Types and Frequencies of Use of Mass Media and Social Media among University Students in Encarnación

Tipos y frecuencias de uso de los medios de comunicación y redes sociales en población joven universitaria de Encarnación

Tipos e Frequências de Utilização dos Meios de Comunicação e das Redes Sociais na População Jovem Universitária de Encarnación

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Abstract: This study analyzed the types and frequencies of professional media and social media use among university students in Encarnación, Paraguay. Data were collected with a standardized questionnaire from the Alfamed Network. Results showed significant differences in the types of media accessed depending on students' area of residence, but no differences in general purposes of use. Year of study proved relevant: early-year students favored social media for entertainment, while advanced students engaged more with professional media for information and communication. Over time, purposes shifted from leisure to news and informational content, suggesting that academic trajectory influences media appropriation and highlighting the need to integrate media literacy into higher education.

Keywords:
Media and Information Literacy, Professional Media, Social Media, University Students, Paraguay

Resumen: El objetivo de investigación fue caracterizar tipos y frecuencias de uso de los medios de comunicación y redes sociales en población joven universitaria de Encarnación. Tras la aplicación de un cuestionario creado por la Red Alfamed, se detectaron diferencias significativas entre los medios de comunicación usados según zona de residencia. No hay diferencias significativas en cuanto a los tipos de usos. Hay diferencias significativas según año de carrera y en los primeros años usan más plataformas de entretenimiento frente a plataformas de comunicación en los últimos años. También hay diferencias en cuanto a los tipos de usos, con usos asociados al entretenimiento en los primeros años y usos asociados a la búsqueda de información y noticias en los últimos años.

Palabras clave:
Alfabetización Mediática e Informacional, medios de comunicación, redes sociales, jóvenes universitarios, Paraguay

Resumo: O objetivo da investigação foi caraterizar os tipos e a frequência de utilização dos meios de comunicação e das redes sociais na população jovem universitária de Encarnación. Após a aplicação de um questionário criado pela Rede Alfamed, foram detectadas diferenças significativas entre os meios de comunicação utilizados de acordo com a área de residência. Não existem diferenças significativas em termos de tipos de utilização. Existem diferenças significativas de acordo com o ano de estudo e nos primeiros anos utilizam mais plataformas de entretenimento em comparação com as plataformas de comunicação nos últimos anos. Existem também diferenças em termos de tipos de utilização, com utilizações associadas ao entretenimento nos primeiros anos e utilizações associadas à pesquisa de informação e notícias nos últimos anos.

Palavras-chave:
Alfabetização Mediática e Informacional, media, redes sociais, jovens universitários, Paraguai

1. Introduction

Media and Information Literacy (MIL) is a vital skill for the 21st century, enabling individuals to access, evaluate, use, and share information and media content critically and

ethically (UNESCO, 2021a). In the global context of information overload and the digitalization of social relations, MIL is a crucial tool for fostering active citizenship and democratic participation.

The international community agrees that MIL is a strategic pillar for governance. Countries with regulatory frameworks for artificial intelligence literacy exhibit higher levels of citizen participation in monitoring and holding automated systems accountable (CAIDP, 2025). Hence, it is noted that the absence of media literacy deepens information gaps, exposing low-skill groups to greater misinformation and institutional distrust (Mansell et al., 2025).

At the techno-pedagogical level, León-López et al. (2024) note that algorithmic personalization exacerbates biases and ideological bubbles, which necessitate critical skills to comprehend recommendation logic and assess the commercial intent of platforms. However, despite arguments in favor of developing algorithmic marketing (AM), Paraguay still lacks national policies on AM.

Within this framework, the objective of this research was to characterize the types and frequencies of media and social media use among young university students in Encarnación.

2. Theoretical Framework

2.1 MIL and the Comprehensive Development of People Today

MIL, as an emerging field in academia and science, responds to the centrality of media, social networks, and digital environments in everyday life, where interactions, learning, and leisure are configured through digital interfaces (Aguaded and Borges, 2025; Pérez Tornero & Varis, 2020; Hernández-Serrano et al., 2021).

However, even though we talk about an "information society," this scenario reveals tensions, as the accelerated circulation of data does not guarantee veracity, and the overabundance favors superficiality. Instead of fostering critical access to knowledge, the digital environment encourages fragmented consumption, conditioned by opaque algorithms that limit informational autonomy (Aguaded and Borges, 2025; Le Voci, 2024). UNESCO (2021a) maintains that informed access must be guaranteed as a fundamental and indispensable right for democratic life. Therefore, it is not just about accessing data, but also about developing the skills necessary to assess its reliability, interpret it critically, and act responsibly with it (Bacher, 2024a; Pérez Tornero & Varis, 2020). Along these lines, MIL integrates three axes: media

(critical media analysis and identity management), informational (rigorous data search and use), and digital (secure technology management and data protection) (UNESCO, 2021a). These components act as a mechanism. Far from being neutral, algorithms filter and direct attention for commercial purposes, reinforcing biases and weakening critical thinking (Le Voci, 2024; Pérez Tornero & Varis, 2020; León-López et al., 2024). Therefore, MIL must go beyond fact-checking and include an understanding of how platforms work, data collection and segmentation, and the purposes that guide the circulation of content. Media education involves uncovering the invisible architectures that shape the digital experience and restrict informational autonomy if one is unaware of them (UNESCO, 2019; Pérez Tornero & Varis, 2020). Updated media literacy must incorporate a critical perspective on artificial intelligence and its impact on the circulation of knowledge and decision-making, combining technical skills with critical thinking and ethical responsibility (Le Voci, 2024; Aguaded & Borges, 2025).

When citizens are unaware of how digital information systems operate, they not only limit their access to knowledge but also their ability to participate in democracy. Disinformation, emotional manipulation, and algorithmic personalization erode social trust and hinder consensus on basic facts (Hobbs, 2020).

Therefore, critical media training serves as a tool for democratic defense, enabling us to resist manipulation, construct alternative discourses, and demand transparency in communication processes (Cabero-Almenara & Martínez-García, 2023; UNESCO, 2021b).

2.2 The State of MIL in South America

In South America, public policies on MIL remain a pending task, with a lack of regulatory frameworks leading to disparate responses. According to the 2023 Mapping, only 63% of Ibero-American countries have a policy, and only 27% in the region have specific frameworks, which limits the definition of goals and coordination. The mapped actions focus on young people aged 18 to 34, particularly university students, and prioritize media and information literacy, critical thinking, digital citizenship, empowerment, and strategies for disinformation detection (UNESCO, 2024; Bacher, 2024b).

However, a deep understanding of the MIL approach is not yet fully consolidated, highlighting specific structural challenges. Among these, the limited participation of public institutions as key actors and the low presence of proposals in rural or peripheral areas stand out

(Rojas, 2024). Furthermore, most of the identified initiatives are developed in school settings but lack long-term continuity or sustainability, which impacts citizens' preparation to face the challenges of an increasingly complex media environment (Rojas-Estrada et al., 2023; Rojas-Estrada et al., 2024; UNESCO, 2024).

In this sense, ALFAMED has played a key role in the development of MIL. The network focuses on coordinating research on media communication in digital contexts, promoting comparative diagnoses and contextualized educational proposals (Pérez Tornero y Varis, 2020). The Alfamed Teacher Training Curriculum (Aguaded et al., 2021a; 2021b) serves as a benchmark for designing evidence-based public policies in MIL. In Uruguay, MIL has been explicitly incorporated into the integrated basic education curriculum, and its learning objectives are present from early childhood through secondary education. However, curricular inclusion follows a technical-instrumental approach and has not yet been consolidated as a critical and civic tool (Rojas-Estrada & Sánchez-Vilela, 2024). In Brazil, a national initiative was launched with teacher training programs aimed at strengthening critical thinking. However, its scope continues to depend on political will and state funding (Secretaria de Comunicação Social & Governo Federal do Brasil, 2023). However, these actions are still marked by their non-universal reach, and their implementation largely depends on political will and state funding.

Despite the aforementioned actions, the region continues to demonstrate a lack of political will to translate this accumulated knowledge into sustainable public policies (Rojas-Estrada et al., 2023).

2.3 Youth and MIL

MIL has become an essential skill for young people to exercise their rights in an informed manner in an increasingly complex digital ecosystem. However, the lag in higher education efforts highlights gaps in preparation for identifying false information, comparing sources, and understanding how the media works (Bacher, 2024a; Halpern, 2024).

In Latin America, 72% of young people turn to visual platforms such as TikTok, Instagram, and YouTube for information (Bacher, 2024a). Regarding access to political information, the most used platforms by young people between 18 and 34 years of age are YouTube (29%), TikTok (25%), Instagram (24%), Facebook (23%), and X/Twitter (16%),

reflecting a clear preference for visual and interactive digital environments for informing and participating in public affairs (CIRCLE, 2025).

The aforementioned social platforms play distinct roles in the circulation of information, serving as environments for learning, entertainment, political participation, and opinion formation.

YouTube has established itself as the leading repository of long-form video, where tutorials, visual journalism, and political analysis from institutional and independent sources converge, becoming a tool for informal learning and in-depth thematic exploration (Dean, 2025; Renés-Arellano et al., 2020). TikTok, initially oriented towards viral entertainment, has transformed into an incidental and increasingly frequent means of accessing news: the proportion of adults who report getting their news there increased from 3% in 2020 to 17% in 2024, while among those under 30 it reached 39% (Zazo & Martínez-Fresneda, 2024; Yang & Amirul, 2024). Instagram, for its part, serves as a hybrid space that bridges lifestyles and political commitments, fostering identity and belonging among young people (Marquina & Hernani, 2023; León-Alberca et al., 2025).

Facebook continues to play a role in the circulation of news and political content, especially among adults, as a network of communities and shared news with a strong political and emotional charge (Kraus et al., 2022; Press-Reynolds, 2021). X maintains its position as a public forum for debate, with young adults predominating in political conversations during information crises and citizen mobilizations (Barbieri et al., 2021; Chen et al., 2020). Finally, WhatsApp has become a central platform for private and community communication, in addition to being used for information gathering through groups (Barrera & Denis, 2022; Holly et al., 2024; Umeh et al., 2025).

Digital dynamics go beyond passive consumption: verification practices, content creation, and network participation strengthen youth civic engagement. At the same time, platforms mediate political access with distinct ideological biases: young Democrats prefer TikTok, Instagram, and YouTube, while Republicans lean toward traditional media (CIRCLE, 2025; Harvard Public Opinion Project, 2023; Skurka et al., 2023; Comisión Europea, 2024). This segmentation, influenced by personalized algorithms and ideological affinity environments (Le Voci, 2024), reinforces the need for media literacy that not only empowers people to verify information but also fosters critical awareness of the construction and circulation of political

discourses in the digital environment, considering the determining role of algorithms (Livingstone & Sefton-Green, 2016).

2.4 MIL and Education: From the Region to the Case of Paraguay

Education plays a crucial role in training citizens who are capable of critical thinking. Therefore, educational institutions must focus on developing skills to confront disinformation and digital manipulation (UNESCO, 2021b; Aguaded & Borges, 2025; Bacher, 2024a; León-López et al., 2024). However, recent reports warn that MIL is not yet systematically integrated into teaching processes, due to gaps in teacher training and a technocentric approach that prioritizes the provision of devices and connectivity over pedagogical and social aspects (UNESCO, 2024; CAIDP, 2025; Canese et al., 2021; Bacher, 2024a).

In Paraguay, the lack of in-depth research reflects the fact that the topic is not consolidated in the curriculum or public policies (Rojas-Estrada et al., 2023; 2024). This is compounded by the low digital skills of teachers and gaps in initial teacher training (Álvarez-Herrero et al., 2023; 2025). Furthermore, the intensive use of social media by young people, with 98% of secondary school students using it and 60% for more than five hours a day, is negatively associated with study time outside of school (Machado et al., 2025).

3. Methodology

The methodology of this research was quantitative, descriptive, cross-sectional, and field-based (Avendaño, 2020). A survey was conducted of 1,060 university students (men and women) between the ages of 20 and 29, who attend the two most attended private universities in Encarnación (Itapúa, Paraguay). It is worth noting that the majority of universities in Paraguay are privately owned. The sampling method used was a purposive non-probability method.

As a data collection instrument, a questionnaire designed by the Alfamed Network was used, based on the conceptual proposal of Pérez-Rodríguez and Delgado-Ponce (2012), as well as provisions from the Comisión Europea (2007), Ferrés (2007), and Celot and Pérez-Tornero (2009). The proposal, as defined by UNESCO (2011) in its MIL curriculum for teachers was also considered. The questionnaire is structured into three areas: a) knowledge; b) comprehension; c) expression. These areas are explored using 42 items with a response scale consisting of four levels, ranging from 1 to 4, where 1 represents the lowest score and four the highest score.

Before administering the questionnaire, the research team reviewed it to identify possible linguistic and content differences, with the aim of adjusting it to the local level. A pilot test was then conducted, meeting the sample inclusion criteria.

The statistical analysis was performed using JASP software (version 0.18.3), complemented by specific procedures in R (version 4.3.1) to control for Type I errors associated with multiple comparisons. The focus was on studying the association between the frequency of use and the perceived usefulness of different media and social networks, in relation to four independent variables: university degree, year of enrollment, type of secondary school, and district of residence.

Tests of independence were applied using Pearson's chi-square test (χ^2), verifying that at least 80% of the cells in each contingency table had expected frequencies equal to or greater than 5. In cases where this assumption was met, the χ^2 values, degrees of freedom (df), and significance levels (p) were reported, and the magnitude of the association was estimated using Cramer's V coefficient (V).

When the associations were statistically significant, adjusted standardized residuals were analyzed to identify the pairs of categories responsible for the most significant deviations from expected independence. To avoid inflated interpretations due to the number of comparisons, tools in R aimed at detecting false positives were used through p-value adjustments and complementary exploratory analyses.

4. Results and Discussion

Of the total districts analyzed, 38.7% (n = 12) were urban areas, while 61.3% (n = 19) were considered rural districts. The sample consisted of students from various university programs, allowing for the capture of a diverse range of educational backgrounds.

Independence tests (χ^2) were applied, with the magnitude of association measured by Cramer's V (<0.20 = low, 0.20–0.40 = moderate, >0.40 = high). To avoid false positives, Bonferroni ($\alpha = 0.002$) and FDR (pFDR < 0.05) corrections were applied. In addition, standardized residuals were analyzed (±2 as the significance threshold).

4.1 Distribution of District of Residence and Media Frequency

After FDR correction, five media outlets showed significant associations: radio, news portals, Twitter/X, online TV, and digital newspapers (V = 0.157–0.183). In rural areas, radio remained prevalent, while in urban areas, Instagram, TikTok, and, in some cases, Telegram took precedence.

These results confirm that territory influences the media habits of youth. In rural areas, the prevalence of radio is linked to connectivity limitations and traditional communication patterns (UNESCO, 2024). In contrast, in urban environments, the preference for digital platforms responds to visual and algorithmic dynamics that prioritize emotional and viral content (Le Voci, 2024; Hernández-Serrano et al., 2021). Thus, the differences between urban and rural areas reflect not only inequalities in technological access but also gaps in information literacy, which condition communicative autonomy and youth citizen participation (Rojas, 2024; Aguaded & Borges, 2025; Bacher, 2024a; Turpo-Gebera et al., 2025).

4.2 Distribution of University Degree by Media Frequency

The chi-square analysis revealed significant associations ($p < .001$) between university degree and the use of Facebook, TikTok, multimedia platforms, television, WhatsApp, and Instagram, with Cramer's V values ranging from 0.15 to 0.18, indicating low but relevant associations in sociocultural contexts (García Ferrando, 1997). No significant differences were found in radio, YouTube, Spotify, online TV, and digital newspapers.

The standardized residuals showed disciplinary particularities. Psychopedagogy showed a greater use of Instagram, while Veterinary Science demonstrated diversified consumption across Instagram, TikTok, and digital newspapers. In contrast, Graphic Design registered a lower presence on Instagram and Facebook, likely due to a preference for specialized platforms such as Behance or Pinterest. Elementary School Education, on the other hand, was associated with intensive use of television and Facebook and low use of TikTok.

These results confirm that a university degree acts as a differentiating factor in media consumption patterns. The predominance of visual environments in Psychopedagogy and Veterinary Medicine contrasts with more traditional practices in Elementary School Education, reinforcing the need to integrate media literacy into university education (Cabero-Almenara & Martínez-García, 2023; Aguaded & Borges, 2025).

The high consumption of television and Facebook in Elementary School Education and the low use of TikTok reflect the influence of family and school environments, underscoring the need to train future teachers in critical media literacy from the university level (Cabero-Almenara & Martínez-García, 2023). These findings challenge the notion of generational homogeneity and reveal differences associated with technological socialization, disciplinary culture, and navigation strategies. Thus, MIL cannot be limited to access or technical skills but must be embraced as a critical competence for analyzing media and recognizing biases (Bacher, 2024a; Le Voci, 2024). These differences require cross-curricular training proposals that integrate critical, ethical, and creative skills, as the digital ecosystem is neither neutral nor equitable. In this sense, UNESCO (2021b) emphasizes that MIL is a crucial condition for citizenship and must be structurally integrated into higher education.

4.3 Distribution of Year of Study by Media Frequency

The contingency analysis between year of study and the different media outlets showed that only three presented significant associations: Spotify ($\chi^2 = 28.473$; $p = 0.019$), multimedia platforms ($\chi^2 = 29.167$; $p = 0.015$), and digital newspapers ($\chi^2 = 33.064$; $p = 0.005$), with Cramer's V values between 0.095 and 0.102, indicating a weak association (García Ferrando, 1997). After the Benjamini-Hochberg adjustment, the p-values remained below 0.05, confirming the validity of the findings.

The standardized residuals indicated that Spotify and multimedia platforms exhibited higher-than-expected frequencies in the first year, while these frequencies decreased significantly in subsequent years. In contrast, the use of digital newspapers intensified in the fourth and fifth years, while it was markedly lower in the first year.

These results suggest that academic progress is associated with a progressive transformation in university students' media practices. In the early years, the use of recreational platforms, such as Spotify, and multimedia platforms associated with entertainment, relaxation, and initial socialization predominates. This pattern addresses the need for emotional support and adaptation to the academic context, but is often disconnected from critical literacy processes (Maxmudova et al., 2025).

As students progress, a transition to information media such as digital newspapers is observed, linked to greater academic demands for contextual analysis and critical

comprehension. As Halpern (2024) points out, critical agency in the digital environment is gradually built through meaningful educational experiences. However, exposure to content does not guarantee reflective processes; therefore, institutions must offer interpretive frameworks that enable a critical reading of the media (Bacher, 2024a; León-López et al., 2024).

This shift from entertainment to information constitutes a pedagogical opportunity. The early years are crucial in guiding digital consumption toward more critical and autonomous outcomes. Incorporating media literacy into the curriculum not only improves digital competence but also strengthens citizenship training and the capacity for deliberation in information-saturated environments (Rojas-Estrada & Sánchez-Vilela, 2024).

4.4 Distribution of the type of school where high school was completed, and frequency of media use

Of the 25 cross-references performed, only multimedia platforms showed a significant association with the type of educational institution ($\chi^2 = 20.286$; $p = 0.002$; Cramer's $V = 0.098$), which remained after FDR correction. The standardized residuals indicated more intensive use among students from private schools ($z = +2.42$ in the "Always" category). In contrast, low frequency predominated in the public sector ($z = -3.06$ in the "Always" category and +2.76 in the "Never" category). A pattern of lower use was also observed in the subsidized private sector. No significant associations were found in the other media, nor in the utility attributed to them.

The results reveal gaps in infrastructure and digital skills depending on the type of management, with the public sector being at a disadvantage (Álvarez-Herrero et al., 2025). The higher frequency of use of multimedia platforms in the private sector appears to be associated with favorable economic conditions and early digital socialization at home.

Although an association was found between school type and frequency of use ($\chi^2 = 20.286$; $p = 0.002$; $V = 0.098$), no differences were observed in the attributed utility, suggesting that unequal access does not imply differentiated purposes. This suggests that intensive use does not guarantee critical practices, with a predominance of functional consumption linked to entertainment and communication (Bacher, 2024a; León-López et al., 2024), reinforced by algorithmic logics that replicate consumption patterns (Zazo & Martínez-Fresneda, 2024; CIRCLE, 2025).

4.5 District of Residence Distribution and Media Usefulness

Independence analyses showed significant associations between city of residence and the type of use of radio, Instagram, Telegram, and TikTok. Cramer's V coefficient indicated low to moderate associations, with greater strength for TikTok (V = .308) and Telegram (V = .295). In rural districts, positive residuals were recorded for radio, confirming its validity as an accessible and culturally rooted medium, in contrast to negative ones in urban areas, where Instagram, Telegram, and TikTok predominated.

These patterns reflect territorial differences in youth media habits. In rural areas, the persistence of radio is due to low connectivity, limited infrastructure, and the absence of sustained MIL policies (UNESCO, 2024; Rojas, 2024), reproducing gaps already noted in the education system (Canese et al., 2021). On the contrary, in urban contexts, high connectivity and youth density favor intensive use of visual and interactive platforms that combine consumption, self-expression, and sociability (León-Alberca et al., 2025; Bacher, 2024a).

In semi-urban areas, a dual pattern is observed, with functional uses linked to information and recreational practices characteristic of the expanding digital culture, evidencing a sociotechnological transition (Turpo-Gebera et al., 2025). Thus, the supposed digital homogeneity of youth is fragmented when analyzed territorially: without contextualized training interventions, access does not guarantee critical skills or equitable participation (Halpern, 2024).

4.6 Degree Distribution and Media Usefulness

The contingency analysis between university degree and media usefulness showed significant associations in fifteen of the twenty-five cross-references evaluated, all consistent after FDR correction ($p \leq .05$). Among the media with the greatest significance are YouTube ($\chi^2 = 38.768$; $p = .001$; $V = .163$), WhatsApp ($\chi^2 = 39.248$; $p = .003$; $V = .145$), Discord ($\chi^2 = 33.300$; $p = .001$; $V = .143$), Facebook ($\chi^2 = 36.654$; $p = .001$; $V = .142$), TikTok ($\chi^2 = 29.966$; $p = .001$; $V = .133$) and multimedia platforms ($\chi^2 = 24.364$; $p = .001$; $V = .122$). Associations were also observed with web portals ($\chi^2 = 30.028$; $p = .001$; $V = .118$), written press ($\chi^2 = 32.702$; $p = .001$; $V = .115$), digital newspapers ($\chi^2 = 15.515$; $p = .001$; $V = .112$), Telegram ($\chi^2 = 18,900$; $p = .001$; $V = .111$), Snapchat ($\chi^2 = 18,900$; $p = .001$; $V = .111$), Twitter ($\chi^2 = 16,452$; $p = .001$; $V = .108$), Pinterest ($\chi^2 = 20.308$; $p = .007$; $V = .098$) and Instagram ($\chi^2 = 19.546$; $p = .043$; $V =$

.094). Cramer's V values (0.094–0.163) indicate weak to moderate associations, expected due to the categorical nature of the study (García Ferrando, 1997).

The analysis of standardized residuals allowed us to identify discipline-medium combinations: on YouTube, Psychopedagogy stood out for "Learning new things"; on TikTok, Early Childhood Education and Social Communication were associated with "Entertainment," in contrast to Law; on Pinterest, Graphic Design stood out for "Finding inspiration"; on Instagram, Fashion Design was linked to "Sharing own content," while Electronic Engineering had negative values; on Facebook, Social Work was associated with "Community events"; on Telegram, Psychopedagogy was related to "Coordinating academic activities." On Snapchat, Pharmacy stood out for "Rapid Communication"; in press and portals, Political Science and Law were linked to "Reading the News"; and in Radio, technology majors were associated with "Listening to Music."

The observed differences show that media practices are not only a function of age or access, but also of disciplinary cultures and training frameworks (Turpo-Gebera et al., 2025). Degrees in education, social intervention, and political science tend to appropriate media for informational and organizational purposes, while those linked to design or communication use them for aesthetic expression and professional visibility (León-Alberca et al., 2025). The functional use of messaging in academic contexts reinforces the idea of "extended organizational environments" (Holly et al., 2024), and the appropriation of news media in social sciences responds to the need to interpret current events and question narratives (Halpern, 2024).

These results demonstrate that the relationship between degree programs and media utility extends beyond technical patterns to encompass imaginaries, values, and educational objectives. As Bacher (2024a) and other authors note, young people are not a homogeneous group; their media practices are shaped at the intersection of academic, social, and symbolic aspects.

4.7 Distribution of year of study by media utility

The contingency analysis between year of study and use of WhatsApp and Telegram revealed significant associations, with moderate intensities (WhatsApp: $\chi^2 = 811.612$; df = 630; $p < .001$; V = .392; Telegram: $\chi^2 = 444.221$; df = 390; p = .030; V = .290) (García Ferrando, 1997).

This suggests that an academic trajectory influences how both platforms are utilized in communication, information, and socialization settings.

The standardized residuals showed distinct patterns. On WhatsApp, “Talking with friends” was overrepresented in the fifth year (+86.67 %) and decreased in the sixth year (–12.65%). In the first year, “Sharing photos” (+41.61 %) and “Searching for information” (+35.22 %) stood out. On Telegram, “Searching for information” was most common in the first year (+49.40) and decreased in the second (–43.55), while “Sharing photos” intensified in the fifth and sixth years (+28.16; +31.99). On both platforms, “Talking with friends” had negative values in the sixth year (–13.92), suggesting a shift toward more academic uses.

Overall, the results reveal an evolutionary pattern: in the first years, social integration and information searching predominate; in the middle years (third and fourth), collaborative and instrumental use consolidates, focusing on organizing tasks and sharing materials; while in the later years, social purposes decrease and academic and professional purposes, linked to internships, theses, and advanced commitments, are strengthened.

This progression aligns with the findings of Holly et al. (2024), who emphasize the role of messaging in emotional adaptation and community building during the early stages, as well as Bacher (2024a), who views these platforms as improvised resources for academic self-regulation. The transition towards a more instrumental and critical use in the middle years confirms what Halpern (2024) proposed regarding the development of digital agency, while the use of Telegram in advanced stages for the circulation of specific content reflects what Turpo-Gebera et al. (2025) pointed out regarding the adaptation of media practices to new training and professional demands. Finally, the reduction in the use of WhatsApp to “talk to friends” in sixth grade can be interpreted as a result of already consolidated ties and greater academic demands, which coincides with León-López et al. (2024), who observe a shift in the logic of youth interaction towards more focused dynamics.

4.8 Frequency distribution of media outlets with media utility

The tests of independence (χ^2) revealed significant associations between frequency and attributed utility in 14 of the 25 media outlets analyzed ($p < .001$), all of which remained consistent after adjusting for multiple comparisons. Cramer's V coefficient values ranged from 0.312 to 0.408, indicating low to moderate but relevant associations (García Ferrando, 1997).

The highest intensities corresponded to TikTok (V = 0.408), Twitter/X (V = 0.398), radio (V = 0.379), and Telegram (V = 0.379), suggesting that the most dynamic and audiovisual platforms concentrate greater variability in uses, while traditional media present more stable patterns.

Regarding specific uses, WhatsApp was primarily linked to interpersonal communication, while Telegram, X, Discord, Pinterest, Snapchat, web portals, newspapers, and blogs were associated with informational functions. Spotify and radio maintained their centrality in audio accompaniment, and TikTok stood out for video consumption and celebrity following, confirming its appropriation oriented toward ephemeral entertainment and algorithmic logic (Zazo & Martínez-Fresneda, 2024). In contrast, print media and blogs showed more stable and critical use, associated with cultural capital and previous habits (Turpo-Gebera et al., 2025).

The analysis of standardized residues reinforced these trends: informational functions were overrepresented in newspapers, websites, and blogs, while visual entertainment predominated in TikTok and Snapchat. Radio and Spotify confirmed persistent ambient use, which is less linked to youth hyperactivity (Bacher, 2024b). WhatsApp, Telegram, and Discord demonstrated a "functional versatility" (Halpern, 2024), serving multiple purposes, including social, expressive, and academic uses. Furthermore, platforms such as Pinterest and Snapchat revealed a strong identity and creative component, in line with what León-Alberca et al. (2025) pointed out.

These results show that the utility attributed to each medium does not depend solely on access frequency, but rather reflects processes of digital socialization, differentiated media literacy, and identity construction. This appropriation, as Bacher (2024a) points out, arises from the tension between the technical possibilities of each medium, the contextual conditions, and the meanings that users themselves assign to them.

5. Conclusions

This research enabled us to characterize in detail the uses and frequencies of media among young university students in Encarnación, revealing that these patterns are not homogeneous but are influenced by prior cultural capital and the conditions of technological socialization in homes and communities. These initial differences influence not only the intensity of access, but also the way students build their media repertoires and, consequently, their possibilities for social and academic participation.

Furthermore, it was found that university programs have a significant impact on media use. In areas related to design, for example, visual platforms like Pinterest acquire formative and professional inspirational value. In fields such as psychopedagogy or social work, the organizational and community function of messaging prevails. This finding opens a pedagogical horizon for strategic media curricularization. Consciously integrating those platforms that students already consider significant can enhance the motivation, relevance, and impact of university teaching.

Furthermore, the results show that media use is not limited to excessive consumption. Many young people turn to networks and platforms for relaxation, emotional support, or recreation, which should be interpreted as an opportunity to promote digital well-being strategies. Recognizing and legitimizing these uses involves teaching how to manage leisure time, fostering a balance between entertainment and learning, and building a healthy relationship with media environments.

The findings reveal that MIL in Paraguay must move toward a comprehensive model that considers cultural capital, disciplinary specificity, and the emotional dimension of media practices. An educational policy that articulates these factors can contribute not only to reducing urban-rural gaps but also to developing participatory and democratic citizens capable of harnessing the potential of the media both in the classroom and in everyday life. In this sense, the university is confirmed as a privileged space for transforming the diversity of media uses into critical, creative, and responsible skills, fundamental for an informed and sustainable democracy.

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