Training communicators in inter- and trans-disciplinarity to operate in a digitalised world

La formación de comunicadores en clave de la inter y transdisciplinariedad para actuar en un mundo digitalizado

Andrés Barrios-Rubio. The author holds a PhD in Communication Content in the Digital Age and is currently a Research Associate at the Faculty of Communication and Arts of the Antonio de Nebrija University in Spain. He is also a lecturer at the Pontificia Universidad Javeriana in Colombia. His research focuses on youth and information, podcasts, news in the digital ecosystem, digital sonosphere and digital media and platforms. He has published three books, as well as several book chapters and papers on communication, professional training, media, information, podcasts, and ICT in national and international journals and magazines. He is a national and international academic peer for accreditation purposes on university programmes and research projects in higher education institutions. He also has experience as a director and member of tribunals for master's and doctoral theses in the field of Communication and ICT.

Universidad Nebrija, Spain / Pontificia Universidad Javeriana, Colombia

barriosr_andres@javeriana.edu.co

ORCID: 0000-0001-9838-779X

Abstract:

Reflection is called for on the institutional use, practices, and formative relations resulting from the implementation of ICT in educational communication processes. Redefining communicative work in terms of inter- and trans-disciplinarity requires revising training objectives and developing competencies and skills mediated by the appropriation of ICT. Transformations in social scenarios and practices can impact mediations, spaces, and forms of cultural goods and resource use. This paper presents an exploratory relational descriptive case study. The study used quantitative elements to calculate repetitive frequencies in the curriculum. These frequencies were then used as input for the qualitative analysis of the structure, contents, and approaches of the curricula of 15 universities. The universities were selected based on their

Resumen:

Es necesaria una reflexión sobre el uso institucional, las prácticas y las relaciones formativas resultantes de la implementación de las TIC en los procesos educativos de la comunicación. Redefinir el trabajo comunicativo en términos de inter y transdisciplinariedad requiere revisar los objetivos de formación y desarrollar competencias y habilidades mediadas por la apropiación de las TIC. Las transformaciones en los escenarios y prácticas sociales pueden impactar en las mediaciones, espacios y formas de uso de los bienes y recursos culturales. Este trabajo presenta un estudio de caso descriptivo de tipo exploratorio relacional. Se utilizaron elementos cuantitativos para calcular frecuencias repetitivas en el currículo, que luego se utilizaron como insumo para el análisis cualitativo de la estructura, contenidos y enfoques de los currículos de 15 universidades. El estudio seleccionó las universidades con base en su relevan-

importance in each of the five Colombian regions, the three most prestigious universities in each region being chosen. The study's main finding is that the curriculum lacks coherence and logical organisation, hindering the development of a model for the use and appropriation of technologies. The convergence of pedagogical and didactic methodologies in the learning environment is only timidly explored. The problem-solving approach is prioritised by social constructivism.

Keywords:

Education; communication; university; digital training; competences.

cia en cada una de las cinco regiones colombianas, escogiendo las tres universidades más prestigiosas de cada región. El principal hallazgo del estudio es que el currículo carece de coherencia y organización lógica, lo que dificulta el desarrollo de un modelo de uso y apropiación de las tecnologías. La convergencia de metodologías pedagógicas y didácticas en el ambiente de aprendizaje es tímidamente explorada. El constructivismo social prioriza un esquema de resolución de problemas.

Palabras clave:

Educación; comunicación; universidad; formación digital; competencias.

1. Introduction

Communication is a scientific field closely linked to other disciplines, providing systematic research into relevant social, disciplinary, interdisciplinary, transdisciplinary, and post-disciplinary problems. Its object of study is traditionally linked to human behaviour and action, providing explanations and interpretations of cultural and social phenomena. In recent years, the discipline has become more interdisciplinary (Pozo Vinueza et al., 2017) and transdisciplinary (Vásquez Sánchez et al., 2022), addressing issues in conjunction with other sciences. This has increased the importance of the work carried out by universities in three areas: teaching-research, teaching-fields, and research-fields.

In the digital age of globalisation, communication is the process of constructing citizen meanings, creating collective dreamscapes, and producing and circulating content. It serves as a means of articulating social processes that build bridges between diverse actors and facilitate cultural transformation. The communication dimension contributes to the cultural, social, and economic development of society and the organisations it serves. Communication is a discipline, a science, or an interdisciplinary field. Some argue that there are no common purposes that unite these fields, nor controversial issues that divide them. The transformation of communication processes requires the development of new competencies that facilitate operations within companies and the wider environment, resulting in greater value and impact in the creation of solutions. In today's complex and globalised world, it is crucial to adopt a holistic and transdisciplinary approach, studying issues and problems alongside other disciplines, cultures, technologies, arts, and life experiences.

The Internet has become ubiquitous, with 5.16 billion people worldwide (64.4% of the population) and 39.34 million Colombians (75.7% of the population) using it. The importance of smartphones has also grown, with a global penetration rate of 105.6% and 141.8% in Colombia (Hootsuite, 2023). Therefore, it is essential to integrate this knowledge into the training programs of various academic disciplines. ICTs mediate different aspects of everyday life, such as providing access to information, facilitating communication, enabling entertainment, supporting education, streamlining production processes, and transforming business models. Therefore, it is crucial to consider how technology is integrated into training processes and how curricula can equip future professionals with the theoretical and practical tools necessary to navigate the evolving landscape of their field.

Educational practice demonstrates that a theoretical foundation underlying the logic of relationships, practices, and the design of communicative processes is necessary. This interrelation between subjects extends beyond the instrumental. Access to, and the use and appropriation of, technological tools can be factors of exclusion and generate significant differences between different strata of the population. Devices with screens play a central role in consumption and in citizens' interactions with their environment (Barrios-Rubio & Gutiérrez-García, 2022). That is a topic of constant discussion and reflection, as it reconfigures interactions, social relations, and points of entry into collective citizenship. Such devices serve as a discursive agora that brings together interactive contributions to improve knowledge of the surrounding reality (Torres Velandia et al., 2010).

The convergence of traditional media with new media, web-media, app-media, and social media has created an environment that promotes knowledge and skills for critically evaluating those media and non-media products that shape our perception of the world (Barrios-Rubio & Gutiérrez-García, 2022; Silva-Capa & Martínez Delgado, 2017; López-Gil, 2016). The use of technology in education is becoming more common (Barrios-Rubio & Fajardo, 2017; Aguilar, 2012). Therefore, it is important to include it in pedagogical strategies as a fundamental support for the teaching-learning process (Cruz Pérez et al., 2019). This involves exploring technology as a mediator of knowledge and promoting educational reflection that goes beyond mere instrumental knowledge (Barrios-Rubio & Fajardo, 2019).

University classrooms bring together students from the digital generation, known as centennials, and alphas, who actively incorporate technological competence in the teaching-learning relationship. Cognitive projection responds to students' basic maturation processes and encourages interaction, discussion, and questioning of knowledge bases. Learning to learn in academic spaces based on the principles of modern education involves the participation of multiple actors, new practices in professional work, and the implementation of design-thinking strategies. The use of technology and individual and collective changes can deepen the understanding of the discipline's problems (Lévy, 2007). The teaching-learning process has undergone changes that adopt new paradigms for the acquisition and solid construction of knowledge (Tünnermann, 2011). These changes lead to an education that modifies the logical processes of maturation.

The classroom is a crucial setting for interpreting reality, as it relates to other socio-cultural contexts beyond its walls (Fuentes-Amaya, 2002). In today's hyper-connected society, the classroom is no longer a closed physical structure, but a space that opens up to the cultural and real world. Technology is integrated with the aim of enhancing the quality of the educational process. Activities are proposed for learners based on relationships and practices to access knowledge (Zambrano et al., 2010). It is crucial to reflect on technology in the educational ecosystem to understand how digital tools are critically appropriated, leading to significant improvements in knowledge, quality, and efficiency in vocational training.

1.1. Communication emergence in the digital ecosystem

Communication is a field of study that spans across disciplines and involves the analysis and interpretation of collective citizenship in a digitalised social ecosystem where technology serves as an articulating axis for interactions between individuals and between them and political, economic, and social strata (Vidales Gonzáles, 2017). This sentence delimits the focus of the discipline in relation to other sciences (Márquez-López et al., 2016). The communicator's role is influenced by the changes that

technology is introducing to the profession and society. They are responsible for designing communication strategies for both traditional and digital platforms, placing them at the forefront of the digital sphere.

From an interdisciplinary perspective, communication comprises three aspects: producing, broadcasting, and consuming communicative products. These products must be understood in the context of culture, society, the market, and other forms of symbolic exchange, as well as in the dynamics between the global and the local. Communication is a process that involves three key stages. These moments require actors to perform actions aimed at constructing and spreading representations of reality. These actions are mediated by various cultural devices, such as technologies, social, political, and economic organisations, and ideologies (Pérez-Tornero & Pedrero-Esteban, 2020). All social aspects intersect in the field of communication, where interaction serves as a stage for mediations and as a mediating axis in the formation of social relations (Riveros Solórzano, 2020).

In scholarly communication, it is crucial to acknowledge the constantly evolving environment in which we operate. This involves adapting to changing ways of thinking concerning interaction and professional channels. As noted by Casero-Ripollés & García-Gordillo (2020), structural and functional changes often require us to reinvent our communication strategies. Furthermore, new social practices emerge that are tailored to individual devices and enable new forms of intercommunication. Today's labour market requires professionals trained in transmedia (Robledo-Dioses & Atarama-Rojas, 2018). These professionals are capable of reaching an audience consisting of the new generations, who have unique spatio-temporal coordinates that define virtual space and have access to the world through technology.

The communication professional in training must have a comprehensive understanding of the research process, conceptualisation, interpretation, correlation, production, realisation, narration, post-production, promotion, distribution, exhibition, and marketing required in the digital environment. They must be competent in working with each medium and respond to the needs of content production, distribution, and consumption as a strategist. The project manager responsible for communication leads the subject towards a planned action (Barrios-Rubio & Pedrero-Esteban, 2021). Mediation mechanisms are used to enhance, resize, block or permeabilise the constitutive relationships of groups, both internally and externally. This relational conjuncture enables sociological and cultural fields of study at the societal level (Jenkins, 2006). The role of mediations in the relationship between subjects, environment, media, and context is a topic of debate.

In light of a revolution that reinforces McLuhan's (1967) axiom, it is important to recognise that the medium, whether it is technology, a device, or an interface, shapes the message. University programmes face the challenge of producing original, rigorous, and reliable content that is adapted to the contemporary environment. This biosphere is characterised by a transition from print to digital media, from radio to digital audio, from television to on-demand video, and from traditional advertising to below-the-line (BTL) marketing. For professionals in training, it is crucial to be able to deliver speeches and interpret the socio-cultural context to help the audience comprehend the complexity of their world. This is a productive process in which everyone seeks their own place in the digital environment. It is important to be remembered as a viable option for use, production, and consumption across multiple platforms, not just to be known.

The panorama laid out suggests a need for communicators to reconsider their professional work to meet market demands. Today's work environment requires professionals with transmedia competencies and logical, transversal dissemination

skills who can conceive of technologies beyond instrumental knowledge. This presents an interesting challenge that opens up multiple fields of action and revitalises a discipline that may have lost credibility and popularity among young people. According to ZipRecruiter (2023), 87% of individuals regret studying journalism, and 64% regret studying communication. This academic disconnect suggests that professional training programmes have not fully acknowledged the transformation and adaptation of communication to new fields of action resulting from the dynamics of a changing world due to the advent of technology. However, students often reduce it to instrumental knowledge and the recognition it can provide. This paper aims to identify the components of the curricula and how universities intend to engage students in fields of action beyond the media component.

The future communication professional, currently being trained in university classrooms, must utilise strategies based on theoretical foundations and research concepts to enable social or organisational intervention. Technological components should be employed to transform professional work. To guide the proposed study, four questions have been formulated to facilitate the verification or refutation of the hypothesis. What are the common and divergent components of communication curricula? How is it evident that theory is the foundation of instrumental knowledge within communication careers? Is the interdisciplinarity of communication with other sciences and disciplines clear in the training process? Does the professional field of communication offer stable employment opportunities or encourage the creation of communication companies?

2. Methodology

Universities with communication degrees are exploring innovative curricula to address connectivity and technological convergence in the discipline. This is accomplished through the design of disruptive communication content using a trial-and-error approach. The research aims to reflect on the impact of technology on the training of communicators for their professional work. The study focuses on how academic professionals adopt, conceptualise, and utilise technology in curricula. A qualitative method was used to conduct the research, primarily through case studies. Additionally, a quantitative analysis of repetitive frequencies in the curricula was employed to a lesser extent. The exploratory technique applied involved analysing the curriculum structure, subject content, and training objectives.

The study corpus comprised 15 syllabuses, and we downloaded the contents of each subject's syllabus directly from the programme's website in March 2023. We used a comparative method to review aspects of the teaching and learning process. The names of the subjects in each foundation, the number of teaching hours, their weight in academic credits, the semester in which they are included, the theoretical cores to be developed, and the competences and skills they aim to provide the student with were registered in an Excel matrix. The research identified common patterns and categories, resulting in a summary of trends that reveal signals and indicators guiding communication and journalism curricula in Colombian universities.

The selection criteria were based on the regional distribution and geographical composition of the country. The three institutions with the most recognised communication curricula by number of students enrolled were chosen utilising data from the Ministry of Education (2022). The sample consisted of the following universities located in the Central Zone: Pontificia Universidad Javeriana, Universidad de la Sabana, and Universidad Externado de Colombia. The universities in the Northern Zone are Universidad del Norte, Universidad Sergio Arboleda, and Universidad Tecnológica de Bolívar. In the

Southern Zone, Universidad Autónoma de Occidente, Universidad del Valle, and Universidad Santiago de Cali. The Eastern Zone has Universidad Autónoma de Bucaramanga, Universidad Francisco de Paula Santander, and Universidad de Pamplona. The Western Zone is home to three universities: Universidad Pontificia Bolivariana, Universidad de Medellín, and Universidad de Manizales.

The collected sample provided information on the levels of meaning used by institutions in constructing their curricula. The study analysed pedagogical relationships, practices, and designs to interpret how technology is approached, interpreted, and conceived in professional education within a disciplinary field. The use of ICT has pedagogical value. The interpretivist perspective (Table 1) enables the analysis of interactional and communicative logics that contribute to the construction of intersubjective meanings implicit in the curriculum (Bonilla & Rodríguez, 2005). Sandin (2003) defines a social phenomenon that involves the interaction of concepts, practices, design, and relationships in the pedagogical process, mediated by instrumental knowledge within a specific habitat.

Table 1. Analysis categories

Category	What are you searching for?
Conception	The curriculum is structured by currents of thought, and it encompasses common fields of knowledge. A field or value proposition is constituted by divergent elements in relation to competence.
Practice	The development of curricular components involves the use and exploitation of technology. This includes practices related to technology consumption and implementation.
Design	The curriculum should comprise both disciplinary and interdisciplinary elements to facilitate the integration of knowledge and enhance the training and professional scope of the communicator.
Relations	Academic institutions provide training for employment and promote entrepreneurship and business development in the workplace.

Source: prepared by the author

The analysis of the categories presented in Table 1 will determine whether the trainee communicator is being prepared to meet market demands and operate in today's digital environment. The curriculum must include technology that generates new aesthetics and forms of interaction, which define and shape the reconstructions and redefinitions of technological processes. The objective of this education is to train professionals who can create communication proposals for both digital and conventional environments. These proposals must combine theoretical and practical components to effectively develop their work.
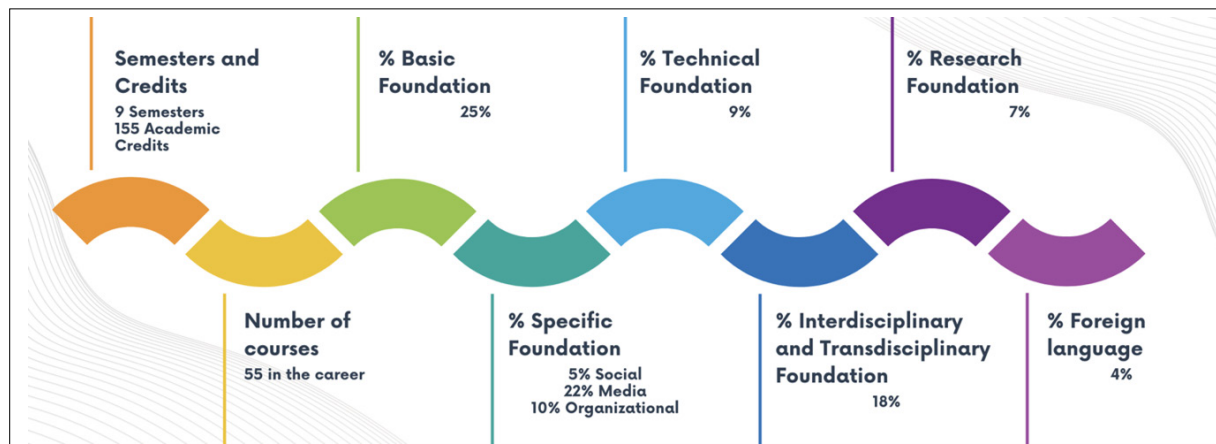
3. Result, analysis, and discussion

3.1. Formative notion of the communicator

The research process utilised a work matrix to categorise the subjects into six distinct work blocks:

– Basic foundation: The subjects in this block contribute to the integral formation of the student, increase their academic competence, and help to consolidate their vocation. The block leads to the appropriation of theoretical and conceptual elements, methods, and basic problems of the sciences that underpin the profession.

– Specific rationale: This foundation aims to provide students with the necessary knowledge, tools, and communication skills to excel in their professional work. It comprises several components:

  ▪ Social: This section discusses communicative processes in different cultures and their impact on social development. It aims to inform the development of communicative intervention policies that can contribute to improving social cohesion.

  ▪ Media: This section offers theoretical and conceptual support to complement the practical work of professionals and equip them for employment in traditional media.

  ▪ Organisational: This section covers the basic concepts and principles of integral strategic communication as a management tool in organisations.

– Technological foundation: It allows reflection on technology and its impact on social, cultural, economic, and political changes, as well as the ethical challenges posed by these technologies in the work of the communicator.

– Research Foundation: Academic space that involves tackling and dealing with the specific problems of both communication and society in general.

– Inter- and transdisciplinary foundation: The purpose of an inter- and transdisciplinary foundation is to contribute to the comprehensive education of students and to stimulate their interest and capacity for reflection and analysis on issues that go beyond the specificities of their discipline or profession.

– Language Proficiency: Demonstrated ability in speaking and writing a second or third language.

Analysis of the study corpus shows that the curriculum is understood overall, with small conceptual differences adapted to the specificities of the region where the programme is located. The design and expression of the curriculum (see Figure 1) suggest a commitment to holistic education that includes ethical, aesthetic, philosophical, political, and social dimensions, as well as the development of professional competencies. However, research skills and second language proficiency are not prioritised. The training process focuses on developing expressive, citizenship, and communication competences, which become more complex as the semesters progress. Communicators are required to possess a greater depth of knowledge, methods, and skills. In general, academic proposals are supported by the themes developed and the provision of open activities of an academic, cultural, sporting, and recreational nature.

Figure 1. Curricular composition matrix

Semesters and Credits
9 Semesters
155 Academic Credits

% Basic Foundation
25%

% Technical Foundation
9%

% Research Foundation
7%

Number of courses
55 in the career

% Specific Foundation
5% Social
22% Media
10% Organizational

% Interdisciplinary and Transdisciplinary Foundation
18%

% Foreign language
4%

Source: prepared by the author

The curriculum defines comprehensiveness through six common components: the conceptual line of communication, media expression, communication management, basic technological tools, interdisciplinary and transdisciplinary socio-humanistic paths, and research. These areas organise the essential knowledge in the training of communicators and are present in each academic semester. The curriculum outlines the development of knowledge in the field, including national and international references. The foundation of the subjects presents conceptual paths that reveal educational structures centred on active pedagogy, which involves practical work to a high degree (84%). This academic exercise enables the student to be an active participant and protagonist of their own learning process, guided by the teacher.

The labour market indicates that the media industry is saturated with professionals and salaries are low (ZipRecruiter, 2023). Despite this, educational institutions allocate 22% of their courses to training students in collecting, analysing, and producing journalistic content with the aim of contributing to the strengthening of the democratic system. The promotion of multimedia creation should be the norm for designing and producing audio-visual content. According to Barrios-Rubio & Pedrero-Esteban (2021), only 9% of courses focus on critical thinking, technology's purpose and application in professional work, and the appropriation of technology and instrumental processes. Zambrano, Medina & García (2010) support this finding. Instrumental knowledge refers to the production of communicative pieces for traditional media and the establishment of productive routines that correspond to the convergence of Media Lab spaces. According to Barrios-Rubio & Gutiérrez-García (2022), this scenario presents technology as the central driving force of the profession.

The curriculum does not adequately achieve the competences required for a globalised and digitalised world. Only 5% of academic spaces are dedicated to designing and managing programmes and projects related to the intervention or understanding of social and cultural phenomena (Riveros Solórzano, 2020; García-Rangel et al., 2014). In the Latin American context, effective communication requires the communicator to act as a policy manager and strategist, capable of intervening

in the community through projects aimed at promoting development or social change. Communication as a profession can play a crucial role in addressing environmental issues and driving improvements or transformations, creating opportunities for professionals to work in governmental organisations, multilateral bodies, or NGOs.

Only 10% of the lectures in industry curricula are devoted to the managerial dimension of communication. However, it is crucial to master the tools used in organisational communication to meet the challenges of both internal and external communication in the labour market. Managerial positions in public and private affairs require communication competencies related to digital marketing and industry-client communication. The curricula provide some flexibility and incorporate interdisciplinary factors. However, they do not offer sufficient in-depth reading guidelines to foster critical and reflective thinking among future professionals. The validate contexts that lead to an understanding of communication and how new technologies enable the creation of symbolic goods that give meaning to the socio-cultural reality in which one is immersed.

The programmes analysed demonstrate a lack of emphasis on promoting scientific research, with only 7% of subjects covering this area. Additionally, there is a lack of utilisation of research advances from university research groups to provide students with essential elements to understand social problems both locally and globally. It is important to incorporate the mastery of a second language as a transversal axis to situate students in contemporary visions and problems. However, the study's corpus shows that only 4% of the classes available are dedicated to language skills. Many universities view language proficiency as a degree requirement rather than an essential skill.

3.2. Practice on the action agenda

The curriculum's practices are based on the methodologies outlined in the subject syllabuses. The 'workshop' activities are intended for students to complete exercises proposed by the teacher under controlled conditions (see figure 2). These productive experiences should mirror the socio-cultural realities and processes of the environment. The task is to create journalistic and audio-visual products that use sound, film, photography, and technology to challenge dominant narratives in both content and form. The aim is to propose social agency and accompaniment. The context highlights the importance of academic and professional practice that reflects the comprehensiveness of the curriculum and the training given to students.

Figure 2. Competencies activated by practice in the curriculum
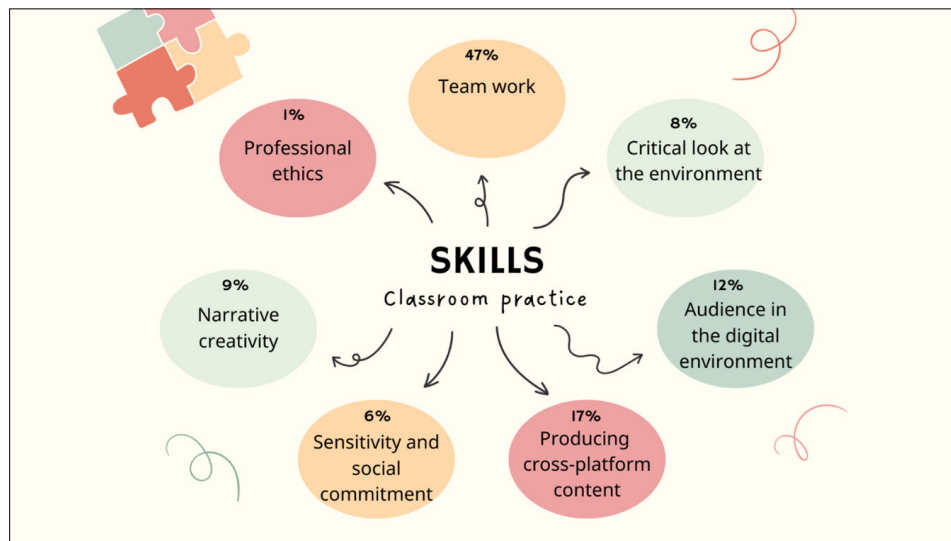
Source: prepared by the author

Internships are considered a valuable opportunity to gain practical experience and learn beyond the academic classroom (see Figure 2). Adequate supervision and evaluation by the students' tutors (Barrios-Rubio & Fajardo, 2019) are necessary in this scenario of engagement with reality. Communication programmes often establish Media Labs, which are academic-practical-research ecosystems. Such ecosystems aim to integrate various media and communication strategies that align with the student's work in the digital sphere (Aguilar, 2012). That is, the ideation of journalistic (74%), social (12%) and business (14%) products that aim to raise student awareness and develop multiplatform strategies for 360º audience consumption. Communication products must respond to the logics of cross-media dissemination and transmedia narratives, using convergent phenomena.

The presentation of each programme is argumentative and indicates a dependence on institutional contexts. The classroom serves as a hub for the productive coordination of interdisciplinary and transdisciplinary competences. Design-thinking work laboratories are used to organise teams, monitor and analyse results, and disseminate professional and academic content. Additionally, there is evidence of communicative proposals materialising that tell stories drawn from the data and the interpretation of a multiplicity of information with a multidisciplinary profile. The study corpus lacks consistent commitment to displaying on-screen scenarios, virtual spaces, and the work and projects of students, teachers, graduates, and external entities. The task involves constructing projects that are related to academic objectives and respond to structural and functional changes. To achieve this, it is necessary to rethink the actions of the communicator and reinvent the uses and schemes that accompany the social transition from print culture to screen culture. According to Barrios-Rubio & Fajardo (2017), this transition has led to the emergence of new practices among the citizen collective.

Media Labs play a vital role in providing spaces for research, creation, and experimentation. They facilitate interaction, integration, management, and socialisation of projects and ideas in line with the educational objectives of the institution. As part of students' training, the academy provides practical spaces that promote the application of theoretical concepts. The platform aims to provide a space for students to develop their own professional training content and have an impact on society. The production units observe academic training processes that strengthen students' professional competences and social commitment to share and apply knowledge at both a technical and human level. Additionally, it aims to propose and articulate communicative conceptions on various fronts.

3.3. Completeness of the communicator

Communication programmes in Colombia in recent years have implemented actions to recognise and promote inter- and trans-disciplinarity in their curricula. They have also introduced mechanisms to encourage student interaction with different programmes and areas of knowledge. Figure 3 (Vidales Gonzáles, 2017) illustrates this. Analysis of the study corpus shows that knowledge integration is reduced by 89% when connecting communication with anthropology, sociology, psychology, philosophy, literature, education, linguistics, and humanities. However, the convergence of communication with management, marketing, advertising, and design, among other areas, is not recognised due to the confluence of disciplinary interests. These areas share common focuses of action in industry, the social scene, and the digital ecosystem.

Figure 3. Disciplinary convergence of the communication programme
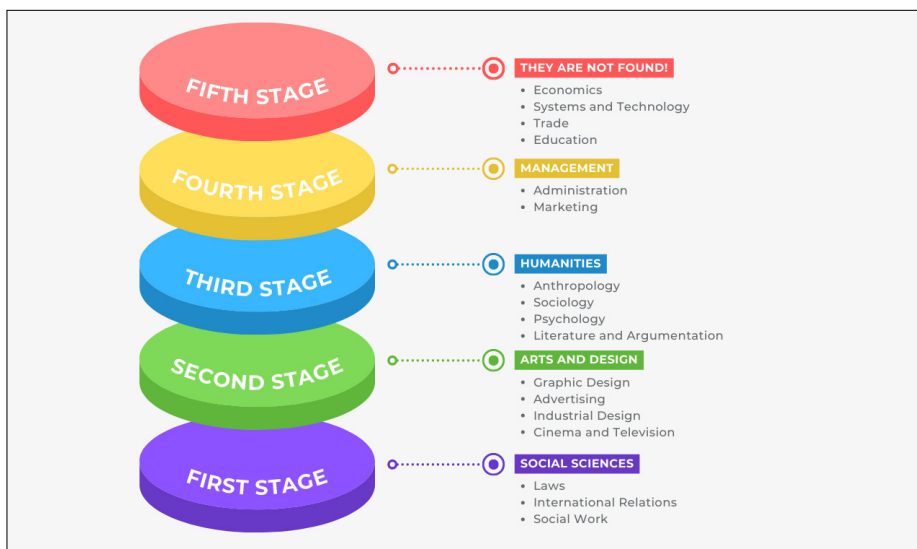
Source: prepared by the author

The training of communicators should strategically apply communication concepts and theories to analyse the organisation of social groups and their communicative processes in their political and cultural contexts, in line with inter- and trans-disciplinarity (Márquez-López et al., 2016). In a globalised and digitalised world, the integration of knowledge necessitates a convergence of interests between the epistemology of disciplines and their problem-solving methods related to the profession's object of study (see Figure 3). The analysis of the curricula of the programmes examined in this research reveals that interdisciplinarity and trans-disciplinarity are not the curricula's objectives to tackle diverse problems based on the interaction of multiple disciplines.

Analysis of the programme contents, class methodologies, and teaching bibliography indicates that inter- and trans-disciplinarity is present in the teaching process through the texts studied in academic spaces, the option of taking optional subjects from other university programmes and sharing spaces with other professional degrees in the master classes. Additionally, integration is fostered through the participation and systematisation of extracurricular activities, such as seminars, congresses, and conferences. These events enable the exchange of knowledge from various approaches, perspectives, methods, and methodologies. The exchange of narratives and interdisciplinary discourses, as well as research experiences, from the professional programmes could facilitate discussions on different disciplinary perspectives around the axes and problem areas that require actions to improve the curriculum on a semester basis.

The current conception of inter- and trans-disciplinarity in communication programmes does not allow for crossover with other discourses and social disciplines (Tünnermann, 2011). There is a need to create a scenario that encourages reflection and practice of communication without transferring this social knowledge to other areas. This broadens the possibility of analysing and understanding contemporary developments influenced by communication. The training of communicators needs to be reconfigured to increase students' awareness of social responsibility, ethical commitment, interdisciplinary and transdisciplinary dialogue, and understanding of the socio-political context of the country and the international community. Communication problems should be addressed through a hybridisation of sciences, technologies, and knowledge.

Conceiving communication in terms of interdisciplinarity and trans-disciplinarity provides an opportunity for research groups to promote academic activities focused on project-based learning. Students can be encouraged to take social action to address complex problems that require an academic approach based on the convergence of disciplinary knowledge, beyond operational activities. The curricular structure of the programmes in the basic training area enables students to share knowledge and experiences with those from other disciplines, enriching the training process. However, the structure is not yet dynamic, even in the specific foundations of the degree outside the Media Lab. The reasoning and construction of solutions to contemporary problems in convergence with other programmes begins to open the window to creativity, integration, and the opening of new spaces for the linking and professional development of the communicator.

3.4. Correspondence of training and labour

Consistent with the prevailing trend in Latin American undergraduate programmes, professional training aims to develop work competencies in specific areas. The analysis of the sample indicates a focus on preparing students for the professional world, with an emphasis on the contexts, principles, and laws of freedom of expression and press freedom, in line with the strong

trend towards journalism (86%). At the end of the curriculum, there are several internship agreements, training scenarios, links, and contacts with companies and organisations. These opportunities provide students with a pathway to begin their transition to the labour market.

The curricula currently lack an analysis of the training needs and requirements of the working, productive, and competitive environment, both nationally and internationally. Internationalisation is a commitment or a pending task within the comprehensive training of communicators. However, there is limited evidence of comprehensive preparation of students that enriches their training with transversal elements, providing them with a global perspective of the profession. To prepare individuals for the challenges of the professional and academic world, it is crucial to consider and create spaces that foster comprehensive training in all fields (Pérez-Escoda et al., 2019).

Research is a strategic focus for learners to engage productively with their environment, generating knowledge that prioritises student-centred learning processes and methods. The curriculum is not merely a set of processes and strategies aimed at facilitating the acquisition of the object of study of the profession, but encompasses all the competencies, skills, and visions of its professional community. Interdisciplinarity is a relatively new field that does not yet provide students with the tools to address communication issues by combining scientific, technological, and disciplinary knowledge (Zambrano-Ayala et al., 2019).

4. Conclusions

After reviewing the training objectives, competencies and skills facilitated by the adoption of ICTs, it has been determined that communication programmes must have academic and social significance beyond journalism and media production. In the contemporary world, there is a need to combine the traditional canons of the discipline with strategic industry management and policy development for social change. The modern theoretical and conceptual approach aims to train professionals with the ability to work in diverse fields and scenarios, with a global, analytical, and critical perspective. This involves generating knowledge and proposing creative solutions to problems within a given context. It also requires transversality to attend to the diverse groups and interests of the population. Communication is a science and a field of study linked to other disciplines. The research is significant as it focuses on systematic investigation of the most important social, disciplinary, interdisciplinary, and trans-disciplinary issues.

Communication research should enhance students' comprehension of social reality, including its origins, consequences, and relationship with other cultural phenomena. Communication articulates social processes that connect diverse actors, facilitating cultural transformation. It plays a crucial role in societies undergoing processes such as the implementation of peace agreements, the reconstruction of the memory of conflicts, and the healing of resentments. This is especially relevant in the case of Colombia. Higher education institutions in the field of science, as well as interdisciplinary fields, do not share common purposes or contested issues with disciplines other than the social sciences, art, design, and the humanities. This research was conducted to observe this phenomenon through their curricula. The variety of subjects studied in communication is evidence of a complex process involving diverse social actors, which is itself a social phenomenon.

Universities are adopting an open and flexible curriculum to provide a comprehensive understanding of the profession. The analysis of the sample suggests that there are opportunities for transdisciplinary integration to prepare future professionals for an evolving labour market, requiring new skills in both the public and private sectors. One possible improvement to curricula in general would be to create opportunities and spaces within the classroom to foster students' entrepreneurial spirit and their ability to propose self-managed solutions to economic, social, and cultural problems in their environment. This could be achieved by incorporating activities that encourage critical thinking and problem-solving skills. Figure 4 illustrates an example of such a space. The aim is to establish training programmes that develop professionals with expertise in communication management and the production of digital and audio-visual media for alternative, cultural, and educational purposes. The goal is to promote entrepreneurship, innovation, development, and social commitment to communities, organisations, and the region, fostering creative economies through academic articulation with a social purpose.

Figure 4. Integration of Lab spaces
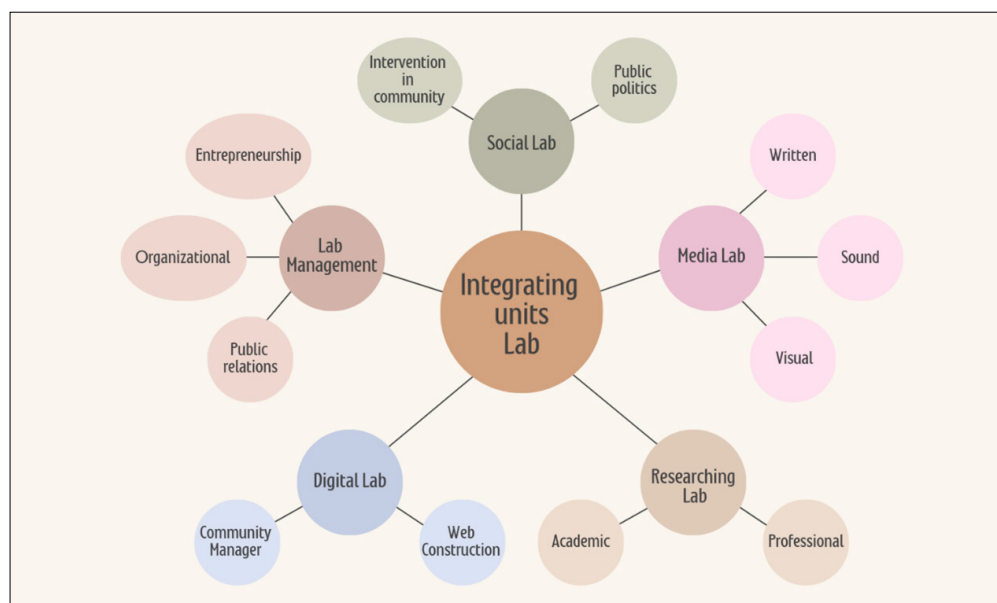
Source: prepared by the author

Communication is a crucial social, cultural, and business phenomenon. The current historical context makes it clear that there is an urgent need to comprehend mass communication, analyse the cultural industry, and assess its impact on the economy, politics, and culture. The significance of communication in innovation management processes can be better understood by examining current technological paradigms and applying appropriate methodologies for creation and dissemination. This analysis can aid in explaining social phenomena. Structural and functional changes necessitate a reconsideration

of communication actions, resulting in the reimagining of communicative products and their applications. The training of communicators should strive to establish a learning environment (as depicted in figure 4) where the competencies and interests of each member are at the forefront of the development and presentation of various products, each with its own unique features.

Communication programmes should aim to project a professional image that demonstrates a genuine commitment to the community. As an academic-practical-research field, communication should serve as a platform for social projection. The learning and exercises taught in research subjects and workshops should be applied to real communication actions that have a positive impact on communities and organisations. This will assist in enhancing communication strategies and content production. The curriculum should be revised to establish clear academic and practical expectations for student development. It is crucial to offer trainees opportunities to share their content with a contemporary audience, who are immersed in screen devices, and to receive constructive feedback. It is not acceptable to wait for learners to enter the professional work environment to gain visibility and opportunities to disseminate their work.

Homogeneity in the fundamentals of language, journalism, and media production in academia may hinder the ability of future professionals to combine their efforts and talents to influence social processes through their work. Although there may be differences in social phenomena between regions, these differences should not substantially affect the training of Colombian communicators. The contemporary technological revolution requires spaces where students can learn new communication models. These spaces should integrate theory and practice to generate transversal content that helps construct communication strategies for different sectors of society. The aim of this theoretical-practical spiral is to create an experimental scenario for disseminating and generating digital content in various formats, including audio-visual, photographic, audio, and textual media, for both domestic and international projects.

To improve the educational project, it is important to encourage exploration of narratives, formats, and creation, circulation, and dissemination processes across various subjects and practices. This can be achieved through interdisciplinary and transdisciplinary integration, which proposes ideas that go beyond the established variables in the profession's foundations. The role of the communicator as a content manager has become increasingly important in the labour market. They are responsible for creating dynamic communication proposals in a scenario that demands a capable workforce. This study confirms that universities' focus on the past, rather than the challenges of the present and future, is the reason for the disconnection of future students from communication programmes. Communication related to media and journalism can be disruptive in meeting the societal needs of today's world. These competencies are essential for communication professionals in contemporary society. Therefore, the academy must provide practical spaces for students to apply theoretical concepts, develop products, and engage with the community. This paper confirms the hypothesis that vocational training programmes have not fully adapted to the changing communication landscape brought about by technological advances.

The paper's results are limited to a comprehensive analysis of the content of curricula and syllabi. In the second phase of the research, these results will be compared with the approaches and arguments of actors, principals, and teachers at each university. Focusing on the perceptions of deans and educators can lead to the exploration of a field diary. This diary could highlight the equipment and technologies available for developing pedagogical exercises in student training. Future research

could explore the specific challenges faced by communication and journalism programmes in serving as an articulating hub between an institution and the social group it serves. The study of communication in the face of political, social, and technological changes requires further exploration. It is important to analyse the interpretation and construction of meaning that is put into practice when messages are broadcast through various communication channels.

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6. Conflict of interest

The author declares no conflict of interest.

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