirming the importance of continuing teacher education and its effectiveness.

Discussion and conclusions

The technological reality and the enormous quantity of audiovisual contents that flow through the hypermedia channels, certify the necessary pedagogical change. In Chile, the government's commitment to provide schools with tools and the timid inclusion of informatics in the curriculum is insufficient for the development of the teaching task. The professionals who participated in the study point out the need to receive training and to analyze these aspects in detail.

The limitations of this study include, on the one hand, the infrastructure difficulties mainly related to the connection to the Internet which has made it difficult to develop the course and the duration of the training that has been developed in a single session. In this sense, almost 100% of the teachers of the center indicated that it should be repeated or at least prolonged more. On the other hand, in terms of conceptual limitations, the lack of knowledge of the majority of participants, of the term media competence. A limitation that can be directly related to the aspects to be improved that have been cited by participants who appealed to the lack of concrete activities and the deepening of the theme.

In addition, they have indicated various proposals to the question: "What aspects would you improve in the design of the training activity", answers that point to both the need for training and practical classes where they can

see how to apply the contents taught in the course, as well as the degree of deepening and continuity of the discussed topics.

In general, the teacher's interest in being trained and knowing more about media literacy and the need to implement proposals in this same line is highlighted. In addition, there is a certain lack of interest on the part of the administration and the government that, although it has provided tools to schools, as in the case of the school we are referring to, in ICT centers, does not train teachers appropriately, according to the detected needs. Therefore, initiatives such as the one we have implemented, following the framework of the Recommendations on literacy dictated by Parliament and the European Commission (2009), and taking into account that the media have a significant influence on the recipient (Alvarado, 2012), should be repeated and extended. A desire reflected in the answers by participants who, while 97% consider that the use of ICT is very important, claim that they lack the necessary skills to implement them in their work as teachers. A response that supports the low frequency of use they claim to have on the aforementioned tools and that certifies the results that respond to the objectives addressed in this study.

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