Media competences in the training of Andean Community journalists*

Needs and challenges in the face of misinformation

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ABSTRACT

Media and information literacy is one of the keys to training journalists. It aims to ensure that the information it produces is relevant, accurate and of high quality. This article presents a study of the curricula of the faculties of Communication and Journalism of the Andean Community of Nations (CAN), with the aim of highlighting the development of these competences in the training of journalists. The research question is: What is the relationship between the media competences present in the curricula of the journalism faculties and the aptitude of journalists to counteract misinformation? To answer this question, a mixed study is carried out, which evaluates the media competences in the curricula of journalism schools, as well as the skills of journalists and journalism students. The preliminary results show that the dimensions of Interaction Processes and Production Processes are developed more intensively in the training of journalists, despite the fact that the greatest professional demand points towards the technological dimension.

CCS CONCEPTS

• Model curricula • Education • Computing literacy

KEYWORDS

Media Education, Journalism, Media Competencies, Andean Community, University Curriculum.

1. Context and motivation driving the research

Changes in the information ecosystem have led to new habits in the use and consumption of information. Public conversation has been digitized [17]. Users have moved from being passive consumers to prosumers, i.e. people who consume and produce content [40].

Prosumers put their own interests and needs first when consuming and creating content [37]. This attitude shows that the power to decide what is published, when and where, is no

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longer in the hands of the media, but rather in those of the users [4]. The media have lost the primacy and exclusivity of the news. Journalists compete daily for the public's attention, along with millions of users who spread content through digital platforms [31].

It is in this context that misinformative content is generated, understood as the different forms of deception and deliberate distortion of reality, with the aim of creating currents of opinion and influencing social attitudes [31]. These contents capture the attention of users because of their high emotional content [17].

Fake news has been identified as one of the challenges arising from the misinformative context [14], and has motivated some initiatives aimed at stopping its proliferation. Some of these are framed in legal proposals, and others have emerged from journalistic practice with the verification of facts; however, none can yet be catalogued as the long-term solution [42].

With regard to the first alternative, since 2018 some countries in Europe have taken legal action to stop the reproduction of false information on the Internet [43]; however, these same actions raise the question: is it possible to regulate the Internet and social networks without restricting people's right to information and freedom of speech? For the moment, the answer is no [20].

Despite this, as more people turn to social networks and other platforms as sources of information, governments are asking for more support from technology service providers to identify, filter and censor content that is considered harmful [24], which means that it is up to the governments to determine what is harmful and for whom, leading to imminent censorship.

This last aspect is particularly relevant, considering that the Inter-American Convention on Human Rights recognizes the right to communication [41], which includes: freedom of speech, information and equal access to the radio spectrum and information and communication technologies [8]. Therefore, censorship, whether it comes from the government sector, the media, social networks or others, puts the freedom and pluralism of the Internet at risk [24].

The second alternative, fact-checking, takes place in the United States, where most of the initiatives dedicated to verifying information and facts disseminated through the Internet originate [19]. Organizations such as FactCheck.org, PolitiFact and others appeared more than a decade ago, while in the Latin American context they are only just being created [21]. These organizations are mainly led by journalists, and focus on promoting one of the profession's traditional tasks, which is the verification of information on the Internet [33].

While the Internet provides greater access to information, and facilitates journalists' reporting, as well as access to a variety of sources [35], not all of these sources provide relevant or true information. Hence the need to talk about the media competences of journalists, a subject that gives rise to this

research, considering that their profession is not just about producing new information, but one that is true [22].

One such competence is the ability to critically evaluate information sources [5], coupled with a set of skills, knowledge and abilities that promote safe and effective use of the media and the information obtained through it [30].

Journalists, from their university training, learn to use sources from different contexts, from academic to specialized ones, official statements, reports, public records and others [5]. This learning is complemented by the exercise of the profession, when they also enrich their critical vision of the information generated from their productive routines.

This research shows the current state of a doctoral thesis whose purpose is to know the degree of media competences of journalists, as well as journalism students from the Andean Community of Nations (CAN), with the aim of inferring a third alternative to counteract misinformation, in addition to legal and data verification, which has to do with media and information literacy, especially information and communication professionals.

To support this study we reviewed research related to media literacy [1, 2, 10-12, 25, 34, 46] which has been applied to different contexts such as: teachers, children, adolescents, university students, older adults, and others, finding that the issue is relevant in different contexts, and that it is a need for education, at its different levels, to promote media literacy strategies, in particular that which has to do with the critical evaluation of the information to which they are exposed, and its origin.

The document presents, in the first instance, a review of the literature, with the aim of conceptualizing the media competences being studied, as well as arguing for their characteristics and the formative context of journalism.

The methodology, objectives, hypotheses, research questions, population and instruments used are then explained. The preliminary results are organized according to the techniques proposed in the methodological part. Finally, the conclusions developed so far are included, in the light of the information that has been gathered with the different instruments, which allows some of the significant contributions of the research to be foreseen.

2. LITERATURE REVIEW

2.1 Media and Information Literacy

Media and Information Literacy (MIL) is the set of skills that enable people to evaluate, study and create messages for various media, in different genres and formats [36]. It seeks to train citizens to think critically about information and communication [3].

Media education is linked to the principle of constant change, a key aspect, in the technological and digital era, where literacy goes beyond the limits of reading and writing [39]

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towards the analysis of information sources, the mastery of technologies, audiovisual production and dissemination processes, collaborative creation, values, ethics, etc.

These competences are particularly important in the 21st century when viralization and credulity in fake news has become commonplace, especially in social media [6]. Far from being an emerging phenomenon, false information has been published throughout history: catastrophes have been minimized in newsrooms, armed conflicts have been created or diseases have been invented [33], but the multiplier effect and the global reach given to them by the Internet have made fake news a global danger [38], while at the same time renewing interest in media literacy, and the belief that people with greater media literacy are less likely to believe and share fake news [15].

Media competences have been formulated from various contexts and different dimensions have been proposed for evaluation. In this research, four groups of dimensions stand out, among others that have been reviewed; the first of these contemplates technical usability, content interpretation, content generation and early reflection as the four dimensions that determine whether or not a person is competent in the use and consumption of information [46]; the second group contemplates three dimensions: authors and audiences as receivers of information, messages and their meanings, and representation and reality as the capacity to relate what is created with the environment of which it is part [2].

A third group focuses on information seeking skills, information assessment, information management, or what you do with it, and finally information communication [13]. Finally, a fourth group focuses on the proposal of Ferrés, and Ferrés and Piscitelly [10,11] who consider six dimensions of media literacy: aesthetics, ideology and values, languages, interaction processes, production and dissemination processes, and technology, the study of which has been addressed by a good part of the researchers who take part in this review [1,25,34]. These six dimensions are taken as the reference framework for the research, as they are more widely developed and because of the possibility of including aspects of journalistic work within each of them, their description is presented in Table 1.

Table 1. Dimensions of media competences

Dimension	Description
Esthetics	It recognizes production that does not conform to aesthetic quality requirements. It produces understandable messages to increase creativity, originality and sensitivity.
Ideology and values	It understands how media representations structure the perception of reality. They evaluate the reliability of information sources. It evaluates, organizes, contrasts, prioritizes, site-maps contrasting information. Transmits values through communicational products.
Languages	It interprets and assesses codes of representation and function in a message. It analyses and assesses the meaning and significance of narrative structures. It relates texts, codes and media with meaning. Expression through systems of representation and meaning.
Interaction Processes	Ability to select, review and evaluate media content Active attitude in screen interaction. Collaborative work through connectivity. Knowledge of legal possibilities of claiming for harmful content.
Production and diffusion	Difference between individual, group and institutional productions. They know the stages of the production process. They work collaboratively in the creation of multimedia and multi-format products. They create and share information in traditional media and social networks. They generate collaborative networks.
Technology	It includes the role of ICT. It handles, interacts and performs effectively in hypermedia environments. It manipulates audiovisual content, from the awareness of the representation of reality.

The relevance of investigating the issue in the CAN is due to the fact that it is a community of countries: Bolivia, Colombia, Ecuador and Peru, whose common characteristic, in addition to being crossed by the Andes Mountains, is that they have similar conditions in the political, economic, cultural and informational context, and in which popular movements have been the architects of social revulsions in the last five years, with journalism as one of the key actors.

The research is focused, on the one hand, on journalism, as the profession that has a social responsibility with the quality of information par excellence; on the other hand, on the journalist, as the professional who develops the commitment to work with the information and the set of activities framed in the collection of data, verification, statements, documents, and others that allow them to elaborate the contents that he/she transmits to the public through different supports in a timely manner and with quality [22].

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It also falls within the framework of media competences [11] as the set of knowledge, skills and abilities that not only help to develop critical and reflective thinking, but also the independence of citizens in their decision-making processes, together with a conscious and responsible social commitment in the exercise of their rights and duties [10].

2.2 Training journalists in the context of misinformation

In recent decades, ICT have imposed important challenges on journalism: new formats, new business models, diversity of information sources, convergence of infoxication media, fake news, among others.

Information production is no longer a characteristic of journalists and the media. Today we find content generated by teachers, parents, politicians, religious, advertising corporations, activists and citizens in general, which leads us to think about the role of the journalist and the relevance of his or her curriculum in the context of the current media environment.

The faculties of communication and journalism are also faced with challenges regarding the training of future journalists. ICTs are evolving rapidly, causing content taught in an educational context to become outdated in a very short time [44].

The CAN's faculties of communication and journalism have had to modify and even restructure their academic programs over the last five years. The purpose of these changes is to insert their professionals into this technological and changing scenario and to redefine the role of the journalist in the face of a multitude of actors in the digital space.

Different formulas are implemented for these purposes. There is a marked difference between training programs for journalists. In Europe, for example, training does not focus on ICTs, but on narratives and research, while American programs have a greater focus on technology and web-based content production and dissemination [45].

However, it has been the global emergence of COVID-19 that has highlighted the need to reinvent educational models in all thematic areas, in which innovation is the main need [28] to transform models, design teaching-learning methods, develop skills and provide for new educational and working contexts.

The reinvention of journalism has been a latent need for several years. It cannot be said that there is only one way to train journalists, but it is possible to speak of training whose transversal axis is critical and reflexive thinking in the face of information, hand in hand with innovative strategies that contemplate the new scenarios of the profession, and which require a vision of entrepreneurship, added to educational resources, active teaching-learning strategies and evaluation and collaborative work[29] of each to form critical and reflective thinking in the face of information, an aspect widely considered in the accreditation processes of journalism careers

[5], but also with a vision of practicing the profession in changing environments.

All of this requires a social appropriation of knowledge, an emerging concept in Latin America, which can be summarized as: the transfer of knowledge to society for its application [32], which is precisely what is sought through media literacy so that people are empowered by information and the media, and thus contribute to improving the information environment.

2. DEFINITION OF OBJECTIVES, HYPOTHESES AND RESEARCH QUESTIONS

The general objective of the research is to find out the degree of media competences of journalists and students of the faculties of journalism/communication of the countries of the Andean Community of Nations.

To obtain key data in the research process, the following specific objectives are proposed:

a) To investigate the contribution of the CAN's Communication and/or Journalism degrees to the development of media competences of future journalists through their academic programs.

b) To analyze the information consumption habits of journalism students.

c) To Know the perception of journalists regarding the strengths and weaknesses of professional training to counteract the effects of misinformation.

d) To identify the importance given by journalists and students to the development of media competences in relation to misinformation.

In addition, the following research hypotheses were put forward:

H1: The percentage of skills that include media competence is lower in journalism students than in practicing journalists.

H2: The training programs of the CAN's Communication and/or Journalism careers give priority to technological skills over other media competences.

H4: Practicing journalists have identified a lack of media competences in their colleagues.

H5: Professional journalists have been involved in publishing or have believed false information circulating on the Internet on more than one occasion.

The question that arises in this research is what is the relationship between the media competences present in journalism school curricula and the abilities of journalists to counter misinformation?

3. RESEARCH METHODOLOGY

The research is of a descriptive-explanatory nature. It seeks to describe circumstances and events in such a way that it becomes clear what a certain phenomenon is like and how it is visualized under natural conditions, and its components.

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Descriptive studies seek to detail the properties, characteristics and profiles of people, groups, communities, processes, objects or any other phenomenon that is subject to analysis [9], and in this case the aim is to study the profiles and characteristics of journalists and journalism students in relation to media competences.

A type of mixed research is proposed, understood as the strategic and systematic integration of qualitative and quantitative techniques, considering the advantages of each, as well as their differences, and above all offering a diversity of perspectives on a reality [27] while providing substantial contributions to research.

On the one hand, a qualitative study of the academic networks of the journalism/communication faculties is carried out, with emphasis on the dynamics and relations between the training objectives and learning results of the subjects that make up these networks.

The selection of the journalism/communication faculties was made based on the QS World University Rankings which rank the universities, among other factors, by their academic prestige. Those universities that have journalism or communication faculties were considered, as they are the ones where journalists are trained: from Bolivia, the Faculty of Social Communication Sciences of the Universidad Mayor de San Andrés; from Colombia, the Faculty of Journalism of the Universidad de Antioquia; from Ecuador, the Faculty of Communication of the Universidad Técnica Particular de Loja; and from Peru, the Faculty of Journalism of the Pontificia Universidad Católica de Perú [26].

The analysis was carried out with the help of the software Atlas.Ti, where the information on the curriculum, objectives and learning outcomes by subject were coded in three ways [7]:

a) Open coding: this starts the coding process. This part identifies the recurring themes or concepts that arise from the information collected. These themes are grouped with the help of codes or labels, which will later make it possible to visualize the association of concepts with each other. It ranges from the particular level of a concept, to a general level with a greater degree of abstraction.

b) Axial coding: these are the relationships that are generated between the codes, and allow their categorization into families, according to the links between each one.

c) Selective coding: this involves the creation of semantic networks. It works with a main category, which is related to a set of several categories, with which a conceptual map is drawn up that generates a narrative line.

This information will be contrasted in two ways; the first is through semi-structured interviews with practicing journalists, with the aim of finding out whether their university education has provided them with tools that allow them to operate with solvency and ethics in the current media context.

The purpose of the interviews is to collect experiential information on media competences in professional practice, while knowing how and why the participant has adopted these interpretations [16].

A sample of 20 journalists from the four countries was selected. They were interviewed on four topics: training and career development, information consumption habits, knowledge of misinformation and media competences.

The second way of testing will be through a questionnaire designed to evaluate the media and information competences of students in journalism schools.

The questionnaire consists of 30 items divided into two variables: the first comprises 13 items related to behavior in the face of fake news; the second consists of 12 items associated with the six media competences [10]. The remaining five items correspond to sociodemographic data of the participants.

The questionnaire uses closed-ended, multiple choice, ranking and assessment questions with a 5-level Likert scale: never, rarely, sometimes, almost always and always.

The reliability of the instrument will be ensured through a validation by experts selected on the basis of their academic and research career in the subject of study.

The data will be analyzed in terms of the research question, posed as part of the mixed-method characteristics, which strategically combines qualitative and quantitative questions in a single question [23]. For the analysis, the information obtained will be disaggregated with regard to the media competences present in the curricula of journalism schools, and through interviews with journalists and surveys of students in order to know whether these are involved in identifying and preventing misinformation.

4. PRELIMINARY RESULTS

After analyzing the content of the curriculum, it can be seen that all the subjects in the journalism/communication faculties contribute to a different extent to the training of media competences, but some with greater intensity than others.

For the study of the curriculum, information from each course was used, using objectives and learning outcomes of the subjects taught. These documents were validated by the directors or coordinators of each faculty.

The analysis of the curriculum was carried out with the help of the software Atlas.Ti 8.4. This tool was useful due to the amount of textual information, allowing its organization, grouping and management in a systematic way.

The analysis process began with the selection of the units of analysis, in this case the objective contents and learning outcomes of the subjects that make up the curriculum; of which a review was made that allowed the assignment of codes, which were later grouped into six groups based on the six dimensions of media competences [10]. As a result, a total of 1293 citations and 32 codes were obtained, which are shown in detail in Table 2.

Table 2. Codification of the curriculum

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Dimension	Subcategories
Esthetics	Quotations 93 Codes 6: Persuasive Communication, Content Creation, Aesthetic Elements, Innovation and Creativity, Public Relations, Marketing and Advertising.
Ideology and Values	Quotations 237 Codes 16: Critical attitude, Application in real contexts, Persuasive communication, Edu-communication, Social environment, Ethics and values, Social function, History, Innovation and creativity, Academic research, Journalistic research, Reading, Legislation, Marketing and advertising, Reasoning, Public relations.
Languages	Quotations 130 Codes 11: Persuasive Communication, Conceptualization of the Image, Communication Strategies, Journalistic Formats, Reading, Oral Language, Linguistics, Audiovisual Narrative, Multimedia Narrative, Writing, Semiotics
Interaction Processes	Quotations 306 Codes 23: Critical attitude, application in real contexts, Persuasive communication, Conceptualization of the image, Creation of contents, Edu-communication, Social environment, Communication strategies, Journalistic formats, Social function, Theoretical foundations, Academic research, Journalistic research, The media company, Reading, Legislation, Oral language, Marketing and advertising, Audiovisual narratives, Multimedia narrative, Reasoning, Writing, Public relations.
Production and Dissemination Processes	Quotations 299 Codes 22: Critical attitude, Application in real contexts, Conceptualization of the image, Creation of contents, Aesthetic elements, Entrepreneurship, Communication strategies, Technical training, Social function, Journalistic formats, Theoretical foundations, Innovation and creativity, Academic research, Journalistic research, The media company, Oral language, Marketing and advertising, Audiovisual narrative, Multimedia narrative, Reasoning, Writing, Public relations.
Technology	Quotations 174

Codes 8: Critical attitude, Content creation, Technical training, Journalistic formats, Journalistic research, Audiovisual narrative, Multimedia narrative, Writing.

The findings show that the processes of interaction, followed by the processes of production and dissemination of content are the two media competences that are mostly developed in journalism schools.

Figure 1. Levels of media competences in CAN journalism schools.
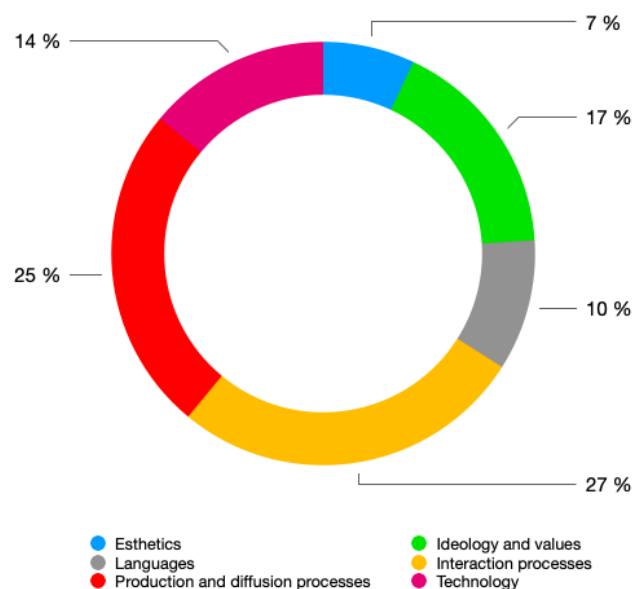
In an information context mediated by technology, knowing how to interact with others is part of the competencies not only of journalists, but of people in general, together with the competences to discriminate information coming from different sources [18], the understanding of one's own reactions and emotions to the information one receives, and the ability to share it with others.

This dimension is mainly reflected in subjects with a high practical component, in which students apply theoretical and classroom learning in real projects, to create content or relate it to different situations; this forces them to know the environment where the information is produced, and based on this, design content with which its recipients feel identified, both by the use of language, the platform that disseminates it, the content and others.

Likewise, the understanding of the social function of acquired learning is reflected in subjects with emphasis on research, content creation, narratives, and the social environment.

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On the other hand, knowing the processes of production and diffusion in journalism, not only obey to the mastery of techniques and productive routines in a coverage, but also to the mastery of different languages and narratives that in turn contribute to a better interaction between media and information and audiences. This can be seen in subjects such as Television, Radio, Journalistic Genres, Journalistic Research, Digital Journalism, Entrepreneurship and Media Management.

The Ideology and Values dimension is the third in order of intensity. It includes the reliability of sources, professional ethics and the transmission of values. In the three dimensions as a whole it can be pointed out that there are inputs to identify lies and rumors.

The largest number of codes for analysis was obtained from the journalism school in Ecuador, which also has the largest number of subjects on its grid, 48 in total, while the others have the following numbers: 23 Bolivia, 36 Colombia and 33 Peru.

General education subjects were not considered in this study as foreign languages or optional workshops, the latter because as their name suggests, are not part of compulsory education and are not always the same.

Figure 2 shows the competences that dominate journalism training in each country.

Figure 2. Media competences by country.
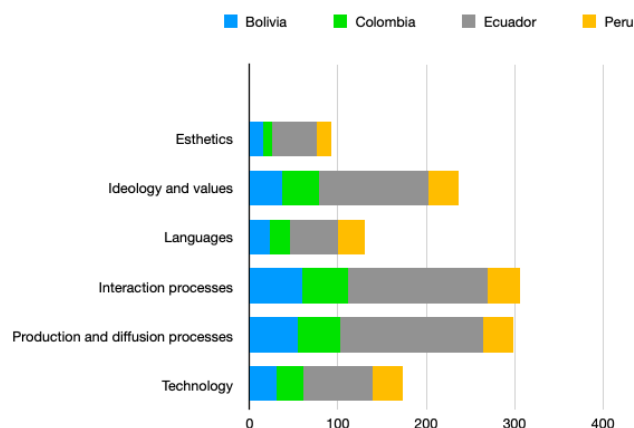
As for the interviews with CAN journalists, these have made it possible to contrast the initial information in the curriculum, considering that three of them, those of Colombia, Ecuador and Peru, have been redesigned in the last few years, while that of Bolivia has not been changed since 1997.

Most of the interviewees stated that although university training is key to the acquisition of competences that allow them to carry out solvent and quality work, most of the skills in relation to the handling and discrimination of information have been acquired in the productive routines that form part of their professional practice, because the training obtained years ago has been eminently theoretical and has not taken into account the technological changes that have taken place in an accelerated way in the last decade. For this reason, they highlight self-training as an important axis of their profession, because the managers of media companies are medium or hardly interested in training the journalists that make up their newsrooms.

In this context, it is the younger journalists who are most interested in self-training processes and recognize the need to increase the technological dimension of their media competences, and acknowledge the absence of similar interests in colleagues with more years of experience.

Journalists recognize that the phenomenon of misinformation does constitute an obstacle to journalistic work, because they are daily confronted with the need to both investigate important events and to verify information, especially the one that is found on social networks. However, they acknowledge that they are not always willing to carry out information verification tasks if they are not assigned to cover issues, due to the fact that media work is currently carried out in less favorable conditions than a decade ago: staff cuts in newsrooms, salary reductions together with the definitive closure of media outlets have considerably affected the profession, and at least 20% of those interviewed have stated that they carry out other economic activities apart from journalism, or work for different media at the same time. Regarding the dissemination of rumors and lies, at least three of the interviewees indicated that they had clearly believed in false information, but none of them said that they had disseminated it.

5. RESEARCH STATUS

The qualitative analysis of university curricula and research has been completed, and the instrument for collecting quantitative information is under development.

This instrument is in the process of being validated by experts, for subsequent piloting with a group of university students from the journalism and communication careers of the faculties that are part of the investigation.

For validation purposes, a qualitative questionnaire was sent to the experts to obtain their views on each item. Once the necessary adaptations suggested by the experts have been obtained and made, a pilot test of the questionnaire will be implemented. The aim of this step is to detect possible errors in the design of the instruments, as well as to verify the clarity, coherence and effectiveness of each one. It is planned to apply the pilot test to students of the CAN, which will be chosen at random.

Finally, the surveys will be sent to the deans or directors of journalism/communication faculties, through a link, so that they can be disseminated among the students of the degree course, and encourage their participation in it.

This will complete the information that was planned to be collected in the research and carry out the triangulation of the data.

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6. CURRENT AND ANTICIPATED CONTRIBUTIONS

The findings obtained so far show that there is greater emphasis on the dimensions of interaction processes and production and dissemination processes in the four curricular networks, that is to say that they are not all addressed with the same frequency. Through the interviews, journalists identify needs for media competences among their colleagues; but these are limited to the technological dimension in which they consider that there is less mastery, and at the same time it is the one most demanded by their employers.

Although journalists are reluctant to believe and share publications of dubious veracity, the precarious conditions in which many practice the profession, coupled with increasing competition on digital platforms, affect their interest in developing verification activities, if this is not related to their own productive routine. This could be related later on to the quality of contents and the topics of interest for the audiences and the media, due to the fact that part of their content production is focused more on the immediate and striking, than on the deep, as part of the policies of certain media companies.

The most obvious contribution of this work is to revalue the journalistic profession as a guarantor of truth, in an environment where there are many senders addressing many receivers at the same time. In addition, it highlights the need for updating the professional training of journalists, together with continuous training for practicing journalists.

7. CONCLUSIONS

This research provides valuable findings related to the training of journalists in the CAN and to the needs and challenges that must be considered in order to improve the training of these professionals, whose work is a constant need and even more so in the current environment of misinformation.

The methodology used allows contrasting the information that comes from communication faculties, students who are trained to be journalists and the practicing journalists. Preliminary results show the need to deepen and strengthen competences such as Language and Esthetics in university curricula, although it is not clear if these have a decisive impact on the identification of fake news. The vision of professional journalists is key when it comes to relating their training needs and how to involve them in their work. It is evident that technological skills are a necessity in journalistic production, probably due to the need to compete with the immediate one in the generation of content on the Internet.

It is necessary that the training programs of journalism faculties orient their curricula towards permanent innovation and updating, because it is a profession in constant change and highly influenced by technologies

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