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## TEACHERS IN THE ERA OF DIGITALIZATION: USE OF SOCIAL MEDIA IN LATIN-AMERICA

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### Abstract

This study analyzes the use of social media in Spain and Uruguay. It examines how opinion leaders in education influence teachers. Findings show that most participants, both Uruguayan and Spanish, employ a range of digital social networks, though the degree of use varies. The results suggest complementarity between general users of social media and those identified as opinion leaders.

TEACHERS • SOCIAL MEDIA USE • NETWORK ANALYSIS •  
EDUCATIONAL REFERENCES

## EDUCADORES NA ERA DA DIGITALIZAÇÃO: USO DE REDES SOCIAIS NA IBERO-AMÉRICA

### Resumo

Este artigo analisa o uso das redes sociais na Espanha e no Uruguai, investigando como os líderes de opinião em educação incidem sobre os professores. Os resultados evidenciam que a maior parte dos docentes, tanto uruguaios como espanhóis, usa diferentes redes sociais digitais, uns mais, outros menos. Parece haver complementaridade entre os educadores que utilizam as redes e os que são considerados referências.

PROFESSORES • USO DE REDES SOCIAIS • ANÁLISE DE REDE •  
REFERÊNCIAS EDUCACIONAIS

## EDUCADORES EN LA ERA DE LA DIGITALIZACIÓN: USO DE LAS REDES SOCIALES EN IBEROAMÉRICA

### Resumen

Este artículo analiza el uso de las redes sociales en España y Uruguay, investigando cómo los líderes de opinión en educación influyen sobre los profesores. Los resultados muestran que la mayoría de los docentes, tanto uruguayos como españoles, utilizan diferentes redes sociales digitales, algunos más que otros. Parece existir una complementariedad entre los educadores que utilizan las redes sociales y aquellos que se consideran modelos a seguir.

PROFESORES • USO DE REDES SOCIALES • ANÁLISIS DE REDES •  
REFERENCIAS EDUCATIVAS

## LES ÉDUCATEURS À L'ÈRE DE LA NUMÉRISATION : L'USAGE DES RÉSEAUX SOCIAUX EN IBERO-AMÉRIQUE

### Résumé

Cet article examine l'usage des réseaux sociaux en Espagne et Uruguay avec une attention particulière à l'influence exercée par les leaders d'opinion sur les enseignants dans le domaine de l'éducation. Les résultats indiquent que la plupart des enseignants, aussi bien uruguayens qu'espagnols, recourent aux différents réseaux sociaux numériques, certains plus que d'autres. Il semble y avoir une complémentarité entre les éducateurs qui utilisent les réseaux et les personnes considérées comme références dans le domaine.

ENSEIGNANTS • USAGE DES RÉSEAUX SOCIAUX • ANALYSE DE RÉSEAU •  
RÉFÉRENCES PÉDAGOGIQUES

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**S**OCIAL NETWORKS CONSTITUTE SPACES FOR EXCHANGE AND, FOR MANY TEACHERS, A domain of professional development. Gee (2017) indicates that these networks emerge as spaces for sharing information and resources and, in some cases, for developing a sense of belonging. Among the various platforms, X (formerly Twitter) stands out for the possibility of immediate exchange of information (Luo et al., 2020) and for the diversity and volume of tweets (Xing & Gao, 2018) from those who frequently become reference figures for other users of the network.

Recent evidence indicates that multiple instances of teachers' informal learning originate on social networks (Marcelo & Marcelo-Martínez, 2021, 2023). Conversely, a certain number of studies exemplify how such networks have become spaces of support and collaboration among teaching professionals (Kelly & Antonio, 2016).

Platforms such as X, Facebook, and Instagram allow the analysis of interactions among teachers (Rehm & Notten, 2016; Cornelio Ramos, 2021), but also the identification of the most prominent reference figures in the field of education. A reference figure is someone who shares information and resources from teaching practice. In all social networks there are individuals who assume leadership roles and play a central part; Marcelo and Marcelo-Martínez (2021) examine the notion of a reference figure as a professional with an active presence on the networks who generates content that fosters interaction among followers.

Carpenter et al. (2021) stress the need to investigate in depth the influence of certain teachers considered reference figures on social networks. It is important to analyse this phenomenon particularly in Latin-America, where there are few studies on the use teachers make of social networks and on who the educational references for this group are on X (Marcelo-Martínez et al., 2024).

This article presents the main results of a study conducted in two Ibero-American countries with two objectives: to characterise teachers at different educational levels who use social networks, and to establish the profiles of the reference figures in education identified by the interviewed teachers. Spain and Uruguay were selected because they have a high rate of connectivity and extensive use of social networks. In addition, since the beginning of the century both countries have shown a similar trend in their educational policies, centred on promoting digital competences in this sphere. Particular emphasis was placed on teacher training (Vaillant et al., 2024).

Since the beginning of the century, Spain has implemented strategies and educational policy actions related to technologies. Drawing on the European reference framework, the Digital Agenda for Spain and its Digital Education Program have driven the development of teachers' digital competence as an essential step for the transformation of education. Several proposals have been produced, among them the Common Framework of Teachers' Digital Competence, in October 2017.

Since 2007, Uruguay has promoted an educational connectivity plan called Ceibal, whose objective is to provide students and teachers with laptop computers, internet access, and free technological resources. Over time, this program has evolved to adjust to the constantly changing reality of educational technologies, moving from the distribution phase to others related to teaching platforms (Learning Management System – LMS) and various educational resources to support students' and teachers' learning.

Our interest in this study is to determine the extent to which teachers in both countries have integrated digital technologies as part of their personal learning network. Digital social networks constitute a privileged space to offer not only resources but also support and a sense of

belonging to learning groups and communities. They grant visibility to many teachers who become informal leaders thanks to the influence they exert on other teachers through the materials and resources they share and the opinions they express on the networks. International studies have been conducted to ascertain how and why teachers use social networks (Carpenter et al., 2020; Marcelo et al., 2023). However, there are few comparative studies in this field, and even fewer when the Ibero-American region is taken as a reference.

## Method

The sample of this study consists of a total of 637 teachers, 441 of whom are Spanish and 196 Uruguayan. The percentages of women and men in both countries are similar: 72.0% and 70.7% women and 27.0% and 29.3% men in Uruguay and Spain, respectively. These data are representative of the most recent teacher censuses conducted in those countries. The age distribution is also similar. The highest percentage corresponds to teachers between 44 and 53 years of age (39.8% in Spain and 32.8% in Uruguay), followed by those in the 34-43 age range (27.2% in Uruguay and 23.5% in Spain). Regarding years in the profession, most have more than 20 years of teaching experience, with a higher percentage in Uruguay (53.1%) than in Spain (37.8%). These teachers work at different levels of the educational system, with a distribution that in this case differs in each country. In Uruguay, the highest percentage corresponds to university teachers (26.7%), followed by those at the upper-secondary level (22.6%) and the primary level (16.9%). In Spain, the main percentages of respondents teach at the primary (32.3%), secondary (31.2%), or technical upper-secondary (9.2%) levels.

Through the questionnaire, we collected information about the participants and the digital social networks they use by means of a series of open and closed questions (frequency of use, length of use, prominent profiles they follow, purpose of using digital social networks). The same questionnaire was used in both countries. A first set of five items gathers information on sex, age, years in teaching, educational level, and type of institution in which they teach. Second, a set of items related to the use of social networks is included. One item requests information on which social networks the teachers use (X, Facebook, Pinterest, Instagram, LinkedIn) and how frequently. In addition, teachers are asked which social network they use the most and the reasons that lead them to choose that network. Two items are also included to determine since when they have used that network and how they began to use it (on the recommendation of a colleague/friend, on their own initiative, after participating in a training session/workshop/conference/event, or for another reason).

We also asked the teachers to indicate the names or profiles of the five people they follow on social networks who are most important for their work as teachers, and to explain the reasons why they follow these profiles. To conclude this part of the questionnaire related to the use of social networks, we included two items. The first collects information on how frequently (several times a day; at least once a day; a few days per week; a few days during the month; or very rarely) and for what purposes they use social networks (to write or share their own content; to reply to tweets from people they follow; to retweet others' tweets; to mention people they follow; or to send direct messages).

Alongside the previous items, we designed a Likert-type scale composed of 24 items, intended to probe more deeply into the reasons why teachers use social networks. For the *ad hoc* design of the scale, we drew on the works of Staudt Willet (2019), Nochumson (2018, 2020), and

Higuera-Rodríguez et al. (2020), who investigated the reasons teachers use X. We also incorporated findings from Gilbert (2016), Greenhow and Askari (2017), and Li et al. (2021), which analysed teachers' learning processes through social networks. From these studies, we identified the following dimensions that served to develop the items of the scale:

- consult more experienced teachers: this dimension addresses items related to the possibility of finding professionals with greater knowledge of methodologies, resources, and didactic notions that may serve as inspiration, support learning, and provide help, in line with the studies by Nochumson (2020) and Li et al. (2021) on professional development through social networks;
- find resources: through this dimension, we investigate the motivations teachers have for locating didactic resources that can be implemented in their planning and materials, drawing on the results obtained by Nochumson (2020) and Hur and Brush (2009);
- share resources with other teachers: this dimension concerns what teachers do, via their social media profiles, to share their own materials and didactic resources with the community. For this, we again used the research developed by Nochumson (2020);
- obtain emotional support: in this dimension, and following the study by Hur and Brush (2009), we seek to assess the extent to which teachers use social networks to find within the community an emotional support they do not encounter in their physical environment;
- learn: one of the dimensions addressed in the works of Gilbert (2016), Nochumson (2020), and Li et al. (2021), it aims to determine whether teachers learn through concrete resources, such as tutorial videos provided by other teachers, or through reflections and messages expressed by the community on the social network;
- carry out a personal diagnosis: this dimension covers both training needs and gaps, as well as the personal reflections teachers develop when using these networks, as identified in Li et al. (2021);
- engage in dialogue with other teachers: already examined by Hur and Brush (2009), this dimension seeks to understand interaction processes among teachers on social networks, for example, learning colleagues' opinions or discussing educational topics.

The questionnaire allowed us to gather information on the reasons for using social networks, as well as the level of use by teachers in Spain and Uruguay.<sup>1</sup> In a second part of this research, we sought to delve further into who the individuals recognized as reference figures or influencers in the field of education are and how they operate. To select the most important reference figures in each country, we adopted two procedures. These differentiated procedures must be justified by the fact that, whereas in Spain we had relevant information from the results of previous studies conducted by one of the authors of this article, in Uruguay there was no valid information on which to proceed with the interviews.

In the case of Spain, we interviewed 18 teachers with a strong presence on social networks and based our work on the study previously developed by Marcelo and Marcelo-Martínez (2021). In that study, we used the Buzzsumo software, a marketing analysis tool that enables advanced searches on the people, profiles, and topics most consumed and shared on social networks. We

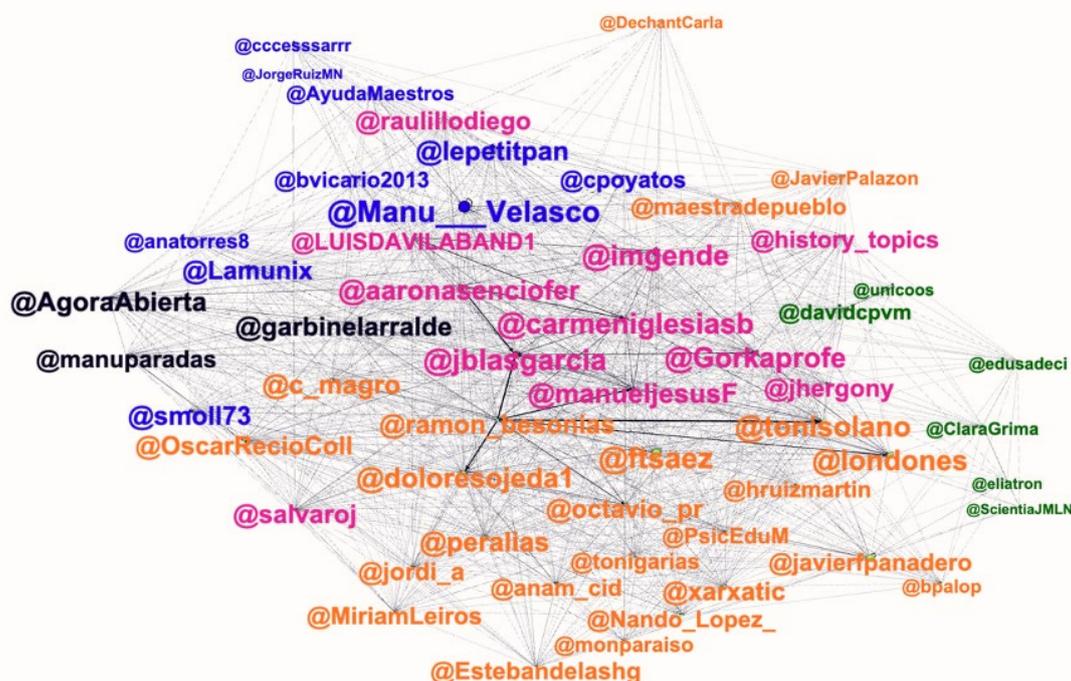
1 A version of the questionnaire can be accessed at: <https://forms.gle/6cjMhAicdnELRw958>

began by filtering users by country (Spain) and by keywords present both in the user's biography and in their posts. From this analysis, we obtained a sample of 64 Spanish profiles, from which we initially selected the 10 most representative. We considered as prominent influencers those who had more than 15,000 followers and more than 5,000 tweets published. After identifying the most prominent Spanish influencers, we analysed the mentions made by each of them in their tweets.

We were interested in discovering who the individuals were that these teachers regarded as relevant, since they were indicated in their mentions. The analysis of the mentions revealed different types of profiles on X: individuals, institutions (government, agencies, official centres), politicians (ministers), national and educational press, radio, television, music, or universities. We selected only the mentions referring to individuals. Once we compiled the list of subjects mentioned by these 10 influencers, we established as a criterion that they had to be mentioned by at least 4 of the influencers in our sample. This process enabled us to identify a total of 44 new influencers. Added to the initial 10, these constitute the total sample of 54 subjects studied, as can be seen in the Figure 1. We used social network analysis to identify the degrees of centrality and betweenness of these influencers. Twenty-eight individuals with different degrees of centrality were identified and invited to participate in the research through an interview.

**Figure 1**

*Representation of groups of influencers in the field of education in Spain*



Source: Authors' elaboration.

In the case of Uruguay, taking into account that we had little prior information, we started from the results of the questionnaire described above, in which teachers were asked to identify individuals they considered reference figures on social networks. In a second stage, the list of these reference figures was processed with the Graphtext software in search of patterns and trends to analyse their influence on social networks and to study the structure and dynamics of connections among users. This program enables interactive network visualisation and provides the tools required to generate dynamic and hierarchical graphs.

Although Facebook and Instagram are the most used social networks in Uruguay, we decided to conduct the social network analysis (SNA) on X, since, according to Luo et al. (2020), this is the main platform for creating professional learning networks and sharing knowledge. The SNA on X made it possible to visualise the centrality degree and betweenness centrality of the vertices in the network. For this social network analysis process, we examined the mentions that each of the 20 most frequently named reference figures in the interviews made in their X messages. For this purpose, we used data from the tweets of the 20 profiles. Once these data were downloaded, we proceeded to extract the mentions made. This frequency count generated an adjacency matrix that showed the number of times each influencer mentioned and was mentioned by each of the remaining 19 influencers. It is worth noting that, in this case, we found some influencers who mentioned themselves.

Once the adjacency matrix had been created, we used the Graphtext program to analyse the relationships among the influencers, as can be seen in the Figure 2. From this analysis emerged a list of nine reference figures linked to the educational field, who were invited to take part in the study through an in-depth interview. Data from the nine reference figures were collected by means of semi-structured interviews. The development of the interview guide was based on the conceptualisation of Walter and Brüggemann (2020). The authors examine how reference figures operate, since they not only redistribute information but also produce their own content, either because they create it or because they obtain first-hand information by virtue of their position on X.

### Figure 2

*Representation of groups of influencers in the field of education in Uruguay*



Source: Authors' elaboration.

In both cases (Uruguay and Spain), the researchers had a question guide aimed at collecting varied information about the interviewees' participation on social networks, their entry into these platforms (with a focus on X), the topics of their interest, and the process they follow to make a post. The interviews made it possible to analyze the ways in which influential teachers related to their followers and the possible learning generated through social networks.

## Results

The data obtained were analyzed, first, by means of descriptive statistics with measures of central tendency and variability. In addition, nonparametric contrasts were performed to analyze differences in the use of social networks among teachers as a function of factors such as sex, age, and the educational level at which they teach.

Subsequently, with regard to the scale on reasons for teachers' use of social networks, we carried out a classical reliability analysis, an initial exploratory factor analysis, and a principal components analysis using the JASP software, version 0.11.1.0. To determine the reliability of the scale, we obtained Cronbach's *alpha* coefficients of 0.957 and examined what happened to the coefficients if each item was deleted, which allowed us to verify that reliability did not change when any item was removed. We also extracted the correlation of each item with the remaining items. For the exploratory factor analysis and the principal components analysis, we used orthogonal varimax rotation. Once an exploratory model consisting of two factors had been defined, we proceeded to confirmatory factor analysis. We obtained additional parameters, such as root mean square error of approximation (RMSEA) and goodness of fit index (GFI), to determine the quality of fit of the confirmed model.

### Which social networks are used by teachers in Spain and Uruguay?

Based on the questionnaire data, it can be stated that most Uruguayan and Spanish teachers use different digital social networks, some more, others less. As shown in Table 1, Instagram is the network most continuously used in both countries, followed by Facebook and X. In the case of Uruguayan teachers, continuous use of LinkedIn is observed (18.8%), whereas this percentage drops to 6.7% among Spanish teachers. This difference and the greater use of LinkedIn in Uruguay could be explained by the fact that it is a network focused on connecting professionals from different fields and on facilitating job searches and offering opportunities in the labor market. It appears that in Uruguay, as indicated by some studies (Salcines Talledo & González-Fernández, 2020), LinkedIn use may help teachers construct an online professional identity and improve their visibility in the market. In Spain, access to teaching positions does not depend on the labor market but on public employment offerings.

It should be noted that 33.0% to 40.4% of the teachers report continuous use of at least one of the indicated social networks. This means that a considerable proportion of respondents confirm daily use of social networks for some reason related to their teaching work, as will be analyzed below.

**Table 1**  
*Descriptive statistics of social network use by teachers*

Social networks	Never		A few times		Several times		Continuously	
	Spain	Uruguay	Spain	Uruguay	Spain	Uruguay	Spain	Uruguay
X	38.3%	39.3%	20.3%	20.8%	16.9%	13.2%	24.5%	18.5%
Facebook	22.7%	21.7%	20.5%	15.3%	28.3%	2.5%	28.5%	28.0%
Instagram	30.3%	19.7%	15.4%	10.4%	21.3%	21.4%	33.0%	40.4%
Pinterest	31.5%	38.2%	19.2%	28.8%	36.4%	34.9%	12.8%	10.0%
LinkedIn	59.8%	30.7%	20.2%	19.9%	13.2%	29.5%	6.7%	18.8%

Source: Authors' elaboration.

The academic level at which they teach conditions, to some extent, the use of one network more than another, as shown in Table 2. Thus, Facebook is the network most used among early childhood and primary education teachers in both Spain and Uruguay. However, differences are found at other educational levels. For example, in secondary education in Uruguay, the most widely used network continues to be Facebook, whereas in Spain it is Instagram. In the case of university teachers, there are also differences, since those in Spain show a marked preference (60.0%) for Instagram and those in Uruguay for X.

**Table 2**

*Percentages of social media use by educational level and country*

Educational level	Facebook		X		Instagram		LinkedIn		Other		None	
	Spain	Uruguay	Spain	Uruguay	Spain	Uruguay	Spain	Uruguay	Spain	Uruguay	Spain	Uruguay
Early childhood education	39.4	62.5	18.2	0.0	9.1	25.0	18.2	0.0	15.2	12.5	18.2	0.0
Primary education	31.9	30.3	18.4	9.1	16.3	21.2	0.7	12.1	7.8	12.1	19.9	6.1
Secondary education	19.1	36.4	14.0	11.4	19.1	22.7	3.7	2.3	4.4	25.0	29.4	2.3
Upper secondary education	10.0	9.5	22.5	9.5	25.0	19.0	0.0	9.5	2.5	33.3	25.0	14.3
Vocational education and training	18.4	17.9	13.2	0.0	5.3	21.4	7.9	21.4	7.9	17.9	42.1	14.3
University	20.0	13.5	0.0	21.2	60.0	17.3	0.0	17.3	0.0	11.5	20.0	13.5

Source: Authors' elaboration.

### For what reasons do teachers in Spain and Uruguay use digital social networks?

Teachers use social networks for diverse reasons. To investigate this, we included in the questionnaire a scale composed of 24 items, the results of which are presented below, separating the mean scores obtained by teachers from Uruguay and Spain. As can be seen in Table 3, the means are low, given that the response range for the items was between 1 (nothing) and 4 (a great deal).

**Table 3**

*Mean scores for reasons for social network use among teachers in Uruguay and Spain*

Reasons	Mean Uruguay	Mean Spain
To get to know more experienced teachers to whom I can turn for consultations	2.31	2.49
To find educational resources shared by other colleagues	<b>2.79</b>	<b>3.00</b>
To share my own resources with other teachers	2.11	2.16
To post questions or clear up doubts within the community	1.89	2.09
To obtain examples of lesson plans or activities to use in the classroom	2.37	2.39

*(To be continued)*

*(Continuation)*

Reasons	Mean Uruguay	Mean Spain
To know other teachers' opinions on current issues	2.57	2.60
To ask a colleague for support in solving a problem	2.37	2.34
To feel in contact with other teachers	<b>1.83</b>	<b>1.79</b>
To share my own emotions and concerns	<b>1.57</b>	<b>1.45</b>
To help me overcome the isolation I often feel in the educational institution	1.99	2.02
To know that other teachers face the same problems as I do	2.26	1.97
To collaborate with other colleagues on a shared project	2.15	2.00
To talk about education with other colleagues	<b>2.65</b>	<b>2.79</b>
To learn from materials prepared by other colleagues	1.78	1.90
To participate in open and online seminars and training activities	2.64	2.33
To discuss fundamental issues related to education in today's world	2.21	1.96
To detect my own gaps or training needs	2.06	2.18
To obtain help when implementing a resource or a didactic strategy	2.21	2.15
To find people with characteristics similar to mine with whom to exchange ideas	2.41	2.29
To participate in a space I consider open and positive	2.41	2.59
To apply in my teaching practice new ideas or methods learned through the media	<b>2.64</b>	<b>2.74</b>
To incorporate new digital resources and tools into my practice	2.37	2.34
To learn about matters I do not master well	<b>2.65</b>	<b>2.65</b>
To reflect on my own teaching practice	<b>2.60</b>	<b>2.58</b>

Source: Authors' elaboration.

As can be seen in Table 3, teachers at all educational levels use social networks because they regard them as spaces for finding digital resources, materials, and tutorial videos prepared by other teachers and considered of interest. These materials support teachers' learning, reflection on teaching practice, and, in some cases, prompt the application of new content and resources in their classes.

The questionnaire responses also provide evidence about the reasons that received the lowest scores for social network use. Among these, requesting support to solve a problem, sharing emotions and concerns, and obtaining help to overcome isolation do not appear to be strong incentives for use.

The analysis of the mean values for each item in both countries indicates considerable overlap in the response range for the reasons given by Spanish and Uruguayan teachers for using social networks. To probe these differences further, we performed a Mann-Whitney U test of between-country differences for each item. As shown in Table 4, of the 24 reasons for using social networks, clearly significant differences (significance level < 0.01) were found only for the items "collaborate with other colleagues on a shared project" and "participate in open and online training seminars and activities".

**Table 4**  
*Mann-Whitney U test values for the analysis of differences between Spain and Uruguay*

Variables	Collaborate with other colleagues on a shared project	Participate in open, online seminars and training activities
Mann-Whitney U	35932.500	35486.000
Wilcoxon W	133835.500	133389.000
Test statistic	35932.500	35486.000
Standard error	2066.085	2077.367
Standardized test statistic	-3.574	-3.769
Asymptotic significance (twotailed test)	< 0.001	< 0.001

Source: Authors' elaboration.

Besides identifying the previously described differences, we sought to determine whether the scale of motives for social media use employed in this study still presents the same construct validity as that obtained in an earlier study in which it was validated with a sample of Spanish teachers (Marcelo et al., 2023). To verify the scale's validity, exploratory factor analysis was applied. Two analyses were performed: one with all participants and another exclusively with Uruguayan teachers, in order to check whether the factors were consistent with those reported in the cited study. In both cases, the Kaiser-Meyer-Olkin measure and Bartlett's test of sphericity were computed. In the first, the overall value (MSA = 0.96) and the item-level values were above 0.9, indicating that the dataset is suitable for data reduction. In the second, the p-value was < 0.001, confirming adequacy in both instances.

The exploratory factor analysis produced a two-factor model, with a chi-square distribution and a p-value < 0.001. Principal component analysis reduced the set of items to two components, coinciding with the factors. Table 5 shows the loading for each item.

**Table 5**  
*Component loadings for the two factors*

Reasons to use networks	PC1	PC2	Unicity
22. Incorporate new digital resources and tools into my teaching	0.965		0.255
2. Find educational resources that other colleagues share	0.921		0.325
21. Apply in my teaching practice new ideas or methods learned on X	0.888		0.287
14. Learn from video tutorials prepared by other colleagues	0.863		0.305
23. Learn about topics in which I have less mastery	0.795		0.379
24. Reflect on my own practice	0.766		0.352
5. Obtain examples of lesson plans or activities to use in my class	0.693		0.582
17. Detect my own shortcomings or training needs	0.645		0.441
6. Learn the opinions of other teachers on current issues	0.524		0.488
1. Locate more experienced teachers to whom I can turn for consultations	0.498		0.459
18. Get help when I try to implement a resource or an instructional strategy	0.443		0.505

(To be continued)

*(Continuation)*

Reasons to use networks	PC1	PC2	Unicity
15. Participate in open, online training seminars and activities	0.414		0.585
13. Talk with other colleagues about education		0.901	0.328
9. Share my own emotions and concerns		0.892	0.430
16. Discuss fundamental issues related to education in today's world		0.809	0.381
12. Collaborate with other colleagues on a shared project		0.717	0.522
7. Request support from a teacher to solve a problem		0.708	0.467
4. Pose questions or clear up doubts in the community		0.638	0.504
8. Feel that I am in contact with other teachers		0.635	0.358
19. Find people with characteristics similar to mine with whom I can share		0.605	0.405
10. Help me overcome the isolation I often feel		0.576	0.733
20. Participate in a space I consider open and positive		0.570	0.447
3. Share my own resources with other teachers		0.567	0.546
11. Know that other teachers have the same problems as I do		0.517	0.569

Source: Authors' elaboration.

The first factor, which we label “sharing and learning”, refers to the motivation that drives many teachers on social networks to locate digital resources, lesson plans, or learning activities shared by others and to take them into their classrooms. It also includes opportunities for professional updating, continued training, and participation in online seminars and training activities, as well as reflection on teaching practice. As shown in Table 5, the most frequent motive within this factor is “finding educational resources shared by other colleagues”.

The second factor, called “support and belonging”, groups the largest number of motives and concerns the use of social networks to integrate into what could be considered “affinity spaces” (Gee, 2005). These spaces include other teachers willing to provide support, offer accompaniment, resolve doubts, help with the implementation of innovations, or engage in conversation. This factor encompasses motives such as sharing emotions and concerns, overcoming isolation, posing questions, feeling in contact with others, or knowing that other teachers face the same problems. Among these, as Table 5 indicates, the least frequent is the one emphasizing that networks help to “overcome the isolation I often feel,” followed by “sharing one’s own emotions and concerns”. As already shown, this is common among teachers in Spain and Uruguay. It may be that they do not wish to expose their practices, resources, or activities publicly in order to shield themselves from others’ judgment (Snow-Gerono, 2005). It may appear that the teaching profession has moved beyond the fear of sharing instructional practices on social networks, partly thanks to the creation of spaces where any teacher, freely and voluntarily, publishes materials and resources without fearing criticism. To deepen understanding of this variable, a broader study – both longitudinal and content-wise – would be required to assess whether social networks generate opportunities to strengthen emotional bonds among teachers, taking into account contextual aspects of the teachers themselves in their educational institutions.

## How are education influencers perceived in Uruguay and Spain?

The reference figures are characterised by dedicating themselves to teaching in formal and informal contexts. Some are teaching professionals with postgraduate studies and a career in the educational field. They seek to disseminate information or knowledge through social networks and interact with other users, sharing resources, materials, and information they find on X.

The interviews made it possible to identify the factors that led the participating reference figures to exercise their influence on the networks. It was also possible to establish their trajectory on the networks and their relationship with followers. Accordingly, we present the results related to the qualitative analysis of the interviews.

### They are professionals who have something to say

The interviewees are professionals who achieved a certain level of notoriety through their publications on the networks. They share their reflections and teaching resources with others; they have something to communicate. They are interested in interaction and acknowledge the benefits of exchange. Some pay more attention than others to the growth of their followers, or to colleagues' recommendations for managing the networks more effectively.

In this regard, by way of example, we collected the following contributions:

*Initially, I began using X to publish texts I wrote or talks I gave, and as a space for debate or dialogue. That was where I had the most exchanges. (Urug-E7).<sup>2</sup>*

*I think many people have the same ideas I do and reaffirm their own opinions. So that would be the definition of an influencer: a person has ideas and expresses them; others confirm that they also have them but do not know how to express them, do not fully understand them, or are more timid. Then, when I express them, they say: "yes, I understand it the same way and I like that you publish it. That is why I am your follower". (Esp-E5).*

All of them use more than one platform, although they acknowledged X's predominance at the time of the interview. They report that they mainly publish texts, some complemented with images.

*I would say I started using Facebook... and X seven or eight years ago. Perhaps Instagram a little later. (Urug-E7).*

*Personally, I had the opportunity to participate in platforms such as Facebook, LinkedIn, and X, but lately I have focused on X because it allows me to share resources and discuss academic issues. It has been an inexhaustible source of opportunities for exchange and growth for me. (Urug-E4).*

*I have a personal strategy. I post first on Facebook, which is more familiar, and I see how the friends there react. When the post is well received, I move it to X, which is like throwing it into the ocean and saying "let's see what happens". That is what I do. (Esp-E5).*

One of the greatest satisfactions of participating in social networks is the possibility of connecting with people and institutions with whom one would never otherwise have contact, in addition to creating work opportunities (building networks, appearing in the media, writing and promoting books) both within the country and abroad. Ongoing contact with people and/or topics of interest is also highlighted.

2 The interview excerpts are originally in Spanish.

*A satisfaction is having established links with people I probably would not have met through any other means. The networks allowed me to do that. (Urug-E6).*

*Having a community where there are common interests, where it is possible to share things. This can give rise to reflections, even if only a little. (Esp-E9).*

All interviewees stated that the initial purpose of their participation in the networks was not to become reference figures or influencers. That developed over time.

*I never set out to be a role model. I only wanted to make a difference and contribute to the debate on education. (Urug-E3).*

*What I gain is the feeling of being in tune with many teachers who want to share, receive training, and continue training to transform education. (Esp-E15).*

### **They are professionals who place importance on the interaction enabled by networks**

Participation in social networks frequently results in new interactions and ties. The reference figures emphasise the possibilities for collaboration, as well as for sharing experiences and resources. New ideas and practices emerge. The dynamics of dialogue and exchange generated on the networks create collective meeting spaces that can be understood as “affinity spaces” (Gee, 2005). In these spaces, individuals encounter other people or topics aligned with their interests (Rosenberg et al., 2016). This affinity space operates as a learning opportunity for teachers beyond the bounds of formal training (Gee, 2017). Accordingly, the interviewees stated:

*It is interesting to share data or thoughts on certain topics with quality and specificity. From a highly focused, very micro topic, a community can emerge. That, for me, is more important than having many networks; that is, if you offer interesting things, people respond. (Urug-E2).*

*I see it as an exchange of information or experiences, an interchange with the people who follow me. (Esp-E10).*

The interviewees’ statements are consistent with findings reported by several authors. Social networks make it possible to increase social capital through collaboration via exchanges that may be stable or temporary (Fox & Wilson, 2015). The interviewees prefer to avoid confrontation in favour of contribution and collaboration. They declared:

*At times it is complicated to react and remain calm when responding to certain things that may point to issues that particularly hurt me. But I believe it is important not to get irritated and to avoid violence on the networks. (Esp-E13).*

*I do not feel comfortable facing off and confronting; I prefer to contribute and comment. (Urug-E5).*

It appears that social networks can facilitate interaction and collaboration among teachers, which could affect social capital. People find in these platforms a way to remain in contact over time, sharing experiences, knowledge, and mutual support. The networks also facilitate more temporary interactions through participation in discussions, debates, or specific events.

### **They are professionals who attach importance to learning and influence**

For the interviewees in both Uruguay and Spain, social networks provide new ways to learn and to develop professionally. Technology makes it possible to access new knowledge and to find inspiring ideas. Several authors (Ross et al., 2015) indicate that X and other social networks enable

contact with diverse reference figures and facilitate learning outside formal structures. In this regard, the teachers state:

*I feel satisfied when I meet colleagues with whom, for different reasons, I had not been in contact for some time. Also the fact of being able to follow certain leaders in education. (Urug-E8).*

*The recognition that brings satisfaction is more linked to vanity. That is, when someone says: “look, I saw you in a video and I liked it”. Well then, thank you. Or, “I was looking at your materials and they were useful for this leadership project”. One is grateful. Social networks have an impact on your vanity. Especially when you interact a lot, because people see that you are there. And that group encourages you to keep working. (Esp-E11).*

The teachers affirm that social networks give them the possibility of amplifying learning opportunities, specifically more than other traditional options for professional development (Ross et al., 2015). In this sense, they feel more fulfilled by having acquired certain knowledge within a community. For example:

*I love what I do; I greatly appreciate people’s affection. For instance, when I have to give a talk and they tell me: “they were waiting for you because many are your followers”. That is very nice, because some people do not know you, but others already do, and that helps a lot. (Urug-E1).*

*Some training sessions I was asked to deliver came about because of the impact that what I share could have... It would not have been possible if I were not on the networks. (Esp-E15).*

The exchange mediated by networks affects the reference figures themselves and, above all, their followers. In many cases, followers replicate and disseminate the posts of these reference figures.

### Professionals who suggest how to intervene on social networks

With regard to how to intervene on the networks, the reference figures recommend maintaining an attitude of respect and balance in exchanges, seeking constructive dialogue, and verifying the truthfulness of information before sharing it. They suggest following media and journalist accounts to obtain reliable information. In some cases, interventions are planned; in others, they are spontaneous. They also advise against interacting with aggressive accounts or those that promote hate. The participants in the study concur in recommending:

*Have a purpose – what you want, what you have to say. Define it, know what you have to share, and stay on that axis. It is not about sharing just anything, nor about talking about everything. (Urug-E4).*

*No, I do not plan my interventions, because that would take away the authenticity of what I do, and I want my networks to be sincere. That is, when they stop being sincere, they will no longer interest me, because I believe the “marketing” work should be done by publishers, not by writers. (Esp-E13).*

Another informant suggests posting at optimal times and considering the connection among different networks. Other interviewees complement this idea by recommending capturing attention in the first seconds and offering clear, high-quality content:

*Post during business hours, but especially early in the morning, at midday, and at the end of the workday. (Urug-E6).*

In addition, it is recommended to maintain authenticity and honesty in posts, protect oneself from public exposure, present an attractive proposition, and make an effort to respond to all followers. Networks are also viewed as tools for learning and connecting with professionals from various fields, and as opportunities for professional development that complement formal education.

Nevertheless, there is concern about the increase in violence in certain exchanges. Hence, it is advisable to adopt specific behaviours and, above all, to delve into this issue in relation to adolescents' use of networks.

*I have already learned not to get involved when I detect a problem, not to respond to an aggressive message . . . you learn that over time, and you also accept that not everyone will agree with your ideas; it is like a permanent ego exercise. (Urug-E1).*

*. . . be grateful, polite, considerate; never get into fights or discussions with people on the network that lead nowhere. Nobody wins. When two people argue, both lose their reasoning. (Esp-E5).*

It appears that ethics is central to participation in social networks, implying an attitude of respect, verification of information, following trustworthy sources, avoiding negative interactions, and promoting constructive dialogue. Such practices could contribute to a more positive and beneficial use of online platforms.

## Discussion and conclusions

In this article, we observed that new digital learning environments are generating favourable conditions for teachers in Spain and Uruguay to learn and improve their teaching practices (Dille & Røkenes, 2021). The existing literature on professional uses of digital social networks by teachers indicates variation in frequency, intensity, and motivations (Owen et al., 2016; Xing & Gao, 2018). This finding is consistent with our results. The percentage of surveyed teachers who report regularly using one of the three main social networks (X, Facebook, or Instagram) is considerable (around 30%; 25% use them occasionally).

What drives Uruguayan and Spanish teachers to participate in social networks? Our study reveals many similarities between the two groups. Two main factors motivate the use of these platforms: seeking high-quality resources and materials for teaching practice, and creating spaces of affinity, collaboration, and support. The highestscoring motives are similar in both countries: finding educational resources made available by other colleagues; applying new ideas or methods learned on these networks in their classes; learning about topics in which they have less command; and reflecting on their own practice.

The least mentioned motives include feeling in contact with other teachers and sharing one's own emotions and concerns. Only two aspects showed significant differences between Uruguayan and Spanish respondents: collaborating on shared projects with other colleagues and participating in open, online training seminars and activities. In both instances, scores are higher among Uruguayan teachers. A possible explanation is the presence in Uruguay of Plan Ceibal (mentioned earlier), which for nearly two decades has promoted virtual learning environments to create and share resources in professional learning communities. The plan has also encouraged participation in numerous online training activities (Vaillant et al., 2022).

According to the results presented here, participation in online social spaces is increasing and is emerging as a catalyst for professional development. Through the networks, teachers

establish contact with colleagues, share experiences, resources, and knowledge, or address specific aspects of teaching practice (Kamalodeen & Jameson-Charles, 2016). They exchange teaching-related knowledge (Ab Rashid et al., 2016) and generate new understandings, ideas, and practices that they take into their classrooms, demonstrating that social networks may contribute to professional development (Goodyear et al., 2019). Their use of social networks underscores that, in an interconnected society such as ours, autonomous learning prevails over more traditional forms of professional development (Kennedy, 2019). As confirmed in this study, Spanish and Uruguayan teachers recognise and make use of the learning opportunities offered by social networks, which rest on more flexible forms of interaction (Rehm & Notten, 2016) and on immediate communication with peers. This communication focuses mainly on the most didactic and practical aspects of their teaching work.

Moreover, we found that social networks have facilitated the creation of affinity spaces among the teaching staff. They appear to allow many teachers to move beyond the institutionalised conservatism noted by Fullan and Hargreaves (2012), who highlighted the difficulty of asking for help because of the negative perception attached to acknowledging weaknesses in one's immediate environment – something at odds with the professional culture of teaching. In contrast, social networks generate affinity spaces that provide security and confidence for requesting assistance (Gee, 2005). Developing in parallel to the physical setting of the school, these spaces enable teachers to sustain trusting and respectful relationships with colleagues with whom they feel affinity, regardless of geographical proximity. Teachers themselves choose whom to follow and with whom to interact.

Within the freedom and range of options offered by networks, new informal leaderships are emerging among teachers (Liou & Daly, 2018). These horizontal leaderships rest on trust, recognition, and mutual appreciation, grounded in the practical usefulness of shared instructional materials, proposals, and ideas. In recent years, some teachers have stood out as reference figures in social networks (Marcelo & Marcelo-Martínez, 2023; Carpenter et al., 2023). These opinion leaders are consulted by others seeking inspiration or support (Daly et al., 2019; Del Fresno García et al., 2016). Their capacity to influence the community derives from their acceptance and media relevance (Del-Fresno García et al., 2016). Recognised by their community, they play a crucial role by facilitating the flow of information across the network and creating opportunities for teachers to develop learning through shared ideas, experiences, and reflections (Greenhalgh et al., 2016).

As the results of this study show, teachers appreciate the role of these reference figures as curators of up-to-date, useful content for teaching work, which motivates them to assume a more active role on social networks. The influence of these leaders holds substantial weight for followers, who adopt a favourable stance that leads them to move beyond mere information consumption and become active participants. This stance arises from an altruistic intention and a sense of responsibility toward knowledge building in the networks. Through their interaction online, these teachers have understood that the worth of this medium lies in sharing practices and experiences, including those that were not successful.

Some teachers who took part in this research display moderate activity on social networks, corresponding to the profiles Baker-Doyle (2017) labels “emergent” and “participatory.” In that work, a four-level continuum is proposed, which teachers progressively traverse as participation and interaction increase in digital environments. Those with an “emergent” profile seek colleagues' advice when needed and recognise the advantage of connecting with others to advance

their learning. They do not isolate themselves or fear asking specialists for help, viewing social environments as a complementary source of knowledge and learning alongside formal sources. Teachers with a “participatory” profile, in addition to the foregoing, use social networks to initiate conversations and debates with other professionals. They move beyond spectatorship to contribute their practices and share them publicly, using these platforms not only to communicate but also to interact and learn with others. This enables them to take a critical stance toward the learning materials they develop and to transform their teaching practice, adapting and designing materials for their students based on what they learn in the networks. As reflected in this study’s results, integration of social networks into professional development also follows different levels or evolutionary stages (Baker-Doyle, 2017).

The teaching profession has traditionally oscillated between discourses of control, accountability, and standards, and others centred on activism, professional awareness, decision-making, and teacher autonomy (Ben-Peretz, 2012). Based on what is presented in this article, digital social networks are facilitating the consolidation of a new type of professionalism. On one side, a collaborative professionalism characterised by rethinking and renewing teaching practices through reflective, self-directed learning and collaboration among teachers via networks. On the other, an activist professionalism that seeks to transform educational practices through the generation of new knowledge via research and collaborative learning (Sachs, 2016). Both forms were identified in this study.

Our focus was on understanding the motivations that lead teachers to use social networks, but we did not examine the reasons why many choose not to. They may distrust the lack of privacy, or the environment created by social networks (public exposure, immediacy of communication) may discourage participation (Baruch & Hershkovitz, 2014). This hypothesis aligns with Lortie’s (1975) proposal that the teaching profession develops in settings that foster isolation. Some teachers might prefer not to expose their practices, resources, or activities publicly to avoid being judged (Snow-Gerono, 2005).

Another aspect that warrants investigation is the quality of the information and digital resources shared online. Although it may be assumed that teachers apply clear criteria to evaluate what they find – adopting a resource or methodological procedure according to its coherence with their teaching style – it is also possible that some adopt resources without having developed the professional judgement typical of an experienced teacher (Kelly et al., 2021). A deeper study of resource quality and the criteria of use applied by teachers is therefore necessary.

This leads to a third reflection: the extent to which educational resources gathered on social networks are applied in classrooms. It is crucial to analyse the learning transfer carried out by teachers and, importantly, the learning outcomes these resources generate in students (Fauth & González-Martínez, 2021).

The study presented here permits the formulation of hypotheses about complementarity between teachers who use various platforms and educational reference figures who publish systematically on social networks. Future research could deepen the analysis of this complementarity to understand, for example, how contributions by educational reference figures on social networks affect teaching practices and student learning outcomes. Studies could also identify not only the benefits of this complementarity but also possible risks, such as the spread of unverified information or excessive dependence on certain platforms or influencers in the

educational field. Another line of inquiry concerns whether social networks create opportunities to strengthen emotional bonds among teachers, assessing contextual aspects of the teachers themselves in the institutions where they teach.

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### Note on authorship

Denise Vaillant – conceptualization; formal analysis; methodology; writing: original draft, review and editing.

Carlos Marcelo – conceptualization; formal analysis; methodology; writing: original draft, review and editing.

Paula Marcelo-Martínez – data curation; formal analysis; methodology; software; visualization.

### Data availability statement

The data can be consulted at the following repository:

Marcelo, C. (2025). Teachers in the era of digitalization: Use of social media and educational references in Latin-America, *Mendeley Data*, V1. <https://doi.org/10.17632/by2y4h4h8c.1>

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