

Comunicar

Media Education Research Journal, 63, XXVIII
www.comunicarjournal.com



Gender equality,
media and education:
A necessary global alliance

Igualdad de género,
medios y educación:
Una alianza global necesaria



© COMUNICAR, 63, XXVIII

MEDIA EDUCATION RESEARCH JOURNAL
REVISTA CIENTÍFICA DE COMUNICACIÓN Y EDUCACIÓN

ISSN: 1134-3478 / DL: H-189-93 / e-ISSN: 1988-3293
n. 63, vol. XXVIII (2020-2), 1st Quarter, April, 1st, 2020

INDEXED INTERNATIONAL SCIENTIFIC JOURNAL

<https://www.revistacomunicar.com/index.php?contenido=ranking-indexaciones&idioma=en>



JOURNAL CITATION REPORTS (JCR)

JCR 2018 (2019-20): Q1. Impact Factor: 3.338. 5 Year Impact Factor 3.785. Immediacy Index: 1.750; Eigenfactor Score: 0.00076; Communication: Q1 (10th position from 243, top Iberoamerican journal); Education: Q1 (9th position from 88), the first Spanish and Iberoamerican journal
SOCIAL SCIENCES CITATION INDEX: The top journal in Spanish in Communication since 2007



SCOPUS

CITESCORE 2018 (2019-20): (2.79): Q1 en Cultural Studies (5th position from 890) (percentile 99). Q1 in Communication: 26th from 312 (percentile 91). Q1 in Education (79th position from 1040) (percentile 91).
SCIMAGO JOURNAL RANK: SJR 2018 (2019-20): 0.851: Q1 in Cultural Studies: The top 10% journal. Q1 in Communication: The 10% top journal. Q1 in Education: The 10% top journal



RECYT (FECYT/MEC)

FECYT Ranking 2020: Education: 1st of 56 journals (99.82 points out of 100) (top 1%); Communication, Information and Scientific Documentation: 1st of 16 journals (99.82 points out of 100) (top 1%).
FECYT 2016-2019 Seal of Quality Excellence (12 indicators) (Official Bulletin of State). Renewal until 2020.



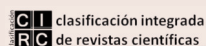
GOOGLE SCHOLAR

2019/20: Top 100 de Google: 1st position (from 100) in the Spanish ranking of all research journals areas. H5: 38. Mean H5: 50. In 2019-09-23: H: 69; H5: 62 (30.912 accumulated citations)
H5 Index (2013-2017), according EC3 Reports, 2018 (UGR): 1st position in Education (out of 165; H5: 38); 1st position in Communication (out of 51; H5: 38)



DIALNET METRICS

Q1: COMMUNICATION 2018 (2019): 1st position (from 223); IF: 3.275 (655 cites)
Q1: EDUCATION 2018 (2019): 1st position (from 55); IF: 3.275 (655 cites)



CIRC (INTEGRATED CLASSIFICATION OF SCIENTIFIC JOURNALS) (EC3 Metrics)

2019, Level A+ (highest rated)



REDIB (CSIC) (Ibero-American Innovation and Scientific Knowledge Network)

2019: 1th position among 1,039 select journals from all areas. Rating: 54.188



ERIH+

Level INT2 (2019)

PUBLISHED BY: GRUPO COMUNICAR EDICIONES

- www.comunicarjournal.com
- www.grupocomunicar.com
- Administration: info@grupocomunicar.com
- Staff: director@grupocomunicar.com
- Mail box 527. 21080 Huelva (Spain)

- COMUNICAR is a member of CEDRO (Spanish Centre for Reprographic Rights).
- COMUNICAR is a quarterly scientific publication, published in January, April, July and October.
- COMUNICAR journal accepts and promotes online institutional exchanges with other scientific journals.

© COMUNICAR is a patented trademark registered at the Spanish Patents and Trademarks Office, n. 1806709,

INTERNATIONAL CO-EDITIONS

- **ENGLISH EDITION:** University of Chester, MMU (Manchester) (United Kingdom). Tecnológico de Monterrey (Mexico)
- **PORTUGUESE EDITION:** University of Brasilia (Brazil)
- **CHINESE EDITION:** University of Southern California (USA) Hong Kong Baptist University (China)
- **LATIN-AMERICAN EDITION:** Technical University of Loja (UTPL) (Ecuador)

PRINTED BY: Estigraf. Madrid (Spain)

© Reproduction of any text in COMUNICAR requires authorization from CEDRO or the publisher.

E-SHOP: www.revistacomunicar.com/index.php?contenido=tienda

CONTENTS

Comunicar, 63, XXVIII (2020-2)

**Gender equality, media and education:
A necessary global alliance**

**Igualdad de género, medios y educación:
Una alianza global necesaria**



DOSSIER

THEMATIC EDITORS

Dr. Francisco-José García-Ramos, Complutense University of Madrid (Spain)
Dr. María-Soledad Vargas-Carrillo, Pontifical Catholic University of Valparaíso (Chile)
Dr. Alexandra Wake, RMIT University (Australia)

- | | |
|--|--------------|
| 01. Gender equality and ICT in the context of formal education: A systematic review | 09-19 |
| Igualdad de género y TIC en contextos educativos formales: Una revisión sistemática | |
| <i>María-Paz Prendes-Espinosa, Pedro-Antonio García-Tudela & Isabel-María Solano-Fernández (Spain)</i> | |
| 02. Gender studies in Communication Degrees | 21-30 |
| Los estudios de género en los Grados de Comunicación | |
| <i>Francisco-José García-Ramos, Francisco-A. Zurian & Patricia Núñez-Gómez (Spain)</i> | |
| 03. Women on YouTube: Representation and participation through the Web Scraping technique | 31-40 |
| La mujer en YouTube: Representación y participación a través de la técnica Web Scraping | |
| <i>Uxía Regueira, Almudena Alonso-Ferreiro & Sergio Da-Vila (Spain)</i> | |
| 04. Influence of Instagram stories in attention and emotion depending on gender | 41-50 |
| Influencia de las historias de Instagram en la atención y emoción según el género | |
| <i>Joan-F. Fondevila-Gascón, Óscar Gutiérrez-Aragón, Meritxell Copeiro, Vicente Villalba-Palacín & Marc Polo-López (Spain)</i> | |
| 05. Victims and perpetrators of femicide in the language of the Mexican written press | 51-60 |
| Víctimas y victimarios de feminicidio en el lenguaje de la prensa escrita mexicana | |
| <i>Elizabeth Tiscareño-García & Óscar-Mario Miranda-Villanueva (Mexico)</i> | |

KALEIDOSCOPE

- | | |
|---|----------------|
| 06. SEO and the digital news media: From the workplace to the classroom | 63-72 |
| SEO y cibermedios: De la empresa a las aulas | |
| <i>Carlos Lopezosa, Lluís Codina, Javier Díaz-Noci & José-Antonio Ontalba-Ruipérez (Spain)</i> | |
| 07. Influence of family and pedagogical communication on school violence | 73-82 |
| Influencia de la comunicación familiar y pedagógica en la violencia escolar | |
| <i>Miguel Garcés-Pretzel, Yanin Santoya-Montes & Javier Jiménez-Osorio (Colombia)</i> | |
| 08. To-friend or not-to-friend with teachers on SNSs: University students' perspectives | 83-92 |
| Ser o no ser amigos de los profesores en redes sociales: Las perspectivas de los estudiantes universitarios | |
| <i>Zeynep Turan, Levent Durdu & Yüksel Goktas (Turkey)</i> | |
| 09. Domesticated voices and false participation: Anatomy of interaction on transmedia podcasting | 93-102 |
| Voces domesticadas y falsa participación: Anatomía de la interacción en el podcasting transmedia | |
| <i>David García-Marín & Roberto Aparici (Spain)</i> | |
| 10. Problematic Internet uses and depression in adolescents: A meta-analysis | 103-113 |
| Usos problemáticos de Internet y depresión en adolescentes: Meta-análisis | |
| <i>Raquel Lozano-Blasco & Alejandra Cortés-Pascual (Spain)</i> | |

SUBMISSION GUIDELINES

GENERAL INFORMATION

“Comunicar”, Media Education Research Journal is published by Grupo Comunicar Ediciones (VAT: G21116603). This established non-profit professional group, founded in 1988 in Spain, specialises in the field of media education. The journal has been in print continuously since 1994, published every three months.

Contents are peer reviewed, in accordance with publication standards established in the APA 7 (American Psychological Association) manual. Compliance with these requirements facilitates indexation in the main databases of international journals in this field, which increases the dissemination of published papers and therefore raises the profile of the authors and their centres.

“Comunicar” is indexed in the Social Sciences Citation Index (SSCI), Journal Citation Reports (JCR), Scisearch, Scopus and over 788 databases, catalogues, search engines and international repertoires worldwide.

Each issue of the journal comes in a print (ISSN:134-3478) and electronic format (www.comunicarjournal.com) (e-ISSN: 1988-3293), identifying each submission with a DOI (Digital Object Identifier System).

SCOPE AND POLICY

Subject Matter: Fundamentally, research papers related to communication and education, and especially the intersection between the two fields: media education, educational media and resources, educational technology, IT and electronic resources, audiovisual, technologies... Reports, studies and experiments relating to these subjects are also accepted.

Contributions: “Comunicar” publishes research results, studies, state-of-the-art articles and bibliographic reviews especially in relation to Latin America and Europe and regarding the convergence between education and communication, preferably written in Spanish although submissions are also accepted in English. The contributions to this journal may be: Research papers, Reports, Studies and Proposals (5,000-6,500 words of text, references included), State-of-the-art articles: (6,000-7,000 words of text, including references).

Unsolicited manuscripts sent in by authors are initially placed in the Miscellaneous section of the journal. The Topics section is organized by an editor through a system of call for papers and specific commissions to experts in the field. If we receive manuscripts within the deadline for a particular topic, the journal editor can refer the manuscript to the Topics editor for assessment and possible publication in this monographic section. The deadline for each Topic section is at least nine months before publication.

EDITORIAL PROCESS

“Comunicar” confirms receipt of all articles submitted by authors and keeps the authors informed of the acceptance/rejection process, as well as the editing process, in the event of acceptance. The webpage www.comunicarjournal.com also provides information about manuscript editing procedures, full guidelines for publication, as well as the Annexes: review protocol prior to submission, manuscript structure protocol, external review protocol...

In general, once the external reports have been reviewed, the criteria that justify the editors’ decision to accept or reject submissions are as follows: a) Topical and new. b) Relevance: applicability of the results to the resolution of specific problems. c) Originality: valuable information, repetition of known results. d) Significance: advancement of scientific knowledge. e) Reliability and scientific validity: verified methodological quality. f) Organisation (logical coherence and material presentation). g) Presentation: good writing style.

PRESENTATION AND STRUCTURE OF ORIGINAL PAPERS

Manuscripts must be sent exclusively through the Journal Management Centre (www.revistacomunicar.com/ojs/). These publication guidelines are based on the standards of the American Psychological Association (APA 7): (<http://goo.gl/1sS7Ax>).

Structure: The following two files must be sent together: manuscript (main text), and cover letter / title page.

ETHICAL COMMITMENT AND RESPONSIBILITIES

Each author must submit a statement of authorship and text originality. Previously published material will not be accepted. The cover letter must specify the transfer of copyright ownership of the manuscript for its publication in “Comunicar”.

www.comunicarjournal.com

Comunicar[©]

MEDIA EDUCATION RESEARCH JOURNAL

XXVIII, 63

EDITORIAL BOARD

EDITOR IN CHIEF

- Dr. Ignacio Aguaded, University of Huelva, Spain

ASSISTANT EDITORS

- Dr. Rosa García-Ruiz, University of Cantabria, Spain
- Dr. Rafael Repiso, UNIR / EC3, University of Granada, Spain
- Dr. Amor Perez-Rodríguez, University of Huelva, Spain
- Dr. Ana Pérez-Escoda, UNIR, University of Nebrija, Spain
- Dr. Luis-Miguel Romero-Rodríguez, URJC, Spain
- Dr. Angel Hernando-Gómez, University of Huelva, Spain
- Ms. Arantxa Vizcaíno-Verdú, University of Huelva, Spain
- Dr. Agueda Delgado-Ponce, University of Huelva, Spain

THEMATIC EDITORS

- Dr. Francisco-J. García-Ramos, Complutense University of Madrid (Spain)
- Dr. María-S. Vargas-Carrillo, Pontifical Catholic University of Valparaíso (Chile)
- Dr. Alexandra Wake, RMIT University (Australia)

INTERNATIONAL COEDITORS

- English: Dr. M. Gant, Univ. Chester and Dr. C. Herrero (MMU), UK
- Portuguese: University of Brasília, Brazil
- Chinese: Dr. Yuechuan Ke (USA) and Dr. Alice Lee, Hong Kong
- Iberoamerican: M. Soledad Ramírez, TEC Monterrey, Mexico and Abel Suing, University T. Part. of Loja, Ecuador

ADVISORY BOARD

- Dr. Ismar de-Oliveira, Universidade de São Paulo, Brazil
- Dr. Miguel de-Aguilera, University of Malaga, Spain
- Dr. Guillermo Orozco, University of Guadalajara, Mexico
- Dr. Manuel Ángel Vázquez-Medel, University of Seville, Spain
- Dr. Cecilia Von-Feilitzen, Nordicom, Sweden
- Dr. Joan Ferrés-i-Prats, Pompeu Fabra Univer., Barcelona, Spain
- Dr. Agustín García-Matilla, University of Valladolid, Spain
- Dr. Cristina Ponte, New University of Lisboa, Portugal
- Dr. Pier Cesare Rivoltella, Catholic University of Milano, Italy
- Dr. Javier Marzal, Jaume I University, Castellon, Spain
- Dr. Jesús Arroyave, University of the Nord, Barranquilla, Colombia
- Dr. Francisco García-García, Complutense Univer., Madrid, Spain
- Dr. Alberto Parola, MED, University of Torino, Italia
- Dr. Teresa Quiroz, University of Lima, Peru
- Dr. Concepción Medrano, University of País Vasco, Spain
- Dr. Claudio Avendaño, University Santiago of Chile, Chile
- Dr. María Luisa Sevillano, National Distancie University, Spain
- Dr. Mar Fontcuberta, Catholic University, Chile
- Dr. Julio Cabero-Almenara, University of Seville, Spain
- Dr. Manuel Cebrián-de-la-Serna, University of Malaga, Spain
- Dr. Ana García-Valcárcel, University of Salamanca, Spain
- Dr. M. Soledad Ramírez-Montoya, Monterrey Institute, Mexico
- Dr. Jesús Arroyave, University of Norte, Colombia
- Dr. Donaciano Bartolomé, Complutense University, Madrid, Spain
- Dr. Samy Tayie, University of Cairo, Mentor Association, Egypt
- Dr. Javier Tejedor-Tejedor, University of Salamanca, Spain
- Dr. Sara Pereira, University of Minho, Braga, Portugal
- Dr. Gloria Camarero, Carlos III University, Madrid, Spain
- Dr. Armanda Pinto, University of Coimbra, Portugal
- Dr. Pere Marqués, Autonomous University of Barcelona, Spain
- Dr. Xosé Soengas, University of Santiago, Spain
- Dr. Octavio Islas, Pontificia Catholic University, Ecuador
- Dr. Don Shin, Chung-Ang University, Seoul, Korea
- Dr. Moisés Esteban-Guitert, University de Girona
- Dr. Patrick Verniers, Conseil Sup. Medis Education, Belgium
- Dr. Domingo Gallego, National Distance University, Spain
- Dr. Manuel Area, La Laguna University, Tenerife, Spain
- Dr. Ramón Reig, University of Seville, Spain
- Dr. Gustavo Hernández, ININCO, Central University, Venezuela
- Dr. Isabel Cantón, University of Leon, Spain
- Dr. Juan de Pablos, University of Seville, Spain
- Dr. Gerardo Borroto, CUJAE, La Habana, Cuba
- Dr. Manuel Fandos-Igado, UNIR, Zaragoza, Spain
- Dr. J. Manuel Pérez-Tornero, Autonomous University, Barcelona
- Dr. Jorge Cortés-Montalvo, UACH/REDECA, Mexico
- Dr. Carmen Marta, University of Zaragoza, Spain
- Dr. Silvia Contín, National University of Patagonia, Argentina
- Dr. Begoña Gutiérrez, University of Salamanca, Spain
- Dr. Ramón Pérez-Pérez, University of Oviedo, Spain
- Dr. Carlos Muñiz, Autonomous University of Nuevo Leon, Mexico
- Dr. Carmen Echazarreta, University of Girona, Spain
- Dr. Evgeny Pashentsev, Lomonosov Moscow University, Russia
- Dr. Fahriye Altınay, Near East University, Turkey
- Dr. Jesús Valverde, University of Extremadura, Spain
- Dr. Yamile Sandoval, University of Santiago of Cali, Colombia
- Dr. Pilar Arnaiz, University of Murcia, Spain
- M. Paolo Celot, EAVI, Brussels, Belgium
- Dr. Victoria Tur Viñes, University of Alicante, Spain
- Dr. José-María Morillas, University of Huelva, Spain
- Dr. Jorge Mora, California, USA
- M. Jordi Torrent, ONU, Alliance of Civilizations, NY, USA
- Ms. Kathleen Tyner, University of Texas, Austin, USA
- Ms. Marieli Rowe, National Telemedia Council, Madison, USA

ADVISORY BOARD

- Dr. Octavio Islas, Pontificia Catholic University, Ecuador
- Dr. Don Shin, Chung-Ang University, Seoul, Korea
- Dr. Moisés Esteban-Guitert, University de Girona
- Dr. Patrick Verniers, Conseil Sup. Medis Education, Belgium
- Dr. Domingo Gallego, National Distance University, Spain
- Dr. Manuel Area, La Laguna University, Tenerife, Spain
- Dr. Ramón Reig, University of Seville, Spain
- Dr. Gustavo Hernández, ININCO, Central University, Venezuela
- Dr. Isabel Cantón, University of Leon, Spain
- Dr. Juan de Pablos, University of Seville, Spain
- Dr. Gerardo Borroto, CUJAE, La Habana, Cuba
- Dr. Manuel Fandos-Igado, UNIR, Zaragoza, Spain
- Dr. J. Manuel Pérez-Tornero, Autonomous University, Barcelona
- Dr. Jorge Cortés-Montalvo, UACH/REDECA, Mexico
- Dr. Carmen Marta, University of Zaragoza, Spain
- Dr. Silvia Contín, National University of Patagonia, Argentina
- Dr. Begoña Gutiérrez, University of Salamanca, Spain
- Dr. Ramón Pérez-Pérez, University of Oviedo, Spain
- Dr. Carlos Muñiz, Autonomous University of Nuevo Leon, Mexico
- Dr. Carmen Echazarreta, University of Girona, Spain
- Dr. Evgeny Pashentsev, Lomonosov Moscow University, Russia
- Dr. Fahriye Altınay, Near East University, Turkey
- Dr. Jesús Valverde, University of Extremadura, Spain
- Dr. Yamile Sandoval, University of Santiago of Cali, Colombia
- Dr. Pilar Arnaiz, University of Murcia, Spain
- M. Paolo Celot, EAVI, Brussels, Belgium
- Dr. Victoria Tur Viñes, University of Alicante, Spain
- Dr. José-María Morillas, University of Huelva, Spain
- Dr. Jorge Mora, California, USA
- M. Jordi Torrent, ONU, Alliance of Civilizations, NY, USA
- Ms. Kathleen Tyner, University of Texas, Austin, USA
- Ms. Marieli Rowe, National Telemedia Council, Madison, USA

INTERNATIONAL REVIEWERS BOARD

- 680 Reviewers of 48 countries (2020-2)
- www.revistacomunicar.com/index.php?contenido=evaluadores&idioma=en

BOARD OF MANAGEMENT

- D. Francisco Casado-Mestre, University of Huelva, Spain
- Dr. Patricia de-Casas, Universidad Antonio de Nebrija, Spain
- Mgr. Daniela Jaramillo-Dent, University of Huelva, Spain
- Dr. Isidro Marín-Gutiérrez, UTPL, Ecuador
- Dr. M. Carmen Caldeiro, University of Santiago, Spain
- Dr. Paloma Contreras-Pulido, UNIR, Spain
- Dr. Mar Rodríguez-Rosell, UCAM, Murcia, Spain
- Mgr. Mónica Bonilla-Del-Río, University of Huelva, Spain
- Mgr. Carmen Baldallo, University of Huelva, Spain
- COMMERCIAL MANAGER: Alex Ruiz, Spain

Comunicar[®]

Quality criteria

Registered in the Spanish Patent and Trademark Office, with the code 1806709

GLOBAL MIL AWARDS

UNESCO, 2019

MARIANO CEBRIÁN TOP PRIZE

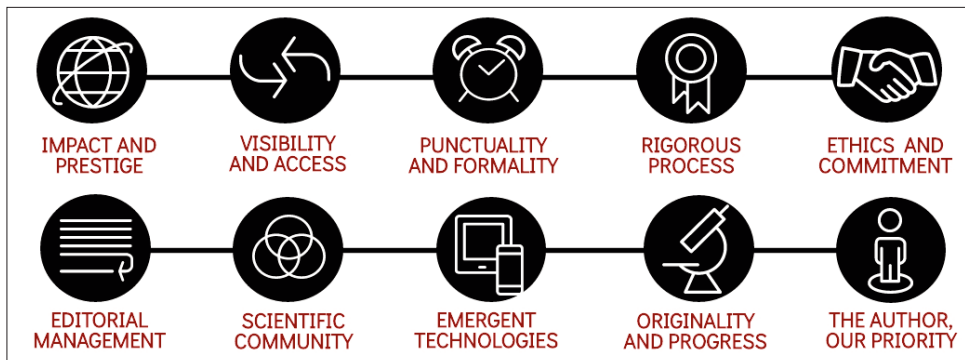
University of Zaragoza/Aragon-Radio, 2015

TOP PRIZE IN COMMUNICATION

Carlos III University, Madrid, 2007



QUALITY CRITERIA



Quality criteria of “Comunicar” Media Education Research Journal are the indicators of our commitment to a rigorous and professional publishing process. They constitute the endorsement for authors, reviewers, collaborators and readers that the final product offered meets the highest standards and academic rigour expected from a publication of national and international reputation.

- **Impact and prestige** are guaranteed by being in the first quartile among the most recognised journals: Q1 in Journal Citation Reports (JCR) in Communication and Education; Q1 in Scopus (SJR) in Cultural Studies and Q1 in Scopus (CiteScore) in Communication and Education.
- **Visibility and access** are safeguarded by an open and shared access policy that makes all published manuscripts available to any reader in a bilingual version: Spanish and English.
- **Punctuality and formality** contribute to an efficient flow of manuscripts within established timeframes, facilitating quarterly publication thanks to highly effective schedule compliance.
- A **rigorous process** is supported by an International Reviewers Board of nearly 680 highly qualified researchers in the fields of education and communication from almost 48 countries all over the world.
- **Ethics and commitment** that ensure the upholding of rights and duties that protect the whole academic community: authors, reviewers, readers and editors. Our Code of Ethics is based on the International Committee on Publication Ethics (COPE), ensuring guidance for authors.
- **High quality Editorial Management** is accomplished throughout the OJS Platform, from the Science and Technology Foundation (FECYT), complemented by reviewers’ contributions and stylistic department work in English and Spanish languages.
- Our **scientific community** is fostered and increased by an influential academic community of authors (1,677), reviewers (600) and readers all over the world. This Community is supported by a committed editorial group composed of: an Editorial Board, an Academic Committee, an International Reviewers Board, an Advisory Board and a Technical Board.
- Use and development of **emergent technologies** encourages the diffusion and impact of the journal, continuously adjusting the access formats, communication models and academic platforms for academic diffusion (ResearchGate, AcademiaEdu...).
- The **originality and progress** of the outstanding research contributions from the research areas of communication and education are guaranteed by plagiarism controls (CrossCheck), applied to all manuscripts accepted before being published to preserve the originality and progress of research.
- At last but not least the **author is our priority**, since after all, authors uphold and give sense to entire process. Every manuscript is available in the Journal website with accurate information about citation, statistical data, references, impact metrics and interaction in social media.

Quality criteria are, in summary, a set of standards that guarantee the whole process, ensuring a professional treatment for every person involved in the publishing, reviewing, editing and spreading processes of the manuscripts.

Information on evaluators, acceptance/rejection rates and internationalisation in Comunicar 63

- Number of research works received: 219. Number of research works accepted: 10.
- Percent of manuscripts accepted: 4.57%; Percent of manuscript rejected: 94.98%.
- Received manuscripts internationalisation: 33 countries.
- Numbers of Reviews: 319 (update: www.comunicarjournal.com).
- Scientific Reviewers internationalisation: 23 countries.
- Country of origin: 4 countries (Spain, Mexico, Colombia & Turkey).
- International databases in COMUNICAR 63: 788 (2020-02) (update: www.comunicarjournal.com).



Comunicar 63

Special

Topic Issue

Gender equality, media and education:
A necessary global alliance

Igualdad de género, medios y educación:
Una alianza global necesaria



Q1
2018

Comunicar

Clarivate Analytics
JOURNAL CITATION REPORTS

Scopus®

9° / 88 Education
10° / 243 Communication




5° / 890 Cultural Studies
26° / 312 Communication
79° / 1.040 Education



Gender equality and ICT in the context of formal education: A systematic review

Igualdad de género y TIC en contextos educativos formales:

Una revisión sistemática

-  Dr. María-Paz Prendes-Espinosa is Full Professor of Teaching and School Organization at the University of Murcia (Spain) (pazprend@um.es) (<https://orcid.org/0000-0001-8375-5983>)
-  Pedro-Antonio García-Tudela is Predoctoral Researcher of Teaching and School Organization at the University of Murcia (Spain) (pedroantonio.garcia4@um.es) (<https://orcid.org/0000-0003-0405-923X>)
-  Dr. Isabel-María Solano-Fernández is Degree in Teaching and School Organization from the University of Murcia (Spain) (imsolano@um.es) (<https://orcid.org/0000-0003-3760-8899>)

ABSTRACT

This article focuses on gender equality as one of the most relevant objectives of the educational system to alleviate gender violence and combat stereotypes. At the same time, ICTs have become a very important educational tool in a digital society like the one where we live. Around these two topics we conducted this research whose purpose is, from the scientific production of the last six years, to analyze the educational practices in formal contexts that deal with gender equality and ICTs (infant, primary, secondary and higher education). The research design is a systematic review, based on the PRISMA statement and the PICoS strategy, using the 2013-2019 search period. After a screening process of a total of 90 documents, 18 papers were found that cover both study topics (gender and ICTs). A content analysis supported by semantic networks was performed, using Atlas.ti v.8. Among the main results, we highlight that most of the good practices in the different educational levels are related to the use of web 2.0. and STEM competences. Finally, we recommend the design of proposals that work on gender through ICTs, with the “smart classroom” as an interesting suggestion that is part of the emerging pedagogies.

RESUMEN

Este artículo centra su interés en la igualdad de género, como uno de los objetivos más relevantes del sistema educativo para paliar la violencia de género y combatir los estereotipos. Paralelamente, las TIC se han convertido en una herramienta educativa muy importante en una sociedad digital como la que vivimos. En torno a estos dos tópicos llevamos a cabo esta investigación cuyo propósito es, a partir de la producción científica de los últimos seis años, analizar las prácticas educativas en contextos formales que trabajen la igualdad de género y las TIC (educación infantil, primaria, secundaria y superior). El diseño de investigación es una revisión sistemática, sustentada en la declaración PRISMA y la estrategia PICoS y usando el periodo de búsqueda 2013-2019. Tras el proceso de filtrado de un total de 90 documentos, se han encontrado 18 trabajos que contemplan ambos tópicos de estudio (género y TIC). Se ha realizado un análisis de contenido apoyado en redes semánticas, usando para ello Atlas.ti v.8. Entre los principales resultados, destacamos que la mayoría de buenas prácticas en los diferentes niveles educativos se relacionan con la utilización de la web 2.0. y con las competencias STEM. Por último, se recomienda el diseño de propuestas que trabajen el género a través de las TIC, siendo la «smart classroom» una sugerencia de interés que forma parte de las pedagogías emergentes.

KEYWORDS | PALABRAS CLAVE

Coeducation, feminism, gender equality, educational technology, childhood education, primary education, secondary education, higher education.

Coeducación, feminismo, igualdad de género, TIC, educación infantil, educación primaria, educación secundaria, educación superior.

1. Introduction

"All human beings are born free and equal in dignity and rights". This is the first article of the declaration of human rights. However, organizations such as the WHO have highlighted that gender violence is currently an imperative public health problem, regardless of the culture of origin (WHO World Health Organization, 2013). It is a social pandemic present in all countries (Torres, 2010). The term gender differentiates between biological and social components and also involves stereotypes such as passivity, dependence, and obedience, which aggravate inequality, subordinating the feminine to the masculine with negative consequences for women (Ferrer & Bosch, 2013; Sánchez-Casales, 2014; Egea, 2019). We consider it meaningless to use the term equality without referring to the earlier feminist movement. (Pino, 2017). Today's feminism must seek a socialization that benefits from total gender equality, far from its false image, which results from myths and stereotypes (Solís, 2007; García-Jiménez, Cala, & Wheat, 2016).

At present, a widespread means to raise awareness and denounce gender inequality is through cyberfeminism, a concept that links technology, the internet and social values, (Catalán, 2017; Sánchez & Fernández, 2017) and which has great potential in education (Mérida, 2019). One of the current worldwide cyberfeminist movements has been "#MeToo", as a means to report sexual abuse (Thissen, 2018). Traditionally there have been three models of classroom organization (Bonafant, 1997): the segregated school (male and female students in separate spaces), the mixed school (both sexes in the same space) and the coeducational school (eliminating inequalities to offer both sexes the same opportunities). Despite social changes, many Spanish schools maintain the same spatial organization as they did five decades ago, which is why, as gender urban planning points out, a structure that favors egalitarian relations should be established (Saldaña, 2018). On the contrary, a culture that differentiates between gender-based expectations, skills and life plans continues to be perpetuated (Cordero, 2013). This begins in educational centers with sexual discrimination towards children and can cause difficulties in relationships in the classroom, and even be a cause of harassment (Ovejero, Yubero, Larrañaga, & Navarro, 2013), preventing academic success (Igbo, Onu & Obiyo, 2015). There has always been a tendency to divide students by gender for various activities, which further aggravates stereotyping (Rodríguez & Miraflores, 2018) and it has been demonstrated how inequality in schools is still present, although transformed into new, subtler forms (Ugalde et al., 2019).

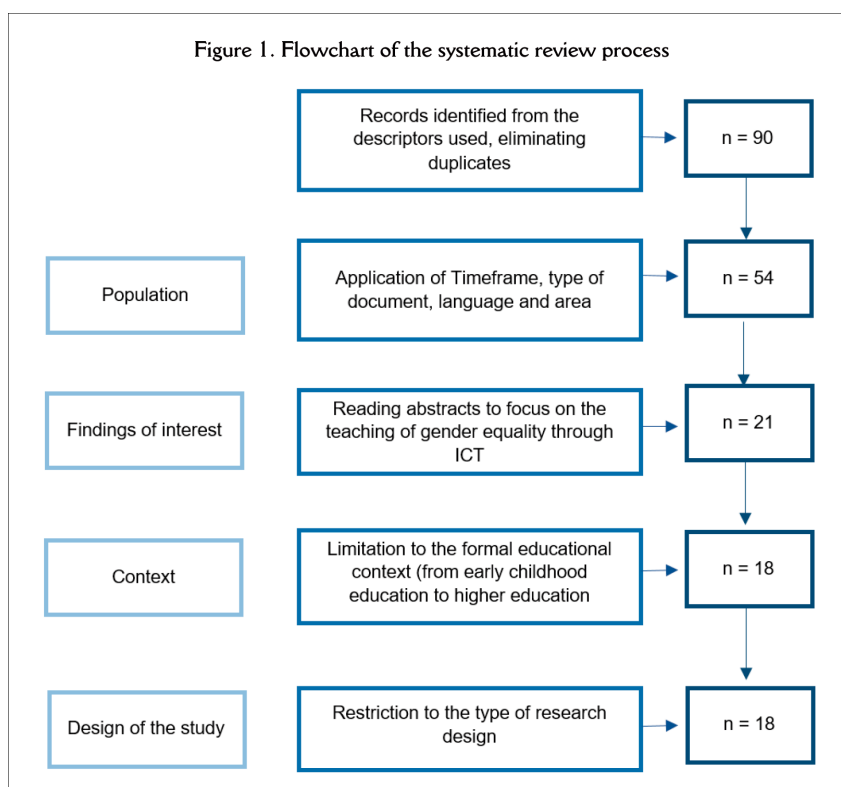
Co-education remains a challenge for the school (López-Pascual, 2007; Subirats, 2016; Tomé, 2017; Egea, 2019; Ugalde et al. 2019). In practice, the so-called hidden curriculum (Pacheco-Salazar & López-Yáñez, 2019) continues, and textbooks are a good example of this (Women's Institute for equal opportunities, 2015). This situation puts not only the students in general at a disadvantage, but also specifically a group of students affected by homophobic and transphobic bullying, to the extent of even being a cause for suicide (Carrer, 2018). To combat this a model of coeducational school must be developed, supported by specific spatial arrangements, and a transformation of content and methodology; a change in mindset and a transversal approach to the problem (Bejarano et al., 2019; Gallardo & Gallardo, 2019). With these measures one can work to overcome sexism in a hierarchical education, favoring personal development, socialization and acceptance, and values and attitudes essential to stereotype-free growth (Pino, 2017). These achievements will inevitably be made through the improvement of teacher training, both in initial training (Bejarano et al., 2019) and continuing training (Gallardo & Gallardo, 2019). Carretero and Nolasco (2019) reveal that 75 % of future teachers could, albeit unwillingly, transmit sexist beliefs to their students. Amongst the various proposals for action, it is necessary to recognize the key role that technologies play in educational innovation and the improvement of the school curriculum (Escudero, 2014). The transition from a micro to a more global perspective in the field of technology has allowed us to replace an instrumental vision with a more methodological view (Cabero, 2003), in which technologies are ideal resources for communication, representation and expression of content, as well as the basis for shared construction of knowledge. In the context of formal education, recent work has expanded the ways in which we can learn with technologies, and how to promote change in classrooms in situations enriched by technologies (Prendes & Román, 2017; Serrano et al., 2016; Solano & Sánchez, 2016). This can serve as a starting point in promoting gender equality in the classroom. With the integration of technologies in the classroom, many educational institutions have been labeled "digital" (García-Aretio, 2019). However,

gender equality has not yet been greatly engaged by ICT's, as we demonstrate in our research. Some of our proposals are limited to the relative inequality of access for men and women to STEM subjects (Science, Technology, Engineering and Mathematics) Although there are several initiatives which work on gender through ICT's (Chamorro, 2010 ; Hirata, 2018; Rheingans et al., 2018), there is still a marked gender gap in both the professional and academic fields in reference to the use of technology (Calvo, 2019; Holth et al., 2016; Tiainem & Berki, 2019). The causes of this are various, including stereotyping of a lack of ability in females to work with technology. (Hill et al., 2010), the absence of female participants (Saéz & Clavero, 2016), and a lack of long-term teacher training (Pinedo et al., 2018). This is why it is necessary to highlight the usefulness of ICT in parallel terms: as a teaching content, employed so that STEMs do not contribute to gender inequalities, and as tools that both students and teachers can use, with female students even being empowered by the potential of ICT (González-García & Pérez-Sedeño, 2002). This role of ICT in the education of girls and women is seen as important by numerous international organizations (United Nations, 2015; UN WOMEN, 1995; UNESCO, 2006) (Boix, 2006; Gurumurthy, 2004) , and raises awareness of the need to combat the stereotype of technological competence as being a masculine quality (Gil-Juárez et al., 2012).

We consider that technologies are "allies in advancing equal opportunities, given the space-time flexibility they offer us and the opportunities for online collaboration" (García-Valcárcel & Arras, 2010: 10). Using this perspective, we base the objectives of this research on those developed within the project "Gender Equality Matters (GEM): Tackling Gender-Based Violence".

2. Methodology

This research is part of procedures carried out within the framework of the Gender Equality Matters (GEM) Project: Tackling Gender-Based Violence, funded by the Rights, Equality and Citizenship program of the European Union, which is to be developed in the 2018-2020 biennium.



Our research question is: how is gender equality working through ICTs in formal educational contexts? In answering this question our objective is to analyze educational practices in formal contexts that work

on gender equality with the use of ICTs. In order to reference and analyze the most significant studies in this field, the systematic literature review (SLR) method has been used, following the indications set forth by Conn et al. (2003) regarding the need to generate a documentary corpus in order to facilitate the review. To accomplish this, a database (<http://bit.ly/2o1tdjJ>) of the selected sample was created, in which the process of re-reading, editing and selection of information is favoured.

2.1. Process

To carry out an optimal search for scientific productions and thus guarantee their validity, several criteria were taken into account, based on the proposal by Tacconelli (2010) and the PRISMA statement (Urrútia & Bonfill, 2010). The criteria were: inclusion and exclusion, relevance, study validity, data description, elimination of duplication, risk of bias, application of Boolean operators and bilingual descriptors. The axis from which the aforementioned criteria were applied is the PICoS strategy: population, events of interest, context and study design (Pertegal-Vega et al., 2019). Population is the first search criteria: the use in Spanish and English of the keywords gender equality, coeducation, education, ICT and technology; our timeframe was limited to the last 6 years (2013-2019); type of document (article, book chapter and conference communication); language (English and Spanish) and area (Social Sciences). All the selected documents come from the main international multidisciplinary databases (Web of Science and Scopus) and Dialnet. Limiting the review to the last six years seeks to reference the most current documents regarding the research problems addressed. In addition, it was found that, in years prior to 2013, studies referring to ICTs and gender equality education were relatively scarce.

The focus of this review is based on educating in gender equality through ICTs. That is, those proposals that directly address the issue or try to ensure the improvement of gender coexistence. The research context is formal education, from pre-school education (from 3 years) to university. The study design prioritizes quantitative and qualitative articles that analyze specific or longitudinal experiences. A flowchart of the review process supported by the PICoS strategy is shown in Figure 1. After a first search based on the use of the above descriptors, an initial sample of 90 documents was obtained. After a round of filtering, using the above criteria, the final sample was 18 documents. In the last phase of the study, the results were analyzed using two quantitative models that demonstrate both the type of sample analyzed and its distribution within the different educational levels investigated. The research problem is analyzed using a semantic network generated with Atlas.ti v.8. It encodes and categorizes the most significant units of information of the selected documents. Next, the 18 citations created are linked to the 4 free codes that correspond to each of the educational levels.

2.2. Analyzed sample

The different scientific publications analyzed in the final sample are presented chronologically in Table 1.

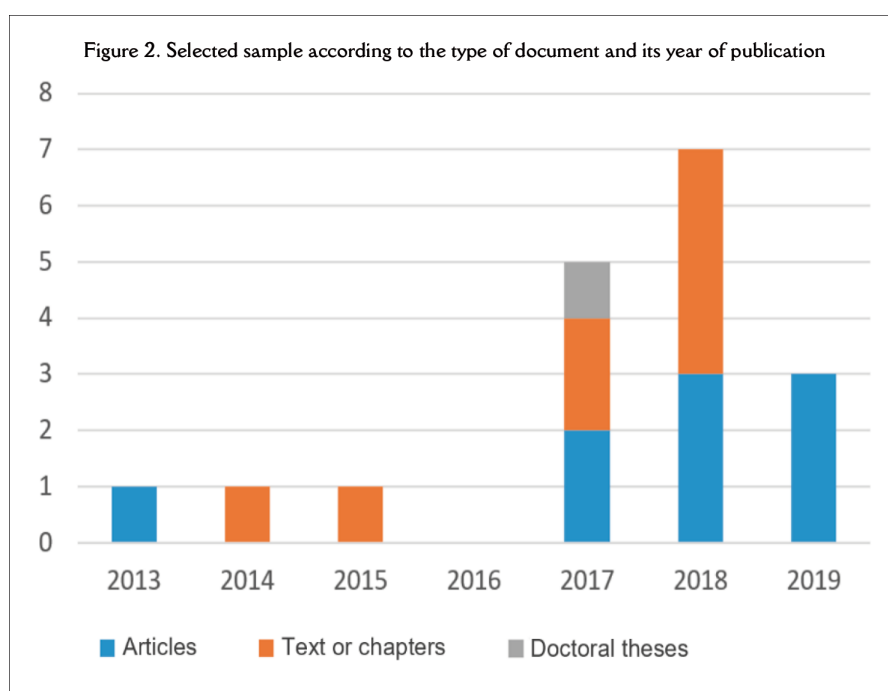
No.	Reference	Country
1	Barragán & Ruiz (2013)	Spain
2	García-Vázquez (2014)	Spain
3	Pär-Ola & Faheem (2015)	Bangladesh
4	Maldonado (2017)	Spain
5	Ferreira (2017)	Portugal
6	Permoser (2017)	Austria
7	Stucchi (2017)	Italy
8	Savinskaya (2017)	Russia
9	Barros, Vasconcelos, Araújo, Amaral, & Ramos (2018)	Portugal
10	Ferreira (2018)	Portugal
11	Hirata (2018)	Japan
12	Navarro-Pérez, Carbonell, & Oliver (2018)	Spain
13	Rheingans, D'Eramo, Diaz-Espinoza, & Ireland (2018)	USA
14	Sullivan & Umaschi (2018)	USA
15	Gkatzos (2018)	Greece
16	Martínez-Romera (2019)	Spain
17	Aguilar (2019)	Colombia
18	Mérida (2019)	Spain

3. Analysis and results

The bar chart in Figure 2 shows the sample as the type of document consulted within the different time frames. Despite the limited number of samples in international and national databases, it should be noted that there is a steady increase in the number of documents dealing with education for gender equality and nonviolence through ICT, with the exception of 2016. Taking into account the rise prior to 2019, an increase in jobs in ICT in the coming years is considered probable.

The teaching practices developed are most evident at the level of Secondary Education (works 1, 2, 4, 7, 10, 12 and 18 in Table 1), as shown in Figure 3.

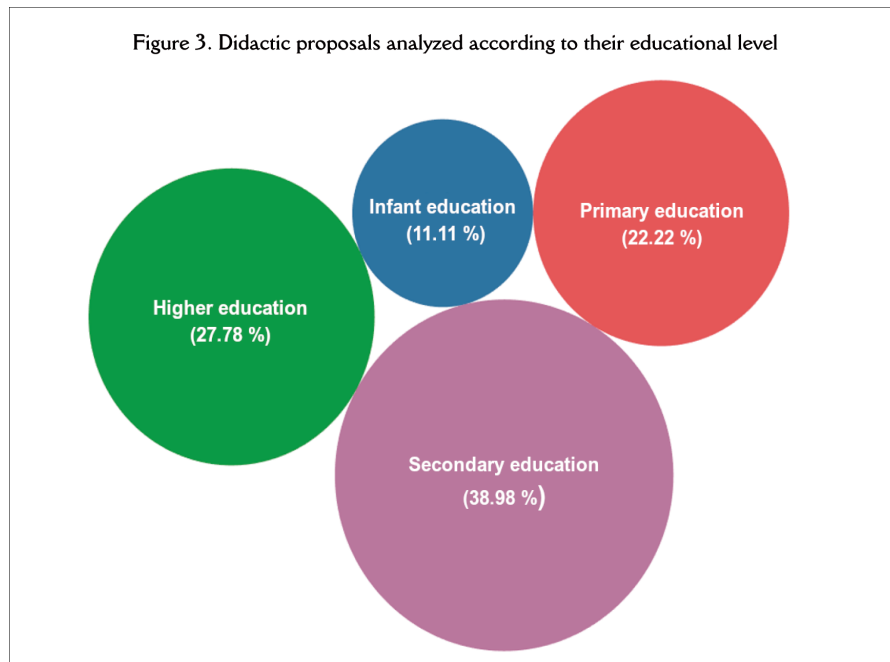
Despite there being a gradual growth in relation to the educational stage, in higher education there is a decrease (27.78%) compared to secondary education (38.89%). This is due to the fact that university courses that educate on gender equality through technology are mostly those related to STEM competencies (works 9, 11 and 13 in Table 1), except in two cases of those selected (works 3 and 16).



Proposals in Pre-school education are not completely non-existent, but are a minority (works 8 and 10). On the other hand, in Primary Education, gender equality and its treatment through technology (papers 6, 14, 15 and 17) is beginning to gain popularity.

We have developed a semantic network in order to visualize the results (Figure 4: <http://bit.ly/2rxYoW7>). Firstly, in Infant Education, gender equality has been examined in two different ways. On the one hand, through a project that regularly develops images, games and other digital resources (work No. 5), and on the other hand, through the STEM competencies which encourage and arouse female interest in these possibilities (work 8).

The inclusion of STEM competencies in Primary Education is promoted in order to encourage female interest in engineering and technology. We have found proposals about robotics (work 14), and in the development of cyberactivism, with digital discussion groups between schools (work 17) and, very relevant to this initiative, the development of web environments with which to play, learn and transform gender-based social reality (work 15). In Primary Education, a strategy known as peer tutoring has also been developed, addressing gender equality through a digital mentoring program among schoolchildren, which deconstructs gender stereotypes (work 6).



Similarly, to one of the proposals implemented in Primary Education, in Secondary schools, web 2.0 is also used to address cyber-activism, or in this case, cyberfeminism (work 18). Along the same lines, there are similar schemes, supported by blogs or digital social spaces, which work on subjects from a co-educational perspective, explicitly addressing feminism with activities and discussion forums (works 1, 5 and 7). In addition to schemes based on virtual environments, there are other projects based on different technological tools complemented by different strategies such as the flipped classroom or inverted class (works 2 and 4), or didactic proposals based on mobile learning, through a mobile phone application which tackles sexism (work 12).

Finally, in close relation to the proposals presented in Secondary Education, in Higher Education there are also proposals related to the use of web 2.0, through digital debates, which take place after viewing videos or talks (work 16). The use of specific programs which develop STEM competencies in university studies, such as engineering, is also examined in the selected samples (works 9 and 11). Finally, we must emphasize that two of the schemes are aimed specifically at females and develop certain technology-related skills. These specifically consist of integration in an undergraduate programme (work 3), and during an engineering course (work 13).

4. Conclusions

One of the most significant findings of our research is the lack of scientific literature on gender equality in education as examined through technologies. These are tools that would greatly contribute to alleviating social problems such as the gender gap - both in the professional and in the academic fields (Calvo, 2019).

The educational level with which more proposals are associated (7 codes), and that meet the established criteria, is Secondary Education (38.89%), which may be directly related to the fact that this is a stage in which gender violence in the classroom has been inherited from the previous educational levels, as indicated by Pastorino (2014) and González (2009).

Despite the “digital” label (García-Aretio, 2019) that educational institutions have been given, the resources used for dealing with gender issues remain mostly “analog”, such as directed readings, role-playing games or traditional storytelling (López-Pascual, 2007; Solís, 2007).

As various works indicate (Subirats, 2016; Tomé, 2017), co-education is necessary, through the use of long-term projects and not only isolated interventions. In most cases this is already being done, since many of the proposals we analyzed are based on such long-term projects, such as “Gender @ICT” (Ferreira,

2018), “ICT-Go-Girls” (García-Vázquez, 2014); digital mentoring programs which deconstruct gender stereotypes in Primary Education (Permoser, 2017). In addition, long-term activities by both teachers and students are also common. An example of this last case could be the construction of web spaces with which to work on a subject from a co-educational perspective (Barragán & Ruíz, 2013), or the creation of a digital newspaper. (Mérida, 2019).

Analysing the material by educational stages, Pre-school education is the one which is least examined (11%). However, it is considered to be one of the essential stages for interpersonal development. Here, there is a widespread predisposition to educate using electronic devices (Bel & Esteve, 2019; Sánchez et al., 2019), as well as to co-educate (Broch & Sanahuja, 2019; Oltra, 2019). However, there are few links between these two aspects. At this stage there is an introduction to the STEM competencies which will be continued and expanded during the later stages of education (Savinskaya, 2017), and which represents a significant leap in reducing the “digital gender gap” (Calvo, 2019).

In Primary Education, STEM competencies continue to be developed (Sullivan & Umaschi, 2018) and there is an introduction to cyber-activism (Aguilar, 2019). In addition, an important innovation is digital mentoring with which to eliminate gender stereotyping (Permoser, 2017). This strategy, also known as peer tutoring, is used at various educational levels to foster an inclusive classroom where diversity can be addressed (Moliner, 2011; Molina et al., 2019).

Cyber-activism or cyberfeminism is an important initiative in Secondary schools, and because of this, social network groups, or digital newspapers which examine gender inequality are created, (Barragán & Ruiz, 2013; Ferreira, 2017; Stuchi, 2017; Mérida, 2019). A remarkable aspect of this initiative is that these forums often represent the individual character of the institution and participants, as opposed to public social campaigns such as “# MeToo” (Thissen, 2018).

In Secondary Education there also are methods which use the inverted class, (García-Vázquez, 2014; Maldonado, 2017) and various studies demonstrate the academic and socializing potential that the inverted class can have at this level, according to Galindo and Badilla (2016).

Mobile learning is also a strategy that has proven useful for the Secondary school population (Alises, 2017) and, despite the risks of smartphone use for young people, (Villanueva, 2012), we have found a mobile application designed to reduce sexist behaviour (Navarro-Pérez et al., 2018).

As in the previous educational stages, Web 2.0 is also used in Higher Education to teach gender equality through debates or talks (Martínez-Romera, 2019). We have also found initiatives related to the development of STEM skills in engineering on technology-related courses (Barros et al., 2018; Hirata, 2018). Digital literacy and technological competence are necessities in any university education (Acuña, 2014). However, proposals to implement digital competencies in only one specific degree course do not reduce the digital gender gap.

Two proposals have also been analyzed (Pär-Ola & Faheem, 2015; Rheingans et al., 2018) that may be problematic in terms of digital and technological competences as an aspect of gender imbalance. Offering training exclusively for females could foster sexism, thus perpetuating the idea of an imbalance in terms of the capacities of each gender, and contributing to inequality latent in the hidden curriculum (Cordero, 2013; Rodríguez & Miraflores, 2018; Pacheco-Salazar & López-Yáñez, 2019). Ugalde et al. (2019) state that at first sight co-educational methodologies may be positive, but in recent years, stereotyping has occurred.

It is striking that around 75% of people studying for a degree in Education may transmit sexist beliefs to their students (Women’s Institute and for Equal Opportunities, 2015). However, there are no proposals in faculties of Education to counteract this. Therefore, it is necessary to analyze the training of educators and offer specific training on gender equality through mandatory seminars, according to Carretero and Nolasco (2019).

As stated above, the vast majority of technology-related proposals are based on the social web or web 2.0, and are intended to promote a collaboration between students, which would deconstruct stereotypes and confront issues related to gender inequality. Similarly, at all the levels investigated, there are proposals to develop STEM competencies or ICT skills, from either a mixed sex or solely female perspective. Looking at the conclusions of our study, it seems to be necessary to expand on certain aspects. Firstly, it is

essential to design proposals in the form of projects that favour gender equality from a digital perspective in all formal educational contexts. The lack of literature on these topics (gender and ICT), as evidenced in the review we have presented, shows us the need to work on co-educational teaching practices and ICT. In Boix's work (2006), this idea is based on the conclusions of the 1995 "World Women's Conference" in Beijing (UN WOMEN, 1995). Other international events and subsequent official documents give us ways of working for the empowerment of women through ICTs (United Nations, 2015; UNESCO, 2006). Along these same lines, González-García and Pérez-Sedeño (2002) stress the importance of redefining curricular content and reviewing our methodologies in the field of science and technology. The 18 articles we analyzed can serve as examples of good practice with ICTs in relation to gender inequality.

As a result of the falsehoods and stereotypes rooted in feminism (García-Jiménez et al., 2016), it is not only necessary to develop transversal practices, but also a methodology which explicitly addresses gender equality (Bejarano et al., 2019).

Finally, we propose two prospective lines of research. One of them is to qualitatively broaden the proposals studied, by using interviews with the originators of these proposals. In this way, guidelines can be developed for other educational contexts. We also suggest carrying out new research to expand on teaching proposals based on the "smart classroom" or smart class (Sumadyo et al., 2018; Bdiwi et al., 2019), since this implies a restructuring of the physical space to the benefit of gender equality (Saldaña, 2018). In addition, in intelligent learning spaces, technology is a tool which could lead to the narrowing of the digital gender gap. The development of digital skills should not be directed exclusively towards females (Pär-Ola & Faheem, 2015; Rheingans et al., 2018), but should be universal. This means understanding that technologies are vital for all students, regardless of gender, and that the acquisition of existing technological competencies learned from the beginning of formal education can contribute to reducing gender inequality occurring among students at University courses in the areas of science and technology (Elizondo et al., 2010; Puy-Rodríguez, 2017).

We have a long way to go in formal education. The feedback between research and real educational experiences will combat discrimination for the benefit of a better coexistence and social equality.

Funding Agency

This research is part of the project "Gender Equality Matters (GEM): Tackling Gender-Based Violence" (Ref. 810447-GEM-REC-AG-2017 / REC-RDAP-GBV-AG-2017), funded by the call "Rights, equality and Citizenship Program 2016 (H2020 program of the European Union) and coordinated by Dublin City University.

References

- Acuña, S.R. (2014). Alfabetización digital en los contextos de formación universitaria. *Revista Luciérnaga-comunicación*, 6(12), 1-15. <http://bit.ly/2kMwV3A>
- Aguilar, N.J. (2019). Ciberactivismo y educación para la ciudadanía mundial: una investigación-acción participativa con dos experiencias educativas de Bogotá. *Palabra Clave*, 22(2), 1-31. <https://doi.org/10.5294/pacla.2019.22.2.10>
- Alises, M.E. (2017). Potencial pedagógico del mobile learning en el aula de música de secundaria. *Revista de la SEECI*, 43, 29-51. <https://doi.org/10.15198/seeci.2017.43.29-51>
- Barragán, R., & Ruiz, E. (2013). El potencial de las redes sociales en educación. *Profesorado*, 17(1), 309-323. <http://bit.ly/2mkS4Oy>
- Barros, V., Vasconcelos, R.M., Araújo, E., Amaral, L., & Ramos, I. (2018). A positive perspective to implementation of a gender equality plan: A question of design, time and participation. In *Institute of electrical and electronics engineers*. <https://doi.org/10.1109/ie.2018.8659112>
- Bdiwi, R., Runz, C., Faiz, S., & Cherif, A.A. (2019). Smart learning environment: teacher's role in assessing classroom attention. *Research in Learning Technology*, 27. <https://doi.org/10.25304/rlt.v27.2072>
- Bejarano, M.T., Martínez, I., & Blanco, M. (2019). Coeducar hoy. Reflexiones desde las pedagogías feministas para la despatriarcalización del currículum. *Tendencias Pedagógicas*, 34, 37-50. <https://doi.org/10.15366/tp2019.34.004>
- Bel, M., & Esteve, F.M. (2019). Robótica y pensamiento computacional en el aula de Infantil: Diseño y desarrollo de una intervención educativa. *Quaderns digitals*, 88, 74-89. <http://bit.ly/2meizJU>
- Boix, M. (2006). *Nuevas tecnologías de la Información y la Comunicación: creando puentes entre las mujeres*. Mujeres en Red. <http://bit.ly/2OCVUNO>
- Bonal, X. (1997). *Las actitudes del profesorado ante la coeducación: propuestas de intervención*. Graó.
- Broch, D., & Sanahuja, A. (2019). Trabajando la coeducación a través del cuento de «La Cenicienta» desde un proceso de investigación-acción. *Tendencias Pedagógicas*, 34, 169-182. <https://doi.org/10.15366/tp2019.34.013>
- Cabero, J. (2003). New technologies in a global age. [Replanteando la tecnología educativa]. *Comunicar*, 21, 23-30. <https://doi.org/10.3916/C21-2003-04>

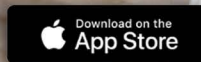
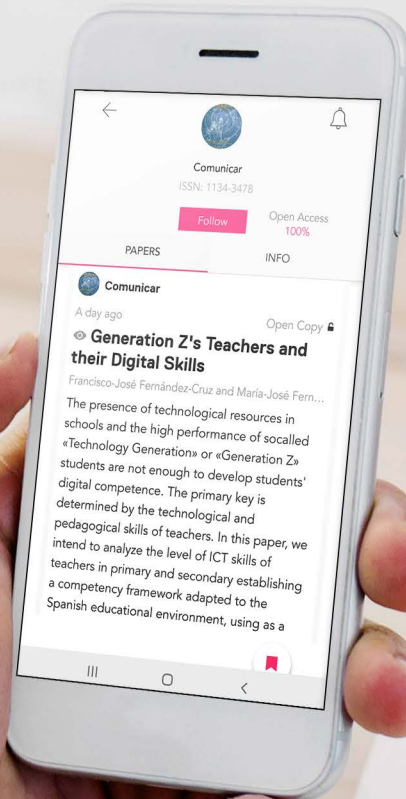
- Calvo, M.E. (2019). Científicas e inventoras a través de los cuentos. *IQUAL*, 2, 147-170. <https://doi.org/10.6018/iqual.340701>
- Carrer, C. (2018). El dispositivo de acoso escolar homofóbico y transfóbico: Voces en una comunidad educativa. *Sociedad e Infancias*, 2, 211-232. <https://doi.org/10.5209/SOCI.59456>
- Carretero, R., & Nolasco, A. (2019). Sexismo y formación inicial del profesorado. *Educator*, 55(1), 293-310. <https://doi.org/10.5565/rev/educar.903>
- Catalán, P. (2017). Ciberfeminismo. Enlaces y vínculos.net. *Libre Pensamiento*, 91, 43-51. <http://bit.ly/2l3pKQR>
- Chamorro, M. (2010). Propuesta de actividades para trabajar la coeducación en Educación Primaria. *Pedagogía Magna*, 9, 27-34. <http://bit.ly/2kHYFIP>
- Conn, V.S., Isaramalai, S., Rath, S., Jantarakupt, P., Wad-Hawan, R., & Dash, Y. (2003). Beyond MEDLINE for Literature Searches. *Journal of Nursing Scholarship*, 35(2), 177-182. <https://doi.org/10.1111/j.1547-5069.2003.00177.x>
- Cordero, L.M. (2013). Barrera para el abordaje de la coeducación en la escuela infantil y primaria. *Cuestiones de Género*, 8, 201-221. <https://doi.org/10.18002/cg.v0i8.887>
- Egea, M.T. (2019). Proyecto de intervención: "protégete contra la violencia de género. *IQUAL*, 2, 73-92. <https://doi.org/10.6018/iQual.347361>
- Elizondo, A., Novo, A., & Silvestre, M. (2010). *Igualdad de mujeres y hombres en las universidades españolas*. Instituto de la Mujer. <http://bit.ly/33eqNxl>
- Escudero, J.M. (2014). Contextos, contenidos y procesos de innovación educativa: ¿El dónde y el cómo de la tecnología educativa? *Docencia e Investigación*, 24, 13-37. <http://bit.ly/2KK5Vv5>
- Ferreira, E. (2017). The eco-production of gender and ICT gender stereotypes in schools. *First Monday*, (10), 22-22. <https://doi.org/10.5210/fm.v22i10.7062>
- Ferreira, E. (2018). Gender and ICT: School and gender stereotypes. In João-Silva, M., Ponte, C., & Dodero, M. (Eds.), *Institute of electrical and electronics engineers* (pp. 1-6). <https://doi.org/10.1109/siie.2017.8259672>
- Ferrer, V., & Bosch, E. (2013). Del amor romántico a la violencia de género. Para una coeducación emocional en la agenda educativa. *Profesorado*, 1(17), 105-122. <https://bit.ly/2RjM2vf>
- Galindo, J.J., & Badilla, M.G. (2016). Innovación docente a través de la metodología Flipped Classroom: Percepción de docentes y estudiantes de Educación Secundaria. *Didasc@lia*, 7(6), 153-172. <http://bit.ly/2kLoL7C>
- Gallardo, J.A., & Gallardo, P. (2019). Educar en igualdad: Prevención de la violencia de género en la adolescencia. *Revista educativa Hekademos*, 26, 31-39. <http://bit.ly/2kL1faT>
- García-Aretio, L. (2019). Necesidad de una educación digital en un mundo digital. *RIED*, 22(2), 9-22. <https://doi.org/10.5944/ried.22.2.23911>
- García-Jiménez, M., Cala, M.J., & Trigo, M.E. (2016). Conocimiento y actitudes hacia el feminismo. *Femeris*, 1(1-2), 95-112. <https://doi.org/10.20318/femeris.2016.3229>
- García-Valcárcel, A., & Arras, A.M. (2010). *Competencias en TIC y rendimiento en la Universidad: Diferencias por género*. Universidad de Salamanca. <http://bit.ly/2nRCPOC>
- García-Vázquez, S. (2014). ICT-Go-Girls! Promoting secondary School girls entrepreneurship through ICT. In López, A.J., González, A., & Aguayo, E. (Eds.), *II Xornada Universitaria Galega en Xénero* (pp. 135-140). Universidad de A Coruña. <http://bit.ly/2l3sMod>
- Gil-Juárez, A., Feliu, J., & Vitores, A. (2012). Género y TIC: En torno a la brecha digital de género. *Athenea Digital*, 12(3), 3-9. <https://doi.org/10.5565/rev/athenead/v12n3.1137>
- Gkatzos, D. (2018). Teaching children's rights and climate change with the support of act for climate web-based learning environment. *Prospects*, 47(1-2), 133-147. <https://doi.org/10.1007/s11125-018-9421-5>
- González, F. (2009). *Sexismo y violencia de género en la población escolar de Extremadura: Un estudio sociológico para la igualdad de género*. Universidad de Extremadura. <http://bit.ly/2mJZqLY>
- González-García, M.I., & Pérez-Sedeño, E. (2002). Ciencia, tecnología y género. *Revista Iberoamericana de Ciencia, Tecnología y Sociedad*, 2. <http://bit.ly/33gKBzU>
- Grumurthy, A. (2004). *Género y TIC*. Bridge. <http://bit.ly/2D9aKWL>
- Hill, C., Corbett, C., & Rose, A. (2010). Why So Few? Women in Science, Technology, Engineering and Mathematics. AAUW. <http://bit.ly/2ldiY10>
- Hirata, S. (2018). Higher Education practices accounting for gender differences in technological development as part of SDGs achievement. In Lee, M.J.V., Nikolic, S., Ros, M., Shen, J., Lei, L.C.U., ... Venkatarayalu, N. (Eds.), *2018 IEEE Internacional Conference on Teaching, Assessment, and Learning for Engineering (TALE)* (pp. 207-214). <https://doi.org/10.1109/tale.2018.8615349>
- Holth, L., Bergman, A., & Mackenzie, R. (2017). Gender, availability and dual emancipation in the Swedish ICT sector. *Work, Employment and Society*, 31(2), 230-247. <https://doi.org/10.1177/0950017016651378>
- Igbo, J., Onu, V., & Obiyo, N. (2015). Impact of gender stereotype on secondary school students' self-concept and academic achievement. *Sage Open*, 5(1), 1-10. <https://doi.org/10.1177/2158244015573934>
- Instituto de la Mujer y para la Igualdad de Oportunidades (Ed.) (2015). Educación en igualdad: Diagnóstico general informe previo. Administración General del Estado. <http://bit.ly/2ldDico>
- López-Pascual, A. (2007). Actividades sobre la igualdad de género en el primer ciclo de Educación Primaria. *Idea la Mancha*, 4, 261-265. <http://bit.ly/2kl8nVr>
- Maldonado, M.P. (2017). Flipped classroom y coeducación con TIC en la enseñanza bilingüe de ciencias en ESO. In J.R.P., J.S., & E.S.R. (Eds.), *Innovación docente y uso de las TIC en educación*. UMA Editorial. <http://bit.ly/2mGriAs>
- Martínez-Romera, D.D. (2019). Feminismo y percepción del sexismo mediante TIC en educación superior. Un estudio de caso. *Revista Didáctica de las Ciencias Experimentales y Sociales*, 36, 3-16. <https://doi.org/10.7203/dces.36.12634>

- Mérida, J.A. (2019). Ciberfeminismo: Una perspectiva desde las aulas. *Revisata Íber*, 94, 51-56. <http://bit.ly/2mLZESV>
- Molina, M., Benet, A., & Doménech, A. (2019). La tutoría entre iguales: Un elemento clave en las aulas interculturales inclusivas. *Revista Complutense de Educación*, 30(1), 277-292. <https://doi.org/10.5209/RCED.57271>
- Moliner, L. (2011). Construyendo aulas inclusivas a través de la tutoría entre iguales en la educación primaria, secundaria y universitaria [Tesis Doctoral. Universitat Jaume I]. <http://bit.ly/2mfXuuk>
- Naciones Unidas (Ed.) (2015). Transformar nuestro mundo: la agenda 2030 para el desarrollo sostenible. Teseo. <http://bit.ly/34i0TtC>
- Navarro-Pérez, J.J., Carbonell, A., & Oliver, A. (2018). Eficacia de una app psicoeducativa para reducir el sexismo en adolescentes. *Revista de Psicodidáctica*, 24(1), 9-16. <https://doi.org/10.1016/j.psicod.2018.07.002>
- Oltra, M.A. (2019). Género y diversidad en la literatura infantil: Los mundos de ficción como espacio para educar en igualdad. In Rausell, H., & Talavera, M. (Eds.), *Género y didácticas: Una mirada crítica, una aproximación práctica* (pp. 191-224). Tirant lo Blanch. <http://bit.ly/2DBOmVW>
- ONU MUJERES (Ed.) (1995). Declaración y Plataforma de Acción de Beijing. <http://bit.ly/2KPalHR>
- Organización Mundial de la Salud (Ed.) (2013). Informe de la OMS destaca que la violencia contra la mujer es «un problema de salud global de proporciones epidémicas». <http://bit.ly/2klal8h>
- Ovejero, A., Yubero, S., Larrañaga, E., & Navarro, R. (2013). Sexismo y comportamiento de acoso escolar en adolescentes. *Psicología Conductual*, 21(1), 157-171. <http://bit.ly/2lexkYO>
- Pacheco-Salazar, B., & López-Yáñez, J. (2019). «Ella lo provocó»: el enfoque de género en la comprensión de la violencia escolar. *Revista de Investigación Educativa*, 37(2), 363-378. <https://doi.org/10.6018/rie.37.2.321371>
- Pär-Ola, Z., & Faheem, H. (2015). Impacting on Gender Equality through a Women's ICT program in South Asia: an exploratory study. In Nielsen, P. (Ed.), *Proceedings of the 13th International Conference on Social Implications of Computers in Developing Countries* (pp. 391-401). University of Oslo. <http://bit.ly/2mD4ZLY>
- Pastorino, M.J. (2014). Violencia de género en las aulas de Educación Secundaria. *Revista de Estudios Socioeducativos*, 2, 112-133. <http://bit.ly/2mfOIC2>
- Permoser, K. (2017). Re-ment-Reverse mentoring as a way to deconstruct gender related stereotypes in ICT. In *International Association for Development of the Information Society* (pp. 131-134). IGI GLOBAL. <http://bit.ly/2mLqP7>
- Pertegal-Vega, M.A., Oliva-Delgado, A., & Rodríguez-Meirinhos, A. (2019). Systematic review of the current state of research on Online Social Networks: Taxonomy on experience of use. [Revisión sistemática del panorama de la investigación sobre redes sociales: Taxonomía sobre experiencias de uso. *Comunicar*, 27, 81-91. <https://doi.org/10.3916/C60-2019-08>
- Pinedo, R., Arroyo, M.J., & Berzosa, I. (2018). Género y educación: Detección de situaciones de desigualdad de género en contextos educativos. *Contextos Educativos. Revista de Educación*, 21, 35-51. <https://doi.org/10.18172/con.3306>
- Pino, A.M. (2017). El tratamiento de la igualdad de género en los centros educativos de Educación Infantil y Primaria de Ceuta [Tesis Doctoral, Universidad de Granada]. <http://bit.ly/2mD15CO>
- Prendes, M.P., & Román, M.M. (2017). *Entornos Personales de Aprendizaje: Una visión actual de cómo aprender con tecnologías*. Octaedro.
- Puy-Rodríguez, A. (2017). *Estadísticas e indicadores de la (des)igualdad de género en la formación y profesión científica*. Ministerio de Ciencia, Innovación y Universidades. <http://bit.ly/2QKTcbr>
- Rheingans, P., Eramo, E.D., Diaz-Espinoza, C., & Ireland, D. (2018). A model for increasing gender diversity in Technology. In Barnes, T., & García, D. (Eds.), *Proceedings of the 49th ACM Technical on Computer Science Education* (pp. 459-464). ACM. <https://doi.org/10.1145/3159450.3159533>
- Rodríguez, L., & Miraflores, E. (2018). Propuesta de igualdad de género en Educación Física: Adaptaciones de las normas en fútbol. *Retos*, 33, 293-297. <http://bit.ly/211bJmF>
- Saéz, M.J., & Clavero, N. (2016). Una propuesta interdisciplinar en primaria a través del uso de textos. *Revista Eureka*, 13(3), 628-642. https://doi.org/10.25267/rev_eureka_ensen_divulg_cienc.2016.v13.i3.09
- Saldaña, D. (2018). Reorganizar el patio de la escuela, un proceso colectivo para la transformación social. *Hábitat y Sociedad*, 11, 185-199. <https://doi.org/10.12795/habitatsociedad.2018.i11.11>
- Sánchez, J.M., & Fernández, D. (2017). Subactivismo feminista y repertorios de acción colectiva digitales: Prácticas ciberfeministas en Twitter. *El Profesional de la Información*, 26, 894-902. <https://doi.org/10.3145/epi.2017.sep.11>
- Sánchez, M.M., & Solano, I.M. (2016). Repensando el uso de metodologías en educación infantil en situaciones enriquecidas con tecnologías. In Roig-Vila, R. (Ed.), *Tecnología, innovación e investigación en los procesos de enseñanza-aprendizaje* (pp. 3002-3015). Octaedro. <http://bit.ly/2rp24c5>
- Sánchez, M.M., Solano, I.M., & Recio, S. (2019). El storytelling digital a través de vídeos en el contexto de la Educación Infantil. *Pixel-Bit*, 54, 165-184. <https://doi.org/10.12795/pixelbit.2019.i54.09>
- Sánchez-Casales, A. (2014). Sexo, género y agresión [Tesis Doctoral, Universidad de Santiago de Compostela]. Minerva. Repositorio Institucional da USC. <http://bit.ly/2mKm8DF>
- Savinskaya, O. (2017). Gender equality in preschool STEM programs as a factor determining Russia's successful technological development. *Russian Education & Society*, 59(3-4), 206-216. <https://doi.org/10.1080/10609393.2017.1399758>
- Serrano, J.L., Gutiérrez, I., & Prendes, M.P. (2016). *Internet como recurso para enseñar y aprender: Una aproximación práctica a la Tecnología Educativa*. Eduforma. <http://bit.ly/2pJU5Gc>
- Solís, Y. (2007). Propuesta metodológica para fomentar la igualdad de género en el aula escolar. *Educare*, 10(1), 103-122. <https://doi.org/10.15359/ree.10-1.6>
- Stucchi, M. (2017). Introduzione della letteratura di genere nell'Istruzione Secondaria attraverso l'uso delle TIC: una proposta didattica con le opere di Sibilla Aleramo e Cristina Comencini [Tesis Doctoral, UNED]. e-SpacioUNED. <http://bit.ly/2mIWa97>

- Subirats, M. (2016). De los dispositivos selectivos en la educación: El caso del sexismo. *Revista de la Asociación de Sociología de la Educación*, 9, 22-36. <http://bit.ly/2mM6ec5>
- Sullivan, A., & Umaschi, M. (2018). Investigating the use of robotics to increase girls' interest in engineering during early elementary School. *International Journal of Technology and Design Education*, 29(5), 1033-1051. <https://doi.org/10.1007/s10798-018-9483-y>
- Sumadyo, M., Santoso, H.B., & Sensuse, D.I. (2018). Metacognitive components in smart learning environment. *Journal of Physics*, 978. <https://doi.org/10.1088/1742-6596/978/1/012025>
- Tacconelli, E. (2010). Systematic Reviews. CRD's guidance for undertaking reviews in health care. *The Lancet*, 10(4), 226. [https://doi.org/10.1016/s1473-3099\(10\)70065-7](https://doi.org/10.1016/s1473-3099(10)70065-7)
- Thissen, L. (2018). #Metoo: ¿de la campaña social al cambio social? *Temas para el Debate*, 54, 285-286. <http://bit.ly/2o2ilCd>
- Tiainem, T., & Berki, E. (2019). The re-Production process of gender bias: A case of ICT professors through recruitment in a gender-neutral country. *Studies in Higher Education*, 44(1), 170-184. <https://doi.org/10.1080/03075079.2017.1351428>
- Tomé, A. (2017). Estrategias para elaborar proyectos coeducativos en las escuelas. *Atlánticas-Revista Internacional de Estudios Feministas*, 2(1), 89-116. <https://doi.org/10.17979/arief.2017.2.1.1979>
- Torres, L. (2010). Nuevos retos para la escuela coeducativa. Iniciativas y experiencias para la prevención de la violencia de género en las aulas: Una mirada general. *TABANQUE*, 23, 15-44. <http://bit.ly/2lft-lyrJ>
- Ugalde, A.I., Aristizabal, P., Garay, B.G., & Mendiguren, H. (2019). Coeducación: Un reto para las escuelas del siglo XXI. *Tendencias Pedagógicas*, 34, 16-36. <https://doi.org/10.15366/tp2019.34.003>
- UNESCO (Ed.) (2006). La integración de las Tecnologías de la Información y la Comunicación en los Sistemas Educativos.
- Urrútia, G., & Bonfill, X. (2010). Declaración PRISMA: Una propuesta para mejorar la publicación de revisiones sistemáticas y metaanálisis. *Medicina clínica*, 135(11), 507-511. <https://doi.org/10.1016/j.medcli.2010.01.015>
- Villanueva, V. (2012). Programa de prevención del abuso y la dependencia del teléfono móvil en población adolescente [Tesis Doctoral, Universidad de Valencia]. RODERIC. <http://bit.ly/2kLvCxS>

Comunicar


Follow us in  Researcher







Gender studies in Communication Degrees

Los estudios de género en los Grados de Comunicación

 Dr. Francisco-José García-Ramos is Assistant Professor in Advertising and Audiovisual Communication Studies at Complutense University of Madrid (Spain) (fjgarciamos@ucm.es) (<https://orcid.org/0000-0002-1805-650X>)

 Dr. Francisco-A. Zurian is Senior Assistant Professor in Advertising and Audiovisual Communication Studies at Complutense University of Madrid (Spain) (azurian@ucm.es) (<https://orcid.org/0000-0002-3734-6879>)

 Dr. Patricia Núñez-Gómez is Professor in Advertising and Audiovisual Communication Studies at Complutense University of Madrid (Spain) (pnunezgo@ccinf.ucm.es) (<https://orcid.org/0000-0002-3028-9429>)

ABSTRACT

This paper is the result of a research carried out under the umbrella of the “UNESCO UniTWIN Network on Media, Gender, and ICTs” Project, and it tries to determine the presence of subjects with a specific focus on gender in the current Communication Degrees offered at Spanish universities. The inclusion of subjects about gender equality in relation to media follows the suggestions of the IV World Conference on Women in Beijing (1995). The main objective of this research will be to investigate the presence of these subjects in Communication Degrees, identifying the elements that define them at a thematic, methodological and relevant levels within the curriculum. A mixed methodological design is proposed based on ex-post-facto research, with a descriptive orientation and the search for improvement, a qualitative analysis of study plans using ATLAS.ti and a panel of experts. The results reveal a scarce presence of this type of subjects, with a higher percentage in public universities than in private ones, and also a minimal relevance as compulsory subjects. This research study reveals the current formal training in gender studies of future generations of media professionals and serves as an endorsement for forthcoming changes of curricula in the European Higher Education Area context.

RESUMEN

El presente trabajo es fruto de una investigación desarrollada en el marco del proyecto «UNESCO UniTWIN Network on Media, Gender, and ICTs» para determinar la presencia de asignaturas con un contenido específico en estudios de género en los actuales planes de estudio de los Grados españoles en el área de comunicación. La inclusión de asignaturas que aborden la igualdad de género en relación a los medios y procesos de comunicación obedece a lo establecido en la IV Conferencia Mundial sobre la Mujer de Beijing (1995). El objetivo principal de este trabajo será la indagación del nivel de presencia de estas asignaturas en los Grados en comunicación identificando los elementos que las definen a nivel temático, metodológico y relevancia dentro del plan de estudios. Se plantea un diseño metodológico mixto partiendo de una investigación ex-post-facto, con orientación descriptiva y de búsqueda de la mejora, un análisis cualitativo de planes de estudio mediante ATLAS.ti y un panel de expertos. Los resultados inciden en una escasa presencia de este tipo de asignaturas, con mayor porcentaje en la universidad pública respecto a la privada y una mínima relevancia como materia obligatoria. Un trabajo que vislumbra la actual formación reglada en cuestiones de género de las futuras generaciones de profesionales de los medios y que sirve de apoyo para futuros cambios de planes de estudios en el Espacio Europeo de Educación Superior.

KEYWORDS | PALABRAS CLAVE

Equality, gender, communication, journalism, ICT, university, Degree, curriculum. Igualdad, género, comunicación, periodismo, TIC, universidad, Grado, currículo.

1. Introduction

The development of an integral plan to promote gender equality and women's empowerment through the media is a priority on the UNESCO agenda. Universities and colleges specialized in different areas of Communication are called to play a key role in helping eradicate any form of discrimination against women.

Section J of the "Beijing Declaration and Platform for Action", adopted at the Fourth World Conference on Women held in Beijing in 1995, stressed the importance of mass media in achieving that goal (UN Women, 1995: 57). Since then, the international debate on gender equality in the media has generated extensive literature (Grizzle, 2014) and annual reports including, among others, "The World Summit on the Information Society" (EES, 2003), "Report on equality between women and men in the EU" and "Women in the digital age" (European Commission, 2018a; 2018b), "Mainstreaming gender into policies and the programmes of the institutions of the European Union and EU member states" and "Review of the implementation of the Beijing Platform for Action in the EU member states: Women and the media. Advancing gender equality in decision-making in media organizations" (European Institute for Gender Equality, 2013a; 2013b), or "Global report on the status of women in the news media" (International Women's Media Foundation, 2011).

Regarding universities, the Beijing Declaration proposed to "develop non-discriminatory education and training" (strategic objective B.4). Among the actions to be taken (Action 83), the Declaration emphasized the need to include a gender perspective in all educational programs, in particular in the curricula of higher education institutions (UN Women, 1995: 56-59). In its "Priority Gender Equality Action Plan 2008-2013", UNESCO reaffirmed this recommendation, helping its development and launch in 2012 and together with the International Federation of Journalists the "Gender-Sensitive Indicators for Media." Among its strategic objectives (A5.2) is to foster gender equality awareness among "journalists, other media workers and media officials (male and female) and access to education and training, including on gender related issues, for women and men in the media" (UNESCO, 2014: 40).

In 1992, UNESCO launched the "University Twinning and Networking" (UNITWIN) Program to promote cooperation and inter-university linkages worldwide. This initiative under the "Global Alliance on Media and Gender" involves more than 700 institutions in 116 countries (UniTWIN, 2017). As regards the Bologna reform and the creation of the European Higher Education Area (EHEA), the Preamble of the 1993 Berlin Communiqué already stressed the pivotal role of universities in ending gender inequality. One of the key drivers of the EHEA was to develop gender objectives and verification agencies for all Degrees (Saldaña, 2010).

In Spain, the conference on "Women's, Gender and Feminist Studies. Graduate and Postgraduate Degrees" ("Los Estudios sobre las Mujeres, de Género y Feministas. Grados y Postgrados"), held at the Complutense University of Madrid (UCM) in 2006, draw attention to the urgent need to incorporate gender studies in all university curricula. This demand was also based on Title I, Chapter 4, Section 7 of Organic Act 1/2004, of 28 December, on comprehensive protection measures against gender-based violence, subsequently confirmed by Title II, Article 25, of Organic Act 3/2007, of 22 March, on effective equality for women and men, and all regional implementing regulations. The Spanish Network of University Quality Agencies ("Red Española de Agencias de Calidad Universitaria", REACU) also addressed these concerns in the introduction of the Evaluation protocol for verification of official university Degrees (REACU, 2011).

The poor implementation of the objectives set forth in Section J of the 1995 Beijing Declaration (Verloo, 2005; Rees, 2005; North, 2010; Pollack & Hafner-Burton, 2011; Gallagher, 2015; Ross & Padovani, 2016; Padovani, 2016), gave rise to the creation in 2017 of "The International UNESCO UnitWIN Network on Gender, Media, and ICTs" under the framework of the "Priority Gender Equality Action Plan 2014-2021, the "Incheon Declaration for Education 2030" and the "2030 Agenda for Sustainable Development" (UN, 2015). This was conceived as an inter-university project to train the new generations pursuing communication studies in gender equality.

In the Spanish case, numerous studies confirm the poor achievement of those objectives in professional practice (Gallego, 2004; Bernárdez et al., 2008, Matud et al., 2012; Martín & Navarro-Beltrá, 2012),

which is also the case for EHEA's recommendations and the regulatory framework governing higher education (López-Díez, 2000; 2005; Ballarín, 2009; Bosch & Ferrer, 2012; Bosch et al., 2011; Castellsagué et al., 2014), and particularly in the field of Communication (Menéndez, 2013; 2014; Guarinos et al., 2018).

In this context, and in light of the Beijing+25 process scheduled for March 2020, UNESCO-UniTWIN launched in 2018 the project "Mapping Educational Strategies for Creating Gender-sensitive Journalism, Media, and ICT Curriculums" in 11 countries: Australia, Chile, Ecuador, Spain, United States, Ethiopia, India, Italy, Mexico, Dominican Republic and Costa Rica. Aware of the importance of contributing to this mapping, the UCM, based on Guarinos et al. (2018), developed a study covering the whole Spanish university system based on seven objectives:

- 1) To identify the subjects in communication studies curricula explicitly promoting gender equality in the media and ICTs—including the name of the subject.
- 2) To determine the optional or compulsory nature of those subjects.
- 3) To determine the varying presence of those subjects in public vs. private universities.
- 4) To describe the contents, methodology and bibliographical references for those subjects.
- 5) To identify the gender composition of the faculty.
- 6) To analyze the data and to assess the Spanish case.
- 7) To recommend strategic actions to be taken by UNESCO-UniTWIN to promote gender equality in communication studies.

2. Materials and methodology

This study applies a mixed methodology based on an *ex-post facto*, non-experimental approach (Latorre et al., 2005, Buendía et al., 1998; Bernardo & Calderero, 2000; Latorre et al., 2005), with a descriptive orientation towards improvement. In this type of research, the event has already occurred (Bisquerra, 2004) or is still occurring. Given that the researcher "has no control over the independent variables because their manifestations have already occurred or are inherently non-manipulable" (Kerlinger, 1975: 268), the focus is placed on "defining" the education phenomenon by answering questions about its situation.

As regards information gathering, the sample includes all official curricula for the 2017/18 academic year in the Spanish university system in Journalism, Advertising, Audiovisual Communication, Communication, Cultural Communication, Digital Communication and Social Communication Degrees. We downloaded the curricula from the official websites of each university, and we processed them using the qualitative data analysis software ATLAS.ti. Those primary documents were grouped by regions (autonomous communities) and public/private universities.

The sampling strategy used codes including the name of the relevant Degrees, a word finder listing the terms "gender," "women," "equality," and "diversity," and their subsequent "Auto-Coding" based on the Degree codes. The subjects were validated as part of the sample by verifying in the corresponding syllabus whether gender equality was one of their main objectives and central in their relation to the field of communication.

The final sample of 165 Degrees under consideration comprises 30 public universities and 25 private universities. Among those, 22 subjects corresponding to 21 different Degrees included the relevant codes in their own names. In order to qualitatively improve the recommendations of the final report for UNESCO-UniTWIN, a panel of experts was convened in April 2018 to discuss and assess the results, and to identify the needs and actions to promote the inclusion of gender equality in those syllabi.

The panel was made up of 42 experts among teaching and research staff (PDI for its initials in Spanish) from national and international universities selected based on their experience in gender equality and higher education in the field of Communication, their independence, geographical spread, and teamwork skills (Table 1).

Table 1. Panel of experts by academic ranks from national and international universities

University	Full Professor	Professor	Senior Assistant Professor	Assistant Professor
Univ. of Alicante	—	—	—	1
Autonomous Univ. of Barcelona	—	2	—	1
Autonomous Univ. of Madrid	—	1	—	—
Univ. of Burgos	—	2	—	—
Complutense Univ. Complutense of Madrid	—	2	2	2
Univ. of Girona	—	—	—	1
Univ. of Granada	—	—	—	1
International Univ. of La Rioja	—	1	—	—
Univ. Rovira i Virgili	—	2	—	—
Univ. of Salamanca	—	—	—	1
Univ. of Sevilla	—	1	—	1
Univ. of Valencia	1	1	1	2
Total National Universities	1	12	3	10
Aston University, UK	1	—	—	—
Clark University, USA	—	—	—	1
University of the Atlantic, Colombia	—	2	—	—
Charleston University, USA	—	1	—	—
Dartmouth College, USA	1	—	—	—
Dickinson College, USA	—	1	—	—
Universität Giessen, Germany	—	—	—	1
Université Grenoble-Alpes, France	1	—	—	—
Uniwersytet Lodzki, Poland	—	—	—	1
Louisiana State University, USA	—	1	—	—
University of Mass.-Amherst, USA	1	—	—	—
University of Minnesota, USA	—	1	—	—
Oxford Brookes University, UK	1	—	—	—
Federal University of Sergipe, Brazil	—	1	—	—
Université Paris-IV-Sorbonne, France	—	1	—	—
Total International Universities	5	8	—	3

3. Analysis and results

The results regarding the presence of specific gender equality subjects in the official syllabi of Communication Degrees in Spanish public and private universities in 2018 are presented below.

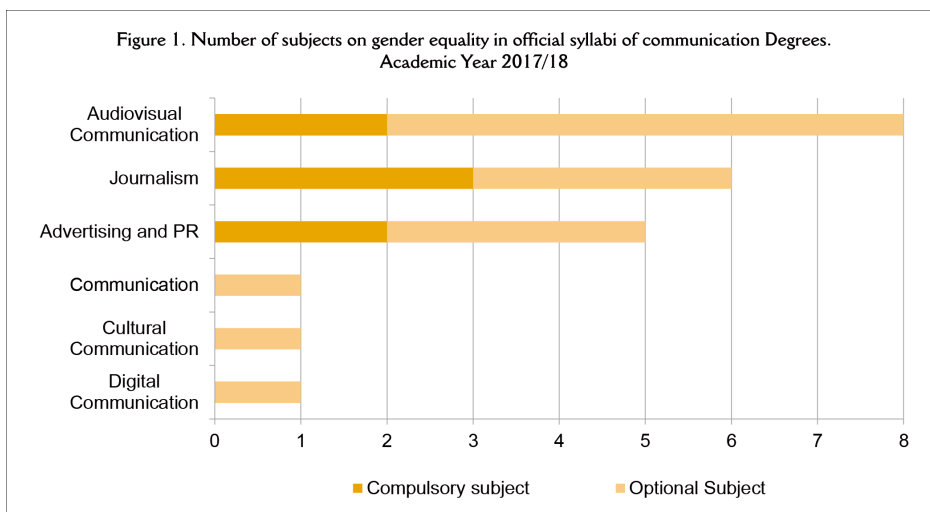
3.1. General features

In the academic year 2017/18, Spanish universities offered a total of 165 Degrees in the field of communication (including Journalism, Advertising, Audiovisual Communication, Communication, Cultural Communication, Digital Communication and Social Communication Degrees), as reflected in the sample. Of those, only 22 subjects had specific gender equality content explicitly included in their name in relation to the media, new technologies, and audiovisual culture (Figure 1).

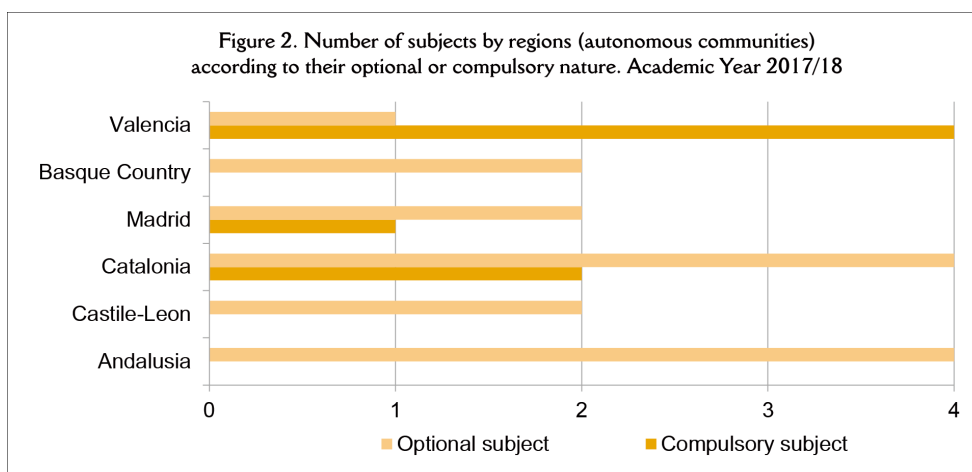
Ordered by Degrees, Audiovisual Communication offers 8 subjects (36.36%), Journalism offers 6 subjects (27.27%), Advertising offers 5 subjects (22.72%), and Communication, Social Communication and Digital Communication offer 1 subject each (4.55%). As regards the optional or compulsory nature of the 22 subjects, Journalism offers the highest number of compulsory subjects: 3 out of 6, i.e., 50%. Advertising offers 2 compulsory subjects out of the total 5 (40%) and Audiovisual Communication offers 2 compulsory subjects out of the total 8 (25%). The single subject offered in Communication, Social Communication and Digital Communication Degrees is optional.

In terms of regional distribution (autonomous communities), Catalonia leads the ranking with 6 subjects offered (27.27%), followed by Valencia with 5 (22.72%), Andalusia with 4 (18.18%), Madrid with 3 (13.63%), and Castile-Leon and the Basque Country with 2 each (9.1%). None of the other regions offer these subjects.

When it comes to the compulsory or optional nature of the subjects, Valencia ranks first with 4 out of 5 (i.e., 80% of its offer), followed by Catalonia with 2 out of 6 (33.33%) and Madrid with 1 out of 3 (33%). All the subjects offered in Andalusia (4), Castile-Leon (2) and the Basque Country (2) are optional.



At a more detailed level, Andalusia offered 1 specific subject in Audiovisual Communication at the University of Sevilla (US); 1 in Digital Communication at the University Pablo de Olavide (UPO); 1 in the Communication Degree at Universidad Loyola of Andalucía, and 1 in Audiovisual Communication at EUSA-University of Sevilla (EUSA-US). Castile-Leon offered 1 subject in the Communication and Audiovisual Creation at University of Salamanca (USAL) and 1 in Advertising at University of Valladolid (UVa). Catalonia offered 1 subject in Audiovisual Communication, Journalism and Advertising at Universitat de Rovira i Virgili (URV); 1 in Journalism at Autonomous University of Barcelona (UAB), 1 in Public Relations at Superior School for Public Relations, affiliated to University of Barcelona (ESRP-UB), and 1 in Cultural Communication at University of Girona (UdG). Madrid offered 1 subject in Journalism at Complutense University (UCM) and 1 in Audiovisual Communication and the Double Degree in Journalism and Humanities at University Carlos III (UC3M). The Basque Country offered 1 subject in Audiovisual Communication and 1 in Journalism at University of the Basque Country (UPV). Finally, Valencia offered 1 subject in Audiovisual Communication at University of València (UV) and 2 in Journalism, 1 in Advertising and 1 in Audiovisual Communication at University Jaume I (UJI) (Figure 2).



Considering the public or private nature of the university, 19 subjects were offered by the public network (86.36%) and 3 by the private one (13.64%). Subjects in Journalism, Advertising and Cultural Communication were only offered by public universities. Subjects in Audiovisual Communication were offered both by the public and private network, while subjects in Communication and Digital Communication were only offered by private institutions. Of the total 165 Degrees, 73 were offered by

public universities (44.24%) and 92 by private ones (55.76%). Finally, looking into the gender composition of the faculty, all the syllabi refer to women teachers, except in two cases: “Communication for Equality”, at ESRP-UB and “Communication, Gender and Mass Culture in the Contemporary World” in Journalism at UPV.

3.2. Name and methodological approach

The 22 subjects have 16 different names in the syllabi: 75% of the subjects combine the concepts of “gender” and “communication” for a total of 12 different names with negligible variations; 18.75% of the subjects are named based on the concept of “equality” giving rise to 3 different names. The only markedly different case is the subject on the history of women (Table 2).

Table 2. Gender equality subjects offered in official syllabi in Communication Degrees. Academic year 2017/18			
Name of the subject	Type	Degree	University
Gender and Communication	Optional	Journalism	Univ. Rovira i Virgili
	Optional	Journalism	Univ. Jaume I
	Optional	Audiovisual Communication	Univ. Rovira i Virgili
	Optional	Advertising	Univ. Rovira i Virgili
Communication and Gender	Optional	Journalism	Univ. Complutense
Gender and Audiovisual Communication	Optional	Audiovisual Communication and Creation	Univ. Salamanca
Gender and Audiovisual Culture	Optional	Audiovisual Communication	Univ. Carlos III
Audiovisual Communication and Gender	Optional	Audiovisual Communication	Univ. Sevilla
Gender Studies in Audiovisual Communication	Optional	Audiovisual Communication	EUSA-Univ. Sevilla
Communication for Equality	Compulsory	Journalism	Univ. Jaume I
	Compulsory	Audiovisual Communication	Univ. Jaume I
	Compulsory	Advertising	Univ. Jaume I
	Compulsory	Advertising	Univ. of Barcelona
Communication and Gender Studies	Compulsory	Journalism	Autonomous Univ. of Barcelona
Image, Gender and Identity	Optional	Audiovisual Communication	Univ. of the Basque Country
Gender Studies	Compulsory	Journalism and Humanities	Univ. Carlos III
Gender Policies and Discourse Theory	Compulsory	Audiovisual Communication	Univ. of Valencia
Communication, Gender and Mass Culture in the Contemporary World	Optional	Advertising	Univ. of the Basque Country
Advertising and Equality	Optional	Advertising	Univ. of Valladolid
Equality and Diversity Management	Optional	Communication	Univ. Loyola de Andalucía
Gender and NICTs	Optional	Digital Communication	Univ. Pablo de Olavide
History of Women	Optional	Social Communication	Univ. of Girona

From a situated knowledge perspective (Haraway, 1991), it should be noted that feminist critical theory is the dominant approach in all the syllabi. New masculinity studies are included in the subject “Gender and Communication” in the three Degrees offered at URV. Queer theory is only mentioned in two instances: “Gender Studies in Audiovisual Communication” in the Audiovisual Communication Degree at US, and “Gender Studies” in the Double Degree in Journalism and Humanities at UC3M. Only two subjects are informed by a postcolonial approach: “Gender Policies and Discourse Theory” in the Audiovisual Communication Degree at UV and “Advertising and Equality” in Advertising at UVa. The syllabus of this latter subject incorporates a specific block on gender studies and functional diversity, being the only one that adopts this theoretical angle.

The most-cited bibliographic references in the whole sample of syllabi under consideration are works by Juana Gallego Ayala (9 entradas), María Milagros Rivera Garretas (6), Luisa Muraro (5), Judith Butler (4), Laura Mulvey (4), María Zambrano (4), Annette Kuhn (3) and Giulia Colaizzi (3), followed by Simone Weil, Simone de Beauvoir, Teresa de Lauretis, Donna J. Haraway, Michel Foucault, Stuart Hall, Enn Ann Kaplan, Asunción Bernárdez, Eulàlia Lledó and Eloísa Nos Aldás (2 each). Other authors or references,

such as Virginia Woolf, Monique Wittig, Gayle S. Rubin, Barbara Zecchi or UNESCO reports are cited only once.

3.3. Results of the expert panel

The discussion on the results revealed little progress—two decades after the creation of the EHEA—in the elaboration or modification of Degree curricula to incorporate specific gender equality subjects in the field of Communication. This is all the more so if we look at previous studies such as Menéndez (2013; 2014) and, in Andalusia, Guarinos et al. (2018). The following conclusions and recommendations were reached for the report requested by UNESCO-UnitWIN:

1) Training in gender studies in Communication Degrees is particularly important to promote gender equality values, to foster a broader view of professional practice—not limited to a male perspective—and to help build an academic education that does not conceal women’s contributions in different professional areas and aspects.

2) Training should be carried out through subjects included in official curricula and syllabi, without prejudice to mainstreaming and complementary activities. Optional subjects should never reduce the offer of compulsory subjects.

3) In 4-year Degrees, at least one compulsory subject should be offered in the first or second year and at least an optional one in the third or fourth year.

4) Compulsory subjects should cover all aspects addressed by gender studies: feminist and women’s studies, men’s/masculinity studies, and LGBTIQ+.

5) The new “Verifica” (Verify) and “Modifica” (Modify) programs for official curricula provide an opportunity to include these subjects.

6) There is an urgent need to draw up a “White Paper” to promote education policies integrating gender studies in a more effective and specific manner, including an agenda focused on the objectives set forth in Section J of the 1995 Beijing Declaration.

4. Discussion and conclusions

Let us now point out the most relevant aspects regarding the presence of gender studies in the different communication Degrees offered by Spanish universities. Before, we will indicate the limitations encountered in this work.

The object of study is limited to the subjects included in official curricula of Degrees offered in the academic year 2017/18 in the field of Communication. Only Graduate Degrees are considered, since they constitute the basic and common training for university students. Optional subjects may vary each year depending on the course, the needs of the teaching departments and faculties, as well as the students’ demand. However, these aspects do not pose a major problem, since this study focuses on the subjects included in current official curricula.

Pursuant to Article 35 of Organic Act 4/2007 of 12 April, we have observed that curricula and syllabi are easily accessible online in public universities, in contrast to private universities.

Spanish universities offer few subjects that explicitly promote gender equality in the media and ICTs: only 22 subjects out of 165 Degrees, which shows the little relevance attached to gender studies in the media in Spain. Hence, the hegemonic perspective in this field is still not sufficiently aware and sensitive to gender issues. Also, poor training in this area will affect how future professionals analyze and develop information, discourses and our collective imagination.

It is somewhat remarkable that Audiovisual Communication Degrees offer more gender-related subjects than Journalism and Advertising, even if Journalism offers more compulsory subjects.

The fact that these Degrees only include 6 compulsory subjects in their curricula raises concerns about the achievement of the objectives laid down in Section J of the 1995 Beijing Declaration. This is especially so if Spanish universities intend to train future generations according to the 2030 Education Framework for Action, thus effectively promoting values for a more just, egalitarian and gender-diverse society. In this regard, the “2030 Agenda for Sustainable Development” establishes in its objective 5 a more reduced and less specific framework than Section J of the 1995 Beijing Declaration regarding women and mass media,

which may be indicative of the agenda's gradual de-politization. In that context, the commitment and cooperation of social actors in general and of the university system in particular are all the more necessary. The results of this research confirm such need and shed light on the situation of Spanish universities facing potential changes stemming from the upcoming Beijing+25 process.

In this regard, universities in Valencia and Catalonia are the most committed. These two regions offer the largest number of gender-oriented subjects—Valencia offers the highest number of compulsory subjects, and UJI is the Spanish leading university in this field. Andalusia, Madrid, the Basque Country and Castile-Leon offer these subjects as optional, except for the Double Degree in Journalism and Humanities at UC3M. The other regions lag behind by offering no such subjects.

The fact that 86.36% of these subjects are offered by public universities says a lot about the great challenge facing private institutions to incorporate gender studies in their curricula—a significant issue considering that 55.76% of the Degrees in this field are taught at private universities. For instance, some new Degrees such as Communication and Digital Communication are only offered by the private network. Only 19 subjects include gender studies in relation to the media and ICTs out of the 73 graduate Degrees that can be studied at public universities, which shows the shortcomings of current curricula, and points in the direction of change.

In their names, these subjects fit into the theoretical framework defined by UNESCO indicators, acknowledging the key role of the media in promoting gender equality. In light of the gender composition of the faculty, this commitment should extend to the entire faculty, thus encouraging men to teach these subjects.

As for the content, methodology and bibliographical references, the results show that feminist critical theory is the core element in all the subjects. Subjects in Audiovisual Communication at US and the Double Degree in Journalism and Humanities at UC3M, which explicitly include LGBTIQ+ studies and queer theory in their syllabi, are an exception. Also remarkable are postcolonial approaches in Audiovisual Communication at UV and Journalism at Uva—in the latter case, also including studies on gender and functional diversity. These certainly are a minority, but may be relevant to design new subjects based on the inclusive indicators promoted by UNESCO.

The results show few bibliographic recommendations in the syllabi, which barely cite some key reference works in the field of gender studies. This was highlighted with concern by the panel experts, especially those coming from the English-speaking countries. There is an urgent need to update and enrich the bibliographic references in Spanish syllabi in order to include major figures in feminist critical theory and gender studies.

The poor theoretical training offered to students in the syllabi goes hand in hand with the scarce presence of these subjects in the official curricula of communication Degrees. This is of particular concern with respect to public universities, whose curricula should include at least one compulsory subject and an optional one.

The insufficient training in gender studies calls for the elaboration of a White Paper at national level. Furthermore, the expert panel's recommendations and requests have been submitted to the Women's Institute ("Instituto de la Mujer") as reflected in the proceedings of the "7th GECA International Conference: Representation, Education, and Fight against Gender-Based Violence" ("VII Congreso Internacional de GECA: Representación, Educación y Lucha contra la Violencia de Género," GECA, 2018). Sharing the results through the UNESCO-UniTwin network has served to frame this research as a model for future studies in Latin American countries. It has also provided discussion material for the drafting of "Gender, Media, & ICTs. New Approaches for Research, Education, & Training" (UniTWIN, 2019), a White Paper to guide the design of specific subjects by adapting the proposed content to each institution's educational, political and social circumstances.

In the meantime, we can only hope that Spanish universities, faculties, and departments, promote training programs for faculty members focused on gender equality and diversity so that these contents are mainstreamed into all the subjects of the curricula. This is particularly important if specific new subjects cannot be offered in the short term. Only if we adopt such a global and inclusive perspective may we ensure that future generations of media professionals are educated and trained in gender equality.

Funding Agency

This study was carried out by a group of researchers of the Complutense Research Group GECA (Gender, Esthetics and Audiovisual Culture) under the framework of the UNESCO Project "The International UniTWIN Network on Media, Gender, and ICTs," with the support and financing of UNESCO and the Netherlands.

References




- Ballarín, P. (2009). *Jornadas internacionales en políticas de igualdad de oportunidades en el ámbito académico*. [Paper presentation] Jornadas internacionales en políticas de igualdad de oportunidades en el ámbito académico. III Encuentro de unidades y oficinas de igualdad, Lleida, España.
- Bernárdez, A., García, I., & González, S. (2008). *Violencia de género en el cine español*. Universidad Complutense.
- Bernardo, J., & Calderero, J.F. (2000). *Aprendo a investigar en educación*. RIALP. <https://bit.ly/2LFrXvU>
- Bisquerra, R. (2004). *Metodología de la investigación educativa. Manuales de metodología de investigación educativa*. La Muralla. <https://bit.ly/349N6EC>
- Bosch, E., & Ferrer, V. (2012). La vieja y la nueva universidad: Cambios propuestos desde una perspectiva de género. In *II Xornada de innovación en xénero* (pp. 31-49). Universidade de Vigo. <https://bit.ly/36hESMj>
- Bosch, E., Ferrer, V., Capilla-Navarro, C., & Ferreiro, V. (2011). *Incorporación de los contenidos en igualdad de oportunidades género en Grado*. Universidad de las Islas Baleares.
- Buendía, L., Colas, M.P., & Hernández, F. (1998). *Métodos de investigación en psicopedagogía*. McGraw-Hill. <https://bit.ly/2LHlyQF>
- Castellsagué, A., Rifa, M., & Pujal, M. (2014). Introduciendo la transversalidad de la perspectiva de género en nuevos formatos docentes. In *III Xornada de innovación en xénero* (pp. 57-76). Universidade de Vigo. <https://bit.ly/36hESMj>
- EEES (Ed.) (2003). Educación superior europea. Comunicado de la conferencia de ministros responsables de la educación superior. <https://bit.ly/34hTUB8>
- European Commission (Ed.) (2018a). *Report on equality between women and men in the EU*. Publications office of the European Union. <https://doi.org/10.2838/168837>
- European Commission (Ed.) (2018b). *Women in the digital age*. Publications office of the European Union. <https://doi.org/10.2759/526938>
- European Institute for Gender Equality (Ed.) (2013a). *Mainstreaming gender into policies and the programmes of the institutions of the European Union and EU member states*. Publications office of the European Union. <https://doi.org/10.2839/43849>
- European Institute for Gender Equality (Ed.) (2013b). *Review of the implementation of the Beijing Platform for Action in the EU member states: Women and the media. Advancing gender equality in decision-making in media organizations*. Publications office of the European Union. <https://doi.org/10.2839/73389>
- Gallagher, M. (2015). *The post Beijing+20 agenda on media, gender and journalism. The overall feminist agenda*. [Paper Presentation] Gender and media: A critical analysis after 20 years of the BPfA forum, México. <https://bit.ly/219nb57>
- Gallego, J. (2004). De las recomendaciones a los mecanismos: producción informativa y transmisión de estereotipos de género. In Vera, M.T., & Ballesteros, R.M. (Eds.), *Mujeres y medios de comunicación. Imágenes, mensajes y discursos* (pp. 151-170). Universidad de Málaga.
- GECA (Ed.) (2018). Resoluciones de Congreso. VII Congreso Internacional GECA: Representación, Educación y Lucha contra la Violencia de Género.
- Grizzle, A. (2014). Enlisting media and informational literacy for gender equality and women's empowerment. In *Media and gender: A scholarly agenda for the Global Alliance on media and gender* (pp. 93-108). UNESCO. <https://bit.ly/2YxKS0l>
- Guarinos, V., Caro-González, F.J., & Cobo, S. (2018). La igualdad de género en los estudios de Grado en Comunicación: La transversalidad imaginaria. *Prisma Social*, 22, 296-325. <https://bit.ly/2PwJQhf>
- Haraway, D.J. (1991). *Ciencia, cyborgs y mujeres. La reinención de la naturaleza*. Cátedra. <https://bit.ly/38tfZzh>
- International Women's Media Foundation (Ed.) (2011). *Global report on the status of women in the news media*. <https://bit.ly/2LCrlqv>
- Kerlinger, F.N. (1975). *Investigación del comportamiento*. Interamericana. <https://bit.ly/2E5vVwxA>
- Latorre, A., Del-Rincón, D., & Arnal, J. (2005). *Bases metodológicas de la investigación educativa*. Ediciones Experiencia.
- López-Diez, P. (2000). *Manual de información en género*. Instituto Oficial de Radio y Televisión (RTVE) e Instituto de la Mujer.
- López-Diez, P. (2005). *2º Informe. Representación de género en los informativos de radio y televisión*. Instituto Oficial de Radio y Televisión (RTVE) e Instituto de la Mujer. <https://bit.ly/2LDUQbN>
- Martín, M., & Navarro-Beltrá, M. (2012). La publicidad sexista en España: Eficacia de la Ley Orgánica de Medidas de Protección Integral contra la Violencia de Género. *Cuestiones de Género: De la Igualdad y la Diferencia*, 7, 247-267. <https://doi.org/10.18002/cg.v0i7.913>
- Matud, M.P., Wanguemert, C., & Espinosa, I. (2012). Representación de mujeres y hombres en las noticias de la prensa nacional española. *Cuestiones de Género: De la Igualdad y la Diferencia*, 7, 9-24. <https://doi.org/10.18002/cg.v0i7.900>
- Melki, J., & Farah, M. (2014). Educating media professionals with a gender and critical media literacy perspective: How to battle gender discrimination and sexual harassment in the media workplace. In *Media and Gender: A scholarly agenda for the global alliance on media and gender* (pp. 87-92). UNESCO. <https://bit.ly/38ldPS2>
- Menéndez, M.I. (2013). Metodologías de innovación docente: La perspectiva de género en Comunicación Audiovisual. *Historia y Comunicación Social*, 18, 699-710. https://doi.org/10.5209/rev_HICS.2013.v18.44000
- Menéndez, M.I. (2014). El Espacio Europeo de Educación Superior en España: Incorporación de contenidos y metodologías de género en comunicación. *Revista Internacional en Comunicación y Desarrollo*, 1(0), 23-34.

- North, L. (2010). The gender problem. *Australia Journalism Education*, 32(2), 103-115. <https://doi.org/10.2139/ssrn.2015844>
- Padovani, C. (2016). Gendering the european digital agenda: The challenge of gender mainstreaming twenty years after the Beijing World Conference on Women. *Journal of Information Policy*, 6, 403-435. <https://doi.org/10.5325/jinfopoli.6.2016.0403>
- Pollack, M.A., & Hafner-Burton, E. (2011). Mainstreaming gender in the European Union. *Journal of European Public Policy*, 7(3), 432-456. <https://doi.org/10.1080/13501760050086116>
- REACU (Ed.) (2011). *Protocolo de evaluación para la verificación de títulos universitarios de Grado y Máster*. ANECA. <https://bit.ly/2QMkcYj>
- Rees, T. (2005). Reflections on the uneven development of gender mainstreaming in Europe. *International Feminist Journal of Politics*, 7(4), 555-574. <https://doi.org/10.1080/14616740500284532>
- Ross, K., & Padovani, C. (2016). *Gender equality and the media: A challenge for Europe*. Routledge. <https://doi.org/10.4324/9781315709024>
- Saldaña, N. (2010). Los estudios de género en los Grados en Derecho: Propuestas para un diseño curricular de la enseñanza del derecho constitucional con perspectiva de género en el Espacio Europeo de Educación Superior. *Revista de Educación y Derecho*, 3, 1-23. <https://bit.ly/357pMsH>
- UN (Ed.) (2015). *Transformar nuestro mundo: La Agenda 2030 para el Desarrollo Sostenible*. <https://bit.ly/2mej03a>
- UN Women (Ed.) (1995). *Beijing Declaration and Platform for Action*. Fourth World Conference on Women. <https://bit.ly/2tkGoME>
- UNESCO (Ed.) (2012). *Indicadores de género para medios de comunicación. Marco de indicadores para evaluar la sensibilidad en materia de género en las operaciones y contenidos mediáticos*. UNESCO. <http://bit.ly/2qVWKIZN>
- UNESCO (Ed.) (2014). *Media and gender: A scholarly agenda for the global alliance on media and gender*. UNESCO. <https://bit.ly/2YxKS0I>
- UnitWIN (Ed.) (2017). *UNESCO UnitWIN network on gender, media, and ICTs*. <https://bit.ly/2KilcQ5>
- UnitWIN (Ed.) (2019). *Gender, media, & ICTs. New approaches for research, education & training*. <https://bit.ly/2LER4yQ>
- Verloo, M. (2005). Displacement and empowerment: reflections on the concept and practice of the Council of Europe approach to gender mainstreaming and gender equality. *Social Politics*, 12(3), 344-365. <https://doi.org/10.1093/sp/jxi019>



Women on YouTube: Representation and participation through the Web Scraping technique

La mujer en YouTube: Representación y participación a través de la técnica Web Scraping

-  Uxía Regueira is Predoctoral Researcher in the Faculty of Education Sciences at the University of Santiago de Compostela (Spain) (uxiafernandez.regueira@usc.es) (<https://orcid.org/0000-0003-2738-182X>)
-  Dr. Almudena Alonso-Ferreiro is Professor in the Faculty of Education Sciences at the University of Vigo (Spain) (almalonso@uvigo.es) (<https://orcid.org/0000-0002-9438-2681>)
-  Sergio Da-Vila is Postgraduate Student in the Faculty of Mathematics at the University of Santiago de Compostela (Spain) (sergio.davila@rai.usc.es) (<https://orcid.org/0000-0002-7446-5316>)

ABSTRACT

YouTube is the favourite entertainment platform for teens and pre-teens. It is configured as a space for interaction and collaboration that coordinates collective creativity as a generator of meaning. Because of this, nowadays the platform constitutes an enabling environment for subjectivation. Women and men participate by sharing or consuming videos, although the visibility and experiences are different for each gender. The aim of this study is to analyse the presence of women in the new spaces of participation, both from the perspective of producers and consumers of content. An analysis based on Web Scraping of the Instagram profiles of the 50 most successful Youtubers in Spain was carried out. The data obtained was analysed with the statistical software R. The results show a low representation of women among the channels with the highest number of views and subscribers. In addition, there is a lower presence of a female audience. Both roles, women as content creators and as consumers, are mostly associated with stereotypically feminine content such as beauty, drawmylife and fitness sports. The study shows that YouTube, the platform representing the new online participation spaces, reproduces the gender power structures of traditional media. An analytical approach to media education is needed to fight against sexist representations, stereotypes and under-representation of women in public spaces.

RESUMEN

YouTube es la plataforma favorita de entretenimiento de adolescentes y pre-adolescentes. Se presenta en esta etapa como un entorno propicio para la subjetivación, al configurarse como un espacio de interacción y colaboración, que coordina la creatividad colectiva como generadora de significado. Mujeres y hombres participan compartiendo o consumiendo vídeos, aunque la visibilidad y las experiencias son diferentes para unas y otros. El objetivo de este estudio es analizar la presencia de la mujer en los nuevos espacios de participación, tanto desde una perspectiva de productora como de consumidora de contenidos. Se ha realizado un análisis basado en Web Scraping de las 50 cuentas de youtubers de mayor éxito en España, a través de sus perfiles de Instagram. Los datos obtenidos se han analizado con el software estadístico R. Los resultados evidencian la escasa representación femenina entre los canales con mayor número de visualizaciones y suscriptores. Además, existe una menor presencia de público femenino. Ambos roles aparecen asociados mayoritariamente a contenidos estereotipadamente femeninos como belleza, drawmylife y deportes fitness. El estudio pone de manifiesto que YouTube, plataforma representativa de los nuevos espacios de participación online, reproduce las estructuras de poder de género de los medios tradicionales. Es necesaria una educación mediática crítica para luchar contra las representaciones sexistas, los estereotipos y la insuficiente representación femenina en espacios públicos.

KEYWORDS | PALABRAS CLAVE

Gender, stereotypes, audience, teens, pre-teens, youtubers, YouTube, web-scraping.
Género, estereotipos, audiencia, adolescentes, preadolescentes, youtubers, YouTube, web-scraping.

1. Introduction and current status of research

The development of digital media and Information and Communication Technologies (ICT), in a complex context characterised by social, economic, political and cultural change, has led to variations in the way we communicate, relate and perceive reality. This rapid socio-technological advance clashes with the almost leisurely pace of the transformation of gender inequalities in and throughout the media (French et al., 2019).

The processes of media convergence, participatory culture and collective intelligence (Ayuste et al., 2012) resulted in the transformation of the perception of media and the way in which we relate to it, whilst also leading to profound implications for those who use it (Jenkins, 2008). Furthermore, these processes forecast a potential democratisation (Jenkins et al., 2015) in terms of access and participation.

These transformations have led to the understanding of the web as a space where participatory culture can also overcome the barriers or imposed constraints linked to corporeality; which would imply the possibility of constructing alternative identities, avoiding those that have been attributed or imposed. Although this idea may be appealing from a gender perspective, it is somewhat naïve, as it postulates that if the same opportunities of access are offered to groups that have not been socialised in the same way, nor have had access to the same goods, actions or rights (Ficoseco, 2016), a democratic and universal participation would be achieved. This would mean that the web is interpreted as a space alien to the social fabric and that gender socialisation is not taken into consideration, as disembodiment is associated with the power to break from gender constructs and the freedom to create alternative identities.

Research on traditional media reveals a scarce presence of women in these spaces when their corporeality becomes visible and they are attributed a gender identity. As the studies promoted by UNESCO (Byerly, 2011), show, women are under-represented, especially in places of power, such as government or management councils (<20% in Spain). Similarly, it is evident that the positions involved in the decisions regarding the content produced in the media are not occupied by them either. As a result, only 24% of the people to whom this content refers are women (Macharia, 2015).

Female representation and representativeness are limited and influenced by stereotypes (Grizzle, 2014). The figures reveal slow progress on this issue, which is further aggravated by the perpetuation of online media trends (Macharia, 2015). In new participation spaces, the results are similar but acquire new expressions. In the case of YouTube, Wotanis and McMillan (2014) determined that, although there are numerous investigations on the presence and participation of women on the platform and some of them manage to obtain favourable results in terms of equality (Rainie et al., 2012), there is a shortage of female referents among the 50 most visited channels.

Digital technologies are part of the social fabric, given that these technologies and society mutually produce and define themselves as contingent and open agents, expressing the social relations in which they are integrated (Haraway, 2006). The absence of women in the technological narrative, or the binary and stereotyped expression of them, is a constitutive part of technology as media and as a social tool with a patriarchal system of imaginaries associated with prestige, reason and power (Ficoseco, 2016). In this context, digital media emerge with a hint of democratisation and decentralisation but do not challenge the patriarchal nature of the media (Macharia, 2015). Technology is neither naïve nor neutral, while the media is structured in a way that impacts gender power relations (French et al., 2019). This structure imposes rules on how people behave and the roles and responsibilities they assume, thus creating pressures and expectations.

From a gender perspective, it is necessary to critically examine how gender power devices appear and what social practices they reproduce, that is, to review what is privileged and what is postponed in the architecture of the Internet (Byerly, 2011).

Based on the current reality described above, this study seeks to assess the presence of women in online participation spaces — specifically, on today's largest entertainment platform: YouTube (Berzosa, 2017), the leisure space most visited by young people and pre-teens (Haddon & Livingstone, 2012). From a gender standpoint, our purpose is to establish to what extent women are part of this new social framework for entertainment, considering those with producer and prosumer roles, as well as those limited to content consumption.

1.1. Gender and identity construction on YouTube

Watching videos is one of the most widespread entertainment habits among young Europeans, with YouTube rising as the queen of online platforms, used by 90% of 12-15 year-olds (Haddon & Livingstone, 2012), who mainly consume humorous videos and content related to video games (Mascheroni & Ófalsson, 2014).

Pre-adolescence and adolescence are the stages in which the platform shows greater success, coinciding with a key moment in the development of individuality and relevant decision-making for the future. This makes teens and pre-teens more susceptible to the influence of the environment when it comes to constructing their identity (Aran-Ramspott et al., 2018). YouTube constitutes an enabling environment for subjectivation as it is configured as a space for interaction and collaboration that coordinates collective creativity as a generator of meaning (Sánchez-Olmos & Hidalgo-Marí, 2016).

In this context, the mediating figures branch out into subjectivation and new forms of expression are configured, resulting in the promotion of new opportunities for the construction of the subject, thus placing the referents in these spaces in the focus of interest. At the same time, we must understand these opportunities in a context characterised by the convergence of the media and the socio-economic, political and cultural reality of the young people who participate on the platform, within which they are also subject to a gender socialisation.

Socialisation and education instill an ideal that situates the subject in the symbolic, the language and the available schemes of cultural intelligibility (Lacan, 1977), configuring a norm of conduct (Butler, 2010). Power forms the subject, provides it with the condition of its existence and the trajectory of its desire; in such a way that submission consists precisely of dependence on a discourse that is not chosen but paradoxically initiates and sustains the existence of the individual (Foucault, 1994). Therefore, socialisation and access to goods, actions and rights, among other issues (Ficoseco, 2016), inevitably determine gender power relations, as well as the role that women play on the platform, despite no existing explicit conditions.

The studies that have analysed the platform from a gender perspective manifest the appropriation of the environment and the unequal presence of identities. The lack of feminine referents between the figures of greater reach on the platform is evident (Votanis & McMillan, 2014); as well as masculine domination characterised by sexism, visible in comments received by the female YouTubers that do not conform to the expectations of gender (Döring & Mohseni, 2018). Along with the conditioning of content according to gender, there is an imbalance in the production and reception of videos and a more active participation of men (Molyneaux et al., 2008; Sánchez-Olmos & Hidalgo-Marí, 2016), despite the greater effort that women invest in the quality of interactions (Pierson, 2015).

Gender does not seem to be a conditioning factor to be part of the platform. However, no research has been found that concludes equal participation, which reveals the traces of a participatory gap (Jenkins, 2009).

1.1.1. YouTubers: mediating figures in the construction of identity

The ways of dealing with culture have changed mainly due to the interaction with digital media (Dussel, 2017), which is especially evident in the field of YouTubers, a field characterised by a kind of participatory culture (Jenkins, 2009). There is a social connection between Youtubers and the audience, in a space where the latter frequently perform informal mentoring, thinking that they can teach something to their followers, who value their contributions. Therefore, today's culture belongs to the audience, which is often rooted in their experiences and background (Jenkins et al., 2015).

The term YouTuber refers to content creators on YouTube (Berzosa, 2017; Van-Dijk, 2016). They are people, mostly young, who generate large masses of followers who support them over time. A community is formed around this figure, and the YouTuber himself or herself belongs to this community, which creates identity symbols. The interaction in the community is bidirectional: the YouTubers question their audience, who, in turn, provide feedback. This relationship, constituted in a relevant social context (Pérez-Torres et al., 2018), involves elements of collaboration, interaction with other users, learning opportunities, civic commitment and identity construction (Lange, 2014; Lenhart et al., 2015). The YouTuber phenomenon implies a generational and socio-temporal factor, which entails its own way of generating and consuming

content (Berzosa, 2017). The attributes that characterise YouTubers are, in turn, those that propitiate their success: identity construction, processes of identification and empathy with the characters, as well as "the ability to improvise, to change, and to surprise", in a way that is far from the logic of traditional media (Aran-Ramspott et al., 2018: 73). These are people who are close and accessible, and who challenge the margins of intimacy and privacy.

The uniqueness of the strategy of the YouTuber on the web is based on the periodicity in the publication of videos in a way that connects the audience and creates expectation (Berzosa, 2017). This results in engagement from the audience that visits the given channel repeatedly. Success relies on the retention of large masses that view their videos, which makes them influencers and a social reference for young people. They are "role models" as followers identify with their discourse and consequently become "subscribers" (Pérez-Torres et al., 2018: 67). This is a tendency shown in the work of Gewerc and Alonso-Ferreiro (2019), where the power of these models is evident: the YouTubers become someone to please by means of subscribing to their channel in response to their demands.

The admiration generated by YouTubers (García-Jiménez et al., 2016) makes them position themselves as mediators of media consumption, guiding the preferences of pre-teens and teens, leading them to videos of other YouTubers with the power of their discourse. Like this, they become mediators of the construction of the individual who socialises on online platforms such as YouTube.

The construction of the subject is produced via the mediation of others (Foucault, 1994), who act: 1) as examples of behaviour; hence the relevance of the visibility of female referents; 2) as figures of empowerment, contributing to the transmission of knowledge and principles; including jargon, values, and other elements identified in communication that contribute to configuring the community and the identity of the group; and 3) in the spaces of interaction, within which their exposure can cause unease. The same schemes that constitute social reality are transferred to these new spaces of online participation. There are different forms of appropriating and occupying spaces, in such a way that the dialogue is conditioned by the individuals who form this space. Namely, a group that assumes the responsibility of having the voice, while others occupy the periphery without exposure. In this respect, men subscribe to the request of the referent figure (Gewerc & Alonso-Ferreiro, 2019); while women, feeling unrepresented, become passive participants, observers that don't leave comments nor generate content of any type.

1.2. Media education for full and critical participation

In this media setting, where YouTube occupies a prominent place among young people, critical media literacy is necessary (Buckingham, 2007; French et al., 2019; Gutiérrez, 2008; Jenkins, 2009; Jenkins et al., 2015) as an essential competence for the 21st century.

Dussel (2017) points out the vital necessity to tackle what circulates in YouTube and other networks in school, analysing with students how to produce and how to look at images, to contribute to the expansion of their worlds, and to help them become accustomed to other images and production methods. To this end, it is essential to address this learning process from a critical, reflexive and creative approach (Gutiérrez, 2008), breaking and confronting gender stereotypes. It is about preparing young people to read and write media (Buckingham, 2007), addressing the dual role of producers and consumers (Jenkins, 2009), so that they actively participate in digital culture and take advantage of the potential of YouTube as a space for social (Gutiérrez, 2008) and gender equality.

It is necessary to deepen their experiences with media outside the classroom (Buckingham, 2007; Dussel, 2017) and to understand critically and profoundly how forms of media work, how they communicate and intervene in relationships, how they represent the world and how they are produced and used (Buckingham, 2019). In this context, we should consider the participatory gap (Jenkins, 2009; Robles-Morales et al., 2016), which refers to inequality in access to media and opportunities to participate fully. Examining this gap from a gender perspective requires concern for the situation of women in this scenario, as well as consideration of their way of behaving on the web — a behaviour that implies ethical values.

The ethical challenge (Jenkins, 2009) focuses on the importance of the school context and refers to the learning of ethical norms during the online experience. Furthermore, it relates to issues of netiquette

and digital identity management, since practices with Web 2.0 technologies, even if they are for fun and entertainment purposes, are important in the construction of one's own identity (Jenkins, 2010). In the education of prosumers, users who participate and give feedback on the web, it is fundamental to instill respect and empathy, topics that are often forgotten although research reveals them as factors related to the low participation of women (Macharia, 2015). These topics must be taken into consideration to create democratic participation spaces.

2. Method

This project proposes a quantitative study employing a descriptive method that uses social network analytics (Thelwall, 2018) to investigate and illustrate the presence of women in the participation spaces generated on YouTube. For this purpose, the study of content-generating users with a greater reach (in the Spanish context) and of the audiences that subscribe to their channels was addressed from a gender perspective.

2.1. Sampling unit: YouTubers' profiles

For data collection, a list of the 50 largest accounts was created. For this purpose, we selected those accounts that as of August 1st, 2019, housed the largest number of total views in their videos and the highest number of subscribers (Burgess & Green, 2018). This list was delimited in accordance with the situation and age group in which this study is framed: adolescents in the Spanish context. The following criteria were considered: the YouTube channel a) is located in Spain; b) generates content in one of the official languages of the country; c) does not generate children's content; d) shows an Instagram account — the second most used platform in the age group (Mascheroni & Ófalsson, 2014) — in the YouTube profile; e) shared its last video in the last 5 months; and f) received its last comment in the last 5 months.

The resulting list was ordered according to a variable generated from the normalisation of the variables "views" and "subscribers", establishing a ranking that considers the reach capacity of the 50 accounts that comprise the list. Furthermore, the genre expressed by the creators and the type of content generated was added. Table 1 includes the ten accounts with the greatest reach. The complete list made it possible to ascertain the presence of women among the main referents, as well as their scope and content.

2.2. Sampling unit: audience profiles

YouTube's data policy makes it possible to see the channels followed by an account, but not the subscribers of that given channel. Due to this policy, Instagram was the platform chosen for the exploration of the audience. Furthermore, Van-Dijck (2016) highlights the importance of cross-platform interconnection (media convergence) as it allows for greater visibility and maximum presence. In this respect, Instagram is the platform preferred by young people after YouTube (Mascheroni & Ófalsson, 2014), which justifies our methodological decision.

Using the free software R, a loop was created, represented in Figure 1 (<https://bit.ly/2OeUF8e>), which performs a Web Scraping procedure with each of the accounts that constitute the initial list. This technique allowed us to extract a large amount of information from websites, obtaining public data accessible to anyone.

For this study, a process was programmed to go to the Instagram profiles subject to examination, click on the "followers" tab and extract the names of between 40,000 and 50,000 users, through a simple indiscriminate sampling: the program randomly chose the profiles that represent the sample, whereby any profile of the audience was equally eligible.

According to the proposed objectives, we sought to determine the gender of the people who make up the YouTubers' audience, their preferences regarding content and the genre of the channel. As Thelwall (2018) points out, this information can be inferred from the names obtained from Instagram with the Web Scraping technique, which can be compared to the Continuous Register Statistic as of January 1, 2017, published by the National Statistics Institute of Spain. Here, the names registered in the Spanish context and the prevalence of the name concerning each gender can be found. If the frequency of a name in one of the groups (feminine or masculine) was one hundred times greater than the frequency associated with the same name in the opposite group, the association of said name with the gender of the first group was

accepted. If this was not the case, the name was categorised as neutral and was eliminated because it did not provide relevant information.

After comparing the sample with the Register, an average of 15,000 users was obtained for each profile, defined as female or male; whereby a confidence level of 95% and an error of 1% is achieved with a sample size of 9,603 for the account with the greatest number of followers. A total sample of $n=904,939$ analysed names was collected (Table 1).

Tabla 1. Sampling unit: YouTubers and audiences (TOP-10)

Youtubers	Gender	Subscribers	Subscribers Normalisation	F	M
VEGETTA777	M	27,090,883	3.25	3054	18255
elrubiusOMG	M	35,402,085	4.68	13641	46314
TheWillyrex	M	15,684,534	1.29	2349	14923
Willyrex	M	14,694,651	1.12	2349	14923
AuronPlay	M	17,270,734	1.56	5460	11793
DaniRep	M	9,363,315	0.20	1335	16536
iTownGamePlay	M	11,707,556	0.60	2641	12511
Mikecrack	M	11,283,645	0.53	6377	13071
Makiman131	M	11,734,205	0.61	3991	12642
TheGrefg	M	11,045,262	0.49	1633	11390
Youtubers	Content	Views	Views Normalisation	New Variable Normalisation	
VEGETTA777	Gameplay	10,725,421,239	3.39	7.6479	
elrubiusOMG	Gameplay-entertainment	7,802,313,025	2.93	7.6128	
TheWillyrex	Gameplay	5,561,329,714	1.80	3.1020	
Willyrex	Gameplay	3,705,701,797	0.88	2.0028	
AuronPlay	Entertainment	2,195,693,750	0.12	1.6895	
DaniRep	Gameplay	4,643,648,531	1.34	1.5561	
iTownGamePlay	Gameplay	3,626,991,363	0.84	1.4500	
Mikecrack	Gameplay	3,749,509,808	0.9	1.4385	
Makiman131	Entertainment	2,899,464,629	0.47	1.0903	
TheGrefg	Gameplay	2,900,456,299	0.47	0.9724	

The Web-based Scraping methodology facilitates access to and management of an enormous amount of data. There is no bias in its selection as it is performed under a simple random sampling, which provides a comprehensive view of the YouTube audience in terms of gender. This technique, based on the analysis of social networks using the software R, finds its limitations in the impossibility of locating profiles not easily identifiable with feminine or masculine names, an issue to which the assumption of a binary perspective of gender is added. Besides, we do assume a certain bias as it resorts to a second social network (Instagram) to recover the subscribers of each YouTube channel.

3. Results

3.1. Female YouTubers: presence of women who create and produce content

Among the 50 YouTube accounts considered to have the largest reach, there are a total of 4 female YouTubers, compared to 41 male YouTubers. Furthermore, there are 2 accounts shared by a woman and a man, and 3 accounts linked to mass-media and institutions such as football clubs.

The first five accounts correspond to VEGETTA777, elrubiusOMG, TheWillyrex, Willyrex and AuronPlay, channels whose main content is related to video games or entertainment linked to humour. All of them are managed by men, who appear as the creators and image of their content. In the case of VEGETTA777 and elrubiusOMG, their reach positions them on the international scene (Figure 2: <https://bit.ly/2rxQrzO>).

The first woman to appear in the ranking is ExpCaseros (ranked 13th), an account shared by a woman and a man who generate entertainment linked to experiments and do-it-yourself (DIY) tutorials. The next woman to appear on the list (ranked 27th) does so under this same condition, together with a man, generating entertainment content and draw-my-life videos (TikTak Draw).

Position	Youtubers	Gender	Normalised variable	Subscribers	Views	Content	F	M
13	ExpCaseros	H/M	0.4575	10,602,712	2,023,923,205	Entertainment	6991	11033
27	TikTak Draw	H/M	-0.7610	6,428,447	1,023,312,452	Entertainment	9983	7621
28	gymvirtual	M	-0.7633	6,648,612	943,130,582	Sport	17744	3107
33	patty dragona	M	-1.0895	5,478,295	693,242,586	Gameplay-entertainment	2103	13107
48	LizyP	M	-1.4184	4,467,344	383,433,302	Beauty	12047	2260
49	Sarinha	M	-1.4501	2,891,000	861,131,784	Gameplay	3117	17214

The female creators of content who manage to be in the list of 50 accounts represent 12.2% of the total number of visible physical persons. Moreover, none of them manages to reach the top 10, meaning that the female gender has a notoriously inferior reach. These women create content such as entertainment, sports, beauty or gameplay, while male creators create content that includes entertainment, sports or gameplay.

It is evident that the contents related to female gender stereotypes are less valued among those that have a greater reach, as they rank starting from the 28th position; while content stereotyped as "masculine" or "neutral" holds the most privileged positions, although these positions are not occupied by the women who generate it.

In the overall list, gameplay is the type of content best valued by the YouTube community, produced by 54% of the accounts. Gameplay is also the best positioned, as it is the primary category of content in 8 of the top 10 accounts with the greatest reach. In contrast, women gamers (2) rank 33rd and 49th.

When it comes to sport-related content, only one female YouTuber enters the list and is the best-positioned woman among the women that generate content alone (28th position). She mainly shares content concerning aerobic exercises, the titles of which frequently include the word "adelgazar" (lose weight). The gender stereotype is also reproduced in the content linked to beauty, with no male YouTubers sharing this type of content and with only one woman entering the list and ranking 48th.

3.2. The relationship between gender and the audiences of the most far-reaching YouTube channels

The audience builds its gender identity through mediation with female and male YouTubers. It is noteworthy, therefore, that the sample studied is made up of 74.1% men and 25.9% women. In this regard, Figure 3 (<https://bit.ly/35HxrNX>) illustrates the breakdown of YouTube channels according to the gender of their audience, taking the content into account. Most YouTubers have a mostly male audience.

There are few accounts (6) of greater reach that gather an audience of more than 50% women, and, among these, the most valued content is created by an account with sports tutorials focused on losing weight (Gymvirtual) and by an account focused on makeup (LizyP). This means that the content that impacts the female audience to a greater extent is subject to the reproduction and perpetuation of beauty norms. Music content is the next most important content category, as the official account of Adexe and Nau, two Spanish male teenage singers, has an audience of 82% women.

The accounts closest to reaching a gender balance among their audiences are the shared accounts managed by a woman and a man, followed by mass-media channels, whose content is plural and cannot be linked to a stereotype.

As can be seen in Figure 3, most of the YouTube channels examined in this study have a largely male audience that consumes content related to gameplay and entertainment. Female creators of this type of content also have mostly male audiences, but they are lower down the list due to the domination of male creators. Patty Dragona has 14% female subscribers and Sarinha 15%.

Women who create content linked to the female gender stereotype get greater recognition from the female audience. The content and its link to gender stereotypes present a greater influence than the gender expressed by the content creator. However, the channels that obtain the most balanced audiences in terms of women and men are those in which the two genders are expressed by the creators, that is to say, accounts shared between a man and a woman who create neutral content in terms of gender stereotypes (entertainment linked to humour).

4. Discussion and conclusions

This study, which investigates the role of women in the new media scene, on the main entertainment platform (YouTube), reveals the under-representation of female figures in the public sphere on the network, continuing the trend of what happens in traditional media, as revealed by UNESCO's work on the subject (Byerly, 2011; French et al., 2019; Macharia, 2015). In the case of this social media platform, where the audience is not necessarily passive but has spaces for participation, female representation is linked to gender stereotypes and low participation.

The differentiated appropriation of the environment suggests the transfer of power relations from the physical space to the YouTube platform: a leisure space has been generated on the web, similar to the schoolyard, a recreational space and time not planned by the school organisation. The familiar image illustrates boys and male pre-teens on the football field, an hegemonic sport in the Spanish context and one which is usually situated in a central and privileged space on the playground. This is where the action takes place, where they interact and learn the rules and codes that they will transfer to other play spaces. Girls and female pre-teens, as explained in other studies (Cantó & Ruiz, 2005; Martínez-García, 2018; Castillo-Rodríguez et al., 2018), tend to occupy the periphery of playgrounds, standing around the football field while chatting, playing in small groups or amusing themselves as spectators. In these spaces they acquire learnings of all kinds, very valuable learnings. The most relevant of these being the place that they belong to and the place that the knowledge they have acquired in this space occupies.

Those YouTubers at the core of the media scene, at the top of the ranking, are men who share stereotyped content: gameplay, humour, and football. They are also the most recognised by pre-teens, as pointed out in the research of Aran-Ramsrott et al. (2018), as they occupy a visible place that makes them referents. While there are women creators of all kinds of content, the female audience assembles around those who publish content linked to gender stereotypes, such as beauty or staying in shape. Women who produce content associated with videogames have male followers, although they are overshadowed by their male counterparts, who dominate the platform (Döring & Mohseni, 2018). This is because pre-teens who follow this type of content prefer a male referent, as proven in research conducted by Gewerc and Alonso-Ferreiro (2019). Their findings show that when given the opportunity to follow Sarinha's profile, from which the pre-teens have learned some tricks, they decide to follow Luh, recommended by the female YouTuber herself in her videos.

The appropriation of the woman's environment, circumscribed in the patriarchal system of imaginaries associated with prestige, reason and power (Ficosoco, 2016), translates into its visible absence as a potential referent and mediator for the construction of the subject. This impacts 1) on the given example, shaped to a greater extent by men; 2) on the transmission of knowledge, content, principles and values, among which women are not represented; and 3) on free, active and critical participation on the platform.

No physical barrier prevents young women from occupying the symbolic central point of this space and, nevertheless, they continue to be relegated to the peripheries. Through socialisation and education, an ideal is fostered that situates the subjects in the available schemes of cultural intelligibility (Lacan, 1977), thus determining the norms that govern their behaviour (Butler, 2010). The evidence highlights a peripheral presence of female participation. Furthermore, the presence of the more successful women is less decisive and influential compared to their male counterparts. Even when the content generated by these women corresponds to their gender stereotypes, they find themselves in less privileged positions, as the knowledge and interests they disseminate are attributed less value.

Whilst the figures illustrate that the majority of the audience is male, among all the accounts in the ranking there is indeed a broad audience made up of women, who represent the majority, or minority, depending on the content. In this regard, major educational concerns emerge. Namely, the democratic participation of women, not conditioned by stereotypes; the devaluation of content linked to the female stereotype; and the consumption of content created by and for men that mediates the construction of masculinity in their majority audiences, and in the same way mediates the subjectivation of female pre-teens.

Against this backdrop, media education presents itself as an opportunity, and it is, therefore, essential to develop actions to fight against sexist representations and in favour of equal access and participation of

women in digital media in which they have an insufficient presence (French and others, 2019). In this context, a challenge and an opportunity emerge, that is, to train in media education in order to create spaces and opportunities for equal participation.

Funding Agency

This study is part of the research carried out by the project "Digital competence among compulsory education students: social and family environments, appropriation processes and e-inclusion proposals (CDEPI)", financed by the Ministry of Economy and Competitiveness, in the national plan for research and challenges R+D+i of the Spanish State Research Agency with code EDU2015-67975-C3-1-P.

References

- Aran-Ramspott, S., Fedele, M., & Tarragó, A. (2018). YouTubers' social functions and their influence on pre-adolescence. [Funciones sociales de los youtubers y su influencia en la preadolescencia]. *Comunicar*, 26(57), 71-80. <https://doi.org/https://doi.org/10.3916/c57-2018-07>
- Ayuste, A., Gros, B., & Valdivieso, S. (2012). Sociedad del conocimiento. Perspectiva pedagógica. In García-Aretio, L. (Ed.), *Sociedad del conocimiento y educación*. Universidad Nacional de Educación a Distancia.
- Berzosa, M. (2017). *Youtubers y otras especies. El fenómeno que ha cambiado la manera de entender los contenidos audiovisuales*. Ariel. <https://goo.gl/iSvn5z>
- Beyerly, C.M. (2011). *Global report on the status of women in the news media*. International Women's Media Foundation. <https://bit.ly/2KPhQGF>
- Buckingham, D. (2007). Digital media literacies: Rethinking media education in the age of the Internet. *Research in Comparative and International Education*, 2(1), 43-55. <https://doi.org/10.2304/rcie.2007.2.1.43>
- Burgess, J., & Green, J. (2018). *YouTube: Online video and participatory culture*. Polity Press.
- Butler, J. (2010). *Mecanismos psíquicos del poder*. Cátedra.
- Cantó-Alcaraz, R., & Ruiz-Pérez, L.M. (2005). Comportamiento motor espontáneo en el patio de recreo escolar: Análisis de las diferencias por género en la ocupación del espacio durante el recreo escolar. *Revista internacional de ciencias del deporte*, 1(1), 28-45. <https://doi.org/10.5232/ricyde2005.00103>
- Castillo-Rodríguez, G., Picazo-Córdoba, C.C., & Gil-Madróna, P. (2018). Dinamización del recreo como resolución de conflictos y participación en actividades físico-deportivas. *Educare*, 1, 1-22. <https://doi.org/10.15359/ree.22-2.14>
- Döring, N., & Mohseni, M.R. (2019). Male dominance and sexism on YouTube: results of three content analyses. *Feminist Media Studies*, 19(4), 512-524. <https://doi.org/10.1080/14680777.2018.1467945>
- Dussel, I. (2017). La inclusión digital desde la escuela: Significados, experiencias y perspectivas. In Alonso-Ferreiro, A., Rodríguez-Groba, A., & Dorado, S. (Eds.), *I Jornadas Internacionales Incluye-T: Cuando la competencia digital favorece la inclusión social* (pp. 13-30).
- Ficoseco, V.S. (2016). Mujeres y tecnologías digitales. Antecedentes del campo de los estudios de género para el análisis de esta confluencia. *Revista Extraprensa*, 9(2), 87-87. <https://doi.org/10.11606/extraprensa2016.107719>
- Foucault, M. (1994). *Hermenéutica del sujeto*. Endymión.
- French, L., Montiel, A.V., & Padovani, C. (2019). *Gender, Media & ICTs: New approaches for research, education & training*. UNESCO. <https://bit.ly/2nI9Kdz>
- García-Jiménez, A., García, B.A., & López-De-Ayala, M.C. (2016). Adolescents and YouTube: Creation, participation and consumption. *Prisma Social*, 1, 60-89. <https://bit.ly/2L5L5CF>
- Gewerc, A., & Alonso-Ferreiro, A. (2019). ¿Jugamos al Clash Royale? Videojuegos y desarrollo de la competencia digital. In Gewerc, A., & Martínez-Piñeiro, E. (Eds.), *Competencia digital y preadolescencia. Los desafíos de la e-inclusión* (pp. 121-137). Síntesis.
- Grizzle, A. (2014). *Indicadores de género para medios de comunicación (GSIM)*. UNESCO. <https://bit.ly/2Zd4ta6>
- Gutiérrez, A. (2008). La educación para los medios como alfabetización digital 2.0 en la sociedad Red. *Quaderns digitals: Revista de Nuevas Tecnologías y Sociedad*, 51, 17-41. [https://doi.org/10.17231/comsoc.13\(2008\).1147](https://doi.org/10.17231/comsoc.13(2008).1147)
- Haddon, L., & Livingstone, S. (2012). *Eu kids online: National perspectives. Eukids online*. The London School of Economics and Political Science. <https://bit.ly/2LcguU0>
- Haraway, D. (2006). A cyborg manifesto: Science, technology, and socialist-feminism in the Late 20th Century. In Weiss, J., Nolan, J., Hunsinger, J., & Trifonas, P. (Eds.), *The International Handbook of Virtual Learning Environments* (pp. 117-158). Springer. https://doi.org/10.1007/978-1-4020-3803-7_4
- Jenkins, H. (2008). *Convergence Culture: La cultura de la convergencia de los medios de comunicación*. Paidós. <https://bit.ly/2suUnBM>
- Jenkins, H. (2009). *Confronting the challenges of participatory culture: media education for the 21st century*. The MIT Press. <https://doi.org/10.7551/mitpress/8435.001.0001>
- Jenkins, H. (2010). Transmedia storytelling and entertainment: An annotated syllabus. *Continuum*, 24(6), 943-958. <https://doi.org/10.1080/10304312.2010.510599>
- Jenkins, H., Ford, S., & Green, J. (2015). *Cultura transmedia. La creación de contenido y valor en una cultura en Red*. Gedisa.
- Lacan, J. (1977). El estadio del espejo como formador de la función del yo tal como se nos revela en la experiencia psicoanalítica. In Lacan, J. (Ed.), *Escritos I*, volume 1 (pp. 86-94). Siglo XXI. <https://bit.ly/2LdL7bS>

- Lange, P.G. (2014). Commenting on YouTube rants: Perceptions of inappropriateness or civic engagement? *Journal of Pragmatics*, 73, 53-65. <https://doi.org/10.1016/j.pragma.2014.07.004>
- Lenhart, A., Smith, A., Anderson, M., Duggan, M., & Perrin, A. (2015). Pew Research Center. In *Teens, technology and friendships*. <https://pewrsr.ch/2OunfBM>
- Macharia, S. (2015). *Who makes the news? Global media monitoring project (GMMP)*. WACC. <https://bit.ly/2ojGJzk>
- Martínez-García, L. (2018). Socialización diferenciada por razón de género en educación infantil: Un estudio etnográfico. *Revista Complutense de Educación*, 29(3), 35-52. <https://doi.org/10.5209/rced.54263>
- Mascheroni, G., & Ólafsson, K. (2014). *Net children go mobile: Risks and opportunities*. Educatt.
- Molyneux, H., O'donnell, S., Gibson, K., & Singer, J. (2008). Exploring the gender divide on YouTube: An analysis of the creation and reception of vlogs. *American Communication Journal*, 10(2), 1-14. <https://bit.ly/2sum3H8>
- Morales, J.M.R., Antino, M., Marco, S.D., & Lobera, J.A. (2016). La nueva frontera de la desigualdad digital: la brecha participativa. *Revista Española de Investigaciones Sociológicas*, 156, 97-116. <https://doi.org/10.5477/cis/reis.156.97>
- Pérez-Torres, V., Pastor-Ruiz, Y., & Abarrou-Ben-Boubaker, S. (2018). YouTuber videos and the construction of adolescent identity. [Los youtubers y la construcción de la identidad adolescente]. *Comunicar*, 26(55), 61-70. <https://doi.org/10.3916/c55-2018-06>
- Pierson, E. (2015). Outnumbered but well-spoken: Female commenters in the New York Times. In *CSCW '15 Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing* (pp. 1201-1213). <https://doi.org/10.1145/2675133.2675134>
- Sánchez-Olmos, C., & Hidalgo-Marí, T. (2016). Del sofá a YouTube: Estudio de género sobre la interacción en la red social en torno a las series de TV españolas. *Communication & Society*, 29(2), 117-132. <https://doi.org/10.15581/003.29.2.sp.117-132>
- Thelwall, M. (2018). Social media analytics for YouTube comments: potential and limitations. *International Journal of Social Research Methodology*, 21(3), 303-316. <https://doi.org/10.1080/13645579.2017.1381821>
- Van-Dijk, J. (2016). La cultura de la conectividad. Una historia crítica de las redes sociales. *Siglo XXI*.
- Wotanis, L., & McMillan, L. (2014). Performing Gender on YouTube. *Feminist Media Studies*, 14(6), 912-928. <https://doi.org/10.1080/14680777.2014.882373>



Audiovisual project for childhood
media literacy development

GRUPO
Comunicar 





Follow us: <http://www.bubuskiski.es/>





Influence of Instagram stories in attention and emotion depending on gender

Influencia de las historias de Instagram en la atención y emoción según el género

-  Dr. Joan-Francesc Fondevila-Gascón is Professor in Blanquerna at the University Ramon Llull, Barcelona (Spain) (joanfrancesc@blanquerna.url.edu) (<https://orcid.org/0000-0002-6587-939X>)
-  Dr. Óscar Gutiérrez-Aragón is Professor in the Mediterranean University School at the University of Girona (Spain) (oscar.gutierrez@mediterrani.com) (<https://orcid.org/0000-0002-4417-6310>)
-  Meritxell Copeiro is Professor in the Mediterranean University School at the University of Girona (Spain) (meritxell.copeiro@mediterrani.com) (<https://orcid.org/0000-0002-5255-5724>)
-  Vicente Villalba-Palacín is Researcher at the Barcelona University (Spain) (vicentevillalbalac@ gmail.com) (<https://orcid.org/0000-0003-0284-3004>)
-  Dr. Marc Polo-López is Professor in Blanquerna at the University Ramon Llull (Spain) (marcospl@blanquerna.url.edu) (<https://orcid.org/0000-0002-8729-4325>)

ABSTRACT

The impact of media and social networks on users is growing. The fact that commercial activity is flooding most social networks motivates us to enquire about the success factors of posts, and to try to determine if the impact is greater or lesser depending on gender. Attracting attention and exciting the user or customer are the main objectives of advertising, especially interactive advertising. This quantitative research measures the psychophysiological signals of the attentional level and the emotional level of people taking into account gender, through Sociograph, when they visualize Instagram stories of real influencers. To measure the electrodermal activity by means of two electrodes, a measurement instrument is used which integrates the traditional register of the Electrodermal Activity (EDA) and processes the information of the individuals. A questionnaire, the screen to display the Instagram story, the Instagram stories of the influencers, a registration protocol and a record sheet of the activity sequences are used. We observed that a greater number of followers implies greater emotional activation, although it translates into negative emotions, and a greater emotional activation in men than in women, although it is they who show positive emotions towards the video and would make an act of purchase through Instagram.

RESUMEN

El impacto de los medios y las redes sociales sobre los usuarios es creciente. El hecho de que la actividad comercial esté inundando la mayor parte de redes sociales motiva a indagar sobre los factores de éxito de las publicaciones, y a tratar de determinar si el impacto es mayor o menor en función del género. Llamar la atención y emocionar al usuario o cliente son los principales objetivos de la publicidad, especialmente la interactiva. Esta investigación, de carácter cuantitativo, analiza los datos de las señales psicofisiológicas del nivel atencional y del nivel emocional de las personas teniendo en cuenta el género, a través de Sociograph, cuando visualizan Historias de Instagram de «influencers» reales. Para medir la actividad electrodérmica mediante dos electrodos, se utiliza un instrumento de medición que integra el registro tradicional de la Actividad Electrodérmica (EDA) y procesa la información de los individuos. Se utilizan un cuestionario, la pantalla para la visualización de la Historia de Instagram, las Historias de Instagram de los influencers, un protocolo de registro y una hoja de registro de las secuencias de actividad. Se observa que un mayor número de seguidores implica mayor activación emocional, aunque se traduce en emociones negativas, y una mayor activación emocional en hombres que en mujeres, aunque son ellas las que muestran emociones positivas hacia el vídeo y realizarían acto de compra a través de Instagram.

KEYWORDS | PALABRAS CLAVE

Sociograph, gender, Instagram, influencer, EDA, emotions, neuromarketing, attention.
Sociograph, género, Instagram, influenciador, EDA, emociones, neuromarketing, atención.

1. Introduction and status of the issue

The Broadband Society (Fondevila-Gascón, 2013), social media and the Internet are changing the relationship between businesses and consumers. In fact, online communication surpasses offline communication, led by social media. Instagram surpasses Facebook in the number of active users by 15%, and it is also the first choice when developing “branding” and “engagement” marketing strategies (CECABLE, 2019).

The communications sector, particularly advertising, public relations and marketing, goes to great lengths to make the most of the options provided by the Internet to move and attract the audience’s attention. If we analyse an individual that sees an ad, we can control at least three variables: attention, emotion and memory (Torreblanca et al., 2012). Attention and emotion can be measured through Sociograph. This is called registering the Electrodermal Activity (EDA).

The essential goal of this research is to measure the psychophysiological signals of attentional and emotional levels, through Sociograph, of subjects when they see Instagram Stories of real influencers that have different amounts of followers. This allows us to verify the amount of (emotional and attentional) influence generated over the follower and to determine if their activation is positive or negative, in addition to the potential activation differences according to the gender of the subject that sees them. We also suggest getting to know user consumption habits or what an “influencer” is to them to determine their perception.

1.1. Stimuli and emotional contagion

With the appearance of social media, emotional contagion appears among users. On Facebook, it has been proven that if two individuals interact with someone outside of their personal contacts and the amount of emotional content on their timeline is reduced, these people produce less positive content and negative expressions (Kramer et al., 2014).

According to Christakis and Fowler (2007), the influence of each individual extends to a third-degree relationship (three degrees of influence of human behaviour). Physically, it’s possible for an emotion to be shared from one person to another (Hatfield et al., 1993), although it has been observed that this can also occur online. The auditory cortex is activated according to the emotional level of the stimulus (Plichta et al., 2011). According to this degree of perception, emotion can be stronger and become a memory, similarly to other areas of the brain through visual stimuli (Keil et al., 2005).

Therefore, emotion makes marketing and advertising useful. Moving the client or audience, for example, during interactive broadcasts on HbbTV (Hybrid Broadcast Broadband Television) (Fondevila-Gascón et al., 2015), customises the product. An experiment with TV ads using Electroencephalogram (EEG) and Heart Rate (HR) proved that it’s possible to know the attention, memorisation, pleasure and emotion experienced while seeing the ad, as well as which the most stimulating fragments are (Vecchiato et al., 2014).

Progress in neuroscience and the study of human reactions to external stimuli is considerable, especially due to the incorporation of new research methods, tools and technologies, such as Functional Magnetic Resonance Imaging (fMRI), EEG, Eye Tracking or EDA, which allow us to study and discover more about brain activity and influence on behaviour and relationships, despite critical approaches (Rego & Fernandes, 2005). EDA is the psychological analysis foundation on which this research is based (Monge & Fernández, 2012). Electrodermal Activity is a psychobiological phenomenon discovered by Fere (1888). It refers to the bioelectric activity of the skin (skin surface) and constitutes a parameter to register psychophysiological measurements. The changes originated in registering EDA depend on the secretion of exocrine glands and other skin structures that cause changes in electrochemical properties due to variations in the permeability of cell membranes (Aiger et al., 2013). EDA is related to moods (Coscolluela et al., 1988).

Electric conductance is used to measure the changes in electric transmission between two electrodes (EDR or phasic level and EDL or tonic level). EDL indicates baseline activation levels (attention), and EDR, the emotional response. This provides the individual’s attention and emotion values at the time the activity is performed. EDA is one of the most used psychophysiological indexes as physiopsychological correlative due to its connection to emotion, arousal and attention (Dawson et al., 2007). In order to measure electrodermal activity through two electrodes we use Sociograph, a measurement instrument

that integrates the traditional EDA registration and processes individual information through Sociolab (Aiger, Palacín, & Cornejo, 2013). This allows objective and non-verbal validations of human behaviour, with responses that are hard to falsify (Aiger & Palacín, 2012). The values are expressed in Kiloohms and quantify the emotional and general activation index of an activity (Aiger et al., 2016).

EDL indicates baseline activation levels (attention). Brain activity, explained by the Yerkes-Dodson Law (Reeve, 1994) sets an inverted U relationship between activation and performance: when activation is very high or very low, performance decreases. Average values promote performance and concentration. Less resistance entails greater activation, greater resistance, less activation and attention (Aiger & Palacín, 2012). A third variable is related to spontaneous activity (NSA): this is the uncontrolled activity attributed to a known cause (situation response linked to the degree of activation). In order to correctly register the data, the electrodes must be placed on the non-dominant hand and attached to the skin with Velcro strips on the medial phalanges of the forefinger and ring finger (Aiger & Palacín, 2012). Therefore, EDA registers activity related to attention and emotion during the activity through Sociograph, which can measure groups. The analysis is performed with Sociolab software.

Tapia-Frade and Martín-Guerra (2017) verified the attentional level (EDL) and emotional level (EDR) of 30 subjects while they watched a set of ads. They determined that in comical-style ads EDR obtains a higher average than for other styles and that a sound change positively affects the subject's attention to the ad.

Mediaset España requested attention and emotion measurements to reach their goal of staying ahead on TV programming. For this, they monitored subjects and were allowed to analyse the EDA of audio-visual pieces to obtain objective data. This allowed them to change plots and create characters that interested the audience more (Sociograph, 2019). Sociograph allows us to do market research and receive information about consumers. In this sense, Lewinski (2015) used facial coding to check the lack of facial expressions (happiness and sadness) in the videos used by the company ING on YouTube.

In contrast, there are not as many studies or as much research within the field of social media communication. Influencers are also dealt with in marketing strategies where the phenomenon is measured with Sociograph, and they study how the Youtubers with the most followers in Spain influence the perception of users who watch them (Alonso et al., 2018). Access to the psychological effects of actions, videos or content over users is viable through "Eye tracking", a technology used to verify the effectiveness of "food styling" (Jaromír et al., 2017), that is, creating food photos to use in marketing. These authors use eye tracking to know the aesthetic effect of food attracts consumers.

1.2. Instagram and attracting attention

For this reason, Instagram, launched in 2010, with more than 900 million active users in 2019 and acquired by Facebook in 2012, is an intriguing object of study. Likewise, it is incorporating new updates, services and ad inserts. Instagram statistics show the hours of peak traffic (between 9 p.m. and 11 p.m.) and the ideal time to share an image (9 p.m.). In 2016 Instagram created Stories, which are 15-second videos, and are only shown for 24 hours on the creator's profile; and they are the second most viewed option (50.2% of users).

For content creators, Instagram Stories attract traffic to the creator's profile. The main Key Performance Indicators (KPIs) are likes, comments, post sharing, saved posts, profile visits and scope. The Instagram Stories option emerged from adapting Snapchat, a platform where you can add content that is available for 24 hours after it has been published. This service is one of the first to launch vertical content on the market, adapted to smartphones and which is perfectly compatible for mobile users. Instagram Stories allow you to include and adapt the videos and photos shared, adding other filter options, location, surveys, countdown, mentions or links (for accounts with more than 15,000 followers). According to Smith (2016), Instagram has the second highest level (after Facebook) of interaction (60% of all users log in daily). The number of active users per month is around one trillion. Out of all of the connected users, the group that amasses the most activity online is the group of users between the ages of 18 and 24, mostly men. 60.4% of the platform's users respond to these sociodemographic traits. The communication style and content shown to users must match their tastes and preferences linked to age.

Within social media, an “influencer” is someone who has achieved certain social recognition thanks to their activity on social media. Most of their financial income comes from brand collaborations, which reach their target audience faster and more effectively (Santamaría-de-la-Piedra & Meana-Peón, 2017). Followers with similar interests to influencers want to be like them and follow their steps, so they consume the same products (Campillo, 2016). Influencers act as brand advisers, given that their critiques or comments on products are respected. Since 83% of people follow brands on social media (IAB Spain, 2018), the number of companies that build strategies for this medium and collaborate with influencers increases, making it a growing means of communication, especially among young people.

The use and role of influencers in marketing strategies grows, although the path to be followed is intriguing and must take into account the notion of inclusive education (Aviva, 2009). 37.1% of businesses have been using them for three years, while 29% of businesses have been using them for less than a year (Brandmanic, 2018). 46.8% of brands used specialised influencer agencies to create marketing campaigns (brand strategies, recruiting new followers and sales conversion). Influencer marketing connects companies to these influencers. The brand generates greater visibility, engagement or branding. One of the main strategies on social media is word-of-mouth, the most effective for 85% of users, above influencer actions (82%) (Augure, 2018). Micro-influencers have less followers, but high engagement ratios, by targeting a theme and gaining audience loyalty, which represents a greater commitment to the consumer (9.7% more than an influencer) (Levy, 2017) and triggers effectiveness.

2. Material and methods

This research, performed during 2019, follows a quantitative methodology. To collect the necessary data, we got in touch with four influencers of different types according to range of followers (IAB, 2019), gender and category (Table 1 and Table 2).

Number of Followers			Gender	Category
Low Level	Medium Level	High Level	According to if they are male or female	Network category (entertainment)
Between 10,000 and 50,000 followers	Between 50,000 and 100,000 followers	More than 100,000 followers		

We requested a 15-second video in vertical format from the influencers, with the same communication traits as their usual character on social media. This was the way to make the result similar to an influencer marketing strategy within a conventional campaign. We obtained a minimum sample of 10 individuals for each influencer video, differentiating between the subject’s gender, so that each video was seen by at least five men and five women. Each influencer could use any kind of audio-visual tactics (visual effects, filters, audio effects, etc.), in this favourable environment. These variables were not controlled in the study.

Level/gender	Male	Female
Low Level	Diego Villalba	Aroa Moreno
Medium Level		Abi Power
High Level	Alberto TM	

The video’s objective was to transmit how good the promoted product was, which, in this case was an unbranded bottle of water, a neutral product, uninfluenced by feelings and of vital necessity. Before registering the EDA, we supplied a questionnaire that, together with the one filled out during the registration, was used to determine the sample’s qualitative data (type of emotion, range of influence, etc.). The data extracted from the EDA registration offers quantitative data regarding the activation level of EDL and EDR. Once the EDL and EDR signal is registered, it runs through an analogue-digital converter (PowerLab) to process the EDA through Labchart software. This application allows us to convert a graphic signal into a numerical signal to store it in Excel. This file shows columns with time, EDL, EDR and a fourth column which is manually coded by inserting the cuts written on the registration sheets. The following step is to convert the Excel files into plain text (.txt), in order to treat the signal with Electro software.

Finally, this software generates the results that are viewed in output files (.res) and are transferred to statistics software (SPSS or XLSTAT). This is the end of the signal processing route and the explanation of research instruments.

The subjects' experimentation process began by providing an initial questionnaire to provide demographic, social and behavioural data on Instagram, and continued by accessing the Social Psychology Laboratory at the University of Barcelona with the individual. Individuals were placed in front of a screen to proceed with registration. During the registration with Sociograph, several activity modules were developed for the individuals to perform. Once the Activity modules were completed, the EDA registration with the subject was concluded. We registered a total of 42 individuals. The final sample, after processing the EDA, was 37, generating a total of 187,336 records (156.11 minutes registered). Anova or analysis of variance was applied to the Sociograph results with a risk of $p=5$.

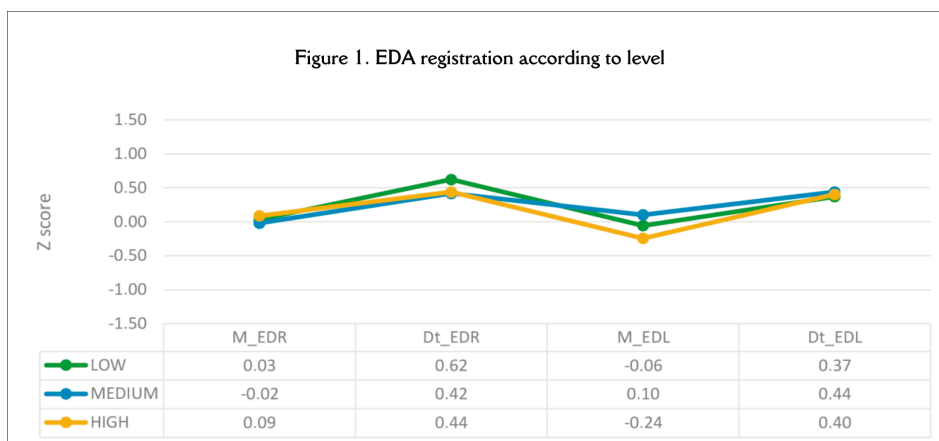
The five records that did not pass the EDA processing were removed from the qualitative information. The entire research sample consisted of adults (between 18 and 24 years of age). Prior experience with Instagram was required and their socioeconomic level was not taken into account. Sample members were homogenous regarding the age variable (men with an average age of 22 and women with an average age of 21). Most men had a university degree (87.50%; 44.12% of women, more with non-university secondary studies, 52.94%). There was a mismatch between men ($n=8$) and women ($n=34$) which affected and minimised conclusions regarding the gender variable. A research ethics code was applied, and participants were called individually, chosen randomly to avoid influences between them that could affect the results.

EDA was only measured once per individual for the study. Each subject viewed a different video with a distribution that included the records rejected after EDA processing. The hypotheses of the study were the following:

- H1: Men activate more emotion and attention in women in Stories marketing campaigns.
- H2: In marketing campaigns, the most-viewed elements on Instagram are Stories.
- H3: The influence of advisers on the consumer is limited.

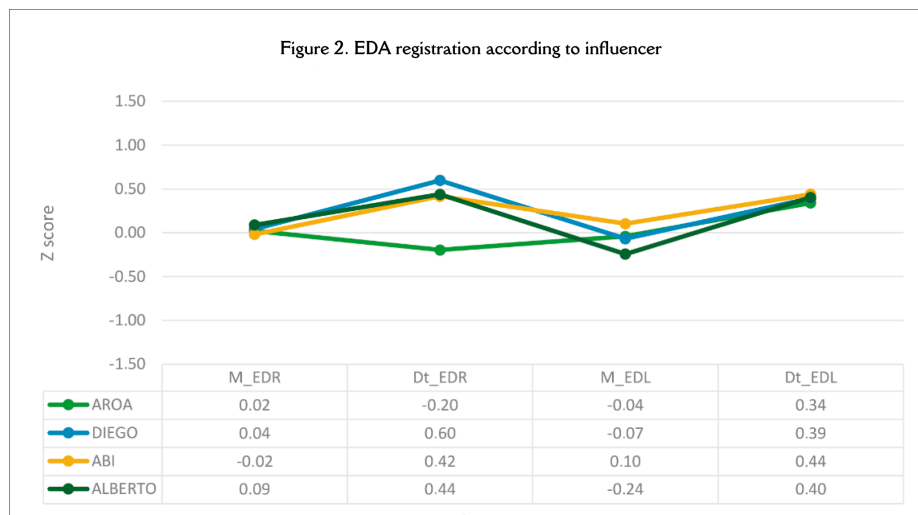
3. Analysis and results

General results per type of influencer (low, medium and high level) (Figure 1) revealed significant $F(2, 18731) = 1010.06$ greater targeted attention (EDL) in the high level, and less in the medium level with similar levels of distraction in the data. The level of significant emotional response (EDR) $F(2, 18731) = 65.07$ was greater in the high level and lower in the medium level. Low-level influencers have generated more heterogeneous emotional responses in comparison to the medium and high levels.



The general reactivity result according to influencer (Figure 2) showed a greater emotional distraction (EDR) for influencer Aroa, which was significant $F(3, 17670) = 24.90$. No significant $F(3, 17670) = 338.41$, emotional (EDR) or attentional (EDL) reactivity differences were observed in

comparison to Figure 1. The global data of the signal required a more specific analysis according to activity modules.



The emotional response and targeted attention data of the different activities according to influencer level aimed to identify average differences in activity modules, mainly for viewing and task. Greater and significant $F(4, 4913)=552.24$ EDR averages were observed in the high level for viewing and task. Standard deviation was homogenous. Regarding attention reactivity (EDL), we observed a mild but greater average in low level during viewing, although with a more significant $F(4, 11928)=8837.15$ heterogeneous distraction.

Regarding EDA psychophysiological responses in activities for each influencer, we observed significant EDR differences (Aroa $F(4, 48883)=367.98$ and Diego $F(4, 7041)=0473.91$) between both low-level influencers compared to Figure 3. Influencer Diego revealed a greater average emotional reactivity during viewing than Aroa (her distraction was heterogeneous). Aroa produced greater targeted attention, which was significant $F(4, 4883)=6064.71$. For the viewing activity, Abi generated less attention, significantly $F(4, 5985)=2474.14$. Diego registered a more heterogeneous attention distraction, significantly $F(4, 7041)=0473.91$. For the task activity, we observed significant $F(4, 4913)=2242.73$ greater targeted attention in the subjects that watched Aroa and Alberto, with similar averages. Task attention distractions were significantly heterogeneous in all four influencers. Moreover, emotional reactivity was quite similar in all four influencers (heterogeneous standard deviations).

Regarding the averages and standard deviations for the viewing module per influencer according to the subject's gender, for EDR $F(7, 1304)=148.51$ we detected a large emotional range in men for influencer Abi (homogeneous standard deviation). Regarding EDL $F(7, 1304)=107.92$, we observed greater targeting in the men that watched Alberto. Aroa generated greater distraction for emotion registration (EDR). For influencer Diego, no significant ranges were observed beyond targeted attention in men.

The viewing modules according to individual influencer aimed to observe significant differences between men and women for the same influencer. We observed a mild attention range in men (standard deviation was greater than for women). We did not observe significant differences for emotion. The high heterogeneity in men for registering emotion was noteworthy. We noted a mild significance of attention in men together with a more homogeneous standard deviation, which was heterogeneous in women.

Viewing according to gender for influencer Abi revealed the clear range of emotion in men, which was homogeneous. For women, the signal was quite similar in all ranges and no major differences were observed.

When watching Alberto, we observed a greater attention span in men. The dispersion is slightly higher (more heterogeneous) than in women. This confirmed H1 (Men activate more emotion and attention in women in Stories marketing campaigns), with an emphasis on attention.

In the task activity, there were significant ranges in terms of targeted attention. We observed significant attention averages $F(7, 8952) = 137.03$ for influencer Aroa with male subjects (standard deviation was more homogeneous than in women). The average attention for Diego among men was one of the most significant averages, with a lower standard deviation in comparison to other influencers. The attention for influencer Alberto among women was significant, but with a heterogeneous standard deviation in comparison to the aforementioned groups. Regarding EDR $F(7, 8952) = 30.21$, all standard deviations were quite heterogeneous, except for Diego among men, who presented a homogeneous standard deviation and a low average range. The highest EDR average was observed in Alberto for men, but his standard deviation was very heterogeneous.

The psychosocial data extracted from the questionnaires reflected the trend of Instagram users (type of content viewed or perception of the Instagrammer according to the sample). Subjects classified influencers as content creators or celebrities. There were multiple content categories. The sample's most followed trends were related to friends, humour, music, animals and food. Regarding the most-viewed elements within the app, Stories took first place, with posts in second place and Instagram TV last. This confirmed H2 (In marketing campaigns, the most-viewed elements on Instagram are Stories). Regarding the sample's perception of the influencers' influence, it tended to be limited.

Regarding the data on each influencer obtained from the post-viewing questionnaire, when it came to Diego, the men who watched him would have dismissed his Stories; nevertheless, the women, including exceptions, would have gone to the influencer or product profile. 20% of women would watch more of Diego's content, although the influencer was unknown by both genders. The emotions most aroused in the subjects were, for men, amusement and annoyance and, for women, positive emotions, although also negative emotions (frustration or boredom). The most remarkable thing regarding attention in Diego's Story was the way he communicated and sounded (probably his accent). Diego's level of influence over the subjects was low except in women, with slightly more impact. We observed that none of the subjects would have purchased the product.

Regarding influencer Aroa, men left the Story, whereas women timidly accessed the product profile for more information. The emotions expressed by men regarding Aroa's video were negative; however, women expressed positive emotions (amusement, friendliness or emotion). The most striking thing about Aroa's Story was herself and the way she communicated. Regarding Aroa's level of influence over the subjects, we considered it limited, except for the case of women, which were more inclined to buy the product.

Regarding influencer Abi, there were no differences between men and women when it came to the amount of time spent on the platform, 50% of subjects recognised the influencer. There was a low perception of the influence of opinion leaders and ample use of Instagram. We observed that the main reaction to Abi's video was to skip the Story, although a percentage of women clicked through to the influencer's profile. The emotion aroused in the subjects was negative in men (associated to boredom) but positive in women, who described her as a source of amusement (66.67%) and surprise (11.11%), although also peculiarity (11.11%). The factors that most stood out about Abi's Story were the product (50% of men, 22.22% of women) and how she communicated (half of men and 66.67% of women). Regarding the influence described by subjects regarding Abi's Story, it was modest, except for 12.5% of women who considered it average. This limited influence diverges from the 25% of women who would have purchased the product.

Regarding influencer Alberto, we observed no remarkable differences in the years of Instagram use between men and women. He was recognised by men, although they do not follow him on Instagram. Women spent more time on Instagram, and the perception of the control influencers had was average. The sample's reaction to Alberto's Story for both genders was to skip it or leave it, except for a small percentage of men who would have swiped up to see more content about the product. The emotion and attention aroused in the subjects, for both men and women, reflected positive and negative feelings. Men were split 50/50 between amusement and indifference, while women, despite the prevalence of boredom (44.44%), also thought of friendliness or amusement, without forgetting about indifference. What stood out the most to both genders were Alberto's communication style and (in the case of women) his character

and the product. Alberto's range of influence over subjects was low for both genders, although half of the men and 25% of the women stated that they would have perhaps consumed the promoted product. Based on the results, we confirm that the most-viewed marketing campaigns on Instagram are Stories, that the influence of advisers on the consumer is limited and that the degree of influence generated over followers is proportional to the activation of emotion and attention. Therefore, H3 (The influence of advisers on the consumer is limited) was confirmed.

4. Discussion and conclusions

The research reflects the relevance for businesses to analyse attention and emotion in the use of marketing campaigns on social media, Instagram in this case. We confirm that the most-viewed elements on Instagram are Stories, in line with Brandmanic (2018). The most followed content is created by friends or about humour, music or fashion. The sample confirms that an "influencer" is a celebrity or a content creator, in contrast with what Campillo (2016) states, and the influence of advisers over platform users is considered limited.

Regarding the levels of emotion and attention activation, they are different according to the influencer's range of influence. The more influence generated over the individual, the greater emotion and attention activation observed. However, the lower the influence, less emotion and attention activation. This confirms the influencer marketing strategy (Augure, 2018; Alonso et al., 2018; Santamaría-de-la-Piedra & Meana, 2018), its impact in terms of advertising (Fondevila-Gascón et al., 2015; Tapia-Frade & Martín-Guerra, 2017), and sector (Jaromír et al., 2017), and the effectiveness of EDA (Aiger et al., 2013) as measurement technology.

So, we observed activation differences according to the influencer. Attentional activation was higher in influencer Aroa (low level) and emotional activation, in influencer Alberto (high level). We observed differences according to the subject's gender. Men revealed greater emotion and attention activation, especially regarding attention, with all the circumspection of an extendable sample of individuals and a scalable experiment.

We detected differences according to influencer and the subject's gender. So, arranged from lesser to greater emotional activation registered, influencer Aroa did not manage to generate emotion in the subject, although she did attract the attention of both genders. This activation became negative emotions, dismissal of the Story, lack of interest in the act of purchasing the product or, in men, viewing more of her content. Nevertheless, a small percentage of women sympathised with the content. Influencer Diego did not manage to arouse emotion, and only a higher level of attention in men. Women interacted with his Story and spoke more positively about it. No purchases or interest in his content were achieved from either gender. Influencer Abi raised strong emotions in men and less in women, and he/she did not manage to attract the subject's attention. Women showed more interest in her, expressed positive emotions and made the purchase. In men, although activation was greater, it did not convert into a purchase. Influencer Alberto generated emotion in both genders and attention only in men. Activation translated into positive emotions and produced a likely potential purchase in both genders. Therefore, we observed fluctuating ranges of attention and emotion.

The application of the registration with Sociograph to describe the nature of emotion and attention activation (EDA) in Instagram Stories presented various research limitations. Thus, the sample was limited, and male participation could be improved. Likewise, the number of influencers could also be optimised. Other variables could be taken into account, such as sound effects, clothing or visual effects in the influencers' videos, factors that can affect emotion and attention and which have been standardised for this study. Therefore, delving into the videos' visual standards and obtaining a larger and more varied sample of influencers are guidelines to follow in future studies.

In this sense, the influence and emotional load generated by social media content on the population suggests different types of research: sectoral, according to type of campaign, on different social media (even comparing them synchronously), on different media outlets, such as interactive HbbTV (Fondevila-Gascón et al., 2015), at different ages and different moments of the customer's journey. The use of other tools associated to neuromarketing (EEG or Eye tracker) can help to define the source of emotion and

attention, fundamental for future decisions that actors can take within the field of advertising, especially interactively (HbbTV), where the emotion-attention pairing is triggered by the dialogue between the audience and brands. Establishing categories and types of emotional and attentional impact through ads is both a stimulating and monetizable challenge for companies.

Funding Agency

This research is part of the "New forms of interactive advertising on television, Internet and digital media. Real applications on HbbTV" project, financed by the Ministry of Economy, Industry and Competitiveness, reference CSO2017-88895-R (MINECO/FEDER).

References

- Aiger, M., & Palacín, M. (2012). Medición de actividad grupal en relación a la interdependencia mediante Sociograph (medida electrodérmica grupal). *Revista Iberoamericana para la Investigación y el Desarrollo Educativo*, 9, 1-23. <https://bit.ly/2QU8qeD>
- Aiger, M., Palacín, M., & Cornejo, J.M. (2013). La señal electrodérmica mediante Sociograph: metodología para medir la actividad grupal. *Revista de Psicología Social*, 28(3), 333-347. <https://doi.org/10.1174/021347413807719102>
- Aiger, M., Palacín, M., Pifarré, P., Llopart, M., & Simó, M. (2016). Effectiveness of relaxation techniques before diagnostic screening of cancer patients. *Suma Psicológica*, 23(2), 133-140. <https://doi.org/10.1016/j.sumpsi.2016.06.002>
- Alonso, T., Braojos, D., & Costa, L. (2018). *Marketing de influencers: La eficacia de la marca personal*. Universidad de Valladolid. <https://bit.ly/37BzvZZ>
- Augure (Ed.) (2017). *Informe de Influencer. Marketing 2017*. Augure. <https://bit.ly/2KPhzku>
- Aviva, S. (2009). A european approach to media literacy: Moving toward an inclusive knowledge society. [Aproximación europea a la educación en medios: Avanzando hacia una sociedad del conocimiento inclusiva]. *Comunicar*, 32, 19-20. <https://doi.org/10.3916/c32-2009-01-004>
- Brandmanic (Ed.). *Estudio sobre marketing de Influencers en España*. Brandmanic. <https://bit.ly/2QI09tQ>
- CECABLE (Ed.) (2019). *Informe sobre uso de redes sociales*. CECABLE.
- Christakis, N.A., & Fowler, J.H. (2007). The spread of obesity in a large social network over 32 years. *New England Journal of Medicine*, 357(4), 370-379. <https://doi.org/10.1056/nejmsa066082>
- Cosculluela, A., Guillén, F., & Malapeira, J. (1988). Actividad electrodérmica (EDA), personalidad y estrés. *Anuario de Psicología*, 38, 107-116. <https://bit.ly/2QR6pj8>
- Dawson, M.E., Schell, A.M., Filion, D.L., & Berntson, G.G. (2007). The electrodermal system. In Cacioppo, J.T., Tassinary, L.G., & Berntson, G. (Eds.), *Handbook of Psychophysiology* (pp. 157-181). Cambridge University Press. <https://doi.org/10.1017/9781107415782.010>
- Fere, C. (1888). Note sur les modifications de la resistance électrique sous l'influence des excitations sensorielles et des emotions. *Comptes Rendus de la Société de Biologie*, 40, 217-219.
- Fondevila-Gascón, J. (2013). Periodismo ciudadano y cloud journalism: un flujo necesario en la sociedad de la banda ancha. *Comunicación y Hombre*, 9(9), 25-25. <https://doi.org/10.32466/eufv-cyh.2013.9.163.25-41>
- Fondevila-Gascón, J.F., Mir-Bernal, P., Carreras-Alcalde, M., & Seebach, S. (2015). *HbbTV history and its educational possibilities: Teaching options in times of the Internet*. In Science Press. <https://bit.ly/2KNpD5c>
- Hatfield, E., Cacioppo, J.T., & Rapson, R.L. (1993). Emotional contagion. *Current Directions in Psychological Science*, 2(3), 96-100. <https://doi.org/10.1111/1467-8721.ep10770953>
- IAB Spain (Ed.) (2018). *Estudio anual de redes sociales*. IAB Spain. <https://bit.ly/2KMis3V>
- IAB Spain (Ed.) (2019). *Libro Blanco de marketing de influencers*. IAB Spain. <https://bit.ly/2DaTHUn>
- Jaromír, T., Pavel, R., & Lenka, M. (2017). Neuromarketing approach to efficient food styling. *Journal of Interdisciplinary Research*, 7(1), 3-5. <https://bit.ly/2OK01Yu>
- Keil, A., Moratti, S., Sabatinelli, D., Bradley, M.M., & Lang, P.J. (2005). Additive Effects of Emotional Content and Spatial Selective Attention on Electrodermal Facilitation. *Cerebral Cortex*, 15(8), 1187-1197. <https://doi.org/10.1093/cercor/bhi001>
- Kramer, A.D.L., Guillory, J.E., & Hancock, J.T. (2014). Experimental evidence of massive-scale emotional contagion through social networks. *Proceedings of the National Academy of Sciences*, 111(24), 8788-8790. <https://doi.org/10.1073/pnas.1320040111>
- Levy, A. (2017). El estatus sobre el marketing de influencers 2017. <https://bit.ly/2QVqtRF>
- Lewinski, P. (2015). Don't look blank, happy, or sad: Patterns of facial expressions of speakers in banks' YouTube videos predict video's popularity over time. *Journal of Neuroscience, Psychology, and Economics*, 8(4), 241-249. <https://doi.org/10.1037/npe0000046>
- Monge, S., & Fernández, V. (2012). Neuromarketing: Tecnologías, Mercado y Retos. *Pensar la Publicidad. Revista Internacional de Investigaciones Publicitarias*, 5(2), 19-42. https://doi.org/10.5209/rev_pepu.2011.v5.n2.37862
- Pérez-Conde, M. (2016). *Influencer engagement, una estrategia de comunicación que conecta con la generación milenial*. [Degree's thesis, Universidad de Alicante]. <https://bit.ly/2qK0jGO>
- Plichta, M.M., Gerdes, A.B.M., Alpers, G.W., Harnisch, W., Brill, S., ... Fallgatter, A.J. (2011). Auditory cortex activation is modulated by emotion: A functional near-infrared spectroscopy (fNIRS) study. *NeuroImage*, 55(3), 1200-1207. <https://doi.org/10.1016/j.neuroimage.2011.01.011>
- Reeve, J. (1994). *Motivación y emoción*. McGraw-Hill. <https://bit.ly/33fzHdP>
- Rego, A., & Fernandes, C. (2005). Inteligência emocional: Contributos adicionais para a validação de um instrumento de medida. *Psicologia*, 19(1-2), 139-167. <https://doi.org/10.17575/rpsicol.v19i1/2.401>

- Santamaría-De-La-Piedra, E., & Meana-Peón, R. (2018). Redes sociales y fenómeno influencer. Reflexiones desde una perspectiva psicológica. *Miscelánea Comillas*, 75, 443-469. <https://bit.ly/33hfzYK>
- Smith, K. (2016). *49 Incredible Instagram statistics you need to know*. Brandwatch. <https://bit.ly/2KN9H36>
- Sociograph (Ed.) (2019). *Informe de actividad*. Sociograph. <https://bit.ly/2RquZaV>
- Tapia-Frade, A., & Martín-Guerra, E. (2017). Neurociencia y publicidad. Un experimento sobre atención y emoción en publicidad televisiva. *Innovar*, 27(65), 81-92. <https://doi.org/10.15446/innovar.v27n65.65063>
- Torreblanca, F., Juárez, D., Sempere, F., & Mengual, A. (2012). Neuromarketing: La emocionalidad y la creatividad orientadas al comportamiento del consumidor. *3C Empresa, Investigación y Pensamiento Crítico*, 6, 20-30. <https://bit.ly/2QLIO4E>
- Vecchiato, G., Kong, W., Maglione, A.G., Cherubino, P., Trettel, A., & Babiloni, F. (2014). Cross-cultural analysis of neuroelectrical cognitive and emotional variables during the appreciation of TV commercials. *Neuropsychological Trends*, 16, 23-29. <https://doi.org/10.7358/neur-2014-016-vecc>



AlfaMed



EuroAmerican Interuniversity Research Network
on Media Literacy for Citizenship



www.redalfamed.org





Victims and perpetrators of femicide in the language of the Mexican written press

Víctimas y victimarios de femicidio en el lenguaje de la prensa escrita mexicana

-  Elizabeth Tiscareño-García is Researcher in the School of Humanities and Education at the Tecnológico de Monterrey in Monterrey (Mexico) (A01470053@itesm.mx) (<https://orcid.org/0000-0002-5465-2472>)
-  Dr. Oscar-Mario Miranda-Villanueva is Professor and Researcher in the School of Humanities and Education at the Tecnológico de Monterrey (Mexico) (oscar.miranda@tec.mx) (<https://orcid.org/0000-0003-3180-889X>)

ABSTRACT

This study investigates the language used by national newspapers in Mexico: “El Universal”, “La Jornada”, “Milenio”, and “Reforma”, when addressing the issue of femicide regarding victims and perpetrators, as well as their relationship with the gender of the reporter and with each newspaper. The research is based on the analysis of qualitative content and the theoretical framework of framing. Categories were built on the type of language in cases of femicide of 360 journalistic texts published during 2017: 1) Narrative of femicide; 2) Justification of the perpetrator or alleged perpetrator; 3) Social issues; 4) Blaming the victim. The analysis yielded cases of victim blaming to a lesser extent than those of the perpetrator’s justification. Aspects of the narration of femicide stood out both by the gender of the reporter and by the media in the four newspapers, from two perspectives: 1) The fact, the follow-up, or the context; 2) The fact, legal aspects, and statistics. Reporters, men and women, tend to justify the perpetrator; male reporters blame the victim more than female reporters; and female reporters contextualize femicide through social issues: social violence, impunity, and failures in legal processes. “La Jornada” is inclined towards social issues, while “El Universal” tends to justify the perpetrator.

RESUMEN

En este estudio se investiga el lenguaje que utilizan los periódicos de tirada nacional en México: «El Universal», «La Jornada», «Milenio» y «Reforma», al momento de abordar el tema del femicidio con respecto a víctimas y victimarios o presuntos victimarios, así como su relación con el género del reportero y con cada periódico. La investigación se apoya en el análisis de contenido cualitativo, y el marco teórico-conceptual del «framing». Se construyeron categorías sobre el tipo de lenguaje en casos de femicidios de 360 textos periodísticos publicados durante 2017: 1) Narrativa del femicidio; 2) Justificación del victimario o presunto victimario; 3) Problemática social; 4) Culpabilización de la víctima. El análisis arrojó casos de culpabilización de la víctima en menor proporción que los de la justificación del victimario. Sobresalieron aspectos de la narración del femicidio tanto por el género del reportero como por el medio en los cuatro periódicos, desde dos perspectivas: 1) El hecho, el seguimiento o el contexto; 2) El hecho, los aspectos legales y la estadística. Reportero y reportera tienden a justificar al victimario; el reportero culpabiliza más a la víctima que la reportera; y la reportera contextualiza más el femicidio a través de la problemática social: violencia social, impunidad y fallas en los procesos legales. «La Jornada» se inclina por la problemática social, mientras que «El Universal» tiende a la justificación del victimario.

KEYWORDS | PALABRAS CLAVE

Violence, woman, victim, perpetrator, femicide, qualitative research, framing theory, digital press.
Violencia, mujer, víctima, victimario, femicidio, investigación cualitativa, teoría del encuadre, prensa digital.

1. Introduction

In 2007 in Mexico, the General Law on Women's Right to a Life Free of Violence (LGAMVLV) was published, a legal strategy with which the State sought to address femicide. Ten years later, in 2017, the statistics showed an increase in crime against women at the hands of men for gender related reasons with 671 cases, while in 2015 and 2016, 389 and 588 were counted respectively (SENSP, 2018).

Research on femicide in Mexico is based on two contexts: how feminism confronts patriarchy through the identification of gender violence (Amorós, 1992; Lagarde, 1990), and the paradigmatic case of Ciudad Juárez, Chihuahua, Mexico: during 1993, 12 women were killed and thrown in different parts of the city as if they were garbage (Gallur, 2014; Wright, 2011). In both situations, it is possible to identify that the victim is waste in this process, the disposable piece, and those who dominate the scene are men (Segato, 2013).

Femicide involves the murder of a woman at the hands of a man because she is a woman (Caputi & Russell, 1990) and it represents the end of a continuum of anti-female terror that includes a wide variety of verbal and physical abuse (Radford & Russell, 1992; Monárrez, 2010). From a legal perspective, femicide is defined as an extreme form of gender violence against women that occurs as a result of the violation of their human rights, and which happens in public and private spheres (LGAMVLV, 2007). The law in Mexico focuses more on strategies of persecution and punishment of those responsible for the acts of violence against women, than on demanding the elimination of messages that blame or stigmatize the victim from the media (Rodríguez, 2010).

Several factors converge in violence against women: misogyny, sadistic sexuality, and the social construction of masculinity (Caputi, 1987; Vallejo, 2002) which are ratified in court trials and represented in the media (Radford, 2006). There is a hierarchical language and a pyramidal organization (Segato, 2013) which reflects attitudes and values congruent with an androcentric discourse, which represents the domain and consolidation of the webs of power to maintain social control (Foucault, 1999).

The media play a fundamental role as strategists of change towards a society without gender discrimination. The reasons of a subjective nature, for which the murders are carried out, are explained by the perpetrator or by witnesses who knew the victim and talked to the press; the dead woman cannot defend herself or give her version of the facts (Monárrez, 2010). This content is not presented as a social problem of interest to the public, instead, only information on individual cases prevails (Rodríguez, 2008).

Commonly, such violence is attributed to individual dysfunction, to a drunk and angry attacker, to the volatile nature of love, to the alcoholic or the drug addict (Lagos, 2008), or to the creation of a tragic cultural hero. Many femicide-suicides are explained as ambiguous homicide-suicides or as mysteries, not as domestic or gender-based violence (Richards, Gillespie, & Smith, 2014). Factors such as poverty, irrationality, and passivity are mentioned in relation to the victims of femicide: in a patriarchal world they are defined as equivocal, bad women, sick, disabled, rare, failed, and crazy (Lagarde, 1990). An image is created between what a good woman and a bad one are, which is mediated by prejudices and assessments (Alcocer, 2014; Lagos, 2008).

In addition, for Shoemaker and Reese (1996) the article's presentation is conditioned by the journalist's gender, the writing is permeated by the gender, ethnicity, education and sexual orientation of the writer (Berkowitz & Liu, 2014). It is notorious that in a staff of reporters there are more men than women, and the articles on femicide are informed predominantly by male reporters (Danés, 2017; Niemi & Pitkanen, 2016). In addition to this, Point J of the Beijing Platform highlights the neglect of the issue of gender by the persisting stereotypes in the media (UN, 1995).

In this case, framing (Benton & Frazier, 1976; Guo, Tien, & McCombs, 2012; Miranda & Iglesias, 2015) as a theoretical approach is used to propose the study of language in the news reports and the context of the news. The frames are interpreted as macro-attributes that allow defining a problem of the event and interpreting its causes (McCombs, 2004; Scheufele & Tewksbury, 2007). The definitions of a situation are constructed by organizational principles that govern social events and our involvement in them (Ardèvol-Abreu, 2015).

On framing and gender violence, Meyers (1994) research findings showed that the victim was blamed directly with an adverse profile: failure to report previous assaults, infidelity, or inappropriate behaviour

with men; also, as indirect blame: by highlighting positive attributes of the aggressor. Bullock and Cubbert (2002) investigated that reporters portrayed the perpetrators as a different kind of people: violence only happens to certain people who are part of other cultures and of a lower social class; there was drug and alcohol use before the act of violence; the perpetrators were excused as self-defending. Gillespie et al. (2013) identified that the reporting focuses more on the criminal past than on the present femicide case. While Fagoaga (1994) argues that gender violence is classified as a crime of passion, in doing so, it becomes a stereotyped causal relationship. The news reports focus on the perpetrator due to mental or physical illness (Taylor, 2009).

In this study, we analyse how journalistic texts address language on the issue of femicide about victims and perpetrators or alleged perpetrators, in particular, we investigate: 1) What language journalists use to refer to victims and perpetrators; 2) The gender of the journalist and how it relates to the type of language used; and, 3) How these newspapers report the victims and the perpetrators of a femicide.

2. Data and methodology

The universe studied includes all news reports related to femicide and gender violence published in 2017. "La Jornada" published 348 notes (20.7%), "El Universal" 549 (32.7%), "Milenio", 525 (31.3%), and "Reforma", 257 (15.3%). There were about 1,679 texts (100%) (Table 1). These are national circulation newspapers and have the qualities of elite newspapers (Merrill, 1968). They represent an ideological plurality: "La Jornada", the left; "El Universal", centre; "Reforma", the right (Rodelo & Muñoz, 2016; Durán, 2009) and; "Milenio", moderate left centre (Nájera, 2007). In relation to daily print run: "Reforma", prints 1,388,875; "El Universal", 119,429; "La Jornada", 131,355, and; "Milenio", 99,827 (PNMI, 2019).

Content analysis was used (Krippendorff, 2004; Riffe, Lacy, & Frederick, 2005; Wimmer & Dominick, 2011) through an inductive approach, a priori, to construct analysis categories with information from the news reports and research questions. Content analysis is a study and analytical method of communication: it is systematic, objective, and quantitative, and measures certain variables (Wimmer & Dominick, 2011); it is also used to analyse information from a qualitative approach (Krippendorff, 2006).

The unit of analysis of the study was defined as news reports which mention victims and perpetrators or alleged perpetrators of femicides. In the beginning, a census of all the news reports relating to femicide and gender violence was carried out. From there, the texts that focused on victims and perpetrators were selected (Table 1). A census should include all groups, classes of subjects or objects, concepts, or phenomena of a universe or population (Wimmer & Dominick, 2011).

In this case, the information of all the texts which met the criteria of the universe was collected; however, only those which met the criteria were analysed, 360, of which 52 (14.4%) were articles from "La Jornada", 134 (37.12%) from "El Universal", 110 (31.02%) from "Milenio" and 64 (17.46%) from "Reforma". Approximately, 742 information pages in total. In the cases of "Milenio" and "La Jornada", the news reports were selected from their respective websites; those from "El Universal" and "Reforma" were gathered via "ProQuest", which was accessed through Tecnológico de Monterrey's digital library.

The advanced search tool from "Reforma" was used with the search prompts: Publication Identification (PUBID) (32,652) AND (Woman OR girl OR young) AND (murdered OR homicide OR dead OR femicide OR crime). In the case of "El Universal", the search was: PUBID (47,134) AND (Woman OR girl OR young) AND (murdered OR homicide OR dead OR femicide OR crime); the search covered 2017 in general and by months. To access "La Jornada", a link that was in the newspaper website was used, which in turn took you to the Google Search engine through the website of the National Autonomous University of Mexico (UNAM) (<https://bit.ly/2r16GoB>). The criteria adopted were: (Jan. 2017) AND (Woman OR girl OR Young) AND (murdered OR homicide OR dead OR femicide OR crime).

With respect to "Milenio", the search was done directly on its website (<https://bit.ly/32Vg8al>), and (January.2017 Femicide) was the search prompt. Searches were carried out each month with different words. As can be seen, three different search methods were applied, the newspapers were not accessible through the same platform, and "Reforma" and "El Universal" are subscription-based. On the other hand, not every news report from the required dates was available from "La Jornada" and "Milenio"

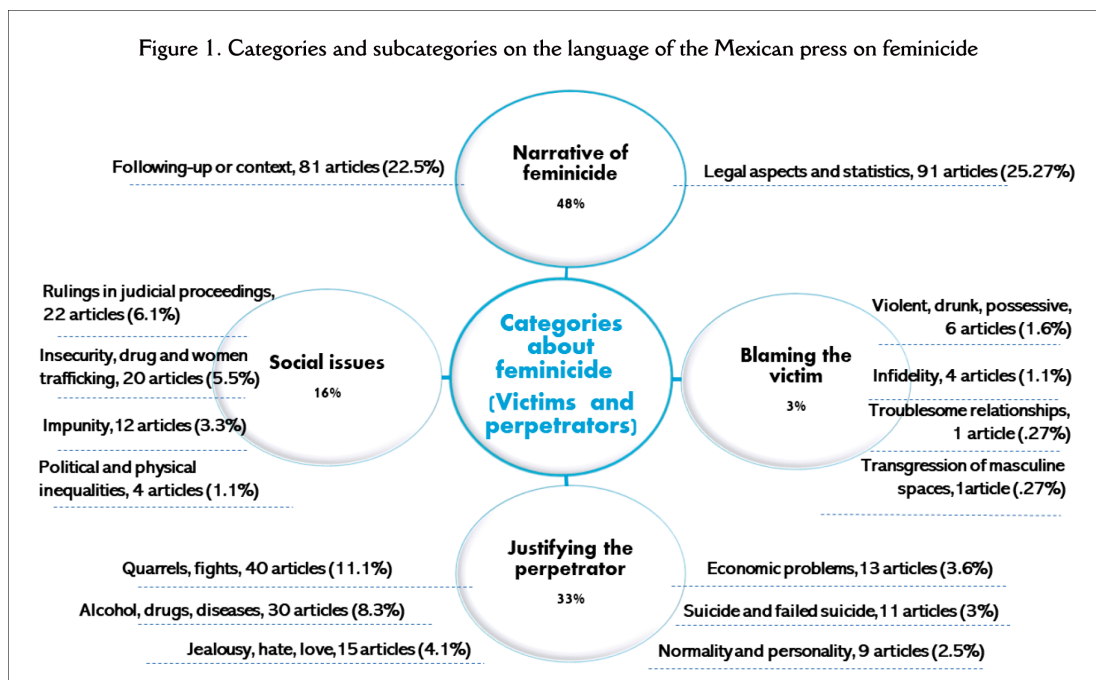
via “ProQuest”. The greatest difficulty was with “La Jornada” because its digitalization process began after mid-2017; the files accessible via its platform were the printed version, without the capacity to search the text. All the information collected was analysed with the Nvivo 12 software.

Theme	“La Jornada”	“El Universal”	“Milenio”	“Reforma”	Total	% Total
Femicide and gender violence	348	549	525	267	1679	100%
Victims and perpetrators of femicide	52	134	110	64	360	21.5%

3. Results

3.1. Journalistic language and texts

Categories were developed after reading news articles with the research topic in mind, regarding the way in which victims and perpetrators are presented in the Mexican written press in femicide reporting. From the analysis of the journalistic texts, four categories emerged: narrative of femicide (48%), justifying the perpetrator or alleged perpetrator (33%), social issues (16%) and blaming the victim (3%), which are made up of a series of subcategories (Figure 1).



3.1.1. Narrative of femicide

1) The fact: The murder of a woman at the hands of a man and/ or its follow-up. In this sense, some articles only mention the facts or part of the judicial process. “Her relatives found Carmen’s lifeless body inside her bedroom at Juárez Pantitlán District, with strangulation marks. The body was lying on the bed covered with blankets, as if she were asleep, and her husband, the presumed culprit, had already escaped” (“Reforma”, December 26th, 2017).

2) The fact and/ or the follow-up contain elements such as statistics, other cases, laws, sanctions or penalties. The articles include legal language which mention the punishment for committing femicide, the legal process, and what the law states about it. “Mexico City’s Superior Court of Justice informed that the sentenced person must pay 365,200 pesos for damages and 4,382 pesos for funeral expenses”

("Milenio", April 27th, 2017). Femicide statistics that put in context the situation of the municipality where the crime was committed are mentioned, or those where there is a recount of all the recent cases, this is done to present the problem as more complex than just an isolated event. "The woman showed marks of violence, and according to the first testimonies, the attacker was her romantic partner, who fled the house. Griselda was last seen on Sunday, April 30th, at her home... According to civil society organizations, 42 feminicides have been registered in the Oaxaca entity so far this year" ("El Universal", May 07th, 2017).

3.1.2. Justification of the perpetrator

It is acknowledged that the man is responsible for the murder of a woman. However, indirectly, the woman is also to blame. This happens when the articles highlight positive aspects of the perpetrator, which put his responsibility into question.

Some of the features that stand out are a justification because of an argument, quarrel or fight; these are followed by reporting drug use, alcohol abuse, and mental disease. "The Attorney General Office suspects Jorge Luis, and still does not rule out femicide. All because, while drunk, the 29-year-old man admitted that he had drunk alcohol and taken drugs near the School of Chemistry and that they had had an argument. He added that the victim was called Lesby, 22 years old, with whom he had lived for four months" ("Reforma", May 05th, 2017).

Anger, rage, love, and jealousy are recurring themes for justifying the perpetrator. "He killed her out of jealousy... Anayetzin Damaris was just over two months pregnant, and although there was a history of violence between them, they allowed her to approach him one last time to give him the news" ("El Universal", November 17th, 2017).

In this category, other characteristics about the person who commits the crime are shown: he murdered a woman because he had economic problems and had no other alternative. Here the perpetrator is given a positive image, and he is described as a normal person on account of his behavior with other people besides the victim.

In addition, there is the man who after killing a woman tries to take his life; he is presented as a kind of suicidal, or failed suicidal, hero. "According to the Port's Municipal Police, the woman's neighbours reported violent acts in one of the houses and when the agents arrived, they noticed the crime. The husband had a knife and had tried to commit suicide by self-inflicting two wounds on his neck" ("El Universal", November 1st, 2017).

On the other hand, in the news reports the perpetrator is mentioned as a man of merit for finally surrendering to justice, after first fleeing. "When I saw what I had done, I felt terrible; I went to my dad and explained to him what had happened. I could not take it anymore and turned myself in to the police" ("El Universal", October 30th, 2017).

Some perpetrators are shown as a figure of normality, likeable and successful, someone who would be incapable of committing such a crime. "The Investigative Police in Mexico City seeks Mario Sáenz for his alleged responsibility in the murder of his girlfriend, Victoria Pamela Salas Martínez... considered by media outlets that have interviewed him as the best 'skater' in the capital" ("Milenio", October 18th, 2017).

3.1.3. Social issues

Concerning the category of social issues, the crimes against women are justified as part of a more general social violence, even though they may know who is responsible or they may even have him in custody, it is contextualized in an atmosphere of widespread violence, under the permissiveness and normalization by the authorities and other institutions.

The articles focus on the failures to provide security for the population and the ones of legal processes; the let-downs relating to violence in general, drug-dealing or women-trafficking, as well as by widespread impunity. To a lesser extent, there is a mention of gender roles and the incursion of women into spaces that are culturally perceived exclusively for males. There is criticism of the authorities and the way they acted is put into question.

Activist groups, specialists, experts, family members and acquaintances of the victims present most of the demands. “Criminal experts and lawyers specialized in gender violence ruled out that Lesvy’s death, in a telephone booth in University City Campus on May 3rd, was a suicide, as stated by the Attorney General Office. The National Citizen Observatory [a Mexican civil organization] released a video yesterday in which it is shown that the conclusion of the expert opinions of the PGJ [Attorney General Office] does not coincide with the position in which the 22-year-old was found” (“Reforma”, August 4th, 2017).

Femicide is considered as collateral damage of organized crime, in all its forms, thus the perpetrator disappears in the background, and the violent atmosphere becomes both the protagonist and the one responsible. “Mother and daughter were shot dead at their home in Ciudad Juárez, Chihuahua, after raising a family brawl early yesterday... He explained that this wave of violence suffered by the city from March of 2016 to date, with the increase in homicides in the style of organized crime, from October last to March this year, add up to 800 dead” (“La Jornada”, March 3rd, 2017).

The lack of haste in investigations is seen as a reflection of frequent impunity. It is referred to as part of the social fatigue generated by the role played by the authorities. “Relatives and colleagues of Verónica Guadalupe Benítez Vega... demanded the Attorney General of the State of Mexico (FGJEM) to solve this femicide, and not give ‘carte blanche’ to impunity” (“La Jornada”, October 31st, 2017).

When victims are women in politics with greater relevance and presence than their husbands, or when they have a higher position than their co-worker romantic partner or in a lesser physical condition, then there are remarks of the activation of patriarchal mechanisms that lead to crime against some women. “The anger of some men at the professional and economic success of their [romantic] partners is reflected not only in that they are jealous because of the achievements of the women they live with, but with outbursts discrediting them. Besides the complaint that ‘they do not tend to their man’, tension arose that, in this case, seems to have turned into rage, said the Professor in Sociology” (“El Universal”, November 07th, 2017).

3.1.4. Blaming the victim

The woman is responsible for her death. In this case, it is recognized that the man was the one who murdered her; however, mitigating circumstances are mentioned. She was unfaithful, had a bad temper, was under the influence of alcohol or drugs, or she deserved it for working in a bad place.

Although this trend shows a lower percentage, the topics of violence, addiction, possessiveness, alcoholism, dependence, or introversion are aspects that are singled out. “As stated in the criminal court, for two years the two teachers had a relationship, but the man: ‘wanted to get rid of her because she was very possessive of him’. He wanted to leave her because he wanted to get married and have a family, but she would not allow it” (“El Universal”, July 2nd, 2017).

The crime against women for being unfaithful stands out in the category of blame. “Gilberto Morales Montemayor murdered his wife and threw the body into a ravine in Montemorelos, and indicated that he suspected she had been unfaithful” (“Milenio”, December 21st, 2017).

3.2. Reporter’s gender and its connection to the language they use

After identifying the way in which the articles address femicide in relation to the language they use about victims and perpetrators or alleged perpetrators, the connection between the language used in the written press and the gender of the Journalist is also presented, as shown in Table 2.

In this breakdown it can be seen how the narration of the fact is focused on both male (14%) and female reporters (14%) and the news reports without the author’s name given (18.5%), that is, 46.5% of 48%. Female reporters (7%) and male reporters (6%), as well as the media (3%), provide 16% of the content on this category.

Table 2. Breakdown of the type of language according to the gender of the writer

Categories	Female Reporter		Male Reporter		Outlet/Agency		Female & Male Reporters		Total	
	News reports	Mentions	News reports	Mentions	News reports	Mentions	News reports	Mentions	News reports	Mentions
1.Social issues	25 7% 43%	39 9% 44.5%	21 6% 36%	31 7% 35.5%	12 3% 21%	18 4% 20%	0 0% 0%	0 0% 0%	58 16% 100%	88 20% 100%
2.Narrative of feminicide	50 14% 29%	54 12% 30%	50 14% 29%	56 12.5% 30.5%	67 18.5% 39%	67 15% 37%	5 1.5% 3%	5 1% 2.5%	172 48% 100%	182 40% 100%
3.Justification of the perpetrator	28 8% 24%	37 8% 23%	44 12% 37%	66 14.5% 40%	46 13% 39%	69 13.5% 37%	0 0% 0%	0 0% 0%	118 33% 100%	163 36% 100%
4.Blaming the victim	1 0.5% 8%	1 0.5% 6%	6 1.5% 50%	9 2% 53%	5 1% 42%	7 1.5% 41%	0 0% 0%	0 0% 0%	12 3% 100%	17 4% 100%
Total	104 29%	131 29%	121 34%	162 36%	130 36%	152 34%	5 1%	5 1%	360 100%	450 100%

In the reporting where the victim is blamed, male reporters (1.5%) and the media (1%) have a higher percentage than female reporters (0.5%); the victim is judged, and negative aspects about her are mentioned; she is re-victimized because she was possessive, addicted, unfaithful, or an alcoholic. This category covers 3% in the news reports.

3.3. Way in which newspapers report victims and perpetrators

From the connection of the four newspapers with the four categories, it follows that the total of the news reports (172) represent 47% and mentions (182) 40% which fall in the category of narrative of feminicide. The newspapers with the highest density in the census are “El Universal” (134 news reports, 37%) and “Milenio” (110 news reports, 30.5%); in the category of the narrative of feminicide, “El Universal” (60 news reports) and “Milenio” (50) also present more than “La Jornada” (27) and “Reforma” (34). In general, the four newspapers present a larger tendency in this last category if compared to the other three (Table 3).

Table 3. Breakdown of the type of language in the texts according to the newspapers

Categories	“La Jornada”		“El Universal”		“Milenio”		“Reforma”		Total	
	News reports	Mentions	News reports	Mentions	News reports	Mentions	News reports	Mentions	News reports	Mentions
1.Social issues	21 5.5% 36%	30 6.5% 34%	17 5% 29%	30 6.5% 34%	16 4.5% 28%	23 5% 26%	4 1% 7%	5 1% 6%	58 16% 100%	88 19% 100%
2.Narrative of feminicide	27 7% 16%	30 6% 16%	60 16.5% 35%	65 14.5% 36%	51 14% 30%	52 11.5% 29%	34 9.5% 20%	35 8% 19%	172 47% 100%	182 40% 100%
3.Justification of the perpetrator	6 2% 5%	6 1% 4%	48 14% 41%	79 18% 48%	39 11% 33%	50 11% 31%	25 7% 21%	28 6.5% 17%	118 34% 100%	163 37% 100%
4.Blaming the victim	0 0% 0%	0 0% 0%	9 2% 75%	14 3% 82%	2 0.7% 17%	2 0.5% 12%	1 0.3% 8%	1 0.5% 6%	12 3% 100%	17 4% 100%
Total	52 14.5%	65 14.5%	134 37%	188 42%	110 30.5%	127 28%	64 18%	70 15.5%	360 100%	450 100%

In the category justification of the perpetrator, regarding the news reports, “El Universal” (14%) and “Milenio” (11%) are above “La Jornada” (2%), “Reforma” has 7% of the total 34% total. In this category, in the relation of both news reports (118) and mentions (163) in “El Universal” the number is higher (48 and 79, respectively), which means that more mitigating factors which benefit the victimizer are mentioned, such as the quarrels, arguments, fights, and jealousy. In the category of social problems (58 news reports) which is connected to the context of violence, insecurity, short comings in the justice system and impunity, “La Jornada” (21 news reports) has a higher incidence and criticism prevails regarding these issues, while opposed to this, “Reforma” (4) has very few news in this category. Finally, on the category of blaming

the victim, the condemnatory effect on women despite being the victim, 9 texts out of 12 appeared in “El Universal”.

4. Discussion and conclusions

The language of the texts provided several categories that open the range of characteristics within the news reports. Not only were previously explored facets identified, such as blaming the victim, justifying the perpetrator, or how the crimes against women were approached (Bullock & Cubbert, 2002; Danés, 2017; Gillespie et al., 2011; Gillespie et al., 2013; Meyers, 1994; Richards et al., 2014; Taylor, 2009), but others were also identified as narratives of the facts. The reason why narratives of the facts could be connected to the newspaper’s profile, all of which are of national circulation and considered elite news outlets. It could also be because the articles are published in sections such as “States”, “City” or “Metropolis”, which takes them away from the crime section, and of being considered “nota roja” [sensationalist crime news], presenting them as a social interest issue, which is part of what the gender perspective handbooks recommend. In this paper, we find the dichotomous aspects of the language Meyers (1994) mentions: blaming the victim and justifying the perpetrator, however, the ratio of blame is 3%, and the justification of the perpetrator is 34%, a figure that coincides with reports from other works (Danés, 2017). This caught our attention. It could be said that the media avoid re-victimization directly when dealing with the victim; nevertheless, they do it indirectly through justifying the perpetrator, which could be because the primary sources are official.

On the category of the journalist’s gender, the literature indicates that the male figure prevails (Danés, 2017; Niemi & Pitkanen, 2016). Male and female reporters write information according to different contexts (Berkowitz & Liu, 2014; Shoemaker & Reese, 1996). In this case, there is no gender difference of the reporter between the categories with the highest tendency, but there is when writing about the social issue’s category. Female reporters have more impact, which could suggest are more critical about security issues and the judicial system, and could be identified with a feminist trend; however, for the media workers, the recommendation of the Beijing Platform (UN, 1995) prevails, which indicates the importance of educating students with a gender perspective, with critical judgment and analytical ability, to produce better journalists.

In the analysis of the language used in the news reports, and the identified categories, it was found that 1) all newspapers have a high percentage of the category related to narratives of the facts; 2) “Milenio”, “El Universal”, and “Reforma” tend to justify the offender; 3) “La Jornada” focuses on social issues, the newspaper that does this the least is “Reforma”; while “Milenio” and “El Universal” present relatively similar numbers in so far as to that category. This suggests that newspapers reporting is connected to their ideological spectrum, especially in social issues; however, for this study, that was a limitation because the research does not get into this aspect. On blaming the victim and justifying the perpetrator the findings of this study are similar to those of Danés (2017), but different from the works of Alcocer (2014) and Lagos (2008), because the adjectives used by the newspapers when blaming the victim are few, but there are many of the perpetrators pointed out in most of the investigations.

In summary, the language of the texts about victims and perpetrators could be changing because 1) the profile of the newspapers could be contributing to the conformation of another set of attributes which do not present an emphasis on other studies; 2) to some extent there is a self-censorship by the media to omit certain language which blames the victims directly; 3) the work that is constantly carried out by the current of feminism and that is iterative helps to diminish the effect of blaming the victim directly; 4) part of justifying the perpetrators could come from official voices, mainly done through press releases; and 5) of the constant mention of international laws or regulations to counteract the negative effect of media coverage on the re-victimization of women. There are no clues regarding the causes why male and female reporters act in a certain way at the time of writing the information. That leaves the interview of those who write these news reports pending in order to know the aspects that they consider when addressing these issues. It would also be interesting to know how audiences receive this information and how they interpret and use it to refer to the issue of femicide and victims and perpetrators, and thus be able to know how much the journalistic text is connected to the information that readers receive.

Funding Agency

The article was written within the project "Language of the Mexican written press on victims and perpetrators of femicide" funded by the Ph.D. scholarship from the Conacyt-Tecnológico de Monterrey, and the Santander scholarship that funded gender studies at the Autonomous University of Madrid (January-June 2019).

References

- Alcocer, M. (2014). "Prostitutas, infieles y drogadictas". Juicios y prejuicios de género en la prensa sobre las víctimas de feminicidio: el caso de Guerrero, México. *Antipoda*, 20, 97-118. <https://doi.org/10.7440/antipoda20.2014.05>
- Amorós, C. (1992). Notas para una teoría nominalista del patriarcado. *Asparkia*, 1, 41-58. <https://bit.ly/32PHdfd>
- Ardévol-Abreu, A. (2015). Framing o teoría del encuadre en comunicación. Orígenes, desarrollo y panorama actual en España. *Revista Latina de Comunicación Social*, 70, 423-450. <https://doi.org/10.4185/rlds-2015-1053>
- Benton, M., & Frazier, P.J. (1976). The agenda setting function of the mass media at three levels of 'information holding'. *Communication Research*, 3(3), 261-274. <https://doi.org/10.1177/009365027600300302>
- Berkowitz, D., & Liu, Z. (2014). The social-cultural construction of news: From doing work to making meanings. In Fortner, R., & Fackler, M. (Eds.), *The handbook of media and mass communication theory* (pp. 301-313). Wiley Blackwell. <https://doi.org/10.1002/9781118591178.ch17>
- Bullock, C., & Cubbert, J. (2002). Coverage of domestic violence fatalities by newspapers in Washington State. *Journal of Interpersonal Violence*, 17(5), 475-499. <https://doi.org/10.1177/0886260502017005001>
- Caputi, J. (1987). *The age of sex crime*. The Popular Press.
- Caputi, J., & Russell, D.E. (1990). Femicide: Speaking the unspeakable. *Ms.*, (pp. 34-47).
- Danés, S. (2017). La representación del feminicidio en la prensa regiomontana [Tesis de maestría, Tecnológico de Monterrey]. Repositorio Institucional del Tecnológico de Monterrey. <https://bit.ly/2rRsBiR>
- Durán, G.M. (2009). La Ideología en los medios: Una propuesta para un mapa conceptual de la prensa en México [Tesis de Maestría, Tecnológico de Monterrey]. Repositorio Institucional del Tecnológico de Monterrey. <https://bit.ly/2qYLrno>
- Fagoaga, C. (1994). Comunicando violencia contra las mujeres. *Estudios sobre el Mensaje Periodístico*, 1, 67-90. <https://bit.ly/2rPe8nq>
- Foucault, M. (1999). *Estética, ética y hermenéutica*. Paidós.
- Gallur, S. (1999). *CIMAC y la cobertura del feminicidio de Ciudad Juárez, 1999-2009*. Universidad Autónoma. <https://bit.ly/2OjK5f4>
- Gillespie, L., Richards, T., Givens, E., & Smith, M. (2013). Framing deadly domestic violence: Why the media's spin matters in newspaper coverage of femicide. *Violence Against Women*, 19(22), 222-245. <https://doi.org/10.1177/1077801213476457>
- Gillespie, L., Richards, T., Kirkland, L., & Dwayne, S. (2011). Exploring News Coverage of Femicide: Does Reporting the News Add Insult to Injury? *Feminist Criminology*, 6(3), 178-202. <https://doi.org/10.1177/1557085111409919>
- González-Rodríguez, S.G. (2010). *Huesos en el desierto*. Anagrama.
- Guo, L., Tien, L., & McCombs, M. (2012). An expanded perspective on agenda setting effects. *Revista de Comunicación*, 11, 51-68. <https://bit.ly/2OiFVnD>
- Krippendorff, K. (2004). *Content analysis. An introduction to its methodology*. Sage Publications.
- Krippendorff, K. (2006). *The semantic turn. A new foundation for design*. Taylor & Francis.
- Lagarde, M. (1990). Identidad femenina. *OMNIA*, 6(20), 51-83.
- Lagos, C. (2008). El feminicidio según la prensa chilena: Otra forma de violencia contra las mujeres. [Tesis de maestría, Universidad de Chile]. Repositorio académico de la Universidad de Chile. <https://bit.ly/35awvlg>
- Ley General de Acceso de las Mujeres a una Vida Libre de Violencia §Primera Sección (2007). <https://bit.ly/355Ui5G>
- McCombs, M. (2004). *Setting the agenda: The mass media and public opinion*. Polity Press.
- Merrill, J.C. (1968). *The elite press and great newspapers of the world*. Pitman.
- Meyers, M. (1994). News of battering. *Journal of Communications*, 44, 47-63. <https://doi.org/10.1111/j.1460-2466.1994.tb00676.x>
- Miranda, O., & Iglesias, A. (2015). 'Agenda-setting' de medios en la guerra contra las droga. *Estudios sobre el Mensaje Periodístico*, 21, 403-420. https://doi.org/10.5209/rev_espmp.2015.v21.n1.49102
- Monárrez, J. (1993). Las diversas representaciones del feminicidio y los asesinatos de mujeres en Ciudad Juárez, 1993-2005. In Fragoza, M., Gómez, C., Flores, F., César, M., & Salas, R. (Eds.), *Violencia contra las mujeres e inseguridad ciudadana en Ciudad Juárez* (pp. 353-398). El Colef y Porrúa. <https://bit.ly/2DRgMvB>
- Mujeres, O.N.U. (Ed.) (1995). Declaración y plataforma de acción de Beijing. <https://bit.ly/2OqNs3T>
- Nájera, L. (2007). Manifestaciones de la noticia cultural en dos diarios nacionales: Análisis del discurso de notas informativas publicadas en la 'Jornada' y 'Milenio Diario' [Tesis de grado, UNAM].
- Niemi, M., & Pitkanen, V. (2016). Gendered use of experts in the media: Analysis of the gender gap in Finnish news journalism. *Public Understanding of Science*, 26(3), 355-368. <https://doi.org/10.1177/0963662515621470>
- Padrón, N. (2019). *Consulta de medios. Padrón Nacional de Medios Impresos (PNMI)*. Secretaría de Gobernación. <https://bit.ly/37f1qhO>
- Radford, J. (2006). Introducción. In Russell, D.E., & Radford, J. (Eds.), *Feminicidio. La política del asesinato de las mujeres* (pp. 33-53). CEIICH-UNAM.
- Radford, J., & Russell, D.E. (1992). *Femicide: The politics of woman killing*. Twayne Publishers. <https://bit.ly/2OUGHC0>
- Richards, T., Gillespie, L., & Smith, M. (2014). An examination of the media portrayal of femicide-suicides: An exploratory frame analysis. *Feminist Criminology*, 9(1), 24-44. <https://doi.org/10.1177/1557085113501221>

- Riffe, D., Lacy, S., & Frederick, F. (2005). *Analyzing media messages. Using quantitative content analysis in research*. Lawrence Erlbaum. <https://bit.ly/37gmqFg>
- Rodelo, F.V., & Muñoz, C. (2017). La orientación política del periódico y su influencia en la presencia de encuadres y asuntos dentro de las noticias. *Estudios sobre el Mensaje Periodístico*, 23(1), 241-257. <https://doi.org/10.5209/esmp.55594>
- Rodríguez, C. (2008). Del crimen pasional a la violencia de género: Evolución y tratamiento periodístico. *Ambitos*, 17, 171-188. <https://doi.org/10.12795/ambitos.2008.i17.11>
- Scheufele, D.A., & Tewksbury, D. (2007). Framing, agenda setting, and priming: The evolution of three media effects models. *Journal of Communication*, 57(1), 9-20. <https://doi.org/10.1111/j.0021-9916.2007.00326.x>
- Segato, R. (2013). *La escritura en el cuerpo de las mujeres asesinadas en Ciudad Juárez. Territorio, soberanía y crímenes de segundo estado*. Tinta Limón. <https://bit.ly/2RsO4co>
- SESNP (Ed.) (2017). Informe de víctimas de homicidio, secuestro y extorsión. <https://bit.ly/2QnwNAO>
- Shoemaker, P., & Reese, S. (1996). *Mediating the message: Theories of influences on mass media content*. Longman. <https://bit.ly/2r36JAg>
- Taylor, R. (2009). Slain and slandered: A content analysis of the portrayal of femicide in crime news. *Homicide Studies*, 13(1), 21-49. <https://doi.org/10.1177/1088767908326679>
- Vallejo, C. (2002). Representación de la violencia contra la mujer en la prensa española ('El País' / 'El Mundo') desde la perspectiva crítica. Un análisis crítico del discurso androcéntrico de los medios [Tesis Doctoral, Universidad Pompeu Fabra]. <https://bit.ly/2D9CxGL>
- Wimmer, R., & Dominick, J. (2011). Part two. Research approaches. In *Mass Media Research* (pp. 114-148). Wadsworth Cengage Learning.
- Wright, J.W. (2011). Necropolitics, narcopolitics, and femicide: Gendered violence on the Mexico-U.S. Border. *Signs*, 36(3), 141-141. <https://doi.org/10.1086/657496>



INTERUNIVERSITY MASTER IN
**Communication &
 Audiovisual education**
 master-educomunicacion.es

Comunicar 63



aleidoscope

Research

Investigaciones

Studies

Estudios

Proposals

Propuestas

14·15·16

OCTOBER, 2020 · QUITO (ECUADOR)



V Alfamed International Congress

Social Media and Citizenship:
Towards a cyberconnected and empowered world



www.alfamedv.wixsite.com/vcongresoalfamed





AlfaMed





SEO and the digital news media: From the workplace to the classroom

SEO y cibermedios: De la empresa a las aulas

-  Dr. Carlos Lopezosa is Researcher in the DigiDoc Group in the Department of Communication at Pompeu Fabra University in Barcelona (Spain) (carlos.lopezosa@upf.edu) (<https://orcid.org/0000-0001-8619-2194>)
-  Dr. Lluís Codina is Associate Professor in the Department of Communication at Pompeu Fabra University in Barcelona (Spain) (lluis.codina@upf.edu) (<https://orcid.org/0000-0001-7020-1631>)
-  Dr. Javier Díaz-Noci is Full Professor in the Department of Communication at Pompeu Fabra University in Barcelona (Spain) (javier.diaz@upf.edu) (<https://orcid.org/0000-0001-9559-4283>)
-  Dr. José-Antonio Ontalba-Ruipérez is Associate Professor in the Department of Audiovisual Communication, Documentation and History of Art at the Polytechnic University of Valencia (Spain) (joonrui@upv.es) (<https://orcid.org/0000-0002-2071-6108>)

ABSTRACT

The constant struggle to attract new readers has led the digital news media to adopt search engine positioning strategies within their newsrooms. Given that readers are increasingly opting to consume their news via search engines, such as Google or Bing, this study explores perceptions and applications of search engine optimization (SEO) in the online news media and identifies the future training needs of journalists in this sector. To do so, 33 semi-structured interviews were conducted with individuals representative of three professional profiles: professional journalists, SEO consultants, and academics. Based on the data collected, we created five semantic categories – with 25 subcategories – and we correlated the perceptions of the SEO experts employed by the news media with those of the academics. The results highlight varying degrees of convergence and divergence in perceptions across these three professional profiles. Similarly, the results confirm the sector's pressing need to attract readers by implementing search engine positioning techniques and, hence, its need to ensure future journalists are well trained in technical SEO, on-page SEO, off-page SEO, in the use of SEO analytics and audit tools, and in the ability to identify search trends so that they have the necessary skills to win the struggle for more readers.

RESUMEN

La lucha de los cibermedios para atraer nuevos lectores ha motivado el uso de estrategias de posicionamiento en buscadores en el seno de las redacciones periódicas. Dado el consumo, cada vez más frecuente, de noticias a través de buscadores como Google o Bing, este trabajo explora la percepción y la aplicación de la optimización en buscadores (SEO) en los medios de comunicación online y determina las diferentes necesidades formativas de los futuros periodistas que quieran trabajar en este campo. Para ello, se realizaron 33 entrevistas semi-estructuradas a personas que representan tres perfiles profesionales diferentes: periodistas profesionales, consultores de SEO y profesores universitarios. A través de los datos recogidos, creamos cinco categorías semánticas –con 25 subcategorías– y correlacionamos las percepciones de los expertos en SEO que trabajan en empresas periódicas con las percepciones de los profesores en el contexto académico. Los resultados confirman los diferentes grados de convergencia y divergencia entre estos tres perfiles profesionales. Asimismo, se reafirma la creciente necesidad de atraer lectores a través de técnicas de posicionamiento en buscadores, por lo que señalamos la necesidad de formar a los futuros periodistas en SEO técnico; en SEO On Page; en SEO Off Page; en herramienta analítica; en auditoría SEO; y en la capacidad de identificar tendencias de búsqueda para que estén cualificados con las competencias necesarias para afrontar la lucha por los públicos.

KEYWORDS | PALABRAS CLAVE

Digital news media, search engine optimization, online journalism, web visibility, journalism training, University, SEO training, Google.

Medios digitales, posicionamiento en buscadores, periodismo online, visibilidad web, formación periodística, Universidad, formación SEO, Google.

1. Introduction

The need for journalism to adapt to the Internet has led to a series of changes in journalistic routines (Cebrián-Herreros, 2009; López-García, 2015; García-Avilés et al., 2018; Caminero & Sánchez-García, 2018), related, mainly, to new modes for disseminating news via digital platforms and, more specifically, for disseminating news via search engines (Smyrnaioi & Rebillard, 2009).

The development of search engines, such as Google and Bing, helps users select the most relevant content in response to their searches (Machill et al., 2008; Richmond, 2008), which, together with the increase in competitiveness for information, accounts for the fact that the digital news media are becoming increasingly dependent on search engine optimization (SEO).

SEO, the set of techniques that ensures web content has the greatest chances of appearing at the top of the rankings of Google, Bing, etc. (Davis, 2006; Enge et al., 2012; Orduna-Malea & Alonso-Arroyo, 2017), is a means of attracting the greatest number of readers (Iglesias-García & Codina 2016). Maximizing web visibility in this way means search engine positioning strategies need to be employed in the routines of the digital news media (Maciá-Domene, 2011; Giomelakis & Veglis, 2015a; Google, 2012; 2019a; 2019b; Harry, 2018). In this emerging scenario, traditional journalism is having to face a number of major challenges including the increase in online news, which has triggered the growing dependence of news editors on search engines (Smyrnaioi, 2015; Arias-Robles, 2016), and the developing 'social role' of journalists coinciding with the adoption of SEO techniques (Carlson, 2007; Ellcessor, 2012; Gonzalo-Penela et al., 2015), developments that require the attention of scholars.

Studies examining the relationship between SEO and the news media confirm that much can still be done to improve the convergence between journalistic routines and those of SEO (Giomelakis & Veglis, 2015b; Codina et al., 2016; Charlton, 2016; Lopezosa & Codina, 2018). And while some recognize that it has become increasingly common to find SEO experts in newsrooms, the need to seek optimal convergence between the best journalism and the best SEO practices continues to be pressing (Dick, 2011; Smyrnaioi & Sire 2014).

Despite this research, the use made today of SEO in the digital news media remains largely unknown. To further our understanding, the main characteristics of the search engine positioning strategies employed by newsrooms need to be described and, simultaneously, any shortcomings, limitations and needs can be identified so that a diagnosis be made of just how the journalism sector can best address the positioning of its content. Ultimately, obtaining this information should enable us to propose changes in Spain's university curricula that can ensure better training for the sector's future professionals.

In short, the overall aim of this study is to examine the role played by SEO in journalism and to identify the corresponding training needs of students of journalism to guarantee they are able to implement SEO strategies in the newsroom. To do this, we conduct a series of semi-structured interviews, a methodology that, to date, has yet to be applied to the study of search engine positioning in relation to university education. Specifically, we set ourselves the following specific goals:

- 1) To explore what SEO experts employed by the news media, consulting firms and universities think about the role played by search engine optimization as applied to the cyber media in promoting the success of digital journalism.
- 2) To determine whether there is a consensus among these groups of professionals about the different elements of SEO being applied to the news media.
- 3) To make recommendations in terms of the competencies and skills that should be part of SEO training for journalism students.

2. Material and methods

In carrying out this study, we conducted 33 semi-structured interviews (Coller, 2000; Valles, 2002; Alves & Díaz-Noci, 2019) during 2018 and 2019 with SEO professionals working in the digital news media, with SEO consultants and with teachers providing university training in SEO.

Initially, desired informants were selected on the basis of a prior design that included all three professional categories described above (see below for specific details). Next, we employed one of the most frequently recommended procedures in such cases, the application of so-called critical criteria (Valles,

2002), whereby we identified which professionals had access to the most relevant information, were most socially and physically accessible, were most willing to participate, and best able to communicate their responses with the necessary precision. After sending out invitations to SEO experts identified in this way, we were able to conduct a total of 33 interviews.

A list of the 33 interviewees can be consulted at <http://bit.ly/2OdmZYJ>, where the subjects are classified according to whether they are journalists/professionals with responsibility for SEO in the digital news media, SEO experts in the field of consulting, or university professors that teach SEO. The table also includes information about the specific digital news platform, firm or university in which they work.

Interview responses were recorded either by email or by digital sound recording and subsequently transcribed. The results were then analyzed both manually and using the qualitative research tool NVivo. The latter enabled us to identify semantic networks from which we created categories and subcategories.

Table 1 shows the specific functions of the experts selected for interview in each of the three groups of professionals, according to the criteria discussed above (Valles, 2002).

SEO managers in the digital news media	Expert SEO consultants for companies	University professors teaching the subject of SEO
Journalist for digital news platform of international importance	Senior SEO consultant working for an agency	Professor in the Degree of Documentation
Journalist for small digital news platform publishing regional news	Independent consultant offering SEO services to companies	Professor in the Degree of Journalism
SEO manager for digital news platform of international importance	SEO expert in an international company	Professor in the Master's Degree in Search Engines
SEO manager for medium-sized digital news platform	SEO expert in a medium-sized company	Professor in the Degree of Advertising and Public Relations
Webmaster responsible for SEO tasks on a digital news platform	Owner of an SEO agency	Professor in the Degree of Journalism and Communication
Owner of a small digital news platform performing basic SEO tasks	SEO entrepreneur specializing in website monetization	Professor in the Degree of Advertising and Public Relations
Manager of digital content services and SEO for a digital news platform	SEO expert offering expertise via personal blog for different business sectors	Professor in the Degree of Audiovisual Communication
Subdirector of a regional digital news platform	SEO entrepreneur specializing in digital projects	Professor in the Degree of Digital Marketing
Director of a digital news platform	Independent SEO consultant specialized in training and giving lectures	
SEO manager of a business media group	External SEO advising the news media	

Below we outline the five specific dimensions or categories of analysis addressed by the interviews and, for the subsequent exploitation of the responses obtained, we break these down into their corresponding subcategories:

1) News production routines: SEO routines performed by the journalist, routines developed specifically for SEO, search trend analysis, web analytics and SEO training.

2) SEO tools: Free SEO tools, paid SEO tools, Google's own tools, plugins and content management systems (CMS) and other tools.

3) SEO perception: Importance of SEO in the newsroom, technological convergence, resistance to change, best SEO practices, worst SEO practices.

4) SEO techniques: On-page SEO, off-page SEO, technical SEO, trending topic analysis and its application in the news media, analysis of trending topics and interactions in social networks and their application in the news media.

5) SEO opinions and visions: Voice search, business model, new professional profiles, new SEO techniques and search engine regulation.

3. Analysis and results

Below we identify the most important ideas extracted from the interviews. To do so, we identified semantic networks of the given categories and subcategories using NVivo operated in manual data analysis mode.

1) Key ideas emerging from interviews with journalists/professionals with responsibility for SEO in the digital news media:

- News production routines: The editor analyzes search trends to identify newsworthy items and timeless topics, and converts them into news stories, reports, etc. that can be used to position content on Google. Basic SEO actions have to be used (optimization of headline, image and text for search engines) on the news story. The SEO professional provides editors with support, addressing doubts they might have in relation to aspects of positioning and drafts reports on audience results, internal searches conducted by users and user behavior analysis within the digital news media in general. In this way, an understanding is gained of search trends and editors can be informed about new content that they can create and position. We confirmed that the digital news media, thanks to the efforts of their SEO professionals, offer content plans to outside firms to help them improve their brand image and create a new business model. Finally, the SEO professional checks the news stories prepared by editors and journalists to confirm they are optimized for search engines.
- SEO tools: The use of Google tools is widespread today in newsrooms. Likewise, SEMrush is the most frequently used paid SEO audit tool in newsrooms. However, news media companies do not usually have access to paid SEO audit tools, preferring to use their free versions. The most frequently used free tools are Google Chrome extensions and the Alexa Website Ranking online software. As for CMS, digital news media run on a WordPress platform optimize their news with the Yoast SEO plugin (a tool that extends CMS functions).
- SEO perception: Journalists recognize the importance of SEO for newsrooms as a strategy for attracting readers. Search engine positioning in newsrooms is becoming more widespread because traffic from social networks is on the decline and because many readers consume their news via search engines. In-house training is usually provided for editors informing them about the basic elements of SEO and their strategic importance for the media company. Editors have a fairly basic grasp of SEO, but the transformation from paper to digital format often makes it difficult for them to be professionally updated. Digital native editors tend to internalize SEO strategies much better. Newsrooms increasingly take SEO into consideration but acknowledge their abusive use of certain practices that are detrimental to the reader and the social task of the journalist. Finally, exceptions exist with some editors believing that 100% of the readers of their digital news media come from direct traffic (without going through search engines).
- SEO techniques: Results confirm that Google Trends needs to be used in combination with the analysis of comments and hashtags in social networks to track trends and to convert them into news reports; tools such as NewsWhip and CrowdTangle have to be employed to predict content engagement, which also helps create new stories that are not on the media's agenda; competitors have to be monitored daily to detect which news stories are being published so that all the day's topics can be identified and worked on and all events can be identified days before they occur, creating a calendar of publications, so that, in this way, on the day of the event (the day when the number of searches increases), the digital platform has already written and optimized its report, news story, etc., and can compete successfully for the best Google rankings.
- SEO opinions and visions: SEO and its relationship with journalism looks set to be strengthened over the coming years, as it is essential for attracting readers and promoting new business models. New challenges have to be faced within SEO and the digital news media, primarily in terms of achieving the best voice search rankings. The digital news platforms that lead the way in SEO

will ultimately be the ones that enjoy success. Likewise, the relationship between journalism and SEO will depend on the links forged between media organizations and search engines. If a newspaper wants to face the future more effectively, SEO has to be included as a training discipline, a daily practice and a constant space for ongoing professional upgrading. As Google's algorithms evolve, journalists will have to adapt accordingly. Respondents acknowledged the possibility that the EU will end up regulating Google or it is, at least, a possibility that will be debated.

2) Key ideas emerging from interviews with expert SEO consultants:

- **SEO opinions and visions:** Taking into account trends in search engine positioning, strategies that focus on search intent need to be developed, semantic searches, voice searches and improved user experience. The best way to optimize the search intent is by writing content as if responding directly to the user's query. To optimize semantic searches, the content needs to be enriched with synonyms, compound words, long tail keywords (search queries of more than three words), while audiovisual content needs to be incorporated and Schema.org and Google Action technologies used. For voice search optimization, content needs to be created in the form of questions that respond to (very precise) very long tail keywords, since questions will predominate in voice searches. The markup "speakable", developed by schema.org, should be used. "Speakable" is able to identify the most appropriate sections on a web page for audio reproduction for text-to-speech (TTS) conversion using TTS technology. Finally, to optimize user experience, the web must be well structured, have good internal linking, with optimal loading speed, employing accelerated mobile page (AMP) technology and using mobile-first indexing (which gives more importance to the mobile site than to the desktop version).
- **SEO techniques:** The consensus is that the best strategy for positioning a website is a combination of the different types of SEO: that is, on-page SEO, off-page SEO and technical SEO. Of the three, technical SEO is considered the most important, followed by on-page and off-page SEO, respectively.
- **SEO tools:** Ahrefs is the most frequently used paid SEO audit tool followed by SEMrush and Screaming Frog. Google tools are also a priority to ensure SEO works well. Finally, other tools used by the SEO experts to a lesser degree include Safecont, Xovi, Moz, WooRank, etc.
- **SEO perception:** The experts believe that the national digital news platforms generally implement very good SEO strategies, though they also acknowledge that some media firms have poor or non-existent SEO strategies. They highlight the following as good SEO strategies: the use of AMP technology, the purchase of vertical websites to obtain more web traffic and more authoritative links, the creation of quality content, the optimization of the crawl budget (tracking and indexing time granted by Google to a certain website), and the exhaustive study of search trends to create content. In contrast, they highlight the following poor SEO strategies applied by the digital news media: the massive sale of links to third-party sites, the production of duplicate content (copied content that Google considers plagiarized), the use of click-baiting (headlines and flashy links designed only to generate clicks), and search engine over-optimization (techniques employed to artificially manipulate website optimization). According to those interviewed, the digital news platforms that employ the best SEO strategies are 'El Mundo' and 'OKDiario', followed by 'La Vanguardia', 'ABC', 'El País', 'El Español', etc.
- **News production routines:** Digital news platforms need to create attractive headlines and use keywords (that is, those words consulted by users in search engines) to optimize positioning, take advantage of old content by renewing these earlier news report, and review all aspects of basic SEO before publishing a story. Likewise, online news media need to carry out technical and indexing improvements, they should employ AMP technology and ensure good internal linking between stories using keywords that are trending in real time. They might also acquire thematic blogs to send web traffic and authority in the form of external links to the digital news platforms (of the same business group) to optimize positioning. Finally, communication between the head of SEO and the editors of the digital news platform must be effective and favor consensus,

especially with regard to writing headlines and the configuration of labels for images.

3) Key ideas emerging from interviews with university professors teaching SEO:

- SEO perception:
- SEO opinions and visions: The subject of SEO should be incorporated as strategic content in university education, since it is a professional profile that media firms are increasingly seeking to recruit.
- News production routines: SEO training is usually provided transversally as part of a broader subject. In short, while SEO is found as an independent subject on master's programs, this tends not to be the case in undergraduate courses.
- SEO techniques: SEO training in Spanish universities is both theoretically and practically based. The main items taught in relation to SEO theory are the following: the history of SEO, search engine operation, study of visitor flow from search engines, the profile of the SEO professional in the digital news media and SEO as a critical vision of the Internet. In contrast, the main practical elements taught in relation to SEO comprise the following: On-page SEO, off-page SEO and technical SEO. Students are taught how to select keywords, use Google Trends, write headlines and structure and create content for SEO, use SEO tools, exploit publications in social media to make content visible and to use WordPress and its SEO plugins.
- SEO tools: Google tools are the SEO tools most frequently introduced and used in class. Training in the use of free tools prevails over that of paid tools. The most frequently used free or freemium tools are Alexa SiteInfo, SimilarWeb, GTmetrix, and WooRank. Finally, the main functions of the tools taught in class are related to positioning metrics, interaction and content engagement.

Subcategory	Perceived level of agreement – high	Perceived level of agreement – medium	Perceived level of agreement – low
SEO routines performed by the journalist		●	
Routines developed specifically for general SEO tasks			●
Search trend analysis			●
Web analytics	●		
SEO training		●	
Free SEO tools		●	
Paid SEO tools			●
Use of Google's own tools	●		
CMS Plugins and CMS		●	
Other tools		●	
Importance of SEO in the newsroom	●		
Technological convergence	●		
Resistance to change		●	
Best SEO practices	●		
Worst SEO practices	●		
On-page SEO	●		
Off-page SEO	●		
Technical SEO	●		
Trending topic analysis and its application in the news media		●	
Analysis of trending topics and interactions in social networks and their application in the news media.		●	
Voice search		●	
Business model		●	
New professional profiles		●	
New SEO techniques		●	
Possibility of future search engine regulation			●

Table 2 shows the main convergences and divergences of opinion as expressed by professionals in the three groups studied. Here, for each of the subcategories identified we run a semantic check to see if their perspectives coincide. A high perceived level of agreement is said to occur when all three parties (professionals employed in the journalism industry, SEO consultants/experts not employed directly by the

industry and university professors) express the same ideas, a medium level when two of the three parties agree, and a low level when all three parties disagree or express different opinions in relation to the same subcategory.

Based on an analysis of the responses obtained in the interviews, we have built various models which we express graphically. These models are designed for two distinct profiles: that of the journalist/editor with responsibility for implementing SEO tasks and that of the SEO (non-journalist) expert employed in the news media company.

Profile	Skills	Training
Journalist	On-page SEO	SEO headlines
		Keywords and content clusters
		SEO image optimization
		News article design: tables and layout
	Trend analysis	Google trends
		Identification of newsworthy event
		Creation of editorial calendar
	Ethics of SEO	SEO and the social task of the journalist
		The debate on the regulation of Internet information
SEO manager	SEO strategies	AMP
		Schema.org
		Internal linking
		Mobile-first indexing
		Optimization of strategies for buying vertical websites
	Tools	Google Analytics
		Google Search Console
		Google Trends
		SEMrush
		Ahrefs
	Types of optimization	Search intent optimization
		Voice search optimization
		Semantic search optimization
		User experience optimization
	Business opportunities	Identification of future search trends to improve web traffic
		Providing consultancy services to firms
Purchase of vertical websites to generate income		

The first training profile includes elements such as SEO ethics, trend analysis and on-page SEO, while the second includes business opportunities, tools, types of optimization and advanced SEO strategies. Figures 1 and 2 show the fields of knowledge for each of the two profiles.

4. Conclusions

Studies have already been undertaken examining SEO as a business strategy, highlighting the importance of search engine positioning to attract readers (Carlson, 2007; Smyrniaos & Rebillard, 2009; Muerza-Ferrer, 2017); however, such studies do not concern themselves with internal business elements, such as new business models or the relationship and communication established between SEO managers and editors and their teams of journalists, aspects which, in contrast, the results of our interviews seem to emphasize.

Likewise, although news strategies have previously been discussed from the point of view of on-page SEO, off-page SEO and technical SEO (Giomelakis & Veglis, 2015a; 2015b; Charlton 2016), including distinctive working frameworks (Codina et al., 2016) and specific strategies, such as the concept of SEO headlines (Asser, 2012), the specific use of keywords (García-Orosa & López, 2014), and the use of technologies such as AMP (Heijmans, 2016), these studies do not include two aspects that emerge from our interviews: namely, the identification of search trends as part and parcel of the work of the SEO manager in the newsrooms of the digital media, and voice search optimization and other emerging aspects of SEO (e.g. semantic SEO, search intent, etc.). Similarly, studies of visibility and SEO auditing applied to the

digital news media report the use of the main tools discussed here: i.e. SEMrush, Ahrefs, Majestic, Alexa, MOZ, among others (Rodríguez-Martínez et al., 2010; 2012; García-Carretero et al., 2016; Lopezosa & Codina, 2018; Lopezosa et al., 2018; Lopezosa et al., 2019); however, they tend to comprise case studies and to focus on visibility rankings of the digital media in search engines, yet they fail to verify whether the newsrooms are using these tools to analyze and position news content.

Finally, a number of studies of SEO applied to the digital news media make recommendations for newsrooms (Giomelakis & Veglis, 2015a; 2015b; Codina et al., 2016; Asser, 2012; García-Orosa & López, 2014), but they do not consider the training that editors/journalists and SEO managers of media platforms need, bearing in mind that good journalistic practice is vital, and that SEO is the support for its dissemination and expansion. Next, we return to reflect on the objectives set out when initiating this study and discuss the results and conclusions that can be drawn:

1) All three groups of professionals identify the need to implement the same types of strategy in promoting search engine optimization, that is, on-page SEO, off-page SEO and technical SEO.

SEO managers working in news media houses confirm the strategic need to take into account search engine positioning techniques when working with news content. Likewise, expert SEO consultants recommend buying third-party vertical websites in order to send authoritative links to their main digital news media sites in order to attract more readers and obtain greater web authority. They also recognize the need to foster optimal internal communication between the SEO department/manager and the editor and journalists. The university professors also recognize the importance of SEO for newsrooms; however, training in this field typically forms part of a much broader subject area in university studies. Similarly, all three groups of professionals speak of the need for newsrooms to make effective use of SEO analytics.

Finally, the interviewees believe that SEO and its relationship with journalism will go from strength to strength over the forthcoming years, although major new challenges are likely to emerge, including voice search optimization, new business models and the possible regulation or political debate concerning the news media and search engines.

2) The perceived level of agreement between the three groups of professionals is high to medium. Indeed, a clear distinction is drawn between the SEO routines implemented by editorial teams and those implemented by SEO professionals or experts. The perception of SEO professionals is that journalists need to apply the basics of content SEO and search trend analysis, while the work of SEO experts should center on advising editors about content optimization and advanced SEO strategies, ensuring that news stories are optimized for search engines, and identifying publication opportunities and business opportunities in the form of new customer services.

Generalist SEO consultants believe that editors should be able to apply a basic SEO to their news stories, while SEO experts should concern themselves with the more technical aspects of optimization. Somewhat tellingly, it should be stressed that SEO studies in university education today provide the basic SEO training for journalists; however, this training is insufficient if, in the future, the student wants to find employment as an SEO expert for an online media company. Likewise, all three groups of professionals identify the need to measure results using web analytics. Specifically, SEO experts working in the digital media draft reports proposing business strategies that can help news platforms obtain a better positioning and, as a result, more readers. SEO consultants working outside the digital news media stress the need to use web analytics tools specifically to improve user experience and, in this regard, universities do introduce students to tools such as Google Analytics so that they learn which metrics can be used to obtain a better understanding of users.

As for tools, those offered by Google are deemed essential by all three groups of professionals, above all Google Analytics and Google Search Console. In the case of paid SEO tools there is no consensus as to which are the most useful. In fact, in newsrooms their use is scarce. However, overall, based on an analysis of the responses given, the preferred tools appear to be SEMrush, Alexa, SimilarWeb and Sistrix. In contrast, for the SEO consultants, Ahrefs is considered the most complete tool. And as far as university training is concerned, free tools predominate, while there is a clear need for students to acquire a greater understanding of CMS and specific positioning plugins, specifically WordPress and the Yoast plugin. The use of positioning strategies in the news media is becoming more and more commonplace, although

there is a minority of journalists that remain resistant to change and who even think that optimizing news content for search engines does not improve the visibility of their news stories. It should be stressed that, although the three groups of professionals recognize the importance of the same types of SEO strategies (on-page, off-page and technical), digital news platforms and universities highlight the emergence of new SEO strategies, including the identification of trending searches via Google Trends and the analysis of social media interactions in order to write new stories to obtain better positioning.

Finally, the individuals interviewed here believe that SEO experts should be capable of recognizing a user's search intent and apply this to their content. Likewise, they believe they should be able to exploit semantic content to the full, improve user experience and undertake the necessary work to position voice searches. In parallel to this, the universities need to set about consolidating the teaching of SEO as a subject in its own right or, at least, as strategic content for training future professionals for the journalism sector, although it is not yet clear what profile and skills an SEO expert should have for the newsroom, given that the journalist and the engineer find themselves at opposite ends of this training spectrum.

3) SEO training needs to focus on providing SEO strategies specifically designed for news editorial teams and journalists, on the one hand, and on SEO strategies for SEO experts working within news media houses, on the other. SEO training for editors and journalists should focus above all on ensuring these teams acquire the essentials of on-page SEO and, more specifically, that they can:

- Optimize news stories for search engines;
- Analyze and recognize search trends;
- Identify best SEO practices; and
- Consider the ethics related to the use of search engine positioning strategies in relation to the social role of journalists.

In contrast, the training for students who want to find jobs in the SEO department of a digital news platform should focus on more advanced strategies, that is, ensuring they can:

- Identify publication opportunities based on search trends. To do this, students need to learn how to use Google Trends, analyze social media interactions and use such paid tools as NewsWhip and CrowdTangle.
- Identify business opportunities;
- Perform technical SEO actions focused on optimizing search intent, optimizing both voice and semantic searches, and optimizing user experience;
- Use SEO and web analytics tools, including those developed by Google (Google Analytics and Google Search Console) as the paid tools, such as SEMrush and Ahrefs;
- Perform off-page SEO actions, specifically that they study strategies to identify thematic vertical websites that can be purchased in order to obtain more web traffic and authority.

While this study has confirmed the adequacy of semi-structured interviews for obtaining relevant insights into the role played by SEO in the digital news media, in the future new analyzes need to be conducted that address the continuing development of this relationship. To gain these insights, other qualitative methods might favorably be adopted, including the Delphi technique, expert panels, or consensus methods.

Funding Agency

This article was written within the framework of the project "Interactive storytelling and digital visibility in the interactive documentary and structured journalism" financed by the Ministry of Economy and Competitiveness (RTI2018-095714-B-C21).

References


- Alves, K., & Díaz-Noci, J. (2019). Informatius de televisió i audiència activa: Estudi de cas de TV3-Televisió de Catalunya. *Comunicació*, 36(1), 9-29. <https://doi.org/10.2436/20.3008.01.176>
- Arias-Robles, F. (2016). Teoría y práctica del lenguaje ciberperiodístico. SEO, redes e (hiper)textos. *Revista Mediterránea de Comunicación*, 7(2), 177-194. <https://doi.org/10.14198/medcom2016.7.2.8>
- Asser, M. (2012). Search engine optimisation in BBC News. <https://bbc.in/2J8TzIR>
- Caminero, L., & Sánchez-García, P. (2018). El perfil y formación del ciberperiodista en redacciones nativas digitales. *Hipertext.net*, (16), 4-15. <https://doi.org/10.31009/hipertext.net.2018.i16.04>
- Carlson, M. (2007). Order versus access: News search engines and the challenge to traditional journalistic roles. *Culture & Society*, 29(6), 1014-1030. <https://doi.org/10.1177/0163443707084346>

- Cebrián-Herreros, M. (2009). New forms of communication in the cybermedia. [Nuevas formas de comunicación: Cibermedios y medios móviles]. *Comunicar*, 17(33), 10-13. <https://doi.org/10.3916/c33-2009-01-001>
- Charlton, G. (2016). How much do journalists and editors need to know about SEO? <https://bit.ly/1UIOyp5>
- Codina, L., Iglesias-García, M., Pedraza, R., & García-Carretero, L. (2016). *Visibilidad y posicionamiento web de informaciones periodísticas: El framework SEO-RCP*. DigiDoc-UPF. <https://bit.ly/2QR08nA>
- Coller, X. (2000). *Estudio de caso. Colección cuadernos metodológicos*. Centro de Investigaciones Sociológicas. <https://bit.ly/2NjqLPZ>
- Davis, H. (2006). *Search engine optimization*. O'Reilly Media. <https://doi.org/10.4016/32139.01>
- Dick, M. (2011). Search engine optimization in UK news production. *Journalism Practice*, 5(4), 462-77. <https://doi.org/10.1080/17512786.2010.551020>
- Ellcessor, E. (2012). Captions on, off, on TV, online: Accessibility and search engine optimization in online closed captioning. *Television & New Media*, 13(4), 329-352. <https://doi.org/10.1177/1527476411425251>
- Enge, E., Spencer, S., Fishkin, R., & Stricchiola, J. (2012). *The art of SEO*. O'Reilly Media.
- García-Avilés, A., Carvajal, M., & Arias, F. (2018). Implantación de la innovación en los cibermedios españoles: Análisis de las percepciones de los periodistas. *Revista Latina de Comunicación Social*, 73, 369-384. <https://doi.org/10.4185/RLCS-2018-1260>
- García-Carretero, L., Codina, L., Díaz-Noci, J., & Iglesias-García, M. (2016). Herramientas e indicadores SEO: Características y aplicación para análisis de cibermedios. *El Profesional de la Información*, 25(3), 497-497. <https://doi.org/10.31145/epi.2016.may.19>
- García-Orosa, B., & López, X. (2015). Los titulares en los principales cibermedios europeos: Más funcionales y menos conceptuales. *Estudios sobre el Mensaje Periodístico*, 21(2), 833-847. https://doi.org/10.5209/rev_esmp.2015.v21.n2.50887
- Giomelakis, D., & Veglis, A. (2015a). Employing Search Engine Optimization Techniques in Online News Articles. *Studies in Media and Communication*, 3(1), 22-33. <https://doi.org/10.11114/smc.v3i1.683>, <https://dx.doi.org/10.11114/smc.v3i1.683>
- Giomelakis, D., & Veglis, A. (2015b). Investigating search engine optimization factors in media websites, the case of Greece. *Digital Journalism*, 4(3), 379-400. <https://doi.org/10.1080/21670811.2015.1046992>
- Gonzalo-Penela, C., Codina, L., & Rovira, C. (2015). Recuperación de información centrada en el usuario y SEO: Categorización y determinación de las intenciones de búsqueda en la Web. *Index.Comunicación*, 5(3), 19-27. <https://bit.ly/2qmiwha>
- Google (Ed.) (2012). Google guide making searches even easier. Search operators. <https://bit.ly/1axVR8p>
- Google (Ed.) (2019a). Google news help. <https://bit.ly/2XqybY9>
- Google (Ed.) (2019b). Search quality rating guidelines. <https://bit.ly/2TZssH7>
- Harry, D. (2018). How search engines rank web pages. <https://bit.ly/2L4OUtN>
- Heijmans, M. (2016). What to do to optimize your news site for SEO. <https://bit.ly/2J5vceZ>
- Iglesias-García, M., & Codina, L. (2016). Los cibermedios y la importancia estratégica del posicionamiento en buscadores (SEO). *Opción*, 32(9), 929-944. <https://bit.ly/2J8Sku>
- López-García, G. (2015). Periodismo digital: Redes, audiencias y modelos de negocio. *Revista de Interculturalidad*, 10, 175-176. <https://bit.ly/2FPA59Y>
- Lopezosa, C., & Codina, L. (2018). Análisis de posicionamiento en medios de comunicación con herramientas SEO. Cobertura informativa de los premios OSCAR 2017. *Digidoc-EPI*. <https://bit.ly/2Nfjsjmo>
- Lopezosa, C., Codina, L., & Freixa, P. (2018). *SEO y comunicación audiovisual: Análisis comparativo de portales de vídeo bajo demanda*. Digidoc-EPI. <https://bit.ly/2PUFb15>
- Lopezosa, C., Codina, L., & Rovira, C. (2019). *Visibilidad Web de portales de televisión y radio en España: ¿Qué medios llevan a cabo un mejor posicionamiento en buscadores?* DigiDoc-EPI. <https://bit.ly/2pyKbHC>
- Machill, M., Beiler, M., & Zenker, M. (2008). Search-engine research: A European-American overview and systematization of an interdisciplinary and international research field. *Media, Culture & Society*, 30(5), 591-608. <https://doi.org/10.1177/0163443708094010>
- Maciá-Domene, F. (2011). *Técnicas avanzadas de posicionamiento en buscadores*. Anaya Multimedia.
- Muerza-Ferrer, A. (2018). Producción de noticias radiofónicas en el contexto de la convergencia periodística: Análisis de Radio Marca y sus sinergias con Marca y marca.com. *Estudios sobre el Mensaje Periodístico*, 24(1), 758-795. <https://doi.org/10.5209/esmp.59979>
- Orduna-Malea, E., & Alonso-Arroyo, A. (2017). *Cybermetric techniques to evaluate organizations using web-based data*. Chandos Publishing.
- Richmond, S. (2008). How SEO is changing journalism. *British Journalism Review*, 19(4), 51-55. <https://doi.org/10.1177/0956474808100865>
- Rodríguez-Martínez, R., Codina, L., & Pedraza-Jiménez, R. (2010). Cibermedios y web 2.0: Modelo de análisis y resultados de aplicación. *El Profesional de la Información*, 19(1), 35-44. <https://doi.org/10.31145/epi.2010.ene.05>
- Rodríguez-Martínez, R., Codina, L., & Pedraza-Jiménez, R. (2012). Indicadores para la evaluación de la calidad en cibermedios: Análisis de la interacción y de la adopción de la Web 2.0. *Revista española de Documentación Científica*, 35(1), 61-93. <https://doi.org/10.3989/redc.2012.1.858>
- Smyrniaos, N. (2015). Google and the algorithmic infomediation of news. *Media Fields Journal*, 10, 1-10. <https://bit.ly/2XJIMN7>
- Smyrniaos, N., & Rebillard, F. (2009). L'actualité selon Google L'emprise du principal moteur de recherche sur l'information en ligne. *Communication & Langages*, 160, 95-95. <https://doi.org/10.4074/S0336150009002087>
- Smyrniaos, N., & Sire, G. (2014). The news according to Google how does algorithmic infomediation frame the work of French journalists? In *JSS-ECREA 2014 Conference, Thessaloniki*. <https://bit.ly/33bA5tN>
- Valles, M. (2002). *Entrevistas cualitativas. Colección cuadernos metodológicos*. Centro de Investigaciones Sociológicas.




Influence of family and pedagogical communication on school violence

Influencia de la comunicación familiar y pedagógica en la violencia escolar

 Dr. Miguel Garcés-Pretzel is Associate Professor in the School of Social Communication at Universidad Tecnológica de Bolívar, Cartagena de Indias (Colombia) (mgarcés@utb.edu.co) (<https://orcid.org/0000-0001-6391-3147>)

 Yanin Santoya-Montes is Assistant Professor in the School Psychology at Universidad Tecnológica de Bolívar, Cartagena de Indias (Colombia) (yaninsantoya@gmail.com) (<https://orcid.org/0000-0002-6098-2398>)

 Javier Jiménez-Osorio is Assistant Professor at University of San Buenaventura, Cartagena de Indias (Colombia) (jjimenez@usbctg.edu.co) (<https://orcid.org/0000-0002-5762-7758>)

ABSTRACT

School violence alludes to peer bullying and aggression in school. The field of communication has studied school violence by analyzing the influence of media and interpersonal relationships on aggressive behaviors. This article provides a perspective on school violence and concentrates on determining the influence of interpersonal communication with parents and teachers on adolescent aggressors and victims in school contexts. A non-experimental correlational-transverse design was used with a sample of 1,082 adolescents ($M=15,61$; $DT=0,90$). Three reliable scales were implemented to assess adolescent aggression and parental and pedagogical communication. Findings indicate that aggressions among adolescents at school and the interpersonal communication with parents and teachers present differences associated with gender ($p=0,00$). At the family level, it was found that offensive communication among parents and children ($\beta=0,225$; $p=0,00$) predicts an increment on school victimization. At the pedagogical level, it revealed that teacher communication intended to discipline students ($\beta=-0,297$; $p=0,00$) and make them see the importance of school and learning ($\beta=-0,120$; $p=0,04$) predicts a decrease in aggressive behavior among adolescents and school victimization. These new findings in education evidence the need to strengthen students' interpersonal communication with their parents and teachers to obtain better results when implementing strategies to intervene and prevent school violence.

RESUMEN

La violencia escolar hace alusión al acoso y agresión entre iguales en la escuela. A nivel comunicacional, se ha estudiado este problema analizando la incidencia de los medios y las relaciones interpersonales en las conductas agresivas. Este artículo aporta una perspectiva de la violencia escolar centrada en determinar la influencia de la comunicación familiar y pedagógica en adolescentes agresores y víctimas en la escuela. Se usó un diseño no experimental de tipo correlacional-transversal con una muestra de 1.082 adolescentes ($M=15,61$; $DT=0,90$). Se aplicaron tres escalas confiables que evaluaron las agresiones entre adolescentes y la comunicación parental y pedagógica. Los hallazgos indican que las agresiones entre adolescentes y la comunicación que estos tienen con sus padres y profesores presentaron diferencias asociadas al género ($p=0,00$). La comunicación ofensiva entre padres e hijos ($\beta=0,225$; $p=0,00$) predijo el aumento de la victimización escolar. Pedagógicamente, se encontró que la comunicación del profesor orientada a generar disciplina en los alumnos ($\beta=-0,297$; $p=0,00$) y hacerles ver la importancia de estudiar y aprender ($\beta=-0,120$; $p=0,04$) predicen respectivamente, la disminución de los comportamientos agresivos entre adolescentes y la victimización. Estos hallazgos novedosos en materia pedagógica evidencian la necesidad de fortalecer la comunicación interpersonal de los estudiantes con sus padres y profesores para lograr resultados eficaces en la implementación de estrategias de prevención e intervención contra la violencia escolar.

KEYWORDS | PALABRAS CLAVE

Violence, family communication, teacher-student communication, adolescent, school, teachers, family relationships, pedagogical practices.

Violencia, comunicación familiar, comunicación profesor-estudiante, adolescente, escuela, docentes, relaciones familiares, prácticas pedagógicas.

1. Introduction and state of the issue

The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2019) brought forth, at the 2019 World Education Forum, a report that reveals an increase in the cases of school violence worldwide, since one in three students have been threatened by peers, and a similar proportion have been subject to physical aggressions. School violence refers to any form of harassment or offense on a physical and psychological level among peers at school (Leganés-Lavall, 2013), and it is a troubling problem because it raises school dropout rates (Ruiz-Ramírez et al., 2018) and reduces the academic performance of students (Cerdeja et al., 2019).

Aggression and bullying behaviors among students can be generated on a face-to-face basis or online, through social media, and other types of internet-ready digital devices (cyberbullying). The reasons why school violence occurs are varied. Demographically speaking, for example, studies indicate that school violence has gender-related differences (Jain et al., 2018; Machimbarrena & Garaigordobil, 2018), whereby physical harassment is a common practice among boys, and psychological harassment is more frequent among girls (UNESCO, 2019).

Other studies have identified gender-related differences within the overlapping link between schools and cyberbullying (Baldry et al., 2017) and other related variables such as roles in cyberbullying, maternal communication, inductive discipline and psychological control (Gómez-Ortiz et al., 2018). In general terms, family, media and school environments all influence school violence (Cid et al., 2008).

In the family context, empirical evidence reveals that family environment (Calvete et al., 2018; Labella & Masten, 2018; Xia et al., 2018), intrafamily conflicts (Ortega-Barón et al., 2016) and hostile communication between parents and children (Aguirre, 2018; Boniel-Nissim & Sasson, 2018; Castañeda et al., 2019; Romero-Abrio et al., 2019) all influence aggressive behaviors in adolescence.

In the field of media, Gentile et al. (2011) were able to demonstrate how children's exposure to violent content in the media predicted an increase in aggressive behaviors and a decrease in prosocial behaviors throughout the school year. Hence, Al-Ali et al. (2018) consider that it is important for parents to enhance their knowledge about media and broadcast content, so that they can play a protective role in their children's behavior.

Regarding the school environment, research indicates that school violence is related to school norms (Rey & Ortega, 2005) and students' social skills (Pérez, 2005). It has also been found that the school environment is associated with students' well-being (Varela et al., 2019), and the relationships they build in school (Jain et al., 2018; Valdés-Cuervo et al., 2018) help prevent school violence. In the case of cyberbullying, Ortega-Barón et al. (2016) detected that academic self-esteem is a predictor of victimization in adolescence.

Within the framework of intervention processes on school violence, experts have established the need for schools impacted by this issue to generate greater levels of confidence within the educational community to denounce peer victimization (Berger et al., 2017) and implement clinical care policies to support victims (Price et al., 2019). Accordingly, there are successful experiences such as the "Asegúrate" (Be Safe) program that focuses on strengthening the work of faculty against cyberbullying by intervening in strategic areas such as the modes of communication amongst students on social media, the communication network's coexistence rules, and the criteria towards setting up safe friendships (Del-Rey-Alamillo et al., 2018).

Other experiences suggest that school violence decreases when tolerance principles are promoted and coexistence is improved through the reinforcement of communication and interaction amongst students (De-los-Pinos & González, 2012). In any case, communication has proven to be an effective resource to develop alternatives to violence as long as it allows students to learn to resolve conflicts peacefully and to adequately express their tensions or discrepancies (Jalón, 2005).

Therefore, strengthening interpersonal communication between students is an essential strategy to prevent school violence. This is confirmed by Estévez et al. (2007) when they revealed that adolescents with lower levels of violent behavior at school are characterized by having positive communication with their parents and more favorable attitudes towards institutional authorities such as school administrators and faculty. Valdez-Cuervo et al. (2018), in turn, have indicated that teaching practices are related to peer violence at school due to their effect on the school environment and empathy. In other words,

teachers and the school, in general, play an important role in the prevention of school violence. Research by Dumas and Midgett (2018) precisely shows, at a pedagogical level, that a positive school environment fostered by faculty contributes to reducing victimization and harassment. It is known that the level of justice imparted by the faculty and their interaction with their students influence the relationship between unfairly treated victims' sensitivity and the altruistic behavior of students (Jiang et al., 2019). However, despite this high flow of literature, empirical evidence on the communicational role of teachers in the face of school violence is still scarce. In addition, studies on how communication between teachers and students (pedagogical communication) and between parents and children (family communication) can jointly influence over aggressive behaviors at school are in short supply. This article offers novel empirical evidence through two objectives that contribute to the analysis of school violence from a communicational perspective: 1) Identify whether school violence among adolescents and the interpersonal communication they have established with their parents and teachers show differences related to gender; 2) Determine the influence of family and pedagogical communication on aggressive adolescents and victims of school violence.

2. Methodology

The research carried out was exploratory and correlational; following a non-experimental, analytical and cross-sectional design.

2.1. Participants

The subject population of this study were adolescents at the secondary and middle school education levels in Colombia, which comes to approximately 4,709,538 students, according to Colombia's Ministry of National Education. A sample was selected by quotas of 1,082 adolescents ($Z=1,96$; $VM=0,25$) between 14 and 18 years of age ($M=15,61$; $SD=0,90$). These adolescents attended schools identified, per the work of Jiménez and Jiménez (2018), as institutions impacted by frequent cases of school violence.

Gender was the quota established to split the sample equally (50% men and 50% women), since, according to UNESCO (2019), this variable is associated with school violence. The selection of participants was made intentionally on a conglomerate basis, thus seeking representativeness in terms of both gender and age as well as levels of schooling. The sample size reflected the interest in reducing the error margin from 5% to 3%, due to the type of sampling carried out and the sociodemographic characteristics of this population.

2.2. Instruments

The information was gathered through a questionnaire comprised by three reliable scales: The School Violence Intensity Scale (VES) by Jiménez and Jiménez (2018), the Parent-Adolescent Communication Scale (PACS) by Barnes and Olson (1982) and the Student-Teacher Communication Scale (ECD) by Gauna (2004). The VES scale identifies, within a range of 1 (never) to 5 (very often), physical and verbal aggressions (for example, shoves, blows, mocking comments and insults) suffered by and generated against others in school. These attacks among adolescents explain, at a rate of 66%, the total variance of school violence. The overall internal consistency of this scale displayed an acceptable Cronbach's alpha of 0.75.

The PACS scale evaluates, within a range of 1 (never) to 5 (always), communication between parents and children. In this study, a version comprised of seven items was used, three of which evaluate offensive family communication (for example, «My parents tell me things that hurt me»), and the remaining four items evaluate open family communication (for example, «I can talk to my parents about what I think without feeling bad or uncomfortable»). The internal consistency of this scale was 0.71 for the offensive family communication factor, and 0.85 for the open family communication factor. Both factors explain parental communication by 61%.

The ECD scale has seven items that assess, within a range of 1 (totally disagree) to 4 (totally agree), the teacher's communication in the classroom (for example, «The teacher's communication with the students is based on the highlighting of achievements, not mistakes»).

The overall internal consistency of this scale was 0.78. The items explain, by 61%, the total variance of the verbal pedagogical communication perceived by adolescents. These scales were chosen based

on their reliability, and the original evaluation form was maintained. In the case of the VES Scale, its greatest advantage is that it has been adapted to the population under study (Jiménez & Jiménez, 2018). The PACS Scale, compared to others, was created for the adolescent population and has been used in studies on school violence showing good statistical behavior (Estévez et al., 2007; Castañeda et al., 2019; Romero-Abrio et al., 2019). The ECD Scale focuses on the teacher's pedagogical communication in the classroom, thus differentiating itself from other questionnaires that traditionally focus on the teacher-student interpersonal relationship (Zapata et al., 2010; Jiang et al., 2019), which has been widely studied.

2.3. Procedure

The information was collected with the informed consent of the parents and directors of each school. Adolescents were trained on how to fill out the questionnaire, and, in that process, all their concerns were tackled. The questionnaire was administered face-to-face. The data obtained were processed with the SPSS v23 statistical software.

2.4. Data analysis

To achieve the first objective of this investigation, the Student T test and the Mann-Whitney U test were applied in order to determine gender differences in school violence among adolescents, as well as in the communication they maintain with their parents and teachers. The levels of the aggressions suffered and generated by the adolescents in school were previously averaged, and the scores from the indicators of family and pedagogical communication were added. Similarly, three levels of communication (low, moderate and high) were set based on the minimum (MIN), and maximum (MAX) dispersion values as well as the thirty (P30) and seventy (P70) percentiles.

The second objective that determines the influence of family and pedagogical communication on offending adolescents and victims was achieved by applying Spearman's correlation test between the communication factors and the aggressions evaluated. A multiple regression analysis comprised of the variables that showed a significant correlation was implemented. The statistical procedure carried out matches the causality criteria set by Hill (2015), who claims that statistical association is the first requirement towards establishing causality. After applying collinearity tests, seven predictors were included. This number is appropriate for the sample size and for estimating medium-sized effects (Tabachnick & Fidell, 2001).

3. Results

The findings achieved from the two objectives outlined in this study are laid out in this section.

3.1. Gender-related differences between school violence and family and pedagogical communication

This study found that 70% of adolescents had suffered physical and verbal aggressions at school and admitted to having assaulted their classmates at least once. The remaining 30% claimed to have never been the victim of physical or verbal attacks or having assaulted other peers at school.

Communication level	Open communication with parents	Offensive communication with parents	Verbal communication with teachers
Low	37%	38.3%	29.9%
Moderate	37.7%	34.3%	44.1%
High	25.2%	27.4%	26.1%
Reference Value (Scoring)	MIN=4; P30=12; P70=15; MAX=26	MIN=3; P30=5; P70=8; MAX=16	MIN=10; P30=20; P70=24; MAX=36

Upon implementation of the Student T test, significant differences were found between school violence and the adolescents' gender. Men were, on average, more frequent victims of physical and verbal aggressions in school ($M=1,89$; $SD=0,74$; $p=0,00$; Cohen's $d=0,28$) compared to women ($M=1,69$; $SD=0,67$). Likewise, men reported being more aggressive on average ($M=2,35$; $SD=0,92$; $p=0,00$;

Cohen's $d = 0,24$) than women ($M = 1,93$; $DE = 0,87$). Within the context of communication, the data in Table 1 indicate that the communication of parents and teachers with adolescents happens most frequently between low and moderate levels. The Mann Whitney U test identified significant differences between the gender of adolescents and the levels of family and pedagogical communication. In this case, the finding was that women scored significantly lower (64.1%) than men (35.1%) at the level of verbal communication with their teachers ($p = 0,00$; $r\text{-Rosenthal} = -0,08$).

In terms of offensive communication between parents and children ($p = 0,00$; $r\text{-Rosenthal} = -0,07$), women scored higher (57.6%) than men (42.4%). Regarding open family communication, although there were no significant gender-related differences ($p = 0,09$; $r\text{-Rosenthal} = -0,05$), adolescent women scored lower (47.6%) than men (52.4%).

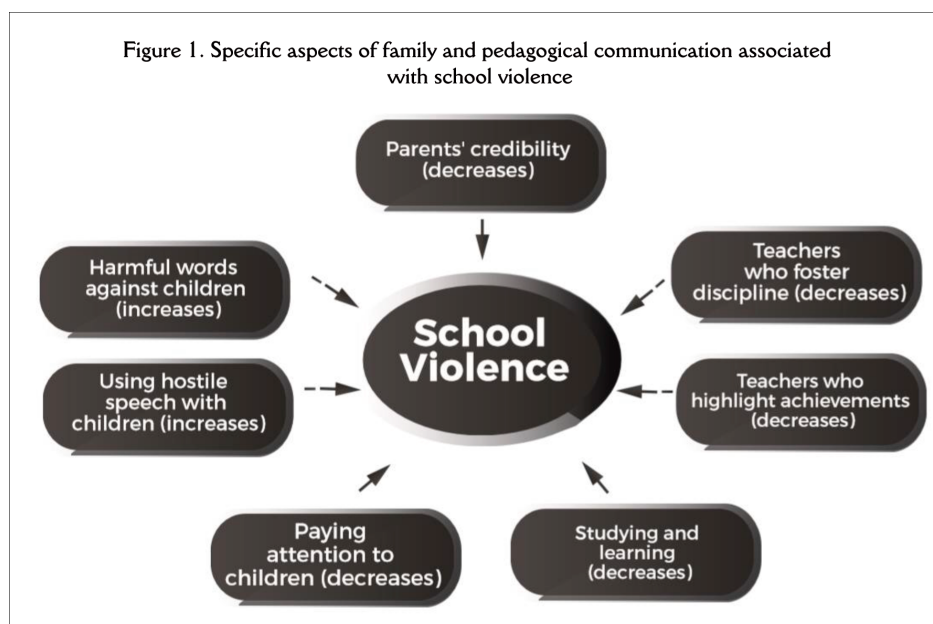
3.2. Influence of family and pedagogical communication on offending teenagers and victims

In the «Open Family Communication» factor, the credibility of parents correlated significantly ($p = 0,00$) and negatively with the aggressions generated by adolescents against others in school. Within this same factor, it was found that parents' willingness to pay attention to their children correlated significantly ($p = 0,00$) and negatively with the aggressions suffered (school victimization).

In the «Offensive Family Communication» factor, it was established that the act of speaking aggressively to children ($p = 0,04$) and telling them harmful things ($p = 0,00$) correlated significantly and positively with victimization.

In the educational setting, within the «Pedagogical Communication» factor, it was found that the use of communication by teachers in order to instill discipline in students within the classroom ($p = 0,00$) correlated significantly and negatively with the aggressions caused. The use of communication by teachers to bring out students' achievements and not their mistakes ($p = 0,04$) and to make them realize the importance of studying and learning ($p = 0,04$) correlated significantly and negatively with victimization.

The following image (Figure 1) shows the indicators for the variables under study that correlated significantly with school violence.



A regression analysis applied to the above variables, which held a significant correlation, significantly allowed us to identify the predictors of family and pedagogical communication that influence school violence among adolescents.

Table 2. Predictors of family and pedagogical communication associated with school violence

Predictors evaluated	Aggressions generated (violent behavior)	Aggressions suffered (victimization)
I believe in whatever my parents tell me	$\beta=-0.08$	$\beta=-0.01$
My parents pay attention to me	$\beta=-0.04$	$\beta=-0.03$
My parents tell me harmful things	$\beta=0.00$	$\beta=0.22^{**}$
My parents speak to me in a hostile manner	$\beta=0.04$	$\beta=0.16^*$
Teacher communication with students in the classroom instills good discipline	$\beta=-0.29^{***}$	$\beta=-0.01$
Teachers' communication in the classroom is characterized by bringing out students' achievements and not their mistakes	$\beta=-0.08$	$\beta=-0.04$
Teachers' communication in the classroom highlights the importance of studying and learning	$\beta=0.02$	$\beta=-0.12^*$
Level of significance (Anova)	$p=0.00$	$p=0.00$
R ² adjusted (variance explained)	8.5%	11.6%

Note. Standardized Coefficients (β =Beta): * p -value < 0.05; ** p -value < 0.01; *** p -value < 0.001.

The values in Table 2 point out that family and pedagogical communication influences school violence among adolescents, predicting 8.5% of violent behavior and 11.6% of victimization. Specifically, it was determined that offensive communication between parents and children, characterized by saying harmful things ($\beta=0.22^{**}$) and hostile speech ($\beta=0.16^*$), significantly forecasts an increased victimization.

The regression analysis revealed, by the same token, that teachers' pedagogical communication focused on making adolescents perceive the importance of studying and learning ($\beta=-0.12^*$) significantly predicts a decrease in victimizations. Communication between teachers and students aimed at instilling good discipline ($\beta=-0.29^{***}$) was the only significant predictor that showed a reduction in violent school behavior.

4. Discussion

The main objective of our study was to determine the influence of family and pedagogical communication on offending adolescents and victims of school violence. A discussion is hereinafter laid out between this study's own findings and those of other studies in order to point out similarities, contributions and empirical limitations.

In general terms, it was found that the communication of parents and teachers with adolescent students' ranges from low to moderate levels. That is, family and pedagogical communication is deficient within this context, which is affected by issues of school violence. For this reason, parents and affected schools need to improve interpersonal communication with students. The above is even more truthful when studies reveal that emotional ties between students and adults in school (Jain et al., 2018), communication aimed at teaching students how to peacefully resolve their conflicts (Jalón, 2005) and the involvement of families in the prevention of school violence (Valdez-Cuervo et al., 2018) effectively contribute to the reduction of peer aggressions.

On the other hand, we have identified that aggressions amongst adolescents in school and the communication they maintain with their parents and teachers displayed significant differences in terms of gender. In such a case, men were more likely than women to be offenders and victims. On the other hand, at the communication level, women were more likely than men to receive insults from their parents and to exert a lower level of communication with their teachers.

Our findings related to gender match those of various studies that reveal how school violence is exercised differently amongst men and women (Machimbarrena & Garaigordobil, 2018; Jain et al., 2018; UNESCO, 2019); such findings also show that gender differences permeate the field of family and pedagogical communication. Such aspects are present in Linares et al. (2019), who point to the manner in which family and cultural issues associated with sexism and gender inequalities coexist behind cyberbullying among adolescents. In this context, education in terms of equality is relevant as an essential value towards preventing gender violence (Gallardo & Gallardo, 2019), especially because gender is associated with the

roles played in harassment on both face-to-face and virtual interactions (Baldry et al., 2017) and intervenes in the relationship between adolescents' perception of parental practices and participation in cyberbullying (Gómez-Ortiz et al., 2018).

In reference to the main objective, we have found a relationship between school violence and communication between parents and children. Significant correlations indicate that when family communication is open, victimization decreases, as well as the likelihood of adolescents adopting aggressive behaviors; however, when communication is offensive, the probability of victimization rises.

The regression analysis showed that offensive family communication is a predictor of victimization. This result is consistent with the study by Romero-Abrio et al. (2019) that associates victimization in adolescence with problematic family communication. Accordingly, this coincides with the works of Aguirre (2018) and Castañeda et al. (2019) that point out how open communication with both the father and mother correlates negatively with school victimization; while offensive parental communication correlates positively with victimization.

Research by Xia et al. (2018) enables a better understanding of our findings by showing that adolescents who were subject to domestic violence were more likely to accept violent norms and be exposed to peer aggressions, which increased the likelihood of aggression and victimization in their life. In this respect, Labella and Masten (2018) claim that the family is an adaptation system that affects violent behaviors in children or can prevent them if it provides warmth and healthy behaviors.

On the other hand, novel data were found to indicate that communication between teachers and students with a focus on generating discipline in the classroom is a predictor of reduced aggressive behavior in school. Discipline refers to the set of procedures, rules and norms that teachers implement to maintain order in the school (Valdés-Cuervo et al., 2010).

Various studies warn that, when discipline collapses, conflicts between students increase (Mayora et al., 2012) as well as antisocial behaviors at school (Pérez, 2005). Our findings reaffirm the essential role of discipline in counteracting school violence. In this particular regard, there are correlated studies that highlight coexistence rules (Del-Rey-Alamillo et al., 2018) and teachers' assistance as variables that reduce cyberbullying in adolescents (Ortega-Barón et al., 2016).

The work by Valdez-Cuervo et al. (2018) underscores the relevance of non-permissive teaching practices and the participation of teachers in strategies such as direct interventions and meetings with offenders as effective resources to curtail school violence.

Another novel pedagogical finding was that teachers' communication focused on bringing out students' achievements correlated significantly with a reduction in victimization. This is due to the fact that this type of communication contributes to improve academic self-esteem, which, in turn, reduces victimization (Ortega-Barón et al., 2016). Therefore, children with low self-esteem are more prone to become victims of harassment (Van-Geel et al., 2018).

Lastly, we established the fact that teacher communication in the classroom is a predictor that reduces school victimization as long as it leads students to realize the importance of studying and learning. This finding stresses the relevance of pedagogical communication to avoid school violence when it generates significant learning that makes students aware of the importance of education. This is related to what was claimed by Boggino (2005), who, addressing the prevention of school violence, proposed organizing teacher training to favor meaningful student learning by addressing specific and contextualized issues, active participation and the generation of concepts, values and social norms.

It is relevant to note that, although the influence of family and pedagogical communication on school violence was low (between 8.5 and 11.6 percent of the total variance), it is similar to that of other related studies confirming the multicausal nature of this phenomenon. From the above, the following stand out: the work of Boniel-Nissim and Sasson (2018) that shows how family communication predicts victimization at 4% of the total variance as well as that of Ortega et al. (2016), which points out the manner in which family cohesion, academic self-esteem, family conflict, assertiveness and teacher support predict cyberbullying victimization between 6.2% and 9.7%.

5. Conclusions and recommendations

Our study contributes to the analysis of school violence from a communicational standpoint. The findings obtained allow us to conclude, firstly, that gender makes a difference in the way in which school violence is exercised among adolescents and in the type of communication students hold with their parents and teachers. We suggest, on the basis of the present study, new studies that explore the role of pedagogical communication against gender violence in schools. It is known that teachers' antibullying behavior is associated with low levels of victimization (Doumas & Midgett, 2018). In turn, school confidence increases when students notice that their teachers take corrective measures against gender violence on the basis of sexual orientation and abstain from making alienating comments (Berger et al., 2017).

Secondly, we conclude that family and pedagogical communication influences the victimization and aggressive behavior of adolescents in school. Empirical evidence leads us to infer that offensive family communication is a risk factor for school violence, whereas open communication by parents and teachers with teenagers actually serves as a protective factor to reduce or avoid such violence. This issue is related to the theories of Estévez et al. (2007), who assure that there is an association between parental communication and school violence, and between teachers' expectations and students' attitude towards institutional authority, which is strongly linked to violent behavior.

All aspects indicated in this study reveal the need to strengthen communication and the family-school relationship to accomplish better results in the implementation of prevention and intervention strategies for school violence, as confirmed by some successful intervention programs in this field (De-los-Pinos & González, 2012; Del-Rey-Alamillo et al., 2018).

Based on our findings and the research by Gentile et al. (2011), which indicates how mass media influence school violence, we suggest new studies to determine if open family communication intervenes as a protective factor in the relationship between children's exposure to violent media content and aggressive behaviors.

We propose, at the educational level, that a study is carried out to assess whether pedagogical communication is more effective as an intervention in school violence when mediated by the relationships between teachers and students, as well as by the justice dispensed by the teacher against acts of indiscipline. This proposal is based on the study of Jiang et al. (2019) that reveals how justice from teachers strengthens the bond with their students and influences the relationship between victim sensitivity and altruism.

We highlight, as a limitation of this study, the fact that only urban adolescents participated in the sample. For this reason, other studies that analyze school violence in rural institutions are required, since, in the Colombian case, the impact of the internal armed conflict has been different for those two contexts (Ospina-Ramírez et al., 2018). However, this article is one of the first empirical developments towards assessing, on a joint basis, the role of pedagogical and family communication against school violence.

Funding Agency

This research work was supported by Universidad Tecnológica de Bolívar and the Cartagena de Indias Education Observatory (Colombia).

References

- Aguirre, K.M. (2018). Relación de la comunicación familiar y la victimización escolar de adolescentes. *Investigación y Práctica en Psicología del Desarrollo*, 1(1), 109-118. <https://doi.org/10.33064/ippd1637>
- Al-Ali, N.M., Yaghy, H.S., Shattawi, K.K., & Al-Shdayfat, N.M. (2018). Parents' knowledge and beliefs about the impact of exposure to media violence on children's aggression. *Issues in Mental Health Nursing*, 39(7), 592-599. <https://doi.org/10.1080/01612840.2017.1422201>
- Baldry, A., Farrington, D., & Sorrentino, A. (2017). School bullying and cyberbullying among boys and girls: Roles and overlap. *Journal of Aggression, Maltreatment & Trauma*, 26(9), 937-951. <https://doi.org/10.1080/10926771.2017.1330793>
- Barnes, H.L., & Olson, D.H. (1982). Parent-adolescent communication scale. In Olson, D.H. (Ed.), *Family inventories: Inventories used in a national survey of families across the family life cycle* (pp. 33-48). University of Minnesota.
- Berger, C., Poteat, V.P., & Dantas, J. (2017). Should I report? The role of general and sexual orientation-specific bullying policies and teacher behavior on adolescents' reporting of victimization experiences. *Journal of School Violence*, 18(1), 107-120. <https://doi.org/10.1080/15388220.2017.1387134>
- Boggino, N. (2005). *Cómo prevenir la violencia en la escuela*. Homo Sapiens.

- Boniell-Nissim, M., & Sasson, H. (2018). Bullying victimization and poor relationships with parents as risk factors of problematic internet use in adolescence. *Computers in Human Behavior*, *88*, 176-183. <https://doi.org/10.1016/j.chb.2018.05.041>
- Calvete, E., Fernández-González, L., Orue, I., & Little, T.D. (2018). Exposure to family violence and dating violence perpetration in adolescents: Potential cognitive and emotional mechanisms. *Psychology of Violence*, *8*(1), 67-75. <https://doi.org/10.1037/vio0000076>
- Castañeda, R., Fadda, S., Ochoa, G., & Jerónimo, J. (2019). Comunicación con los padres, malestar psicológico y actitud hacia la autoridad en adolescentes mexicanos: Su influencia en la victimización escolar. *Estudios sobre Educación*, *26*, 113-134. <https://doi.org/10.15581/004.36.113-134>
- Cerda, G., Pérez, C., Elipe, P., Casas, J.A., & Rey, R.D. (2019). Convivencia escolar y su relación con el rendimiento académico en alumnado de Educación Primaria. *Revista de Psicodidáctica*, *24*(1), 46-52. <https://doi.org/10.1016/j.psicod.2018.05.001>
- Cid, P., Díaz, A., Pérez, M., Torruella, M., & Valderrama, M. (2008). Agresión y violencia en la escuela como factor de riesgo del aprendizaje escolar. *Ciencia y Enfermería*, *14*(2), 21-30. <https://doi.org/10.4067/s0717-95532008000200004>
- De-Los-Pinos, C.C., & González, J.M. (2012). Eficacia de un programa para la prevención de la violencia en un centro de enseñanza secundaria. *Revista Española de Orientación y Psicopedagogía*, *23*(2), 123-138. <https://doi.org/10.5944/reop.vol.23.num.2.2012.11453>
- Del-Rey-Alamillo, R., Mora-Merchán, J., Casas, J., Ortega-Ruiz, R., & Elipe, P. (2018). 'Asegúrate' Program: Effects on cyber-aggression and its risk factors. [Programa «Asegúrate»: Efectos en ciberagresión y sus factores de riesgo]. *Comunicar*, *26*, 39-48. <https://doi.org/10.3916/c56-2018-04>
- Doumas, D.M., & Midgett, A. (2018). The effects of students' perceptions of teachers' antibullying behavior on bullying victimization: Is sense of school belonging a mediator? *Journal of Applied School Psychology*, *35*(1), 37-51. <https://doi.org/10.1080/15377903.2018.1479911>
- Estévez, E., Murgui, S., Moreno, D., & Musitu, G. (2007). Estilos de comunicación familiar, actitud hacia la autoridad institucional y conducta violenta del adolescente en la escuela. *Psicothema*, *19*(1), 108-113. <http://bit.ly/2NjDDb>
- Gallardo, J.A., & Gallardo, P. (2019). Educar en igualdad: Prevención de la violencia de género en la adolescencia. *Hekademos*, *26*, 31-39. <http://bit.ly/2MUpgaZ>
- Gauna, P.J. (2004). *La comunicación interpersonal maestro-alumno y el rendimiento académico*. Universidad Iberoamericana.
- Gentile, D., Coyne, S., & Walsh, D. (2011). Media violence, physical aggression, and relational aggression in school age children: A short-term longitudinal study. *Aggressive Behavior*, *37*(2), 193-206. <https://doi.org/10.1002/ab.20380>
- Gómez-Ortiz, O., Romera, E., Ortega-Ruiz, R., & Del-Rey-Alamillo, R. (2018). Parenting practices as risk or preventive factors for adolescent involvement in cyberbullying: Contribution of children and parent gender. *International Journal of Environmental Research and Public Health*, *15*(12), 2664. <https://doi.org/10.3390/ijerph15122664>
- Hill, A.B. (2015). The environment and disease: Association or causation? *Journal of the Royal Society of Medicine*, *108*(1), 32-37. <https://doi.org/10.1177/003591576505800503>
- Jain, S., Cohen, A.K., Paglisotti, T., Subramanyam, M.A., Chopel, A., & Miller, E. (2018). School climate and physical adolescent relationship abuse: Differences by sex, socioeconomic status, and bullying. *Journal of Adolescence*, *66*, 71-82. <https://doi.org/10.1016/j.adolescence.2018.05.001>
- Jalón, M.J. (2005). La violencia entre iguales en la adolescencia y su prevención desde la escuela. *Psicothema*, *17*(4), 549-558. <http://bit.ly/2yYrvSl>
- Jiang, S., Liu, R.D., Ding, Y., Oei, T.P., Fu, X., & Hong, W. (2019). Victim sensitivity and altruistic behavior in school: Mediating effects of teacher justice and teacher-student relationship. *Frontiers in Psychology*, *10*, 1077. <https://doi.org/10.3389/fpsyg.2019.01077>
- Jiménez, J., & Jiménez, Y. (2018). *Factores comunicacionales y violencia escolar*. Universidad Tecnológica de Bolívar.
- Labella, M.H., & Masten, A.S. (2018). Family influences on the development of aggression and violence. *Current Opinion in Psychology*, *19*, 11-16. <https://doi.org/10.1016/j.copsyc.2017.03.028>
- Leganés-Lavall, E.N. (2013). Una propuesta de intervención para prevenir el acoso escolar desde una perspectiva sociogrupal. *Psychology, Society & Education*, *5*(1), 21-40. <https://doi.org/10.25115/psye.v5i1.494>
- Linares, E., Royo, R., & Silvestre, M. (2019). El ciberacoso sexual y/o sexista contra las adolescentes: Nuevas versiones online de la opresión patriarcal de las sexualidades y corporalidades femeninas. *Doxa Comunicación*, *28*, 201-223. <https://doi.org/10.31921/doxacom.n28a11>
- Machimbarena, J.M., Garaigordobil, M., & and (2018). Bullying y cyberbullying: Diferencias en función del sexo en estudiantes de quinto y sexto curso de educación primaria. *Suma Psicológica*, *25*(2), 102-112. <https://doi.org/10.14349/sumapsi.2018.v25.n2.2>
- Mayora, F., Rojas, N., & García, M. (2012). La disciplina escolar a partir de los registros diarios de clase en una escuela venezolana. *Revista de Investigación*, *36*(75), 33-51. <http://bit.ly/33rZG2D>
- Ortega-Barón, J., Buelga, S., & Cava, M. (2016). The Influence of School Climate and Family Climate among Adolescents Victims of Cyberbullying. [Influencia del clima escolar y familiar en adolescentes, víctimas de ciberacoso]. *Comunicar*, *24*, 57-65. <https://doi.org/10.3916/c46-2016-06>
- Ospina-Ramírez, D.A., López-González, S., Burgos-Laitón, S.B., & Madera-Ruiz, J.A. (2018). La paz entre lo urbano y lo rural: Imaginarios de paz de niños y niñas sobre el posconflicto en Colombia. *Revista Latinoamericana de Ciencias Sociales*, *16*(2), 943-960. <https://doi.org/10.11600/1692715x.16220>
- Pérez, V.M. (2005). Conflictividad escolar y fomento de la convivencia. *Revista Iberoamericana de Educación*, *38*, 33-52. <http://bit.ly/2Cp3iqg>
- Price, M., Hill, N.E., Liang, B., & Perella, J. (2019). Teacher relationships and adolescents experiencing identity-based victimization: What matters for whom among stigmatized adolescents. *School Mental Health*, *11*(42), 790-806.

- <https://doi.org/10.1007/s12310-019-09327-z>
Rey, R., & Ortega, R. (2005). Violencia interpersonal y gestión de la disciplina. *Revista Mexicana de Investigación Educativa*, 10(26), 805-832. <http://bit.ly/34A917r>
- Romero-Abrio, A., Villarreal-González, M.E., Callejas-Jerónimo, J.E., Sánchez-Sosa, J.C., & Musitu, G. (2019). La violencia relacional en la adolescencia: Un análisis psicosocial. *Psicología y Salud*, 29(1), 103-113. <https://doi.org/10.24265/liberabit.2018.v24n1.03>
- Ruiz-Ramírez, R., García-Cué, J.L., Ruiz-Martínez, F., & Ruiz-Martínez, A. (2018). La relación bullying-deserción escolar en bachilleratos rurales. *Revista Electrónica de Investigación Educativa*, 20(2), 37-45. <https://doi.org/10.24320/redie.2018.20.2.1527>
- Tabachnick, B.G., & Fidell, L.S. (2001). *Using multivariate statistics*. Allyn & Bacon.
- UNESCO (Ed.) (2019). *Behind the numbers: Ending school violence and bullying*. Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura. <http://bit.ly/31AV4pl>
- Valdés-Cuervo, A., Martínez-Ferrer, B., & Carlos-Martínez, E. (2018). El rol de las prácticas docentes en la prevención de la violencia escolar entre pares. *Revista de Psicodidáctica*, 23(1), 33-38. <https://doi.org/10.1016/j.psicod.2017.05.006>
- Valdés-Cuervo, A.A., Martínez-Cebreros, M.M., & Vales-García, J.V. (2010). Percepciones de docentes con respecto a la disciplina en la escuela. *Psicología Iberoamericana*, 18(1), 30-37. <http://bit.ly/33o7ORE>
- Van-Geel, M., Goemans, A., Zwaanswijk, W., Gini, G., & Vedder, P. (2018). Does peer victimization predict low self-esteem, or does low self-esteem predict peer victimization? Meta-analyses on longitudinal studies. *Developmental Review*, 49, 31-40. <https://doi.org/10.1016/j.dr.2018.07.001>
- Varela, J.J., Sirlopú, D., Melipillán, R., Espelage, D., Green, J., & Guzmán, J. (2019). Exploring the influence school climate on the relationship between school violence and adolescent subjective well-being. *Child Indicators Research*, 12(50), 1-16. <https://doi.org/10.1007/s12187-019-09631-9>
- Xia, Y., Li, S., & Liu, T.H. (2018). The interrelationship between family violence, adolescent violence, and adolescent violent victimization: An application and extension of the cultural spillover theory in China. *International Journal of Environmental Research and Public Health*, 15(2), 371-371. <https://doi.org/10.3390/ijerph15020371>
- Zapata, C.M., Gómez, M.C., & Rojas, M.D. (2010). Modelado de la relación de confianza profesor-estudiante en la docencia universitaria. *Educación y Educadores*, 13(1), 77-90. <https://doi.org/10.5294/edu.2010.13.1.5>



To-friend or not-to-friend with teachers on SNSs: University students' perspectives

Ser o no ser amigos de los profesores en redes sociales:

Las perspectivas de los estudiantes universitarios

id Dr. Zeynep Turan is Assistant Professor in the Department of Computer Education and Instructional Technology at Atatürk University (Turkey) (zeynepturan@atauni.edu.tr) (<https://orcid.org/0000-0002-9021-4680>)

id Dr. Levent Durdu is Assistant Professor in the Department of Computer Education and Instructional Technology at Kocaeli University (Turkey) (levent.durdu@kocaeli.edu.tr) (<https://orcid.org/0000-0003-3788-7226>)

id Dr. Yuksel Goktas is Full Professor in the Department of Computer Education and Instructional Technology at Atatürk University (Turkey) (yuksekgoktas@atauni.edu.tr) (<https://orcid.org/0000-0002-7341-2466>)

ABSTRACT

A large majority of university students use social networking sites (SNSs) actively. Nevertheless, there are very limited studies examining students' perceptions about student-teacher relationships in SNSs comprehensively. The purpose of this research was to investigate university students' perceptions about interacting with their teachers in SNSs, and to this end an exploratory mixed-methods design was utilised. Qualitative data were collected from 21 students via interviews, and quantitative data from 1,324 students in 19 universities in Turkey via a questionnaire. Content analysis, descriptive analysis and principal component analysis methods were used to analyse the data. The content analysis contributed to the formulation of the questionnaire items. The principal component analysis yielded the following four dimensions: perceived utility, perceived barriers, perceived favourable teacher behaviours, and perceived unfavourable teacher behaviours. The most prominent finding is that the students were mostly opposed to their teachers' sharing their political and religious views; however, they were in favour of teachers sharing information about their personal life. Despite some students displaying some hesitation, especially concerning the level of respect between them, the majority of students had a positive outlook towards teacher-student friendships. The students indicated that being friends on SNSs would increase their motivation towards the course.

RESUMEN

La gran mayoría de los estudiantes universitarios utilizan activamente las redes sociales (RRSS). Sin embargo, hay estudios limitados sobre las percepciones de estos con base en la relación estudiante-profesor en RRSS. El propósito de esta investigación fue investigar las percepciones de los estudiantes universitarios sobre la interacción con sus profesores en redes sociales. Para este fin se empleó un diseño exploratorio mediante métodos mixtos. Se recopilaron datos cualitativos de 21 estudiantes por medio de entrevistas y datos cuantitativos de 1.324 sujetos en 19 universidades de Turquía mediante cuestionario. Para analizar los datos se aplicaron análisis de contenido, análisis descriptivo, y análisis de componentes principales. El primero contribuyó a la formulación de los ítems del cuestionario. El análisis del componente principal arrojó cuatro dimensiones: utilidad percibida, barreras percibidas, comportamientos docentes percibidos como favorables y desfavorables. El hallazgo más destacado fue que los estudiantes se opusieron principalmente a que sus profesores compartieran sus puntos de vista políticos y religiosos. No obstante, estaban a favor de que los docentes compartieran información sobre su vida personal. A pesar de que algunos estudiantes mostraron dudas, especialmente con respecto al nivel de respeto entre ellos, la mayoría del alumnado tenía una perspectiva positiva hacia las amistades profesor-alumno. Estos indicaron que ser amigos en las redes sociales aumentaría su motivación hacia el curso.

KEYWORDS | PALABRAS CLAVE

Social networking, student-teacher relationship, university student, teacher, interaction, communication, self-disclosure, privacy.

Redes sociales, relación profesor-alumno, estudiante universitario, profesor, interacción, comunicación, autorrevelación, privacidad.

1. Introduction

Improvements in the Internet and technology have introduced new communication tools and styles. In particular, social networking sites (SNSs) have become some of the outstanding communication tools in this era (HersHKovitz & Forkosh-Baruch, 2017; Ito et al., 2009). With the emergence of social networking websites, such as Facebook, MySpace, and Twitter, students and teachers have started to connect outside school (Elhay & HersHKovitz, 2019; Puzio, 2013).

SNSs are seen as important communication and educational tools for school and school-related issues in higher education settings (Greenhow et al., 2014). For example, students can be asked questions outside the classroom via social media, interact with their peers and teachers, and engage in discussions about the course. However, despite the prevalence of the use of SNSs and their possible educational benefits, educators have some concerns about using these websites in their professional practice (Puzio, 2013), especially related to privacy issues (HersHKovitz & Forkosh-Baruch, 2013). Therefore, with the widespread use of technology in education, it is important to understand the ways in which technology affects the interaction between students and teachers (Harper, 2018).

2. Literature review

2.1. Teacher-student relationship

Teacher-student relationships play an important role in students' academic development and affect the school and classroom environment (HersHKovitz, 2019; Song et al., 2019). Researchers focusing on student-teacher relationships on SNSs point to both positive and negative issues. For example, Callaghan and Bower (2012) reported that the student-teacher interaction in SNSs correlated with students' achievements and engagement levels. HersHKovitz and Forkosh-Baruch (2013) found that although communication between students and the teacher was limited, the students considered positive student-teacher relationships on SNSs as useful and supported in-class satisfaction. However, some research studies underlined the negative aspects of SNSs. Butler (2010), for instance, referred to inappropriate comments posted on SNSs. Mazer et al. (2007) explored not only the contents of the comments but also how the amount of shared information might affect the perceptions of SNS users. They found that increased number of informal photographs shared by teachers could affect student perceptions negatively.

Teachers can easily manage how much information they want to share about their private lives in their classroom communication; for example, they can create a privacy boundary for their in-class communication (McBride & Wahl, 2005). However, social media differs from traditional communication environments in that it is not an official teaching environment; therefore, teachers tend to share or express themselves freely because they assume that they are not in a formal environment. It is obvious that in-person communication differs from communication over SNSs, in which the boundaries of professional and personal life can be unclear (Carter et al., 2008). In this formal classroom environment, privacy management is easier for both teachers and students.

Maintaining the balance between academic and personal life on SNSs is difficult and can be ambiguous, sometimes causing school authorities and policy makers to ban student-teacher relationships in this type of media (Manca & Ranieri, 2017). For example, the United States of America, Israel, and Australia have implemented policies from time to time to forbid these interactions but, in fact, there is no empirical evidence to support these actions (HersHKovitz & Forkosh-Baruch, 2017). Considering the prevalence of SNSs, adopting a banning strategy is not the optimal solution; rather, in this pervasive digital era, it is better to understand the student-teacher relationship in SNSs, which could be achieved through developing Media and Information Literacy (MIL) (Buckingham, 2007). Teachers should be able to determine how much information to unveil in SNSs in order to preserve their credibility and avoid possible negative perceptions that students might construct. Regulations might have some impacts on students but scholarly studies are insufficient in this area (Veletsianos et al., 2013).

2.2. Self-disclosure and credibility

The definition of self-disclosure according to Mazer et al. (2009) is “any message about the self that a person communicates to another”. Teacher self-disclosure is viewed as a strong personal source of student-faculty communication (Fusani, 1994). Sorensen (1989) stated that there was a positive relationship between student perceptions of affective learning and teacher self-disclosure. Therefore, it can be said that teacher self-disclosure can contribute to student learning (Song et al., 2019). Self-disclosure can establish a supportive learning environment and facilitate various forms of communication between students and teachers (Cayanus & Martin, 2004).

As discussed above, student-teacher communication has extended beyond the classroom, blurring the boundaries. For this reason, Buckingham (2007) stated that utilisation of digital technologies should be approached from a pedagogical perspective. This approach should help both teachers and students manage their communication processes, and in this way, students will gain skills and competencies on how to communicate with their friends and teachers. The amount and relevance of self-disclosure are critical components of communication since there are studies claiming that an increase in teachers’ self-disclosure results in students’ uncivil behaviours (Trad et al., 2012).

Self-disclosure is a kind of friendly communication which positively affects student participation and raises teacher credibility (Cayanus & Martin, 2008). There is a moderate association between teacher credibility and teacher behaviours, such as humour, technology use, and aggressive messages (Finn et al., 2009). When students perceive their teacher as less credible, their motivation decreases, and they show less respect to their teacher. As a result of the combination of these elements, student learning is decreased. Therefore, teachers’ credibility is the key factor in attaining successful student communication.

Various studies have shown that students’ learning is positively affected when they attribute high credibility to their teachers (Frymier & Thompson, 1992; McCroskey et al., 2004); however, SNS communication as a way of establishing friendships between teachers and students may impact on the boundaries of personal and professional life negatively in terms of credibility. For example, Barber and Pearce (2008) argued that the teacher’s presence on Facebook affected teacher credibility adversely, and it was not only their presence but also what was shared that could possibly have an effect on perceptions towards teachers. For instance, if a student is exposed to unwanted photos of the teacher on Facebook, this can affect the teacher’s credibility negatively (Hutchens & Hayes, 2014; Johnson, 2015). Since excessive disclosure can decrease teacher’s credibility, contrary to what Mazer et al. (2009) reported that self-disclosure increases teacher credibility, teachers should pay attention to the type of information they share and the amount of disclosure they have with students (Johnson, 2015).

Communication practices between teachers and students and how they perceive each other’s behaviours on SNSs needs further investigation (Manca & Ranieri, 2015; 2017). Some research reveals that students prefer passive behaviours while interacting with their teachers and avoid active interactions, such as chatting, commenting, and posting (Aydin, 2014). Understanding why learners enact this behaviour would reveal how SNS-based friendships can be utilised for better communication. Thus, it is important to explore teacher-student friendship on SNSs to determine how students perceive their teachers’ use of SNSs and how teachers should use these social interaction tools.

3. Methodology

3.1. Research aim and research questions

The existing research mostly focuses on use of SNSs for academic purposes. In general, studies report the effects of usage or non-usage of SNSs on students’ achievement and the use of SNSs as communication tools for teaching and learning processes (Froment et al., 2017). There is a well-documented doctoral dissertation (Plew, 2011) pertaining to Facebook friendships between teachers and students from the teachers’ perspective. However, there are very few comprehensive studies examining students’ perceptions towards student-teacher relationships on SNSs. Therefore, this study is important for teachers, policy makers, and school authorities in relation to creating new regulations, policies or guidelines on student-teacher relationships on SNSs. With the purpose of analysing the factors that affect student-teacher relationship on SNSs, this study addressed the following research questions:

- 1) What are the students' views about the student-teacher interaction in SNSs?
- 2) What type of posts do students want their teachers to share and not to share?
- 3) What type of actions do students expect from their teachers on SNSs?
- 4) What are the factors that affect the student-teacher relationship on SNSs?

3.2. Research design

This study used a mixed-methods approach with an exploratory sequential design (Creswell, 2011). In this context, qualitative data collection and an analysis shaped quantitative data collection tool were utilised; therefore, the interview results emerging from the first phase of the study assisted in developing the instrument of the second phase of the study. In such exploratory research design, researchers often try to understand a situation using a qualitative research group with the aim of developing a quantitative instrument based on the obtained qualitative data. The final aim is to test and generalize the findings of the first phase of the study via a large number of participants. The priority of this study was quantitative, with a greater emphasis being placed on quantitative methods.

3.3. Participants

In the qualitative phase, there were 21 university students attending a large state university in Turkey. The participants in the quantitative phase comprised 1,324 university students from 19 different universities in Turkey. Descriptive data about the participants obtained from the qualitative and the quantitative phases are summarised in Table 1. The participants were selected via convenience sampling method. The immediate academic colleagues of the researchers were the main sources for finding the participants. The participants were undergraduates ranging from freshmen to seniors aged from 18 to 23 years, attending various departments of different faculties (education, law, engineering, sport sciences, communication, and so on).

Gender	Qualitative Data	Quantitative Data	Total
Male	7	445	452
Female	14	879	893
Total	21	1,324	1,345

3.4. Data collection and analysis

The primary data collection tool was the semi-structured interview developed by the researchers. To ensure the validity of the data collection tool, two experts were consulted and two other researchers from the same academic field reviewed the open-ended questions. According to their feedback, the interview questions were modified and finalised. Examples of the interview questions are: "What do you think about being friends with your teachers on social networks? Can you elaborate on your response?" and "What kind of content should or should not be shared by your teachers on social networks?".

The qualitative data were analysed with the content analysis method (Strauss & Corbin, 1990). The qualitative data of the study were transcribed, segmented, and coded (Johnson & Christensen, 2004). The researchers organised the codes and interpreted the findings to form the items of the data collection instrument of the second phase (Yildirim & Simsek, 2005). The qualitative data were analysed by two researchers for inter-rater reliability.

The second data collection tool was the questionnaire used to obtain the quantitative data of the study. The questionnaire was developed based on the scale development stages recommended by DeVellis (2003). The first step was to create an item pool based on the interview results and the researchers' experiences. The questionnaire was determined to be a five-point Likert scale. Then, the questionnaire items were evaluated by field experts in terms of validity and clarity. An exploratory factor analysis (EFA) was applied to group-related items, and five items were removed. Thus, the questionnaire was finalised with 17 items. In order to determine the factor pattern coefficients, the quantitative data were analysed via the principal components analysis (PCA), which "simplifies the complexity in high-dimensional data while retaining trends and patterns" (Lever et al., 2017: 641). The suggestion of Thompson (2004) that

noteworthy factors should have eigenvalues greater than 1.0, which is also known as the K1 rule, was applied.

4. Results and analysis

4.1. Qualitative results

As summarized in the dataset (<http://bit.ly/33kFVcB>), the interviews with the students revealed their views and assisted in the development of the items in the questionnaire. The most prominent finding is that according to the students, political and religious views should not be shared by teachers. This finding is also included in the quantitative phase as two separate items, as explained in the next sub-chapter.

Additionally, some students did not want to be friends with their teachers on SNSs because they believed that being friend with a teacher on social media would probably affect the level of respect between them negatively. On the other hand, more than half of the students saw being a friend with their teachers on SNSs as a positive contribution to their daily interaction. In addition, the students thought that SNSs increased communication between students and teachers.

4.2. Quantitative results

EFA was conducted to ensure the construct validity of the instrument using IBM SPSS v. 20. The result shows that the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.87, suggesting the absence of multi-collinearity. A KMO greater than .50 is considered acceptable, a value above .80 is commendable (Kaiser, 1974), and values closer to 1 indicate a better correlation between variables (Norusis, 1998). Bartlett's test for sphericity was performed, and the approximate chi-square was 11058.274, $p < .000$. These two tests showed that factorial analysis was appropriate for this set of data. PCA with Varimax rotation was used to reveal the factor loadings. Four factors emerged from the data: The first factor, consisting of four items, was labelled as "perceived utility", the second factor (seven items) as "perceived barriers", the third factor (two items) as "perceived unfavourable teacher behaviours", and the last factor (four items) as "perceived favourable teacher behaviours". The factorial loadings, mean and standard deviation of the items are presented in dataset (<http://bit.ly/2XIBIOy>).

Table 2 presents the four noteworthy factors with an Eigenvalue greater than 1, as suggested by Guttman (1954, cited in Thompson, 2004). The satisfactory reliability values of the factors of the scale ranged from 0.72 to 0.91, and that of the whole scale was 0.83. The highest variance (34.69%) belonged to the perceived barriers factor and the lowest variance (7.83%) to the perceived unfavourable teacher behaviours. The percentages of variance explained by the remaining two factors were 15.35% for perceived utility and 9.43% for perceived favourable teacher behaviours. The four factors accounted for 67.30% of the total variance.

Factor	Cronbach alpha	Eigenvalue	Explained variance (%)	Cumulative %
Perceived utility	0.91	5.89	34.69	34.69
Perceived barriers	0.83	2.60	15.34	50.05
Perceived favourable teacher behaviours	0.72	1.60	9.43	59.47
Perceived unfavourable teacher behaviours	0.80	1.33	7.83	67.30

5. Discussion

In this era, SNSs have become a part of most people's daily routine, including university teachers and students. The positive aspects of SNSs, especially in terms of classroom practices for teaching and learning (Aydin, 2012; Gao et al., 2012; Tess, 2013) have been mostly studied; however, research into the communicative and socialisation issues of SNSs focusing on the friendship of the teacher and student are very limited. In this framework, this study focused on a comprehensive examination of the students' perceptions concerning the student-teacher relationship on SNSs. The students' responses in relation to the four research questions are presented below. What are the students' views about student-teacher interaction on SNSs? Based on the qualitative findings, more than half of the students thought positively

about student-teacher friendship on SNSs. Although from a different education level, our finding is parallel to HersHKovitz and Forkosh-Baruch's (2013) study, which found that secondary school students wanted to befriend their teachers. Additionally, the students indicated that being a friend with their teachers on social media had a positive contribution to their communication with them. The students perceived SNSs as a facilitating factor for the communication between students and teachers. Research studies claim that SNSs could be a contributing tool for improving learning and communication with students (Kleinglass, 2005, cited in Kolek & Saunders, 2008). Similarly, our research findings showed that more than half of the students claimed that being a friend with their course teachers on SNSs increased their communication with them.

The literature mainly reports that for the majority of students, communication via SNSs is appropriate; however, for a minority of students, communication via SNSs was unwanted (Miron & Ravid, 2015). According to Hutchens and Hayes (2014), students prefer to use Facebook for instructional purposes, but they (73%) do not approve of friendship on SNSs mainly due to privacy concerns. This study also revealed some privacy issues about teacher-student relationship, with the most prominent being that some students indicated that teachers should not share contents about their political and religious views. Five of the students believed that being a friend with their teachers would negatively affect the level of respect between them. The finding showing that the students indicated they did not want to be friends with their teachers on SNSs because they thought that being a friend would negatively affect the level of respect can be explained by some kind of behaviours in Turkish culture being considered as disrespectful. This finding indicates that the students may have given their responses based on thinking that their communication with their teachers would be very informal, and therefore perceived them as discourteous. From the teachers' perspective, Göktaş (2015) revealed a similar issue, stating that some active students' behaviours, such as chatting, posting, and poking "can be considered disrespectful by their teachers in Turkish culture". Furthermore, some teachers want the student-teacher relationship to be more formal (Akkoyunlu et al., 2015).

What are the factors that affect student-teacher relationship on SNSs? According to the quantitative findings, the following four factors affected student teacher friendship on SNSs: perceived utility, perceived barriers, perceived favourable teacher behaviours, and perceived unfavourable teacher behaviours. The statistical dataset provides detailed information about the factors and the related items (Turan et al., 2019b).

What kind of actions do students expect from their teachers on SNSs? When the factor of perceived favourable teacher behaviours was examined, it was seen that the students liked some kind of interaction with their teachers. For example, they favoured their teachers' sharing information about their personal life and professional developments. A descriptive study by Göktaş (2015) of 416 undergraduate physical education and sport students reported similar results in the item "read my teachers' education information", which had the highest mean score among 23 items, and the third and fourth items having higher mean scores were "read my teachers' status updates" and "watch videos my teachers' post". Aydın's (2014) study with 121 English language teaching undergraduate students revealed almost the same results, with the item "read my teachers' status updates" having the highest mean score, followed by viewing photos and videos of teachers. This reaction seems appropriate to the nature of SNSs. Students can be curious about their teachers; therefore they want to read basic information about them.

What kind of posts do students want their teachers to share and not to share? When the factor perceived unfavourable teacher behaviours was examined, the students mostly disliked their teachers' sharing their political and religious views. Previous research studies also reported that students negatively perceived some kind of teacher self-disclosure (Kearney et al., 1991; McBride & Wahl, 2005). This was also the most important finding in the qualitative phase of the study, as stated previously. In her blog concerning social media, Fuglei (2014) gave the most important tip, "don't say anything on your social media profile that you wouldn't say in class". Nemetz (2012) designed a study in which the students rated the appropriateness of Facebook scenarios depicting fictional faculty behaviours. She reported the following behaviours from the least to the most appropriate: "lip ring comment, drinking, violation comment, professor reports reputation of other professors, party information request, racism assignment,

Jesus statement, ...” (Nemetz, 2012: 6). The perceived utility factor included actions about SNSs’ contributions to students’ participation in the course, motivation towards course, communication with their teachers, and their expectations about receiving more feedback concerning their courses. Social media is a tool that can enhance communication, and this effect can be seen in educational environments in particular. As a consequence, students expect and tend to use social media to communicate with their teachers (Hamid et al., 2015). This communication with the students generally refers to announcements, such as scheduling and dates of exams, organization purposes (Froment et al., 2017), and content sharing (Draskovic et al., 2013). Such interaction with their teachers is itself a motivation for students (Draskovic et al., 2013), which positively affects academic motivation (Imlawi et al., 2015) and academic performance (Sarapin & Morris, 2015).

According to students, under the perceived barriers factor, the biggest barrier to interacting with their teachers was that being a friend in SNSs would affect their communication negatively. The intimacy level between teachers and students can be the starting point of the discussion. Song et al. (2016) suggested that student and teacher relationship in online environments was more intimate than face-to-face environments. Therefore, students might think that sharing information might negatively affect their professional communication, and it is possible that this is why the students in the current study indicated that they did not want their teachers to see their posts.

The responses to other items, especially those about bias and prejudice support this inference. A similar discussion from teachers’ perspective was presented by Akkoyunlu et al. (2015). The teachers in their study stated that they thought they could not be fair to their students when they knew about their students’ private lives, and it is noteworthy that this item was the second most loaded item in their study, clearly showing that neither teachers nor students wanted their posts to be seen by the other person. Furthermore, some students indicated that seeing their teachers’ posts might negatively affect their attitude to their teachers. This might be the main reason why the students did not want to send a friend request to course teachers.

6. Conclusions

New media has evolved into a participatory and interactive culture. Social media inevitably reflects values and ideologies. Contemporary media now address different skills and competencies; i.e., multiple literacies “that are required by the whole range of contemporary forms of communication” (Buckingham, 2008: 88). A person who produces a media message should consider how the target audience will perceive and respond to the message. Teachers should avoid possible negative self-disclosure to their students (Miller et al., 2014).

Although further research is required on teachers’ perspectives, meanwhile we suggest that the guidelines concerning student-teacher SNS communication from various studies (Kearney et al., 1991; McBride & Wahl, 2005; Miller et al., 2014) are followed in addition to our main finding that students consider teachers should not share political or religious views with them over SNSs. Teachers should, therefore, have two separate accounts, one for personal life and one for professional issues. In addition, teachers could use only Facebook course groups for interaction with students, which would prevent the latter from seeing what teachers are sharing. On the other hand, several studies have shown (Draskovic et al., 2013) that students expect, to some degree, that teachers share developments in their professional life and events in their personal life. This finding was confirmed in our study. Teachers should, thus, take this into account when communicating with students over SNSs.

The literature review and our study reveal that student-teacher communication over SNS is both positive and negatively viewed and experienced by students. There is, thus, a dichotomy: certain actions must be avoided, but others that facilitate interaction with students are to be encouraged. Communication on SNSs can be carried out according to relevant policies or guidelines determined jointly by students and teachers or the respective institution. Students and teachers should be given information about the privacy settings of SNSs so that they can adjust who can see their posts and with whom they share other information.

6.1. Recommendations for further research

Since this study focused on the students' perspective, further investigations should be undertaken concerning teachers' views about student-teacher friendship. Teachers might not favour communication via SNSs because it will surely interrupt and distract their daily routines, such as lecturing, researching, and organising official meetings. Therefore, it is important to elucidate teachers' perspective about communication over SNSs. Since the social and cultural environment affects communication, to determine how different cultures react to SNSs communication, the same questionnaire can be applied to participants from various cultures.

6.2. Limitations

Although this research had over 1,000 participants, the participants were reached through convenience sampling; the data obtained from 1,324 respondents cannot give a representative result for Turkey. In addition, culture is one of the most important determinants of human relations, and the data in this study was affected by the subculture of university students in Turkey. Lastly, although it was not intended, the majority of the students that volunteered were female, and it is possible that female students' online attitude differs from that of male students.

References

- Akkoyunlu, B., Da han, G., & Erdem, M. (2015). Teacher's professional perception as a predictor of teacher – student friendship in facebook: A scale development study. *International Online Journal of Educational Sciences*, 7(1), 242-259. <https://doi.org/10.15345/iojes.2015.01.020>
- Aydin, S. (2012). A review of research on Facebook as an educational environment. *Education Tech Research Dev*, 60, 1093-1106. <https://doi.org/10.1007/s11423-012-9260-7>
- Aydin, S. (2014). Foreign language learners' interactions with their teachers on Facebook. *System*, 42, 155-163. <https://doi.org/10.1016/j.system.2013.12.001>
- Barber, L., & Pearce, K. (2008). *The effect of instructor Facebook participation on student perceptions of teacher credibility and teacher attractiveness*. [Paper Presentation]. The International Communication Association Conference. San Diego, CA, United States. <http://bit.ly/2qp6GOY>
- Buckingham, D. (2007). Digital media literacies: Rethinking media education in the age of the Internet. *Research in Comparative and International Education*, 2(1), 43-55. <https://doi.org/10.2304/rcie.2007.2.1.43>
- Buckingham, D. (2008). Defining digital literacy: What do young people need to know about digital media. In Lankshear, C., & Knobel, M. (Eds.), *Digital Literacies: Concepts, Policies and practices* (pp. 73-90). Peter Lang. <http://bit.ly/2WPlj9x>
- Butler, K. (2010). Tweeting your own horn. *District Administration*, 46(2), 41-44. <https://bit.ly/2DVQ0m0>
- Callaghan, N., & Bower, M. (2012). Learning through social networking sites – the critical role of the teacher. *Educational Media International*, 49(1), 1-17. <https://doi.org/10.1080/09523987.2012.662621>
- Cayanus, J.L., & Martin, M.M. (2004). An instructor self-disclosure scale. *Communication Research Reports*, 21(3), 252-263. <https://doi.org/10.1080/08824090409359987>
- Cayanus, J.L., & Martin, M.M. (2008).). Teacher self-disclosure. Amount, relevance and negativity. *Communication Quarterly*, 56(3), 325-341. <https://doi.org/10.1080/01463370802241492>
- Creswell, J.W., & Plano-Clark, V.L. (2011). Choosing a mixed methods design. In Creswell, J.W., & Plano-Clark, V.L. (Eds.), *Designing and conducting mixed methods research (2nd ed.)*. Sage Publications. <https://doi.org/10.3316/qri0702090>
- Davis, C., Deil-Amen, R., Rios-Aguilar, C., & González-Canche, M.S. (2012). *Social media in higher education: A literature review and research directions*. The Centre for the Study of Higher Education at the University of Arizona and Claremont Graduate University. <http://bit.ly/2CczAEC>
- De-Vellis, R.F. (2003). *Scale development: Theory and applications (2nd ed.)*. Sage.
- Draskovic, N., Caic, M., & Kustrak, A. (2013). Croatian perspective(s) on the lecturer-student interaction through social media. *International Journal of Management Cases*, 15(4), 331-339. <https://bit.ly/2E1mZVH>
- Elhay, A.A., & Hershkovitz, A. (2019). Teachers' perceptions of out-of-class communication, teacher-student relationship, and classroom environment. *Education and Information Technologies*, 24, 385-406. <https://doi.org/10.1007/s10639-018-9782-7>
- Finn, A.N., Schrodt, P., Witt, P.L., Elledge, N., Jernberg, K.A., & Larson, L.M. (2009). A metaanalytical review of teacher credibility and its associations with teacher behaviors and student outcomes. *Communication Education*, 58(4), 516-537. <https://doi.org/10.1080/03634520903131154>
- Froment, F., García-González, A.J., & Bohórquez, M.R. (2017). The use of social networks as a communication tool between teachers and students: A literature review. *The Turkish Online Journal of Educational Technology*, 16(4), 126-144. <http://bit.ly/2qr2Zbu>
- Frymier, A.B., & Thompson, C.A. (1992). Perceived teacher affinity-seeking in relation to perceived teacher credibility. *Communication Education*, 41(4), 388-399. <https://doi.org/10.1080/03634529209378900>
- Fuglei, M. (2014). Social media in education: Benefits, drawbacks and things to avoid. <http://bit.ly/2reD7QN>
- Fusani, D.S. (1994). "Extra-class" communication: Frequency, immediacy, self-disclosure, and satisfaction in student-faculty interaction outside the classroom. *Journal of Applied Communication Research*, 22(3), 232-255.



- <https://doi.org/10.1080/00909889409365400>
- Gao, F., Luo, T., & Zhang, K. (2008). Tweeting for learning: A critical analysis of research on microblogging in education. *British Journal of Educational Technology*, 43(5), 783-801. <https://doi.org/10.1111/j.1467-8535.2012.01357.x>
- Göktaş, Z. (2015). Physical education and sport students' interactions with their teachers on Facebook. *Anthropologist*, 21(1-2). <https://doi.org/10.1080/09720073.2015.11891789>
- Greenhow, C., Gleason, B., & Li, J. (2014). Psychological, social, and educational dynamics of adolescents' online social networking. *Media Education*, 5(2), 115-130. <http://bit.ly/32icfMy>
- Hamid, S., Wwaycott, J., Kurnia, S., & Chang, S. (2015). Understanding students' perceptions of the benefits of online social networking use for teaching and learning. *The Internet and Higher Education*, 26, 1-9. <https://doi.org/10.1016/j.iheduc.2015.02.004>
- Harper, B. (2018). Technology and teacher-student interactions: A review of empirical research. *Journal of Research on Technology in Education*, 50(3), 214-225. <https://doi.org/10.1080/15391523.2018.1450690>
- Hershkovitz, A., & Forkosh-Baruch, A. (2013). Student-teacher relationship in the Facebook era: the student perspective. *International Journal of Continuing Engineering Education and Life-Long Learning*, 23(1), 33-33. <https://doi.org/10.1504/ijceell.2013.051765>
- Hershkovitz, A., & Forkosh-Baruch, A. (2017). Teacher-student relationship and Facebook-mediated communication: Student perceptions. [La relación profesor-alumno y la comunicación en Facebook: Percepciones de los alumnos]. *Comunicar*, 53, 91-100. <https://doi.org/10.3916/C53-2017-09>
- Hutchens, J.S., & Hayes, T. (2014). In your Facebook: Examining Facebook usage as misbehavior on perceived teacher credibility. *Education and Information Technologies*, 19(1), 5-20. <https://doi.org/10.1007/s10639-012-9201-4>
- Imlawi, J., Gregg, D., & Karimi, J. (2015). Student engagement in course-based social networks: The impact of instructor credibility and use of communication. *Computers & Education*, 88, 84-96. <https://doi.org/10.1016/j.compedu.2015.04.015>
- Ito, M., Baumer, S., Bittanti, M., Cody, R., Stephenson, B.H., Horst, H.A., Lange, P.G., Mahendran, D., Martínez, K.Z., Pascoe, C.J., Perkel, D., Robinson, L., Sims, C., & Tripp, L. (2009). *Hanging out, messing around, and geeking out: Kids living and learning with new media*. MIT Press. <https://doi.org/10.7551/mitpress/8402.001.0001>
- Johnson, B., & Christensen, L. (2004). *Educational research: Quantitative, qualitative, and mixed approaches (2nd edition)*. Pearson Education Inc. <https://bit.ly/37zAae5>
- Johnson, K. (2015). The effect of Twitter posts on students' perceptions of instructor credibility. *Learning, Media and Technology*, 36(1), 21-38. <https://doi.org/10.1080/17439884.2010.534798>
- Kaiser, H.F. (1974). An index of factorial simplicity. *Psychometrika*, 39(1), 31-36. <https://doi.org/10.1007/bf02291575>
- Karpinski, A.C., & Duberstein, A. (2009). *A description of Facebook use and academic performance among undergraduate and graduate students*. [Poster presentation]. Meeting of the American Educational Research Association, San Diego, CA, United States.
- Kearney, P., Plax, T.G., Hays, E.R., & Ivey, M.J. (1991). College teacher misbehaviors: What students don't like about what teachers say and do. *Communication Quarterly*, 39(4), 309-324. <https://doi.org/10.1080/01463379109369808>
- Kirschner, P.A., & Karpinski, A.C. (2010). Facebook® and academic performance. *Computers in Human Behavior*, 26(6), 1237-1245. <https://doi.org/10.1016/j.chb.2010.03.024>
- Kolek, E.A., & Saunders, D. (2008). Online disclosure: An empirical examination of undergraduate Facebook profiles. *NASPA Journal*, 45(1), 1-25. <https://doi.org/10.2202/0027-6014.1905>
- Lever, J., Krzywinski, M., & Altman, N.S. (2017). Points of significance: Principal component analysis. *Nature Methods*, 14(7), 641-642. <https://doi.org/10.1038/nmeth.4346>
- Manca, S., & Ranieri, M. (2016). "Yes for sharing, no for teaching!": Social media in academic practices. *The Internet and Higher Education*, 29, 63-74. <https://doi.org/10.1016/j.iheduc.2015.12.004>
- Manca, S., & Ranieri, M. (2017). Implications of social network sites for teaching and learning. Where we are and where we want to go. *Education and Information Technologies*, 22(2), 605-622. <https://doi.org/10.1007/s10639-015-9429-x>
- Mazer, J.P., Murphy, R.E., & Simonds, C.J. (2007). I'll see you on 'Facebook': The effects of computer-mediated teacher self-disclosure on student motivation, affective learning, and classroom climate. *Communication Education*, 56(1), 1-17. <https://doi.org/10.1080/03634520601009710>
- Mazer, J.P., Murphy, R.E., & Simonds, C.J. (2009). The effects of teacher self-disclosure via Facebook on teacher credibility. *Learning, Media and Technology*, 34(2), 175-183. <https://doi.org/10.1080/17439880902923655>
- McBride, M.C., & Wahl, S.T. (2005). "To say or not to say": Teachers' management of privacy boundaries in the classroom. *Texas Speech Communication Journal*, 30(1), 8-22. <https://bit.ly/2E7j7CZ>
- McCroskey, J.C., Valencic, K.M., & Richmond, V.P. (2004). Toward a general model of instructional communication. *Communication Quarterly*, 52(3), 197-210. <https://doi.org/10.1080/01463370409370192>
- Miller, A.N., Katt, J.A., Brown, T., & Sivo, S.A. (2014). The relationship of instructor self-disclosure, nonverbal immediacy, and credibility to student incivility in the college classroom. *Communication Education*, 63(1), 1-16. <https://doi.org/10.1080/03634523.2013.835054>
- Miron, E., & Ravid, G. (2015). Facebook groups as an academic teaching aid: Case study and recommendations for educators. *Educational Technology & Society*, 18(4), 371-384. <http://bit.ly/2NNbV3k>
- Nemetz, P. (2012). Faculty social networking interactions: Using social domain theory to assess student views. *Journal of Instructional Pedagogies*, 8, 1-13. <https://bit.ly/2JQnKnT>
- Norusis, M.J. (1998). *SPSS professional statistics*. Prentice-Hall.
- Oye, N., Helou, A., & Rahim, N. (2012). Model of perceived influence of academic performance using social networking. *International Journal of Computers and Technology*, 2(2), 24-29. <https://doi.org/10.24297/ijct.v2i1.2612>

- Plew, M.S. (2011). Facebook Friendships between college/university instructors and students: Deciding whether or not to allow students as friends, communicating with students, and the individual differences that influences instructors' impression management on Facebook [Unpublished doctoral dissertation]. Georgia State University
- Puzio, E.R. (2013). Why can't be friends? How far can the state go in restricting social networking communications between secondary school teachers and their students? *Cardozo Law Review*, 34(3), 1099-1127.
- Sarapin, S.H., & Morris, P.L. (2015). Faculty and Facebook friending: Instructor-student online social communication from the professor's perspective. *The Internet and Higher Education*, 27, 14-23. <https://doi.org/10.1016/j.iheduc.2015.04.001>
- Song, H., Kim, J., & Luo, W. (2016). Teacher-student relationship in online classes: A role of teacher self-disclosure. *Computers in Human Behavior*, 54, 436-443. <https://doi.org/10.1016/j.chb.2015.07.037>
- Song, H., Kim, J., & Park, N. (2019). I know my professor: Teacher self-disclosure in online education and a mediating role of social presence. *International Journal of Human-Computer Interaction*, 35(6), 448-455. <https://doi.org/10.1080/10447318.2018.1455126>
- Sorensen, G. (1989). The relationships among teachers' self-disclosive statements, students' perceptions, and affective learning. *Communication Education*, 38(3), 259-276. <https://doi.org/10.1080/03634528909378762>
- Strauss, A.L., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Sage. <https://doi.org/10.4135/9781452230153>
- Tess, P.A. (2013). The role of social media in higher education classes (real and virtual) – A literature review. *Computers in Human Behavior*, 29(5), 60-68. <https://doi.org/10.1016/j.chb.2012.12.032>
- Thompson, B. (2004). *Exploratory and confirmatory factor analysis: Understanding concepts and applications*. American Psychological Association. <https://doi.org/10.1037/10694-000>
- Trad, L., Baker, N., Blackman, H., Glynn, K., Miller, A.N., ... Wright, A. (2012). Incivility and instructor communication in the college classroom. *Florida Communication Journal*, 40, 47-53. <http://bit.ly/2X4QiQc>
- Veletsianos, G., Kimmons, R., & French, K.D. (2013). Instructor experiences with a social networking site in a higher education setting: Expectations, frustrations, appropriation, and compartmentalization. *Educational Technology Research and Development*, 61, 255-278. <https://doi.org/10.1007/s11423-012-9284-z>
- Yildirim, A., & Simsek, H. (2005). *Sosyal bilimlerde nitel araştırma yöntemleri*. Seçkin.



Domesticated voices and false participation: Anatomy of interaction on transmedia podcasting

Voces domesticadas y falsa participación: Anatomía de la interacción en el podcasting transmedia

-  Dr. David García-Marín is Professor in the Department of Communication, Faculty of Humanities, Documentation and Communication at the Carlos III University of Madrid (Spain) (dgarin@hum.uc3m.es) (<https://orcid.org/0000-0002-4575-1911>)
-  Dr. Roberto Aparici is Professor in the Department of Didactics, School Organization and Special Didactics in the Faculty of Education at the The National Distance Education University in Madrid (Spain) (raparici@edu.uned.es) (<https://orcid.org/0000-0002-1908-1029>)

ABSTRACT

Transmedia podcasting (transpodcast) is an example of a digital medium essentially promoted by a community of independent creators that arises from the technological advancement derived from the arrival of Web 2.0. This medium is considered to offer its users greater possibilities of participation and co-creation by abandoning the traditional communicative models based on unidirectionality. The objective of this work is to determine how audience engagement takes place in this medium, taking into consideration the analysis of its participation spaces. In order to reach this goal, a Mixed Method Research Design was used, integrating two case studies with a total sample of 2,490 units of participation generated by users on the iVoox platform, the blogs of the two selected projects, and messages on Twitter. The research was complemented with an ethnographic investigation through observational methods on the presence of the user's voice in the podcasts of a total of 19 transpodcast projects. Despite the fact that numerous and relevant voices have defended that the new media ecosystem causes the decentralization and democratization of the agenda-setting and empowers ordinary citizens, this study shows a less optimistic and more critical perspective about the possibilities of meaningful citizen participation in online discourse.

RESUMEN

El transpodcast (podcasting transmedia) es un ejemplo de un medio digital desarrollado esencialmente por una comunidad de creadores independientes que surge del avance tecnológico derivado de la Web 2.0. Este medio ofrece a sus usuarios mayores posibilidades de participación y cocreación al abandonar los modelos comunicativos unidireccionales basados en la lógica broadcast, propios del siglo XX. El objetivo de este trabajo es determinar cómo se lleva a cabo la interacción de los usuarios en este medio a partir del análisis de los espacios de participación que despliega el transpodcast. Para ello, se empleó una metodología mixta (Mixed Method Research Design), que integra dos estudios de caso con una muestra total de 2.490 unidades de participación generadas por los usuarios en la plataforma iVoox, blogs de los dos proyectos y mensajes en Twitter. La investigación fue complementada con un estudio etnográfico, ejecutado a través de métodos observacionales sobre la presencia del usuario en los programas en formato podcast de un total de 19 proyectos transpodcast. Aunque numerosas y relevantes voces han defendido que el nuevo ecosistema mediático ha causado la descentralización y la democratización de la agenda-setting y ha empoderado a los ciudadanos en términos comunicacionales, este estudio aporta una perspectiva menos optimista y más crítica sobre las posibilidades reales de participación ciudadana significativa en el discurso online.

KEYWORDS | PALABRAS CLAVE

Audience participation, digital media, podcasting, engagement, interaction, transmedia, interaction analysis, mixed methodology.

Participación de la audiencia, medios digitales, podcasting, compromiso, interacción, transmedia, análisis de la interacción, metodología mixta.

1. Introduction

In its first fifteen years, podcasting has been configured as a practice that represents the best of digital media production on the Web. This medium can be characterized as a way to share content made in a personal way, as a niche and immersive medium, as a platform to disseminate information and research openly and, above all, as a challenge to the hegemony of the text and the image as prominent communicative languages in the digital age. The podcast is considered a participatory and collaborative medium (Löwgren & Reimer, 2013) that facilitates access into the communication arena to individuals without media experience, constituting a type of citizen journalism (Gillmor, 2004).

In recent years, numerous authors have analyzed podcasting as a powerful phenomenon within the digital media ecosystem (Massarelli & Perrotta, 2006; Sterne, 2008; Gallego, 2010; Cordeiro, 2010; 2012; Markman, 2011; Millette, 2011; Lindgren, 2014; Aguayo, 2015; Bonini, 2015; McHugh, 2016). One of the main perceptions coming from these studies is that the evolution of the podcast does not seem to be linked to technology. In fact, the technological tools applied to the podcast have evolved very little since the origin of the medium, whose development seems to be connected to the implementation of better user experiences and the creation of higher quality content. Not only are the media characterized by their technological specificities, but also by their textual differences, industrial practices, audience behavior and cultural understanding (Lotz, 2017). In that sense, podcasts are ontologically and culturally different from the rest of the media: they are made by podcasters and not by radio producers, for mobile listeners, and in search of niche content that is consumed on demand (Spinelli & Dann, 2019). These aspects, combined with its differential technological features, its specific financing mechanisms and the development of talent applied to the medium, has helped podcasting to outline its own cultural space (Berry, 2018) that, concomitantly, challenges the logic and effects of the mediation itself (Llinares, 2018). This own cultural space (López-Villafranca, 2019; Wade-Morris et al., 2019) has been promoted in a richer manner from amateur and independent production, which has managed to develop a powerful ethos of authenticity (Sullivan, 2018) with renewed bridging possibilities for its users (Swiatek, 2018).

Parallel to the creation of amateur communities, the professional podcast has experienced a great evolution in the last five years. The podcast became a mainstream phenomenon in the United States thanks to *Serial* (García-Marín, 2019), a show launched in 2014 that completely changed the perceptions about this medium (Dredge, 2014; Hancock & McMurtry, 2018). Its success lies in the exploitation of this medium's specific characteristics (Sellas & Solá, 2019): mobility, narrative fragmentation, and cross-platform integration. The publication of its chapters with an unpredictable periodicity-possible on the grounds of the podcast's particular content distribution method and the complexity and richness of its storytelling-derived from the possibility of pausing and reproducing the audio as many times as the user wants-led its producers to go beyond the sound language to furnish their creations with elements built in other media languages, generating interactive experiences, impossible to produce on the radio. In fact, the podcast rarely exists as a single sound entity, but forms an intertextual ecosystem (Barrios-O'Neill, 2018) characterized by a legible complexity (Tierney, 2015). At the same time, the podcast is considered a user-centered medium where the listener must actively decide their consumption pattern since, unlike other media, the interaction user-podcast does not exist in a single possible manner. Thus, podcasting, supposedly, opens up new forms of interaction and participation, even reaching performative participation (Wilson, 2018), which involves the physical interaction of the listener with the space depicted in the show.

The podcast's multiplatform and cross-platform character and its distinct interactive possibilities have resulted in the birth of transpodcast, medium derived from podcasting. Analogous to the notion of transradio (transmedia radio) coined by Martínez-Costa (2015), the concept of transpodcast intends to describe those media projects that, having the podcast as a core medium, extend their storytelling and expand their communicative structure to other media, platforms and media languages, acquiring an evident transmedia nature (Wrather, 2016; García-Marín & Aparici, 2018). Despite all the innovations implemented by podcasting and transpodcast, a central issue in the culture of these media continues without being sufficiently investigated: the presence/participation of the user/listener on the different platforms used by both media. Has transmedia evolution applied to sound content generated greater participatory experiences for users/listeners? To what extent does transpodcast reproduce the old media

models based on one-way communication processes? How is the digital public space for conversations and debates constituted and promoted by the transpodcast producers? In connection with these questions, our research raises the following objectives:

- 1) Analyze the functions that, within this type of transmedia projects, the different digital platforms perform as spaces for participation and interaction between producers and users and between the users themselves.
- 2) Map the actions carried out and the contents produced by the users in these participation spaces, in order to determine to what degree the user's meaningful participation takes place resulting in the content co-creation in this medium.
- 3) Construct a taxonomy about the different models/levels in which the listener's participation in the shows is performed.

2. Materials and methods

2.1. Case studies selection

The participation spaces in transpodcast are defined as the different platforms in which users and fans create any type of content and interact with the rest of members of their community. The analysis of these participation platforms was established through a Mixed Method Research Design and executed by analyzing two case studies. The two shows chosen for the analysis had to contain the following eligibility criteria:

- a) Non-professional and independent character. The study focused on the amateur community due to its majority status within the medium in Spain and, presumably, opening greater participatory possibilities compared to professional podcasting.
- b) Having a wide community of users derived from its high relevance in the podcastphere.
- c) Offering the possibility of commenting on chapters hosted in their blogs without previous registration.
- d) The two podcasts chosen should focus on different topics and adopt distinct formats.

Considering these variables, the transcasting projects chosen as the two case studies were 'Vidas en Red' and Fans fiction. The former, focused on technological issues, is a monologue –published daily– presented by a single podcaster. The latter is an informal chat between two TV series and movie enthusiasts, with monthly frequency.

2.2. Sample and procedures

The two projects selected as case studies are pioneers on podcast production dealing with technology and TV series. These topics are two of the most relevant and prominent in the Spanish independent podcastsphere. In the Spanish amateur context, they are regarded as reference podcasts due to their high number of listeners and monthly downloads. In addition, in the case of Fans Fiction, an entire network of podcasts about TV topics has been generated by adding other shows with alternative content to the central podcast. In addition, their formats (conversational and monologue) are the most representative ones in the Spanish context, and their hosts are popular figures: Converso (Vidas en Red) is a renowned technology specialist, while María Santonja (Fans Fiction) was one of the organizers of the 2017 national independent podcasting event in Alicante, and usually collaborates with major commercial radio stations, such as Cadena SER, as an expert in TV series. In both cases, the podcaster's popularity is a catalyst for their podcasts' visibility and relevance. Furthermore, the last element that justifies the representative and referential nature of these projects is the fact that their structure and central features have been copied by several independent podcasts. Both case studies focused on the analysis of the comments on the iVoox podcasting repository, messages on blogs, tweets generated by their communities, and the mode of listener's participation in both podcasts (sound content):

- a) Study of the comments on iVoox. The sample was composed by the users' contributions published in the last 50 chapters hosted on the account of these podcasts. The study was carried out during three months (from November 2017 to January 2018).
- b) Analysis of blog comments. All comments hosted related to the last 50 posts published on the blog for each of the two projects chosen were analyzed. They were studied between November 2017 and

January 2018.

c) Analysis of Twitter. All tweets addressed to the official accounts of the two projects during November 2017 comprised the sample. For data collection, the Tweetreach application was used, which is a specific tool for monitoring activity on social networks.

The messages and tweets were analyzed through “coding and counting”, a quantitative method consisting in “encoding the data and then counting the occurrence of a coded item, together with content analysis” (Torrego & Gutiérrez, 2016). For the coding and classification of the data extracted on these three platforms, a registration sheet (Table 1) was used, including the following predetermined categories: textual (referred to comments related to the specific topic of the show), metatextual (those contents that are related to the project itself, with its authors or with its production process) and extratextual (comments that do not fit in any of the previous two dimensions). These categories were unfolded in 16 subcategories. The corpus of participatory units analyzed on these three spaces was formed by 2,490 comments and tweets, of which 1,058 (42.49%) were messages on iVoox, 680 comments on blogs (27.30%) and 752 contributions on Twitter (30.20%).

Textual	Metatextual	Extratextual
Content extension	Production	Listening situation / circumstance
Request/query	About the authors	Personal reference
Emotional expression	Project news	Others (indicate the type)
Critiques/suggestions	Questions about the project	
Participation in contests/activities	General suggestions	
Others (indicate the type)	Advertising/promotion	
	Others (indicate the type)	

d) Observation of the listener’s voice included in the shows. For its analysis, non-participatory observational methods were used for eleven months, between January 2018 and November 2018. In this case, a decision was made to expand the sample of transpodcast projects in order to include all the shows that received the 2017 Spanish Podcasting Awards. The number of shows studied in this stage was 19. In order to deal with the analysis, four categories, divided into a total of 16 subcategories, were established (Table 2). The four major dimensions to be observed were: a) the way in which listeners are asked to participate, b) their model of presence in the shows, c) the space occupied by the listeners within the shows, and d) the objective of the participatory act.

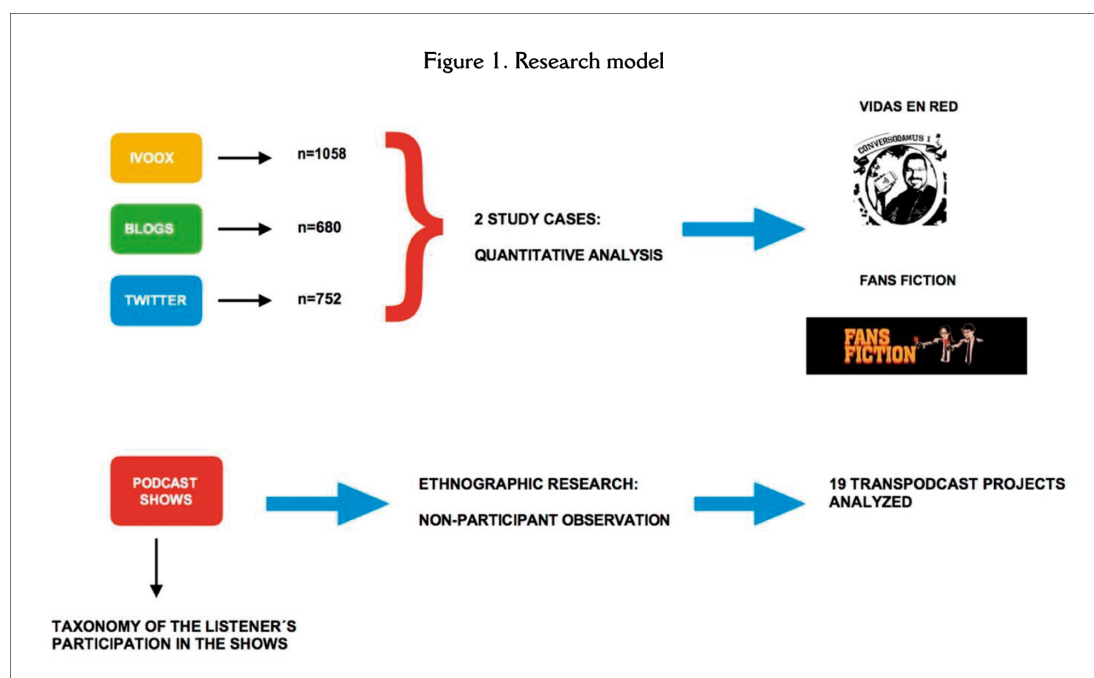
Participation request method	Listener presence	Space occupied by the listener	Participation act’s objective
Placement of the call to request participation within the program (start, end, etc.).	Reference from the podcast host.	Time spent on listener participation.	Possibility of participating (available for all listeners or only for those who accomplish specific requirements, etc.).
Format of the call to participate (pre-recorded announcement, live speech, etc.).	Reading of the listener comment.	Existence of specific sections and when they are performed.	Role of listeners assigned by the show’s managers.
Types and variety of participation modes.	Pre-recorded transmission.	Fan special show.	Listener content type (content extension, critiques, advertising, emotional, etc.).
Possible incentives.	Live intervention (phone call model).	Ongoing participation during the entire show	
	Presence at the time of recording with the rest of the hosts.		
How is participation promoted?	How is participation executed?	When and where is participation developed?	What is the participation request for?

The research instruments used (quantitative analysis and non-participant observation) were articulated by complementation, a strategy consisting in the aggregation of results derived from different instruments that address the analysis of the object of study from different perspectives (Callejo & Viedma, 2005). In order to code and analyze the data produced from the non-participant observation, the Maxqda software was used, which is a specialized tool to assist in qualitative research and mixed methods.

3. Results

3.1. Participation on iVoox

Regarding the *Vidas en red* podcast, a total of 618 comments were analyzed, of which the majority (58.41%) were messages that extend the content of the show (Table 3). These comments can be identified as a type of content relevant as a complement to the podcast's narrative. The users' personal experience with the technological devices analyzed by the podcaster in his shows is the issue most dealt with by the community flourished around this program. Expressions of emotion or empathy about the show's content (18.60%) were the second content type most generated by users, while 15.85% were linked to critical messages about the content that the program offers. The most common criticisms focus on the abuse of off-topic chapters, which is a practice that many podcast users generally disapprove.



In the case of *Fans Fiction*, a smaller number of comments was produced (440); of which, unlike *Vidas en red*, the main content (47.04%) is connected to expressions of emotion or empathy towards the podcasters' discourse. This project receives a lower percentage of comments included under the label "narrative extension" (only 40.68%) and a lower average of critical messages (6.81%) than *Vidas en red*.

3.2. Comments on blogs

Participation in this platform tends to be lower compared to that observed on iVoox. While the latter displays a greater amount of messages that exceeded a thousand interventions, in the case of blogs the number of comments was 680 (30% lower). This difference is especially meaningful in the case of *Vidas en red*, whose community was able to generate 618 comments on the last 50 chapters uploaded on iVoox and only 39 on the last 50 posts of its blog. Almost half of the posts (44%) of this transpodcast project did not receive any comments. The more technological profile of this community can cause its members to be more accustomed to content production from the iVoox app and using social networks (instead of blogs) in

parallel to the execution of another activity. Usually the comments posted on platforms such as websites or blogs are generated from computers, in a domestic environment or, at least, in a situation where the only activity being carried out is precisely the writing of such comment.

Considering *Vidas en red*, the texts produced by its followers are, mostly, extensions of the content produced in the podcast (43.58%), expressions of emotion/ empathy (35.89%) and, to a lesser extent, queries and requests to the podcaster (12.82%). In this case, the critical content appears in fourth place, with 8% of the comments produced.

This low percentage of critical content obtained in the study applied to *Vidas en red* podcast is also observed when analyzing *Fans Fiction*, whose community barely produces this textual category in the numerous comments posted on its website. Its followers tend to produce more significant content (narrative extension) in this space than in the *iVoox* service, since 68% of registered interventions serve to extend the podcast's storytelling. In addition, 31% of comments are linked to emotional expressions. The remaining categories are barely represented.

3.3. Twitter

The data obtained show the relevance of promotional messages (those that serve to advertise the general activity of the program, invitation of special collaborators, publication of new chapters, recording of special episodes, etc.) as content generated by the communities of the two podcasts analyzed. Although with nuances and with different figures and results, on Twitter there is a greater presence of this type of promotional content compared to the use of this category in comments hosted on podcast platforms and blogs.

Table 3. Statistical study of the comments on iVoox and blogs, and participation on Twitter communities of the two selected transpodcasts

Comments on iVoox								
Podcast	Content extension	Emotion	Critiques	Request	Production	Situation	Others	Total (n)
<i>Vidas en red</i>	361 58.41%	115 18.60%	98 15.85%	14 2.26%	10 1.61%	1 0.16%	19 3.07%	618
<i>Fans Fiction</i>	179 40.68%	207 47.04%	30 6.81%	7 1.59%	7 1.59%	1 0.22%	9 2.04%	440
Total	540 51.03%	322 30.43%	128 12.09%	21 1.98%	17 1.60%	2 0.18%	28 2.64%	1058
Comments on blogs								
Podcast	Content extension	Emotion	Critiques	Request	Production	Authors	General suggestion	Total (n)
<i>Vidas en red</i>	17 43.58%	14 35.89%	3 7.69%	5 12.82%	0	0	0	39
<i>Fans Fiction</i>	437 68%	196 31%	2 0.31%	2 0.31%	2 0.31%	1 0.15%	1 0.15%	641
Total	454 66.76%	210 30.88%	5 0.73%	7 1.03%	2 0.29%	1 0.14%	1 0.14%	680
Participation on Twitter								
Podcast	Content extension	Emotion	Promot.	Request	Off-topic	Others	Total (n)	
<i>Vidas en red</i>	268 44.34%	150 25.38%	89 15.05%	29 4.90%	26 4.39%	29 4.90%	591	
<i>Fans Fiction</i>	23 14.28%	21 13.04%	95 59.00%	0	5 3.10%	17 10.55%	161	
Total	291 38.70%	171 22.73%	184 24.46%	29 3.85%	31 4.12%	46 6.11%	752	

The community of *Vidas en red* was much more active in the same period (November 2017) than the *Fans Fiction* community. The former managed to gather almost 600 comments created by its followers, a high number compared to the much more modest amount of 161 tweets that was generated by *Fans Fiction* users. This difference in tweet production can be explained by three relevant reasons.

On the one hand, the *Fans fiction* Twitter community is more limited quantitatively when compared to the number of followers accumulated by the *Vidas en red* account. On the other hand, the latter has enthusiasts with a more technological profile and more accustomed to creating content on social networks.

It should be noted that Vidas en red followers produced a lower volume of comments on the project blog in comparison to Fans fiction followers, which suggests that this community -Vidas en red- prefers to participate in a more synchronous way (when listening to the podcast), in contrast to the participation on blogs, regarded as more asynchronous. Finally, Vidas en red does not have a specific Twitter account, so the followers of the project must contact the personal account of its creator and single host (@Converso72), unlike Fans fiction, which when presented by several podcasters, has an official account with the name of the program, of a more corporate nature.

This difference is considered to be essential, since the official Fans fiction account can be perceived by its own community as less close and more impersonal compared to the perception of closeness that Vidas en red followers can experience. These differences reflect how the logic of connection and affinity built in these communities seems to be best achieved through the adoption of accounts that community members perceive as more personal.

Another element derived from the analysis of the use of Twitter is the greater generation of debates and discussions compared to the situation present in iVoox and blogs. This aspect is especially visible in the case of Vidas en red, where certain queries by the creator of the podcast generated conversations within the community for several days.

3.4. Listener participation on the shows

By applying the observational methods previously mentioned, the following five levels/models of participation within transmedia podcasts were found:

- Level 0. In this model, the communication mode is completely vertical, broadcast-style, identical to that of the radio. A clear differentiation is established between senders and receivers. There is no participation or co-creation by the user. The listener has no relevance in the show and there are no sections for their voice to be heard. Followers are not incorporated into the programs at any time.
- Level 1. The communication mode continues to be clearly one-way and hierarchical, although the hosts make some brief and superficial mentions of listeners who have contacted the program by any of the methods provided by the project. On certain occasions, conversations that arise from the participation in online platforms jump to the core media object, the podcast, introduced by the hosts. It is, however, a very subtle way of promoting the inclusion of the user's voice, since the references to these conversations usually occur very superficially, without detailed descriptions about the development of the initial interaction.
- Level 2. It consists of an evolution of the previous model: hosts introduce the opinions of their followers through the reading of comments coming from the different platforms provided by the project for that purpose. These comments are often read in a specific section of the program (of very short duration), usually in the final part of the show. The model continues to be absolutely hierarchical.
- Level 3. It is configured as a model similar to the previous one, with a main difference: the introduction of the user's voice after sending an audio message. The communicative model remains vertical, as there is still a clear imbalance between the time dedicated to the follower's voice and the subsequent comment of the podcaster regarding their contribution. The fact that users who participate with their audio messages are also podcast creators significantly facilitates their participation in other podcasts, either because they are able to produce materials with a higher technical quality or because this type of users are relevant or popular figures in the podcast community due to their creative work. For this reason, we observe the existence of a bias situated in the production and relevance within the community itself: users who contribute relevant materials to the podcast sphere have more possibilities of being invited to co-create podcasts by others.
- Level 4. This model is linked to the creation of specific and exclusive chapters for the user's participation. These shows are designed as collaborative spaces completely produced with audio messages by listeners, through user comments read by podcasters and later commented by

them, or from a combination of messages of both types. In any case, although the presence of the user is introduced, the model does not cease to have a hierarchical structure: there is no dialogue between listener and podcaster since the latter has no possibility of replying to the comments of the hosts, so the relationship between both is not totally bidirectional. The presence of the user is limited to a single intervention and, in addition, the approach to managing participation is not open: podcasters stand as gatekeepers by selecting the participants and deciding which interventions will be included in the programs. On the other hand, these special shows are often organized as a solution for creating content in times when the podcaster has limited availability and/or little activity related to the topic of the show (holidays or summer period, for instance). They are configured as a strategy to exploit the free labour of fans in those periods of difficulties to generate new content.

4. Discussion and conclusions

The research data show the differentiated use that listeners of different transpodcast projects make of iVoox comments and Twitter posts. While the Vidas en red community create more meaningful messages that can be considered as narrative extensions of this podcast's storytelling, the content produced by the Fans fiction community tends to be more superficial, connected to the intention of advertising the show or showing personal feelings about the topics covered by its hosts. These differences in the use of the participation spaces lead us to consider that participation in the digital media is not performed in a homogenous way, even within the same medium. Each project has specific characteristics (related to their own listeners, the topics the podcasts cover, the features of the hosts, etc.) that generate different conditions for participation. As a consequence, it does not seem appropriate to regard participation as an aspect related to the medium itself, but an element connected to the specific ecosystem created by each project. Because of that, it is possible to assert that participatory media do not exist, what do exist are participatory ecosystems.

On the other hand, one of the main findings of our research is the very limited relevance of the user in the central transpodcast content, the podcast show. Despite the relevance of a significant number of interventions on iVoox, blogs and Twitter, this content is hardly included in the programs as part of their storytelling. In addition, the user voice's access to the shows is at least as restricted as on analog media. The transpodcast interaction model generally maintains the one-way logic characteristic of the traditional media. According to our research, all the models regarding the users' participation in podcasts present an unidirectional and hierarchical logic. The listener's voice is completely domesticated on the grounds that those participating in the shows are clearly managed by presenters, and what sounds like a conversation is actually a staged interaction organized by the editors to fit a pre-established framework (Pinseler, 2015). In order to reach a genuinely horizontal communication process and a true participatory ecosystem in transpodcast, the user/fan should be invited to be part of the podcast as a co-presenter. The participant would have a protagonist role and a continuous presence throughout the duration of the podcast and could enter into discussion with the usual hosts, so the model would be clearly more horizontal and less hierarchical than those previously analyzed. These programs would offer the sensation of breaking the barrier between those who emit and those who traditionally listen, generating greater freshness by introducing a different voice than usual. In their investigations on the participation in radio shows, Higgins and Moss (1982), Orians (1991), and Pinseler (2008) defend the lack of empowerment of the listener on a medium that creates the impression of being bidirectional communication, without really being bidirectional (Shingler & Wieringa, 1998). Our research concludes that exactly the same unidirectional dynamic is followed by transpodcast producers.

From the analysis of transpodcast user interaction, it is possible to raise issues related to the real communicational empowerment capacity of users in digital media. After the arrival of the Web 2.0 in 2004, many academics began to consider the possibilities of digital communication as an essential channel for the relevant participation of subjects in the public debate based on their coordinated and collaborative action in virtual structures open and lacking hierarchy (Jenkins, 2008; Shirky, 2010). After some initial years where the optimistic visions about the digital universe were hegemonic, the studies and contributions

of, among others, Prior (2007), Sunstein (2009), Pariser (2011), Turow (2011), Webster (2014), Han (2017), and Lanier (2018) offer a more critical perspective about the democratizing possibilities of the Internet. They define the digital spaces as a conjunction of closed structures that exploit and manipulate the user's social identities from the exploitation of a network of platforms whose business model is based on the commodification of user data (Srniczek, 2018). These perceptions about the Internet reject the former notions about the ordinary citizen's empowerment on digital environments.

Understanding how the grammar of interaction between senders and receivers is established is essential to construct processes that break the unidirectional and predominantly passive model that governed the media ecosystem during the twentieth century. Just as each medium defines its own content production language (based on years of evolution, practice and essay) significant participation in each medium (and each media project) also has its own language, which must be discovered through useful research in order to promote and nurture new relationship models between the different actors of communication so as to create truly horizontal and participatory processes.

Future research on the profile and role of audiences and their interaction with digital media should be carried out to determine whether the digital media ecosystem of the 21st century gives audiences a greater capacity to influence on the public debate; or if its voice, despite being shown, continues to have a subordinate role in the public sphere. That is, whether or not the expressive discourse (Allen, 2015) that the user produces on social networks and digital media has real possibilities of becoming influential discourse for transformative purposes.

Funding Agency

This research is part of the work carried out by the "Media Education Network" of the State Program for the Promotion of Excellence in Scientific-Technical Research, the State Subprogram for Knowledge Generation (EDU2016-81772-REDT), financed by FEDER (European Regional Development Fund) and Spain's Ministry of Economy and Competitiveness.

References


- Aguayo, V. (2015). *El podcast como herramienta de comunicación empresarial*. [Tesis doctoral, Universidad de Málaga]. RIUMA. Repositorio Institucional de la Universidad de Málaga. <http://bit.ly/2visGKC>
- Allen, D. (2015). Reconciving public spheres: The flow dynamics model. In Allen, D., & Light, J. (Eds.), *From voice to influence* (pp. 178-207). University of Chicago Press.
- Barrios-O'Neill, D. (2018). Wild listening: Ecology of a science podcast in podcasting. In Llinares, D., Fox, N., & Berry, R. (Eds.), *Podcasting. New aural cultures and digital media* (pp. 141-172). Palgrave Macmillan. https://doi.org/10.1007/978-3-319-90056-8_8
- Berry, R. (2018). Just because you play a guitar and are from nashville doesn't mean you are a country singer: The emergence of medium identities in podcasting. In Llinares, D., Fox, N., & Berry, R. (Eds.), *Podcasting. New aural cultures and digital media* (pp. 15-33). Palgrave Macmillan. https://doi.org/10.1007/978-3-319-90056-8_2
- Bonini, T. (2015). The 'Second Age' of podcasting: Reframing podcasting as a new digital mass medium. *Quaderns del CAC*, 41, 23-33. <http://bit.ly/2m0oLku>
- Callejo, J., & Viedma, A. (2005). *Proyectos y estrategias de investigación social: La perspectiva de la intervención*. McGraw Hill.
- Cordeiro, P. (2010). *A rádio e as indústrias culturais*. Livros Horizonte.
- Cordeiro, P. (2012). Radio becoming r@dio: Convergence, interactivity and broadcasting trends in perspective. *Journal of Audience & Reception Studies*, 9(2), 492-510. <https://bit.ly/2E4VxGZ>
- Dredge, S. (2014). Serial podcast breaks iTunes records as it passes 5M downloads and streams. <http://bit.ly/2mpFgqg>
- Gallego, J.I. (2010). *Podcasting: Distribución de contenidos sonoros y nuevas formas de negocio en la empresa radiofónica española*. [Tesis doctoral, Universidad Complutense de Madrid]. E-Prints Complutense. <http://bit.ly/2UrwuU4>
- García-Marín, D. (2019). La radio en pijama. Origen, evolución y ecosistema del podcasting español. *Estudios sobre el Mensaje Periodístico*, 25(1), 181-196. <https://doi.org/10.5209/esmp.63723>
- García-Marín, D., & Aparici, R. (2018). Nueva comunicación sonora. Cartografía, gramática y narrativa transmedia del podcasting. *El Profesional de la Información*, 27(5), 1071-1071. <https://doi.org/10.3145/epi.2018.sep.11>
- Gillmor, D. (2004). *We the media: Grassroots journalism by the people, for the people*. O'Reilly Media. <https://doi.org/10.1145/1012807.1012808>
- Han, B.C. (2017). *La expulsión de lo distinto*. Herder.
- Hancock, D., & Mcmurtry, L. (2018). I know what a podcast is: Post-serial fiction and podcast media identity. In Llinares, D., Fox, N., & Berry, R. (Eds.), *Podcasting. New aural cultures and digital media* (pp. 81-105). Palgrave Macmillan. https://doi.org/10.1007/978-3-319-90056-8_5
- Higgins, C.S.C., & Moss, P.D. (1982). *Sounds real. Radio in everyday life*. University of Queensland Press.


- Jenkins, H. (2008). *Convergence culture. La cultura de la convergencia en los medios de comunicación*. Paidós. <https://bit.ly/2YnkqH7>
- Lanier, J. (2018). *Ten arguments for deleting your social media accounts right now*. The Bodley Head.
- Lindgren, M. (2014). RN's creative audio unit-what's that all about? <http://bit.ly/2mrqPC5>
- Llinares, D. (2018). Podcasting as liminal praxis: Aural mediation, sound writing and identity. In Llinares, D., Fox, N., & Berry, R. (Eds.), *Podcasting. New aural cultures and digital media* (pp. 123-145). Palgrave Macmillan. https://doi.org/10.1007/978-3-319-90056-8_7
- López-Villafranca, P. (2019). Estudio de casos de la ficción sonora en la radio pública, RNE, y en la plataforma de podcast del Grupo Prisa en España. *Anuario electrónico de estudios en Comunicación Social Disertaciones*, 12(2), 65-78. <https://doi.org/10.12804/revistas.urosario.edu.co/disertaciones/a.6547>
- Lotz, A.D. (2017). *Portals. A treatise on internet-delivered television*. Maize Books. <https://doi.org/10.3998/mpub.9699689>
- Löwgren, J., & Reimer, B. (2013). *Collaborative media: Production, consumption and design interventions*. The MIT Press.
- Markman, K.M. (2012). Doing radio, making friends, and having fun: Exploring the motivations of independent audio podcasters. *New Media & Society*, 14(4), 547-565. <https://doi.org/10.1177/1461444811420848>
- Martínez-Costa, P. (2015). Radio y nuevas narrativas: de la crossradio a la transradio. In Oliveira, M., & Ribeiro, F. (Eds.), *Radio, sound and Internet* (pp. 168-187). <https://bit.ly/2rpa5y6>
- Massarelli, V., & Perrotta, M. (2006). Podcasting: A change for listeners, a challenge for broadcasters. In Thiermann, S. (Ed.), *Relating radio, communities, aesthetics, access* (pp. 267-264). Spector.
- McHugh, S. (2016). Oral history and the radio documentary/feature: Introducing the COHRD form. *Radio Journal: International Studies in Broadcast & Audio Media*, 10(1), 35-51. https://doi.org/10.1386/rjao.10.1.35_1
- Millette, M. (2011). Independent podcasting as a specific online participative culture: A case of study of Montreal podcasters. [Paper presentation] IR 12.0: Performance and Participation, the annual conference of the Association of Internet Researchers, Seattle, WA, United States. <http://bit.ly/2moD5Dj>
- Orians, W.a. (1991). *Hörerbeteiligung im radio. Eine fallstudie zu motivation, erwartung und zufriedenheit von anrufern*. R. Fischer.
- Pariser, E. (2011). *The filter bubble*. Penguin Books.
- Pinsler, J. (2008). The politics of talk on German free radio stations. *Westminster Papers in Communication and Culture*, 5(1), 67-67. <https://doi.org/10.16997/wpcc.51>
- Pinsler, J. (2015). Listener participation in everyday radio shows. In Bonini, T., & Monclús, B. (Eds.), *Radio audiences and participation in the age of network society* (pp. 56-71). Routledge.
- Prior, M. (2007). *Post-broadcast democracy*. Cambridge University Press.
- Sellas, T., & Solà, S. (2019). Podium Podcast and the freedom of podcasting: Beyond the limits of radio programming and production constraints. *Radio Journal: International Studies in Broadcast & Audio Media*, 17(1), 63-81. https://doi.org/10.1386/rjao.17.1.63_1
- Shingler, M., & Wieringa, C. (1998). *On air. Methods and meanings of radio*. Arnold.
- Shirky, C. (2010). *Cognitive surplus. How technology makes consumers into collaborators*. Penguin Books.
- Spinelli, M., & Dann, L. (2019). *Podcasting. The audio media revolution*. Bloomsbury Academic.
- Srnicek, N. (2018). *Capitalismo de plataformas*. Caja Negra Editora.
- Sterne, J., Morris, J., Baker, B., Freire, M., & A (2008). The politics of podcasting. *The Fibreculture Journal*, 13. <http://bit.ly/2mrqK1f>
- Sullivan, J.L. (2018). Podcast movement: Aspirational labour and the formalisation of podcasting as a cultural industry. In Llinares, D., Fox, N., & Berry, R. (Eds.), *Podcasting. New aural cultures and digital media* (pp. 35-56). Palgrave Macmillan. https://doi.org/10.1007/978-3-319-90056-8_3
- Sunstein, C. (2009). *Republic.com 2.0*. Princeton University Press.
- Swiatek, L. (2018). The podcast as an intimate bridging medium. In Llinares, D., Fox, N., & Berry, R. (Eds.), *Podcasting. New aural cultures and digital media* (pp. 173-187). Palgrave Macmillan. https://doi.org/10.1007/978-3-319-90056-8_9
- Tierney, M. (2015). *What lies between: Void aesthetic and postwar post-politics*. Rowman and Littlefield.
- Torrego, A., & Gutiérrez-Martín, A. (2016). Watching and tweeting: Youngsters' responses to media representations of resistance. [Ver y tuitear: Reacciones de los jóvenes ante la representación de la resistencia]. *Comunicar*, 24, 9-17. <https://doi.org/10.3916/c47-2016-01>
- Turow, J. (2011). *The Daily you. How the new advertising industry is defining your identity and your worth*. Yale University Press.
- Wade-Morris, J., Hansen, S., & Hoyt, E. (2019). The PodcastRE Project: Curating and preserving podcasts (and their data). *Journal of Radio & Audio Media*, 26(1), 8-20. <https://doi.org/10.1080/19376529.2019.1559550>
- Webster, J.G. (2014). *The marketplace of attention. How audiences take shape in a digital age*. MIT Press.
- Wilson, R.Z. (2018). Welcome to the world of wandercast: Podcast as participatory performance and environmental exploration. In Llinares, D., Fox, N., & Berry, R. (Eds.), *Podcasting. New aural cultures and digital media* (pp. 273-298). Palgrave Macmillan. https://doi.org/10.1007/978-3-319-90056-8_14
- Wrather, K. (2016). Making 'Maximum Fun' for fans: Examining podcast listener participation online. *Radio Journal: International Studies in Broadcast & Audio Media*, 14(1), 43-63. https://doi.org/10.1386/rjao.14.1.43_1



Problematic Internet uses and depression in adolescents: A meta-analysis

Usos problemáticos de Internet y depresión en adolescentes: Meta-análisis

 Raquel Lozano-Blasco is Predoctoral Researcher (FPU) in the School of Education at the University of Zaragoza (Spain) (rlozano@unizar.es) (<https://orcid.org/0000-0002-0100-1449>)

 Dr. Alejandra Cortés-Pascual is Associate Professor of Education at the University of Zaragoza (Spain) (alcortes@unizar.es) (<https://orcid.org/0000-0002-2839-7041>)

ABSTRACT

Widespread use of the Internet in 21st century society is not risk-free. This paper studies the comorbidity of some problematic uses of Internet with depression in order to assess their correlation. With that aim, a meta-analysis of 19 samples obtained from 13 different studies ($n=33,458$) was carried out. The subjects of these studies are adolescents between the ages of 12 and 18 years ($\mu=15.68$) from different cultures and continents (Europe, Euro-Asia, America and Asia). The effect size obtained from the use of a random-effects model ($r=0.3$, $p<0.000$) is significant, moderate and positive, thus confirming the relation between pathologic uses of the Internet and depression. Moreover, meta-regression test results showed that 9% of the variance ($R^2=0.09$) is associated with the male gender, while age and culture are not significant variables. The variability rate of the studies is high ($I^2=87.085\%$), as a consequence of heterogeneity rather than publication bias, as Egger's regression test shows (1-tailed p -value=0.25; 2-tailed p -value=0.50, and $\sigma=1.57$). Therefore, the need for specific interventions in secondary education dealing with this issue is evident to ensure that it does not extend into adult life.

RESUMEN

El uso extendido de Internet en la sociedad del siglo XXI no está exento de riesgos. El presente trabajo estudia la comorbilidad entre los usos problemáticos de Internet y la depresión con la finalidad de determinar la existencia de relación entre ambas. Para ello se ha llevado a cabo un meta-análisis, que cuenta con 19 muestras recogidas en 13 investigaciones ($n=33.748$), con adolescentes de entre 12 y 18 años ($\mu=15,68$) de diferentes culturas y continentes (Europa, Euro-Asia, América y Asia). El tamaño del efecto obtenido a partir de un modelo de efectos aleatorios ($r=0,3$, $p<0,000$) es significativo, positivo y moderado confirmando la existencia de relación entre usos patológicos de Internet y depresión. Por otra parte, la meta-regresión mostró que el 9% ($R^2=0,09$) de la varianza es explicada por el sexo masculino, mientras que la edad y la cultura no son variables significativas. La variabilidad de los estudios es elevada ($I^2=87,085\%$) siendo fruto de la heterogeneidad y no del sesgo de publicación, tal y como indicó la prueba de regresión de Egger (p -value 1 tailed=0,25; p -value 2 tailed=0,50 y $\sigma=1,57$). Se advierte la necesidad de comenzar a generar proyectos de intervención en Educación Secundaria que traten esta problemática con el objetivo de que no se extienda a la vida adulta.

KEYWORDS | PALABRAS CLAVE

Meta-analysis, adolescence, Internet, pathological use, depression, comorbidity, correlation, moderating effect.
Meta-análisis, adolescencia, Internet, uso patológico, depresión, comorbilidad, correlación, efecto moderador.

1. Introduction

In recent years, a spread of Internet use in different cultures has been observed. In the case of Europe, research conducted in several countries shows continuous growth in the frequency of use of new technologies. A clear example is the study by Tsitsika et al. (2014) of European adolescents, which found that 70% of their sample regularly used social networks and that 40% used them for an average of two hours a day. In the case of the United Kingdom (UK), 83% of adolescents aged 12 to 15 years have cellphones and spend 21 hours per week on them (Ofcom, 2017).

In the United States (USA), the Pew Research Center (2015) states that approximately 24% of adolescents are almost constantly connected to social networks. However, this increase does not only occur in Europe and the Americas, Asian teenagers also spend more time on the Internet for different purposes. The case of South Korea is paradigmatic. According to surveys performed in that country, 29.2% of South Korean adolescents are potentially addicted users, a larger proportion than observed for the older population (Israelashvili & Romano, 2016).

According to Jun (2016), this problem is observed in adolescents and young people in industrialized countries. Even so, Zhang et al. (2013) report that Internet addiction (IA) is not unique to first-world countries but is also present in developing countries. That is, the pervasiveness of the Internet has led to pathological uses, which in turn has promoted possible pandemics. The meta-analysis conducted by Cheng and Li (2014) shows that 6% of the adult population suffers from IA.

As Király et al. indicate (2015), the Internet is a portal through which numerous online activities are accessed: social networks, video games, video downloads, etc. Regarding social networks such as Facebook and Instagram, Oberst et al. (2016) state that these platforms allow adolescents to create profiles that reflect their desired self-representation, thus making these platforms very attractive spaces. According to King et al. (2013), the increase in new technological spaces implies changes in our behavior. In the words of Lu et al. (2018), the excessive Internet use can lead to health problems.

The nature of adolescence should be considered in light of potential excessive Internet use, as indicated by Underwood and Ehrenreich (2017). At this stage, human beings are especially susceptible to suffering the negative effects of social networks. In particular, adolescents may face situations that lead to feelings of exclusion or victimization (Underwood & Ehrenreich, 2017).

IA is defined by Young (1998) as an excessive concern with the activities carried out on this platform that creates discomfort in the daily lives of users at the personal, social or professional level. As El-Asam et al. (2019) state, in recent years, several terms have come into use, such as excessive Internet use, problematic Internet use (PIU) and Internet addiction disorder (IAD). Other authors, such as Müller et al. (2016), use the term "Internet addiction" (IA), which they define as the excessive and uncontrolled use of online applications accessible through the Internet (social networks, online games, pornography sites, etc.).

Although these terms are frequently used, only Internet gaming disorder (IGD) is a recognized disorder. In fact, IGD is included in the latest edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*, American Psychiatric Association, 2013). Analyses carried out in different countries and cultures show that the persistent use of the Internet (for social networking, online gaming or other activities related to surfing the web) increases the risk of developing addictive behaviors (Müller et al., 2016; Tsitsika et al., 2014).

There are numerous studies that relate the addictive use of the Internet to various health problems that affect the individual and his or her way of relating to the world. The relationship between IA and depression or depressive symptoms is especially alarming. Kaess et al. (2014), in their sample of European adolescents with an average age of 15, found that the pathological use of the Internet is related to different mental problems, including suicidal ideation and depression.

Gámez-Guadix et al. (2014) verified the correlation between depressive disorder and the components of PIU in a population of Spanish adolescents aged 13 to 17. Banjanin et al. (2015) claim that the level of IA is correlated with depressive symptoms in adolescent Serbs aged between 12 and 18. Even so, the relationship between IA or pathological use is not only an endemic problem in Europe. Adolescents from Asia, and North and South America also suffer from these psychological illnesses.

According to several studies, the relationship between addiction and depression is mixed. In this sense, we find several authors who show that addiction affects depressive symptoms (Chou & Edge, 2012; Bickhan et al., 2015). The reverse also occurs: depressive symptoms predict addiction (Bonetti et al., 2010; Kim et al., 2015).

In the first case, the idealization of personal and professional qualities—that is, hiding one's own defects—could affect one's mood (Chou & Edge, 2012). Likewise, the lack of family rules regarding the use of new technologies seems to lead to the onset of depressive symptoms (Bickhan et al., 2015). In this sense, it is noteworthy to mention the research of Mehdizadeh (2010), according to which, Facebook users with higher rates of narcissism and lower self-esteem had greater online activity; that is, they were more active.

In the second case, people with depression used their mobile devices to reduce negative feelings (Kim et al., 2015). Likewise, solitary adolescents could have greater difficulty relating face to face, which would increase their interest in relating online (Bonetti et al., 2007). Thus, it is understood that there is no consensus regarding which factor constitutes the dependent variable and which the independent variable is.

Access to the Internet could become a health problem for young people. McLaughlin and King (2015), among others, argue that adolescence continues to be an evolutionary stage of great vulnerability in terms of low self-esteem and the onset of depressive and anxiety disorders. Underwood and Ehrenreich (2017) report that social networks can lead to situations of exclusion and victimization. Therefore, Woods and Scott (2016) support the need to understand the relationship between pathologies and social networks.

Given the evidence of the pathological use of new technologies and the psychological problems that these entail, it should be noted that there are protective factors for their prevention. Authors such as Wu et al. (2015) note that it is essential to guide adolescents in the proper use of the Internet and to rely on tools offered by both the school and the family.

2. Methodology

2.1. Research question

In recent years there has been increasing interest in how adolescents use new technologies and how it is beginning to impact their health. That is, the comorbidity between problematic-addictive use of the Internet and depression in adolescents.

2.2. Criteria for inclusion and exclusion

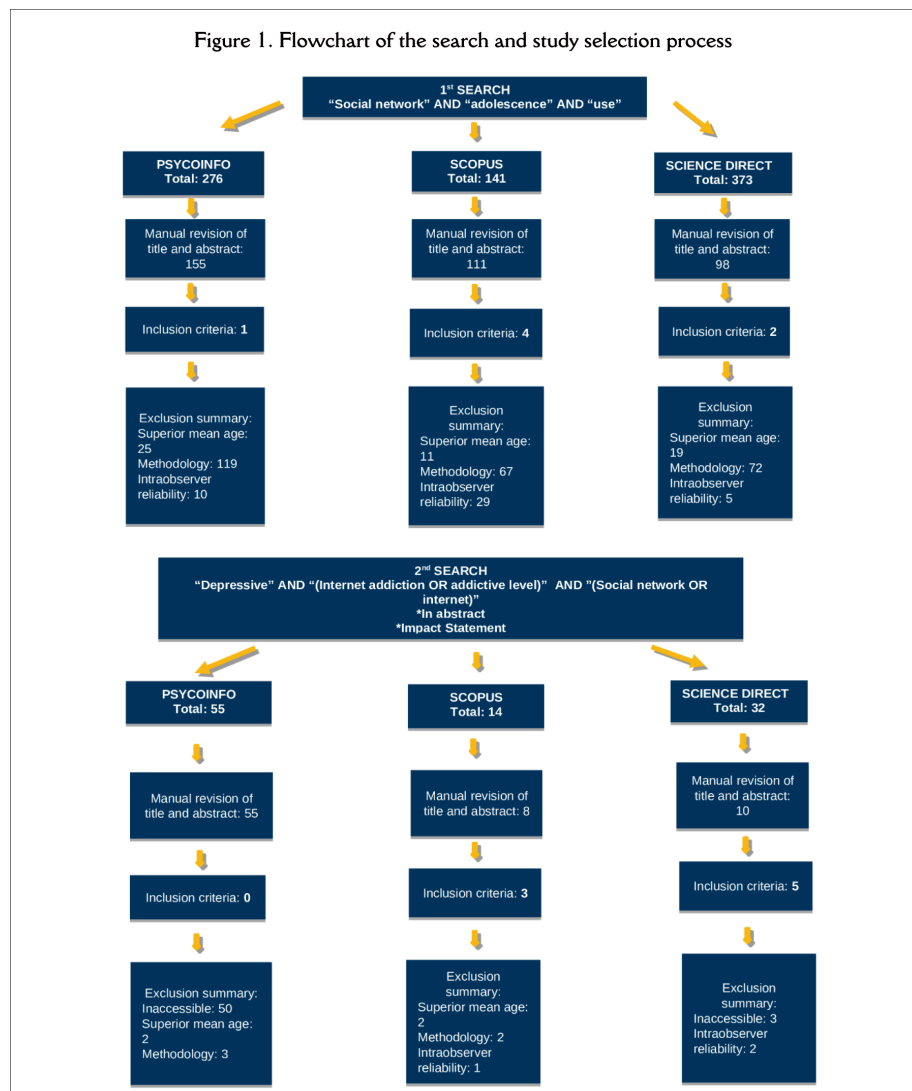
A series of inclusion criteria are stipulated to develop the search:

- Age of the sample. The study population corresponds to adolescents with a mean age between 12 and 18 (including up to 18.9 years to represent high school and professional education students).
- Methodological nature of the articles. Studies should be experimental and quantitative.
- Date of publication. A range was established from 2013 to 2019.
- Intraobserver reliability. It was decided to select only journals of recognized prestige positioned in the 1st quartile (Q1) in the Scimago Journal & Country Rank.
- The exclusion criteria stipulated are as follows:
- Biomedical nature. Studies that evaluated addiction and depression using instruments other than psychometric tests were discarded.
- Adolescent population with special educational needs (SEN) as a main feature. However, it was stipulated that research in which students with SEN were a standard measure according to the normal curve would be accepted.
- Research studies without clear and accurate quantitative data. Scientific studies that did not present numerical data or that did not clearly state the statistics in question were excluded. Similarly, those for which the CMA software detected any statistical error were also left out of the sample.

2.3. Search strategy

The search strategy followed the requirements of Botella and Sánchez (2015). Searches of three databases -Psycinfo, Scopus and Science Direct – were performed. Two Boolean searches were carried out with different keywords (see Figure 1). The first search was performed using the Boolean search actions “Social network AND adolescence AND use”. All of the articles obtained were manually screened by reading their title and abstract (Figure 1).

Next, other types of keywords were introduced for the second search, such as “depressive AND (Internet addiction OR addictive level) AND (social network OR Internet)”. The reference lists of the different articles were reviewed, but none met the inclusion criteria. In total, the meta-analysis comprised 13 studies, with $k=9$ samples from Europe, Asia and the Americas. The search lasted 4 months (October, November and December 2018 and January 2019).



2.4. Coding procedure

The study followed the guidelines provided by the Cochrane Manual of Systematic Reviews in Higgins and Green (2011), which stipulates clear objectives as well as terms related to the criteria for the selection of eligible studies. The studies were coded manually because most of them did not refer explicitly to

addiction related to, or excessive use of new technologies and depression. First, it was necessary to code terms in the same category: “addiction”, “excessive use”, “Internet addiction”, “average and high use”, “problematic Internet use”, “negative consequence of mobile device use (CERM)” and “problematic Facebook use” were coded as problematic use.

As explained by El-Asam et al. (2019), in recent years, various terms have been used, such as “excessive Internet use”, “problematic Internet use (PIU)” or “Internet addiction disorder (IAD)”. On the other hand, only studies that addressed depression were selected; thus, studies were excluded if they contained terms such as “suicidal ideation,” “loss of interest,” “preoccupation,” “shyness,” “loneliness” and “alexithymia,” among others, although they could be symptoms of depressive disorder.

The effect size was calculated from data and expressed as Pearson correlations, odds ratio and sample sizes with p values. These data were entered into the statistical software CMA and returned an effect size of $r=0.3$, which according to Cohen (1998) establishes a significant positive and moderate correlation between the variables.

2.5. Instruments

For the instruments used to measure both problematic Internet use and depression, see Table 1.

Author	Problematic use instrument	Depression instrument
El-Asam et al.	Problematic Internet Use (PIUQ)	Patient Health Questionnaire 9 (PHQ)
Woods & Scott	Social Integration and Emotional Connection subscale of the Social Media Use Integration Scale	Hospital Anxiety and Depression Scale
Walburg et al.	Internet Addiction Test (AIT)	Center for Epidemiologic Studies Depression Scale (CES-D)
Sami et al.	Internet Addiction Test (AIT)	Center for Epidemiologic Studies Depression Scale (CES-D)
Colder-Carras et al.	Video Game Addiction Test (VAT)	Depressive Mood List
Banjanin et al.	Young Internet Addiction Test, designed by the authors	Center for Epidemiologic Studies of Depression Scale for Children (CES-DC)
Kircaburun et al.	Ten-item Internet gaming disorder test (IGDT-10)	UCLA Loneliness Scale-Short form (ULS-4)
Jun	KCYPS	Korean Manual of Symptom Checklist
Chang et al.	Chen Internet Addiction Scale (CIAS)	Center for Epidemiologic Studies Depression Scale (CES-D)
Lin and others	Chen Internet Addiction Scale (CIAS)	Ko's Depression Inventory
Zhang et al.	Beard's Diagnostic Questionnaire for Internet Addiction	Self-Rating Depression Scale (SDS)
Gámez-Guadix et al.	Generalized Problematic Internet Use Scale 2	Brief Symptom Inventory
Oberst et al.	Questionnaire of experiences related to mobile phone use (CERM)	Self-report Hospital Anxiety and Depression Scale (HADS)

3. Results and analysis

3.1. Sample description

The literature searches for studies related to pathological use and depressive symptoms in recent years (2013-2019) yielded interesting results. The 19 samples ($K = 19$) in the 13 selected studies comprised a total of 33,748 individuals. The smallest sample was 20 individuals, and the largest was 9,733 individuals. Regarding the cultures examined in the research, 46.15% of the studies included European populations (France, Serbia, UK, Holland, Spain). The European population represented 42.81% of the total sample. A total of 30.76% of the studies were conducted in Asia (China and North Korea), accounting for 50.18% of the total sample. A total of 15.31% of the studies were carried out in Eurasian countries (Israel and Turkey), representing 2.60% of the total sample. Regarding the Americas (represented by Spanish-speaking countries), 7.69% of the studies were conducted in South America and represented 4.38% of the sample. The presence of various countries allowed an examination of differences among cultures. However, it

should be noted that no studies conducted in Africa, North America or Oceania were included. It would have been interesting to have a greater representation of Indo-European and Asian countries because the latter are only represented by China and South Korea, and Southeast Asia and the Middle East were ignored. Regarding sex, it is worth indicating that two studies did not provide data related to this variable. Of the total sample, 38.15% were men and 41.02% were women. Three studies did not provide a mean age but instead present a range of years, while the rest reported the mean age of their participants. In sum, the mean age of the sample was 14.75 years.

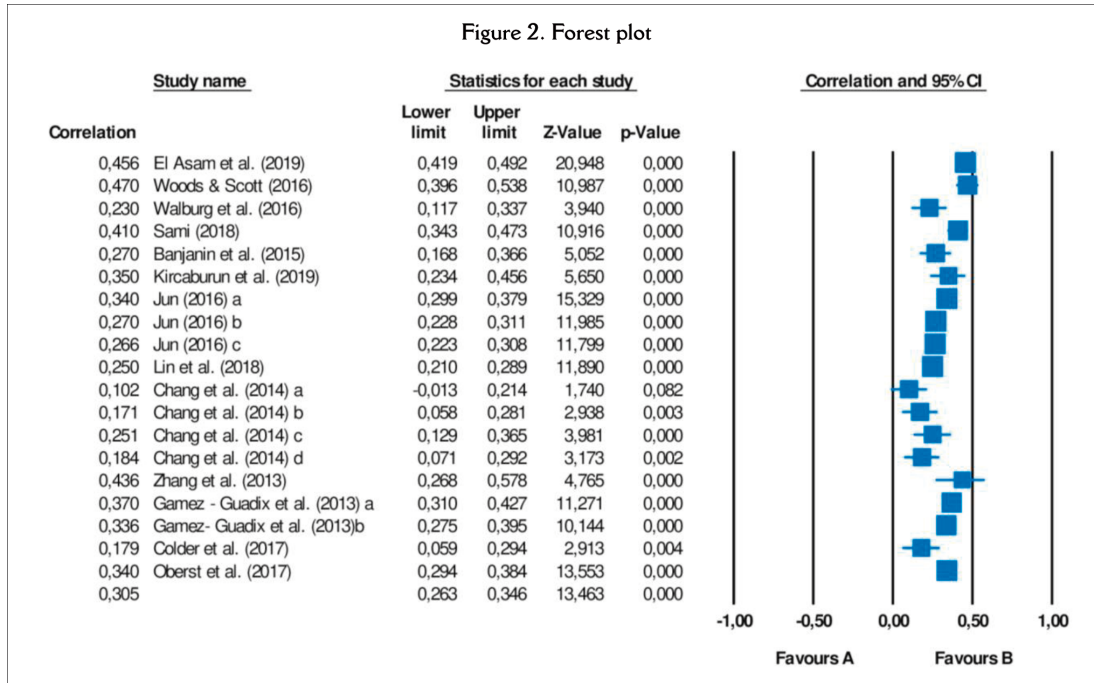
Author	Country	Year	Population	Sex % males	Sex % women	Mean age
El-Asam et al.	UK	2019	1.814	53	47	12.6
Woods & Scott	UK	2016	467	-	-	14
Walburg et al.	France	2016	286	40.2	59.8	16.5
Sami et al.	Israel	2018	631	43.5	56.6	14.95
Colder-Carras et al.	The Netherlands	2017	9733	48.83	51.17	14.5
Banjanin et al.	Serbia	2015	336	34.52	65.48	18
Kircaburun et al.	Turkey	2019	242	93	7	18.78
Jun (x3)	South Korea	2016	1877	49.77	50.23	15.98 14.89 13.89
Chang et al. (x4)	Taiwan	2014	2.315	52	48	15.5
Lin et al.	Taiwan	2018	2.170	-	-	15.83
Zhang et al.	China	2013	20	90	10	16.8
Gómez-Guadix et al. (x2)	Spain	2013	845	41.07	58.93	15.2
Oberst et al.	Latin America	2017	1.468	25.59	74.31	16.59

3.2. Statistical analysis

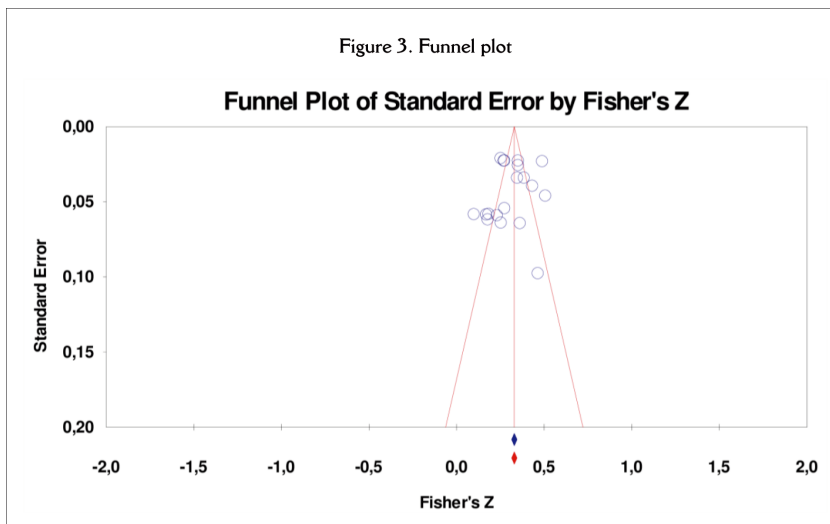
This study aimed to research the relationship between the variables “problematic Internet use” and “depression” using the CMA software. Based on the sample of correlation coefficients, a decision was made to transform these values to Fisher’s Z scores (Martin-Andrés & Luna-del-Castillo, 2004). Figure 2 (forest plot graph) shows the sample size and 95% confidence interval (0.263, 0.346) for the studies that reported both variables. The size effect was moderate ($d = 0.30$) according to Cohen (1988) and was significant ($p=0.000$). Although 95% of the data were within the confidence interval, we must highlight that Banjanin et al. (2015), Walburg et al. (2016), Chang et al. (2014) and Colder-Carras et al. (2017) had limits below the mean confidence interval and that El-Asam et al. (2019), Woods and Scott (2016), Sami et al. (2018) and Kircaburun et al. (2019) presented values above the upper mean limit. This finding implies that the confidence interval was wide, which implies greater variability in the data of these articles and suggests a strong likelihood of the presence of extreme data that increased the standard deviation. On the other hand, it is necessary to note that the p value must be less than 0.05 to accept that the correlations are significant. In this regard, the “ a ” value of Chang et al. (2014) was nonsignificant ($p=0.082$) as it was greater than $p=0.005$, unlike the rest of the sample. The weight of each study was assumed through the random or random-effects model. This decision-making process is explained below.

Per Cochrane in Higgins and Green (2011), the heterogeneity of the sample was studied. The Q statistic of Der-Simonian and Laird (1986) ($Q=139.368$, $df=8$, $p<0.000$) showed that there was variability in the studies; therefore, the hypothesis of homogeneity was rejected. For its part, the I^2 statistic, which describes the percentage of variability resulting from heterogeneity and not from chance, had a high value (87.085%), indicating that there was a high degree of heterogeneity in the studies. According to Higgins et al. (2003), these findings indicate that the variability of this meta-analysis was high. For this reason, the random model or random-effects model was applied (Martin-Andrés & Luna-del-Castillo, 2004). However, following the indications of Botella and Sánchez (2015), Egger’s regression intercept was applied to verify the nonexistence of publication bias. This allows an estimation of the asymmetry of the funnel plot data, which determines the publication bias. In this study, we observed that there was no

significance in either tail (1-tailed p-value=0.25, 2-tailed p-value=0.50), which implies the absence of bias (Eggers et al., 1997). In addition, the value of the standard error was small (1.57); therefore, it was quite close to the regression line, which reaffirms the lack of publication bias (Jin et al., 2014; Martin-Andrés & Luna-del-Castillo, 2004).



On the other hand, the funnel plot (Figure 3) reflected the variability that had been previously found, reaffirming that the source of this variability is the diverse nature of the studies (Sterne et al., 2011), as indicated by Egger's test. As the cone progresses, it implies that the standard error increases; therefore, it is possible to allow some studies that are below but always within the structure. We must note that 3 studies clearly depart from the figure. These studies present more extreme data, although it is noteworthy that during the transformation from a normal curve to the Fisher curve, values greater than 0.5 undergo some deformation and become even more distant from the mean.



The studies that move away from the figure on the right are El-Asam et al. (2019) and Wood and Scott (2016), which worked with an Anglo-Saxon sample (UK) and had confidence intervals greater than the mean (see Figure 2). On the left side, we find Chang et al. (2014) “a”, which presents a value for the lower limit of the confidence interval that is significantly lower than the mean (Figure 2).

3.3. Moderating variables and meta-regression analysis

Moderating variables were established to study the variability of the investigations (Botella & Sánchez, 2015). Three such variables were determined: sex, mean age and culture (Europe, Eurasia, Americas and Asia), since it was considered necessary to determine whether these were variables that affected the variability of the results. Once the meta-regression was performed (see Table 3), five models were generated: 1) simple, 2) female sex, 3) male sex, 4) age, and 5) culture. The first model, in which no moderating variable was introduced, did not explain any percentage of the variance, unlike the rest of the models. Models 2 and 3 (sex) explained 9% of the variance ($R^2 = 0.09$), but only model 3 (male sex) had high significance ($p < 0.05$). This finding implies that sex was a moderating variable but was only significant in the case of men; therefore, there were differences between sex in terms of PIU and depression. Model 4 (age) explained 4% of the variance, a value that was not significant ($p = 0.383$); in comparison, model 5 (culture) explained 14% of the variance, although that value was not significant either ($p = 0.1761$) (Martin-Andrés & Luna-del-Castillo, 2004). These findings indicate that the variability of the data presented originated from differences in sex, and not age or culture.

Table 3. Meta-regression of model 3 and model comparison test with a random effect (MM). Distribution Z and Z of Fisher

Meta-regression M.3						
Covariance	Coefficient	Standard error	95% lower	95% upper	Z value	2-tailed p-value
Intersection	0.3497	0.0315	0.2880	0.4114	11.11	0,0000
Man	-0.0000	0.0000	-0.0001	-0.0000	-1.97	0,0491
Comparison of models						
Model name	TauSq	R ²	Q	df	p value	
Model 1	0.0079	0	0	0	1	
Model 2	0.0071	0.09	3.28	1	0.07	
Model 3	0.0072	0.09	3.87	1	0.04	
Model 4	0.0076	0.04	0.76	1	0.383	
Model 5	0.0068	0.14	4.94	3	0.1761	

3.4. Extreme values

The study, which initially consisted of 21 samples and 15 studies, was reduced by two factors. In addition, the studies of Lu et al. (2018) and Wartberg et al. (2016) presented extreme Fisher’s Z values (0.016 and 0.019, respectively), which were very far from the values of the other studies. However, it is necessary to keep these three studies in mind in the discussion.

4. Discussion and conclusions

There was a consensus among most of the studies (Banjanin et al., 2015; Colder et al., 2017; El-Asam et al., 2019; Gámez-Guadix et al., 2013; Kircaburun et al., 2019; Lin et al., 2018; Sami et al., 2018; Walburg et al., 2016; Lu et al., 2018; Wartberg et al., 2016; Woods et al., 2016; Zhang et al., 2013), indicating that there was a significant and positive correlation between PIU and depression in adolescents. This is consistent with the results presented in Figure 2, which shows a moderate effect size ($r = .30$) according to Cohen (1988). However, Banjanin et al. (2015) reaffirmed that multiple regressions showed that the time spent on social networks was unrelated to IA and to depressive symptoms. Therefore, the number of hours should not be equated with Internet use as harmful to health. The influence of sex as a moderating variable was discussed in some of the studies that make up the sample. Consistent with the results obtained, El-Asam et al. (2019) showed that 26.2% of the variance in the general score on the “Problematic Internet Use Questionnaire” (PIUQ) was significantly predictive of depression ($p < 0.001$).

and male sex ($p < 0.001$). Walburg et al. (2016), meanwhile, found that adolescents (male sex, $r = 0.37$, $p < 0.001$) who engage in problematic use of Facebook were significantly more vulnerable to depression than other adolescents (female sex, $r = 0.10$, $p > 0.05$). Lu et al. (2018), in their multiple logistic regression analysis, revealed that male sex, religious beliefs and the most severe depressive symptoms were associated with IA. The present study is in line with the findings of these first authors; the meta-regression showed that men were more likely to present both pathologies ($R^2 = 0.09$, $p < 0.05$). Other researchers, such as Banjanin et al. (2015), Wartberg et al. (2016) and Oberts et al. (2017), showed no differences between sexes.

The longitudinal studies of Jun (2016) and Chang et al. (2014) allow an analysis of how depression increases as problematic use grows. Jun (2016), in a longitudinal three-tailed study with a multiage population, found that mobile addiction and depression had a bidirectional relationship. Each measure of addiction to the cellphone at T1 and T2 positively influenced depressive symptoms at T2 and T3, and depressive symptoms at T1 and T2 affected cellphone addiction at T2 and T3, respectively. Chang et al. (2014) showed the longitudinal influence of IA on depression (among other mental health problems) and demonstrated that depression is a variable that predicts the initiation and persistence of IA in youth. Colder et al. (2017) compared the population with PIU with the population at risk of suffering from depressive symptoms, observing how depression grows as the problematic use increases. Lin et al. (2018) also compared two populations, one with IA and another without Internet access, and found clear differences. The diagnosis of IA was positively and significantly correlated with various variables, including alexithymia, impulsivity, disapproval of third parties regarding the use of the Internet, etc. On the other hand, IA was negatively correlated with variables such as self-esteem, subjective well-being, and social support. These findings indicate that psychological distress is related to IA, while well-being reduces the risk of IA; in other words, individual psychological variables are determining factors in the appearance of IA.

The results of the meta-regression showed that age was not a significant moderating variable (see Table 3); that is, IA is not an evolutionary problem. However, time does seem to play a fundamental role. Problematic use of the Internet and depressive symptoms appear to have a feedback loop, so that one problem promotes the other. This shows the urgent need to intervene via education. Because age and culture were not moderating variables, there is a risk of IA and depression being maintained in adulthood. We should not forget that Cheng and Li (2014) demonstrated that 6% of the world's adult population suffers from IA, and 15-20% suffer from depression (Sotelo-Alonso et al., 2012). Considering the positive correlation between both pathologies, it is necessary to begin providing intervention programs in secondary education to avoid future public health problems. On the other hand, Gámez-Guadix et al. (2013) show that being a victim of cyberbullying increases the incidence of depression and problematic Internet use.

In conclusion, there is evidence of a relationship between PIU and depression in adolescents, with sex as the moderating variable that significantly influences depression. There are other variables that should be studied and analyzed and that show comorbidity with pathological Internet use, such as behavioral problems, hyperactivity, emotional problems, and physical health, according to El-Asam et al. (2019). Likewise, there is a significant positive correlation between IGD and emotional traumas, social anxiety or self-esteem (Kircaburun et al., 2019) and Sami et al. (2018) note that IA has a direct effect on sleep disorders. In any case, age is not a moderating variable, and research showing a correlation between IA and depression in adulthood presents an alarming situation. It is necessary to intervene in secondary education to prevent these pathologies from continuing into adult life.

It is necessary to state that there are certain limitations to this study, the first being the inclusion of a limited sample from specific areas; most notably, there was a lack of subjects from Africa, Oceania, North America and Southeast Asia. Furthermore, most studies did not present data differentiated by sex, nor did they address PIU and depressive symptoms as the main topic. As a result, it is necessary to continue studying other variables that may be related to problematic Internet use, such as anxiety, stress, sleep problems, low self-esteem, and to develop intervention projects for institutes.

Funding Agency

This research is supported by the Educaviva Research Group, the Collective Intelligence Department of the University of Zaragoza and University Faculty Education (Formación de Profesorado Universitario – FPU) contract coverage of the Ministry of Science, Innovation and Universities of Spain.

References

- American Psychiatric Association (Ed.) (2013). *Diagnostic and statistical manual of mental disorders*. <https://doi.org/10.1176/appi.books.9780890425596>
- Banjanin, N., Banjanin, N., Dimitrijevic, I., & Pantic, I. (2015). Relationship between internet use and depression: Focus on physiological mood oscillations, social networking and online addictive behavior. *Computers in Human Behavior, 43*, 308-312. <https://doi.org/10.1016/j.chb.2014.11.013>
- Bickham, D.S., Hswen, Y., & Rich, M. (2015). Media use and depression: exposure, household rules, and symptoms among young adolescents in the USA. *International Journal of Public Health, 60*(2), 147-155. <https://doi.org/10.1007/s00038-014-0647-6>
- Bonetti, L., Campbell, M.A., & Gilmore, L. (2010). The relationship of loneliness and social anxiety with children's and adolescents' online communication. *Cyberpsychology, Behavior, and Social Networking, 13*(3), 279-285. <https://doi.org/10.1089/cyber.2009.0215>
- Botella, J., & Sánchez, J. (2015). *Meta-análisis en ciencias sociales y de la salud*. Síntesis.
- Chang, F.C., Chiu, C.H., Lee, C.M., Chen, P.H., & Miao, N.F. (2014). Predictors of the initiation and persistence of Internet addiction among adolescents in Taiwan. *Addictive Behaviors, 39*(10), 1434-1440. <https://doi.org/10.1016/j.addbeh.2014.05.010>
- Cheng, C., & Li, A.Y. (2014). Internet addiction prevalence and quality of (real) life: A metaanalysis of 31 nations across seven world regions. *Cyberpsychology, Behavior, and Social Networking, 17*, 755-760. <https://doi.org/10.1089/cyber.2014.0317>
- Cho, C.M. (2017). Self-rating smart phone addiction scale for adolescents. In Israelashvili, M., & Romano, J. (Eds.), *The Cambridge Handbook of International Prevention Science* (pp. 571-573). Cambridge University Press.
- Chou, H.T.G., & Edge, N. (2012). They are happier and having better lives than I am: The impact of using Facebook on perceptions of others' lives. *Cyberpsychology, Behavior, and Social Networking, 15*, 117-121. <https://doi.org/10.1089/cyber.2011.0324>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Erlbaum. <https://doi.org/10.4324/9780203771587>
- Colder-Carras, M., Van-Rooij, A., de Mheen, D.V., Musci, R., Xue, Q.L., & Mendelson, T. (2017). Video gaming in a hyperconnected world: A cross-sectional study of heavy gaming, problematic gaming symptoms, and online socializing in adolescents. *Computers in Human Behavior, 68*, 472-479. <https://doi.org/10.1016/j.chb.2016.11.060>
- Der-Simonian, R., & Laird, N. (1986). Meta-analysis in clinical trials. *Medline, 7*, 177-188. <https://doi.org/10.1016/j.cct.2015.09.002>
- Egger, M., Smith, G.D., Schneider, M., & Minder, C. (1997). Bias in meta-analysis detected by a simple, graphical test. *BMJ*, (pp. 315). <https://doi.org/10.1136/bmj.315.7109.629>
- El-Asam, A., Samara, M., & Terry, P. (2019). Problematic internet use and mental health among British children and adolescents. *Addictive Behaviors, 90*, 428-436. <https://doi.org/10.1016/j.addbeh.2018.09.007>
- Gámez-Guadix, M. (2014). Depressive symptoms and problematic Internet use among adolescents: Analysis of the longitudinal relationships from the cognitive behavioral model. *Cyberpsychology, Behavior, and Social Networking, 17*(11), 714-719. <https://doi.org/10.1089/cyber.2014.0226>
- Higgins, J., Thompson, S., Deeks, J., & Altman, D. (2003). Measuring inconsistency in meta-analyses. *BMJ, 327*, 557-560. <https://doi.org/10.1136/bmj.327.7414.557>
- Higgins, J.P.T., & Green, S. (2011). *Cochrane handbook for systematic reviews of interventions*. The Cochrane Collaboration.
- Israelashvili, M., & Romano, J. (2016). *The Cambridge handbook of international prevention science*. Cambridge University Press. <https://doi.org/10.1017/9781316104453.024>
- Jin, Z.C., Wu, C., Zhou, X.H., & He, J. (2014). A modified regression method to test publication bias in meta-analysis with binary outcomes. *BMJ, 7*(109), 629-634. <https://doi.org/10.1186/1471-2288-14-132>
- Jun, S. (2016). The reciprocal longitudinal relationships between mobile phone addiction and depressive symptoms among Korean adolescents. *Computers in Human Behavior, 58*, 179-186. <https://doi.org/10.1016/j.chb.2015.12.061>
- Kaess, M., Durkee, T., Brunner, R., Carli, V., Parzer, P., Wasserman, C., Sarchiapone, M., Hoven, C., Apter, A., Balazs, J., Balint, M., Bobes, J., Cohen, R., Cosman, D., Cotter, P., Fischer, G., Floderus, B., Iosue, M., Haring, C., ... Ziberna, J. (2014). Pathological Internet use among European adolescents: Psychopathology and self destructive behaviors. *European Child & Adolescent Psychiatry, 23*(1), 1093-1102. [https://doi.org/10.1016/s0924-9338\(13\)76661-6](https://doi.org/10.1016/s0924-9338(13)76661-6)
- Kim, J.H., Seo, M., & David, P. (2015). Alleviating depression only to become problematic mobile phone users: Can face-to-face communication be the antidote? *Computers in Human Behavior, 51*, 440-447. <https://doi.org/10.1016/j.chb.2015.05.030>
- King, A.L.S., Valença, A.M., Silva, A.C.O., Baczynski, T., Carvalho, M.R., & Nardi, A.E. (2013). Nomophobia: Dependency on virtual environments or social phobia? *Computers in Human Behavior, 29*(1), 140-144. <https://doi.org/10.1016/j.chb.2012.07.025>
- Király, O., Nagygörgy, K., Koronczai, B., Griffiths, M.D., & Demetrovics, Z. (2015). Assessment of problematic Internet use and online video gaming. In Aboujaoude, E., & Starcevic, V. (Eds.), *Mental health in the digital age: Grave dangers, great promise* (pp. 46-68). Oxford University Press. <https://doi.org/10.1093/med/9780199380183.003.0003>
- Kircaburun, K., Griffiths, M.D., & Billieux, J. (2019). Psychosocial factors mediating the relationship between childhood emotional trauma and internet gaming disorder: a pilot study. *European Journal of Psychotraumatology, 10*(1). <https://doi.org/10.1080/20008198.2018.1565031>
- Lin, M.P., Wu, J.Y., You, J., Hu, W.H., & Yen, C.F. (2018). Prevalence of internet addiction and its risk and protective factors in a representative sample of senior high school students in Taiwan. *Journal of Adolescence, 62*, 38-46. <https://doi.org/10.1016/j.adolescence.2017.11.004>

- Lu, L., Xu, D.D., Liu, H.Z., Zhang, L., Ng, C.H., ... Xiang, Y.T. (2018). Internet addiction in Tibetan and Han Chinese middle school students: Prevalence, demographics and quality of life. *Psychiatry Research*, 268, 131-136. <https://doi.org/10.1016/j.psychres.2018.07.005>
- Martin-Andrés, A., & Luna-Del-Castillo, J.D. (2004). *Bioestadística para las Ciencias de la Salud*. Norma-Capitel: Norma-Capitel.
- McLaughlin, K.A., & King, K. (2015). Developmental trajectories of anxiety and depression in early adolescence. *Journal of Abnormal Child Psychology*, 43(2), 311-323. <https://doi.org/10.1007/s10802-014-9898-1>
- Mehdzadeh, S. (2010). Self-presentation 2.0: Narcissism and self-esteem on Facebook. *Cyberpsychology, Behavior, and Social Networking*, 13(4). <https://doi.org/10.1089/cyber.2009.0257>
- Müller, K.W., Dreier, M., Beutel, M.E., Duven, E., Giralt, S., & Wölfling, K. (2016). A hidden type of internet addiction? Intense and addictive use of social networking sites in adolescents. *Computers in Human Behavior*, 55, 172-177. <https://doi.org/10.1016/j.chb.2015.09.007>
- Oberst, U., Renau, V., Chamorro, A., & Carbonell, X. (2016). Gender stereotypes in Facebook profiles: Are women more female online? *Computers in Human Behavior*, 60, 559-564. <https://doi.org/10.1016/j.chb.2016.02.085>
- Ofcom (Ed.) (2017). Children and parents: Media use and attitudes report. <https://bit.ly/2Yq5V5b>
- Pew Research Center (Ed.) (2015). Teens, social media, and technology overview 2015. <https://pewrsr.ch/2QB8Xlp>
- Sami, H., Danielle, L., Lihi, D., & Elena, S. (2018). The effect of sleep disturbances and internet addiction on suicidal ideation among adolescents in the presence of depressive symptoms. *Psychiatry Research*, 267, 327-332. <https://doi.org/10.1016/j.psychres.2018.03.067>
- Sotelo-Alonso, I., Rojas-Soto, J.E., Sánchez-Arenas, C., & Irigoyen-Coria, A. (2012). La depresión en el adulto mayor: Una perspectiva clínica y epidemiológica desde el primer nivel de atención. *Archivos en Medicina Familiar*, 14(1), 5-13. <http://bit.ly/2r60tld>
- Sterne, J.A., Sutton, A.J., Ioannidis, J.P.A., Terrin, N., Jones, D.R., Lau, J., Carpenter, R., Rücker, G., Harbord, R.M., Schmid, C.H., Tetzlaff, J., Deeks, J.J., Peters, J., Macaskill, P., Schwarzer, G., Duval, S., Altman, D.G., Moher, D., & Higgins, J.P.T. (2011). Recommendations for examining and interpreting funnel plot asymmetry in meta-analyses of randomised controlled trials. *BMJ*, 343. <https://doi.org/10.1136/bmj.d4002>
- Tsitsika, A.K., Tzavela, E.C., Janikian, M., Ólafsson, K., Iordache, A., ... Richardson, C. (2014). Online social networking in adolescence: Patterns of use in six European Countries and links with psychosocial functioning. *Journal of Adolescent Health*, 55(1), 141-147. <https://doi.org/10.1016/j.jadohealth.2013.11.010>
- Underwood, M.K., & Ehrenreich, S.E. (2017). The power and the pain of adolescents' digital communication: Cyber victimization and the perils of lurking. *American Psychologist*, 72(2), 144-158. <https://doi.org/10.1037/a0040429>
- Walburg, V., Mialhes, A., & Moncla, D. (2016). Does school-related burnout influence problematic Facebook use? *Children and Youth Services Review*, 61, 327-331. <https://doi.org/10.1016/j.childyouth.2016.01.009>
- Wartberg, L., Brunner, R., Kriston, L., Durkee, T., Parzer, P., Fischer-Waldschmidt, G., Resch, F., Sarchiapone, M., Wasserman, C., Hoven, C.W., Carli, V., Wasserman, D., Thomasius, R., & Kaess, M. (2016). Psychopathological factors associated with problematic alcohol and problematic Internet use in a sample of adolescents in Germany. *Psychiatry Research*, 240, 272-277. <https://doi.org/10.1016/j.psychres.2016.04.057>
- Woods, H.C., & Scott, H. (2016). #Sleepyteens: Social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem. *Journal of Adolescence*, 51, 41-49. <https://doi.org/10.1016/j.adolescence.2016.05.008>
- Wu, C.Y., Lee, M.B., Liao, S.C., & Chang, L.R. (2015). Risk factors of internet addiction among internet users: An online questionnaire survey. *PLoS One*, 10. <https://doi.org/10.1371/journal.pone.0137506>
- Young, K.S. (1998). *Caught in the net*. Wiley.
- Zhang, H.X., Jiang, W.Q., Lin, Z.G., Du, Y.S., & Vance, A. (2013). Comparison of psychological symptoms and serum levels of neurotransmitters in Shanghai adolescents with and without internet addiction disorder: A case control study. *Plos One*, 8(5), 1-4. <https://doi.org/10.1371/journal.pone.0063089>

Comunicar



Leading Scientific Journal specializing
in Communication and Education

1,820 RESEARCH ARTICLES AND STUDIES PUBLISHED
680 SCIENTIFIC REVIEWERS FROM 48 COUNTRIES WORLDWIDE
PRESENCE IN 788 INTERNATIONAL DATABASES

Clarivate
Analytics
JOURNAL CITATION REPORTS

Scopus DOAJ

DIALNET
MÉTRICAS I²

REDIB FECYT

Comunicar

Media Education Research Journal

Next Issues



Comunicar 64 (2020-3)

Children, youth and media in the era of smart devices: Risks, threats and opportunities

Thematic Editors:

Dr. Antonio García-Jiménez, Rey Juan Carlos University (Spain)

Dr. Cristina Ponte, Nova University of Lisboa (Portugal)

Dr. Félix Ortega-Mohedano, University of Salamanca (Spain)

Initial Call: 2019-06-01

Last call: 2019-12-30

Publication: 2020-01-07



Comunicar 65 (2020-4)

Emerging mixed methods in social research: The digital challenge

Thematic Editors:

Dr. Bartolomé Rubia-Avi, University of Valladolid (Spain)

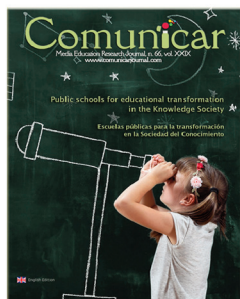
Dr. Jennifer C. Greene, University of Illinois (USA)

Dr. Iván M. Jorrín-Abellán, Kennesaw State University (USA)

Initial Call: 2019-09-01

Last Call: 2020-02-28

Publication: 2020-01-10



Comunicar 66 (2021-1)

Public schools for educational transformation in the Knowledge Society

Thematic Editors:

Dr. Ola Erstad, University of Oslo (Norway)

Dr. Raquel Miño, University of Barcelona (Spain)

Dr. Pablo Rivera, University of Barcelona (Spain)

Initial Call: 2020-01-01

Last Call: 2020-05-30

Publication: 2021-01-01

«Comunicar» is an open platform for participation and collaboration of all professionals in communication and education. If you are interested in collaborate on the next issues (both in Monographic and in Miscellaneous) send us your manuscripts. Guidelines in: www.comunicarjournal.com

Comunicar



'Comunicar' is a quarterly, bilingual Spanish-English research journal, with Chinese and Portuguese abstracts. Articles, authors and topics have a decidedly international outlook.

The journal is now in its 27th year and has published 1,820 research articles.

The journal appears in 788 international databases, journal impact assessment platforms, selective directories, specialized portals and hemerographic catalogues...

Rigorous and transparent blind system of manuscript evaluation, audited in RECYT, International Scientific Council and a public network of 680 reviewers from 48 countries from all over the world.

Professional management of manuscripts is undertaken via the OJS 3 platform, with ethical commitments that ensure transparency and timeliness, antiplagiarism (CrossCheck), alternative metrics (PlumX, Dimensions)...

High visualization level powered by numerous search engines, DOIs, ORCID, dynamic pdfs, epub, XML... with connections to Mendeley, RefWorks, EndNote, Zotero and scientific social networks like Academia.Edu or ResearchGate.

'Comunicar' specializes in educommunication: communication and education, ICT, audiences, new languages; there are specialized monographic editions on the most updated topics.

It has a double format: print and online; The digital edition offers full text, open access for the entire scientific community and researchers around the world. In English and Spanish edited by Comunicar, a professional, non-profit association, veteran in Spain (31 years) in educommunication, which collaborates with multiple institutions and international universities.

In active indexations in 2019/20, "Comunicar" is world top: 5th of the world in Scopus in CS and 9th of the world in JCR in Com. (top 1% worldwide and top 4% worldwide respectively; percentile 99% and 96%). In JCR it is Q1 (1st Spanish in Education and 1st in Communication in Spanish). In Scopus it is Q1 in Education, Communication and Cultural Studies (1st Spanish); In Google Scholar Metrics it is the 1st journal indexed in Spanish in all areas. 1st in REDIB (out of 1,038 journals), 1st in FECYT Metrics in 2 of the 13 published areas and 1st in Dialnet Metrics in Education and Communication.



Sponsored by:



Edited:



Grupo Comunicar

www.comunicarjournal.com
info@grupocomunicar.com

ISSN: 1134-3478 / e-ISSN: 1988-3293