



CRITICAL ANALYSIS OF THE 500 MOST INFLUENTIAL SPANISH EDUCATION PROFILES ON INSTAGRAM

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KEYWORDS

Instagram
Influencers
Educational influencer
Transmedia competencies
Education

ABSTRACT

Education transcends the academic realm, becoming a virtual movement through which we can find educational profiles on any social network. The visibility and influence of education in the daily lives of families, professionals, and society are positive, although it is necessary to discern reliable from unreliable information. This study analyses the 500 most influential Spanish profiles on Instagram. To achieve this, the education category was selected within the Starngage tool, categorising the profiles based on the specific content published and analysing those accounts directly related to education.

Received: 10/ 02 / 2024

Accepted: 25/ 02 / 2024

1. Introduction

Widespread access to the Internet at any time, through devices that are always at our fingertips, has changed the way we entertain ourselves, the way we disseminate and share content, images and even documents, and the way we access information.

The latest data from the National Statistics Institute (2023) are clear: 95.4% of the Spanish population aged between 16 and 74 use the Internet, 90% of them daily, 2.9 points more than in 2022. This has brought about a necessary change in the way we understand everything related to information, communication and society, as it has been influenced and transformed by the social media scenario that prevails today (Gabelas-Barroso & Marta-Lazo, 2020).

Almost three decades have passed since the launch of SixDegrees, considered the first social network as we understand it today (López del Paso, 2015). Today, we can affirm that social networks are the main environment for contact and communication between people with similar tastes and interests (González-Carrión & Aguaded, 2020).

Instagram has become the digital platform with the greatest capacity for communication and visual transmission worldwide (Thomas et al., 2020). Moreover, according to the most recent Annual Social Media Study (IAB, 2023, p.22), Instagram is now the second most used social network, surpassed only by Whatsapp. Continuity of use and the fact that it is the social network where the most influencers are followed in Spain (IAB, 2023, p.57) are the main motivations for choosing Instagram in this study.

1.1. Influencers on Instagram

There are two main types of users on the web: those who publish and those who consume what others publish, with access to accounts dedicated to any topic and any type of audience (Berners-Lee & Fischetti, 2000).

Instagram (2024) is a social network whose main purpose is to share images that can be commented on, either photographs or videos that can be edited at any time and in any place. The publications can be designed and published via the web or mobile application, there are a variety of filters, the possibility of writing text in the publications of the feed (each user's profile where the publications are permanently stored), the possibility of including music or hashtags in the publications, as well as the sharing of visual content accessible to other users for 24 hours through stories. In general, posts in stories tend to be more informal, although they can be stored in featured folders created by the user, while posts in content are more formal in nature (Carpenter et al., 2020).

Information is organised by likes, comments, tags and locations. In this way, as González-Carrión & Aguaded (2020) point out, leadership profiles are developed according to a visual pattern and the ability to transmit trends with which the public feels identified.

Taking into account this type of transmission and consumption of content, engagement, which quantifies the possible impact of a profile, acquires significant relevance. According to Alonso (2015), it could be said that it measures how committed a user is to a brand/profile.

An influencer is a person, or a group of people behind an account, who has social recognition as a result of their activity on social networks (Fondevila-Gascón et al., 2020). Thanks to this public attention, a profile considered as an influencer collaborates with different companies, obtaining economic benefits, and the brands manage to reach the followers of this account. They thus become prosumers, which, according to Toffler (1992), can be defined as the fusion between the figure of the person who produces content and the person who consumes it.

1.2. Education and Instagram

As social individuals, we have developed over the years socially accepted cultural guidelines and rules, the use of social networks makes us rethink these concepts so that they can be adapted, transformed or directly changed to other new modalities. Already in 2018, the authors Márquez and Lanzeni highlighted Instagram as a platform where different informal skills can be developed, and therefore with an educational purpose. Specifically, they talked about self-management of one's image, exploration of themes, content and people.

The virtual world offers the possibility of a high social impact, reaching many people immediately, while at the same time allowing anonymity behind a pseudonym or profile that does not identify a

specific individual (Paccagnella and Vellar, 2016). This represents a great opportunity for the creation of educational content, but also a risk because of the freedom and impunity that anonymity can offer.

Linking these premises to the new teaching functions and roles, it is understood that the use of Instagram for educational purposes goes beyond teaching; it also serves as a means of creating a personal brand, a virtual professional profile. The success of educational profiles lies, among other things, in the active maintenance of the account, the creation of a community of followers with shared interests and the creation of synergies for collaboration. In addition, it is a type of profile that is particularly concerned with knowledge transfer, with dissemination for purely educational and social purposes (Ruiz-Domínguez & Ruiz-Domínguez, 2021).

In 2018, a study was carried out in the United States with children and adolescents aged between 6 and 17, the results of which showed that their main role models coincided with the influencers they followed on social networks, ahead of teachers, family, athletes and other personalities (puromarketin.com, 2018).

In this sense, it is important not only to know but also to analyse which educational profiles have the most followers and therefore reach the most people, as well as the type of content published and accessible on these profiles.

2. Objectives

Four objectives were chosen for this study. To achieve them, an instrument, Starnage, has been chosen to obtain reliable data on the most influential profiles on the social network Instagram.

The objectives of this work are as follows:

- Objective 1: To select the 500 most influential Instagram accounts in the 'Education' category of the Starnage tool.
- Objective 2: To distinguish, from the total sample, those profiles whose content is related to education, using the previously defined inclusion and exclusion criteria.
- Aim 3: To identify and classify the type of educational content offered by the selected accounts.
- Aim 4: To analyse the profiles that meet the criteria, as well as the characteristics of their audiences, in order to know the scope of their influence.

During the research, an initial search for information was carried out to then define the sample to be analysed, based on various inclusion and exclusion criteria. Once the sample to be studied had been defined, the information on the selected profiles was studied in depth for description, analysis and discussion. This was done in different stages, as follows.

3. Method

The tool chosen to identify the profiles is Starnage, defined as a 'marketplace for content creators' whose mission is to bring brands and content creators together. Although the purpose of the tool is advertising, the filtering we have access to allows us to obtain the information necessary for the analysis carried out in this work. Starnage categorises the search for profiles by topic and location, and provides information on demographics, audience and participation as it appears in the tool itself.

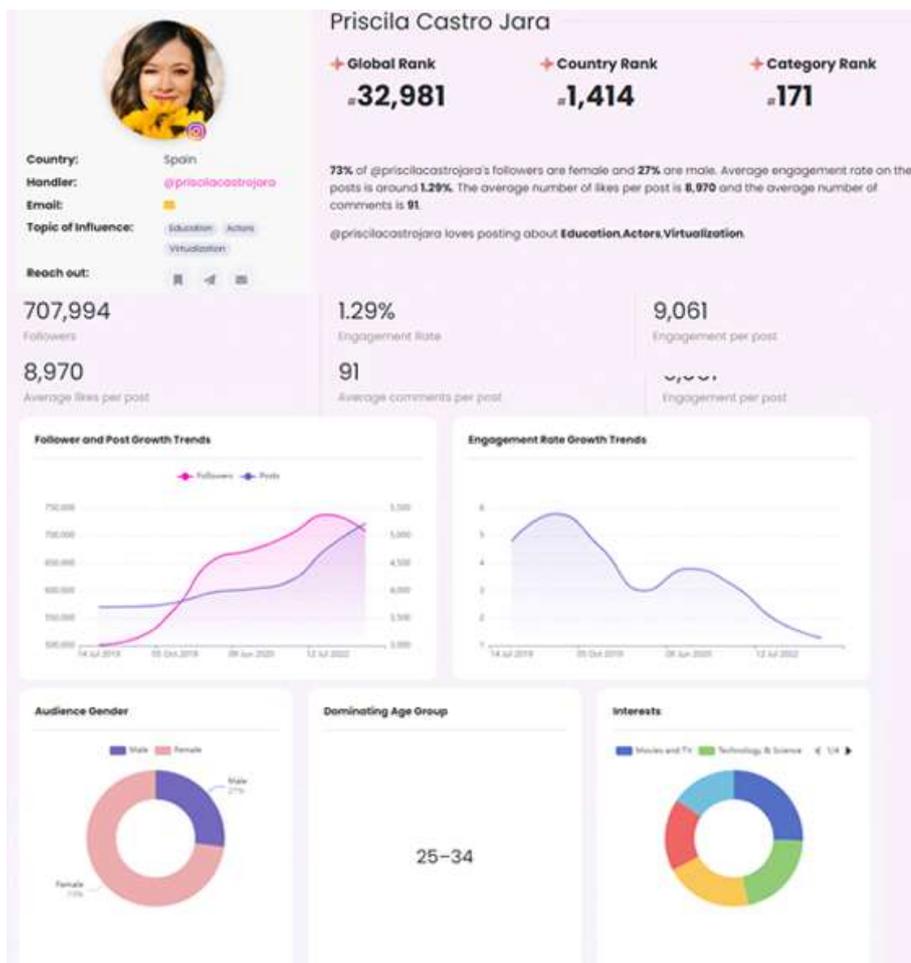
The study was conducted in the following phases:

- Phase 1. Selection in the Starnage tool: 'Spain' and 'Education'.
- Phase 2. Exclusion of inaccessible profiles.
- Stage 3. Categorisation of the accounts according to the content published.
- Stage 4. Selection of profiles with strictly educational content and/or pedagogical purposes.
- Stage 5. Using the Starnage tool, obtain the relevant information for each profile, including: gender of account manager, gender of followers, average age of followers and engagement rate.
- Stage 6. Classification of the data obtained.
- Stage 7. Critical analysis of the results.

The search was started by filtering the parameters of the influence topic with 'education' and the country with 'Spain'. The 500 profiles with the highest number of followers are selected, the profiles are reviewed, and the 47 inaccessible accounts are discarded.

The tool provides us with interactive information about each of the accounts, allowing us to obtain relevant information about the audience of each profile (Figure 1), such as: number of followers, participation rate, average likes per post, average comments per post, growth trends in followers and posts, age group of the audience, gender of the audience and elements of these characteristics.

Image 1. Instagram profile of @prisilacastrojara on Starnage (taken 5 March 2024).



Source: Starnage.com

To limit the sample to the objectives of the study, a flowchart has been followed below that delimits the analysable profiles, in order to improve the transparency, quality and consistency of the methodological information and the results presented.

The following table (Table 1) has been created to show the variables and categories of Instagram accounts to be analysed.

Table 1. Codebook: variables and categories.

Variable	Categories
Gender of the influencer	Male/Female/No data
% male followers	Quantitative variable
% female followers	Quantitative variable
Age range of followers	18-24 / 25-34 / 35-44
Engagement rate	Quantitative variable

Source: Own elaboration

4. Results

4.1. General Data

The first processing of the information was carried out by classifying each of the profiles and assigning them a category (Table 2) from among the options shown below.

To do this, each profile was accessed and given one or more categories depending on the content it offered to the audience. This coding grew and took shape as the profiles were analysed and classified to take account of the diversity of the content broadcast.

Table 2. Classification according to content broadcast by influencer.

Variable	Categories
Content broadcasted by the influencer	Education professionals.
	Educational content.
	Content for students.
	Content for families.
	Books/reading.
	Psychology.
	Finance/profit/advocacy.
	Languages
	Coaching/life
	Phrases
	Erotic
	Sport/gamers
	Food/nutrition
	Curiosities (unrelated content and information)
	Make-up/beauty/hairdressing salon
	Culture/artists
	Institutions
	Shops/business
Medicine	
Other: spirituality/influencers	

Source: Own elaboration

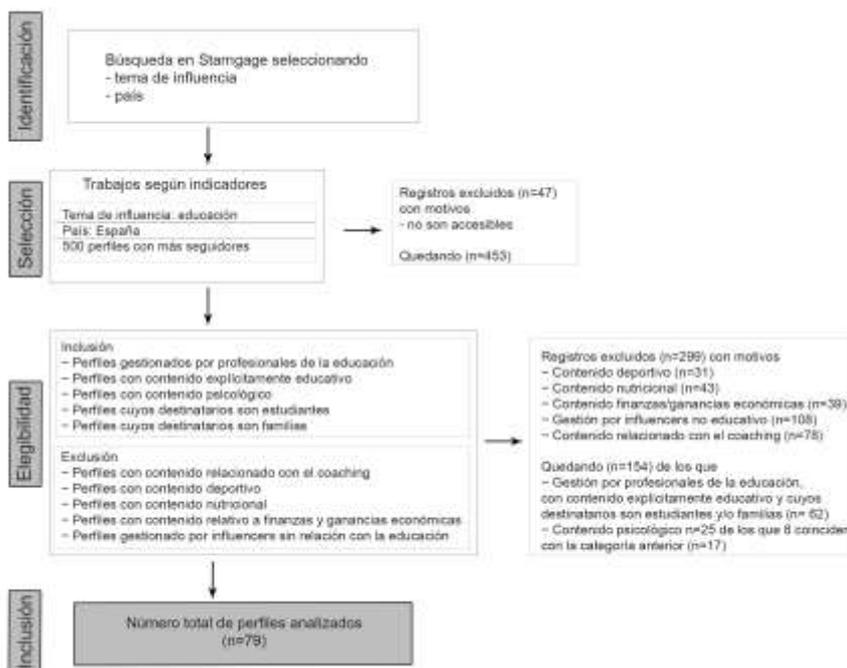
As mentioned in the previous sections, of the 500 accounts analysed, having chosen ‘education’ as the subject of influence and ‘Spain’ as the country, we selected those that were not difficult to access, as some profiles were private or inaccessible, leaving a total of 453 users to analyse.

After this initial exclusion of profiles, those whose categories correspond to and are related to the focus of the research interest: educational content, were excluded. This includes those accounts that, in the first classification by category, belonged to the following categories: managed by educational professionals, with explicit educational content, profiles with content aimed at students and profiles with content aimed at families.

There were 87 profiles that met these characteristics, representing 17.4% of the total, a lower number than initially expected. In order to increase the analysable sample, and taking into account the link between content, it was decided to include the profiles with psychological content. This increased the sample by 25, considering that some accounts (8 out of 25) had already been included in one of the previous categories to avoid duplication.

Finally, the analysable sample consists of 79 Instagram profiles. The figure below shows the flowchart used to develop the inclusion and exclusion of profiles, according to the variables taken into account.

Figure 1. Starngage flow chart: Spain, education.

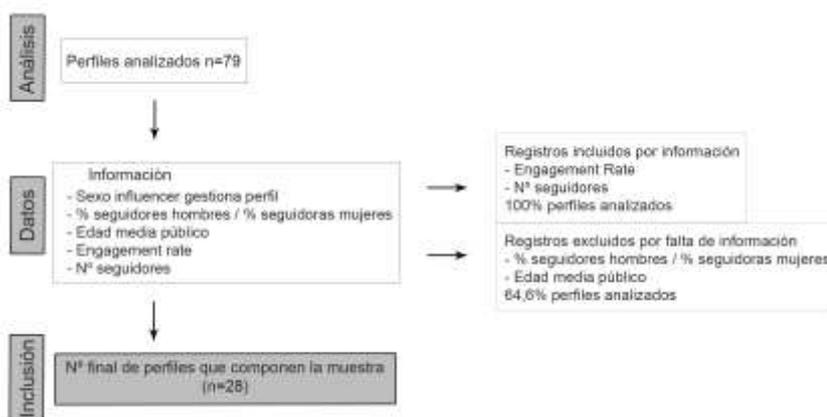


Source: Own elaboration.

After analysing the 79 profiles that make up the sample to obtain the relevant information from them, it was found that there was no data from all the accounts in the tool. This reduces the number of profiles that can be analysed; data was found for 35.4% of the total sample.

Finally, as can be seen in Figure 2, a study was carried out on the 28 profiles for which the data of interest were available: the gender of the profile manager, the percentage of followers, the percentage of female followers and the average age of the followers.

Figure 2. Flow chart selection of profiles for the study.



Source: Own elaboration.

4.2. Content Analysis

After excluding the profiles from which it was not possible to obtain relevant information for the study, because they only provided figures for ‘engagement rate’ and ‘number of followers’, we proceeded with the analysis of the data.

In general, it can be said that the educational content of the accounts analysed for the classification is a minority, as can be seen in Table 3, the percentage of the 453 profiles analysed for this classification.

The accounts analysed show that only 11.3% (n=51) are managed by professionals in the field of education, which is particularly striking given that in the 'subject of influence' parameter of the tool, only profiles whose subject is 'education' have been restricted. If we take into account the profiles whose content is aimed at students, we observe a significantly low percentage, 9.7%, if we take into account that the subject is education. On the other hand, if we look at 'content aimed at families', we can see that it is one of the highest values in the table, at 15% (n=68), only surpassed by the categories 'coaching/life' (n=78; 17.2%) and 'other: spirituality/influencers' (n=108; 23.8%).

Table 3. Content broadcast by the influencers of the selected accounts.

Categories according to content	n	%
Education professionals.	51	11,3%
Content for students.	44	9,7%
Content for families.	68	15%
Books/reading.	38	8,4%
Psychology.	25	5,5%
Finance/profit/advocacy.	39	8,6%
Languages	9	2%
Coaching/life	78	17,2%
Phrases	22	4,9%
Erotic	2	0,4%
Sport/gamers	31	6,8%
Food/nutrition	43	9,5%
Curiosities (unrelated content and information)	20	4,2%
Make-up/beauty/hairdressing salon	21	4,6%
Culture/artists	46	10,15%
Institutions	6	1,3%
Shops/business	26	5,7%
Medicine	23	5,1%
Other: spirituality/influencers	108	23,8%

Source: Own elaboration

Filtering the content produced information that, although a minority, was of concern to the research. Of the 453 profiles analysed, two (0.4%) had explicitly erotic content. This is particularly striking given that the search was limited to the most followed profiles on the topic of 'education' according to the Starnage tool. Although not the aim of this study, it is considered particularly relevant to take into account in future research, as these profiles have erotic content, in a sexual, non-educational sense.

4.3. Analysis of the Findings According to the Objectives

In the Starnage tool, the 500 most influential accounts were selected according to the topic of influence "Education" and the location 'Spain'.

After this initial selection, 47 profiles were excluded because they were not accessible and therefore it was not possible to analyse what they showed to their audience. From the remaining 453 accounts, a categorisation was made according to the content they broadcast, limiting the sample to 79 profiles.

The information from each of these accounts was then analysed, providing 'engagement rate' and 'number of followers' for the entire sample, but '% male/female followers' and 'average age of audience' for only 64.6% of the 79 profiles. In the end, 28 profiles that met all the selection and access to information criteria were analysed.

The accounts ultimately included in the study belong to educators of various types and levels, associations, and profiles targeting specific audiences (such as ADHD, ASD, and language learners).

Additionally, educational professionals or teams whose accounts serve to disseminate knowledge, either in a specific field (such as science, mathematics, or spelling) or more generally, were included. Profiles related to education and psychology were also considered for inclusion based on their content.

Among the profiles excluded are those classified in the above table as non-educational, with a wide variety of topics such as: books and/or reading, finance and/or income and/or law, languages, coaching and/or life, phrases, sports and/or gamers, food and/or nutrition, make-up and/or aesthetics and/or hairdressers, culture and/or artists, among others.

It is noteworthy that Starngage included in the influence theme 'education' profiles that were excluded because they were related to health and medicine or aesthetics, including institutional profiles such as city councils.

23.8% (n=108) of the profiles that appeared in the initial search (n=453) belong to 'influencer' accounts whose activity is not educational as such, and often not related to the field of education. This was a reason for exclusion, although the large number of accounts in this category is significant.

In accordance with the objectives set, the 500 most influential Instagram accounts in the 'education' category of the Starngage tool were selected, objective 1; the content that is genuinely related to the field of education was distinguished according to predefined inclusion and exclusion criteria, objective 2; and the content disseminated on the various selected accounts was identified and classified, objective 3.

Next, the fourth objective will be developed, which consists of analysing the profiles that meet the criteria in order to find out their main characteristics. To do this, we will look at the variables that have already appeared in Table 1: the gender of the influencer, the gender of the followers, the age range of the followers and the engagement rate.

The results are shown in Tables 4 and 5 below:

Table 4. Content broadcast by the influencers of the selected accounts.

Variable	Man			Woman			Unknown		
Account managed by	N=8			N=15			N=5		
	N=8			N=20					
Majority of the following audience (≥50%)	H	M	Unknown	H	M	Unknown	H	M	Unknown
	4	3	1	4	12	4			

Source: Own elaboration

Of the 8 accounts managed by men, 50% (n=4) have male followers, while the accounts managed by women have 60% (n=12) female followers.

Table 5. Content broadcast by the influencers of the selected accounts.

Variable	18-24			25-34			35-44		
	N=4			N=22			N=2		
Average age of the audience managed by	H	M	Unknown	H	M	Unknown	H	M	Unknown
	1	2	1	7	12	3	/	1	1

Source: Own elaboration

The vast majority 78.6% (n=22) of the profiles analysed are followed by people aged between 25 and 34, young adults, something that is relevant for influencers on this social network to adapt their content and the way it is presented.

Finally, the engagement rate. This could be defined as the percentage of interaction between influencers and their followers, taking into account participation, replies, comments, likes, etc. The values for an appropriate "engagement rate" on Instagram typically range between 1% and 5%.

The results obtained using the Starngage tool for the sample of this study show that 43% of the profiles analysed (N=12) have a value of less than or equal to 1%, followed by those accounts whose percentage is between 1.1 and 2.5%, which account for 8 (28.6%) of the 28 profiles analysed. Two of the remaining profiles, 7.1%, have an engagement rate between 2.6 and 4%, a percentage shared by those whose value is equal to or greater than 5%. This leaves 4 accounts (14.3%) of the 28 analysed with an engagement rate between 4.1 and 4.9.

5. Conclusions

This last section develops three sub-sections that are considered to be of great relevance in order to dimension the study carried out, the interpretation of the results analysed, as well as the limitations that have arisen in the development of the research and the perspective that the subject worked on represents.

5.1. Discussion

In the Starngage tool, the 500 most influential accounts corresponding to the influence area 'Education' and the location 'Spain' were selected. One of the most immediate conclusions of this study is the unreliability of the categorisation based on the initial classification.

This statement can be made thanks to the information provided by the analysis of the profiles. After verifying access to the Instagram accounts that met the inclusion criteria, 47 profiles were found to be inaccessible.

The content of the 453 accounts was then classified by accessing each of the profiles and looking at the most recent publications. This resulted in 19 different categories, of which only three were initially selected:

- Profiles managed by education professionals.
- Profiles aimed at students.
- Profiles aimed at families.

The flowchart (Figure 1) also shows 'Profiles with explicit educational content', a category that was eliminated in subsequent phases of the analysis, as each of the profiles also corresponded to one of the three previous categories.

The number of accounts corresponding to this categorisation was much lower than expected, with 62 accounts out of the 453 examined, i.e. 13.7%. It should be borne in mind that the initial intention was to analyse 500 training profiles, with some exclusions for not meeting certain criteria, but the final number was significantly higher.

For this reason, it was decided to also include those accounts whose content was classified as 'Psychology' because, after a second look, it fulfilled the purpose of disseminating knowledge and raising awareness, i.e. with a pedagogical mission. This resulted in 25 new accounts to be analysed, 17 of which were finally included because they corresponded to 8 of the categories already included.

The final selection thus consisted of 79 profiles, 17.4% of the pre-analysis sample. These figures are a considerable distance from the initial objective of this study, although it is true that they reflect a reality that was not recognised at the beginning of this research and that is considered to be particularly relevant: the profiles categorised as educational do not, for the most part, correspond to accounts whose content is specifically educational.

It could be argued, to a certain extent, that profiles classified in the categories 'Curiosities', 'Culture and/or Artists', 'Languages', 'Books and/or Reading' or even 'Coaching and/or Life' could be understood as related to education, depending on the rigour of the classification.

This is not the case for accounts belonging to the categories 'work and/or income and/or law', 'make-up and/or aesthetics and/or hairdressing' or the most striking and worrying category, 'eroticism'. For these latter profiles, the link with education is particularly difficult to establish.

We should also take into account the large number of accounts whose activity is clearly 'prosumer', generally considered as influencers with a large number of followers, promoting brands and products.

5.2. Conclusions

The main conclusions of this research are the following:

- The percentage of profiles with real educational content is much lower than the one established as a starting point, revealing a relevant shortcoming in the criteria for establishing the 'topic of influence' indicator in the tool used.

- The theme of education has a majority of profiles managed by women and also a majority of female followers. There are educational profiles managed by men, as well as a significant number of male followers, but based on the figures (15 out of 28 profiles managed by women and 20 out of 28 profiles with a majority of female followers), we can affirm that Instagram in the educational field in Spain is generally managed and consumed by women.
- Most educational profiles are between 25 and 34 years old, representing 78.6% of the total. This could be explained by the fact that this is an age group in which educational professionals enter the labour market and/or take competitive exams, and by the fact that many couples start to have children. This could be investigated further to see if this relationship can really be established.
- A categorisation and detailed filtering process has been carried out so that the profiles analysed are those that publish and disseminate educational and/or pedagogical content.

In summary and as a general conclusion, it is noteworthy that the utilization of Instagram for educational purposes is expanding due to the platform's versatility, extensive reach, and diverse range of formats available (including images, infographics, photographs, videos, and more; encompassing fixed posts, stories, among others) to effectively disseminate knowledge.

5.3. Limitations and Way Forward

The main limitation of this work was the tool's restriction of access to the profiles with the largest number of followers. While it is true that Starngage provides a large amount of data on each of the accounts, it is also true that a relatively large number of profiles had to be excluded because they did not have access to the necessary information. Future research will explore the tool in more depth and consider the possibility of cross-referencing the data with other similar resources to complete what we were unable to access.

Another limitation that has constrained this research, and which will need to be taken into account as it continues and expands, is time. On the one hand, time in social networks, which means that the data available today will have changed tomorrow. The number of followers, the category to which a profile belongs, the type of content it publishes, or the engagement rate can change in a matter of days or weeks. On the other hand, the time needed to carry out the study was considerable, since, as is usual in educational research, it had to be combined with other types of pedagogical work, such as daily university teaching.

Taking into account the results obtained and the conclusions drawn, it is considered that this work represents an initial point of study for further research.

Possible future actions could include the inclusion of more categories for a detailed analysis of a greater number of profiles related to 'education' as an object of influence and 'Spain' as a country.

In addition, it would be appropriate to carry out a bibliographic review of research, articles and other quality works that relate social networks, especially Instagram, and education, in order to learn about both the different perspectives of its educational use and the pedagogical reality of the social network at the moment, at least with the profiles that most people follow in their daily lives.

Social networks are a way of communicating, relating and staying connected as citizens. Social networks break down the space-time barriers that, until the spread of the Internet, were a major obstacle to the dissemination of knowledge to a diverse and large public. Widespread access to the Internet and social networks represents a great independence from the economic and social conditioning factors that have also conditioned access to knowledge and education since the beginning of time. A situation that has been a reality for decades and that must gradually be given a pedagogical form in order to take advantage of the many opportunities it offers.

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