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Book Social Networks, Informal Learning and Literary Education: Quantitative Study of the Relationship between Digital Platforms and Reading Promotion

Redes sociales de lectura, aprendizaje informal y educación literaria: estudio cuantitativo de la relación entre plataformas digitales y promoción de la lectura

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ABSTRACT

Book social networks are digital environments with a growing impact on young readers. This study analyses the potential of these platforms to promote informal learning and literary education, drawing on activity theory as its theoretical framework. To this end, the validated RESOLEC instrument — comprising two scales — is applied to a purposive sample of 25 networks. Based on the results, a ranking of the networks is produced from highest to lowest potential, aimed at teachers and researchers. Additionally, to examine the platforms' characteristics in relation to readers at large, variance and correlation analyses and a multiple linear regression model are performed. The results show that these networks encourage informal learning in 73.8% of cases, owing to their capacity to assign users an active role and facilitate the creation of new content. In terms of literary education, they promote reading, function as recommendation systems, and contribute to the construction of a reading identity, although their impact on interpretative competence proves limited. These findings offer relevant implications for reading promotion in educational and digital contexts.

RESUMEN

Las redes sociales de libros son entornos digitales con un creciente impacto entre los jóvenes lectores. Este estudio analiza el potencial de estas plataformas para fomentar el aprendizaje informal y la educación literaria, tomando como marco teórico la teoría de la actividad. Para ello, se aplica el instrumento validado RESOLEC —compuesto por dos escalas— a una muestra intencionada de 25 redes. A partir de los resultados, se elabora una clasificación de las redes de mayor a menor potencial, orientada a docentes e investigadores. Asimismo, para examinar las características de las plataformas en relación con los lectores en general, se realizan análisis de varianza y de correlación, así como un modelo de regresión lineal múltiple. Los resultados muestran que estas redes fomentan el aprendizaje informal en el 73,8% de los casos, gracias a su capacidad para asignar un papel activo a los usuarios y facilitar la creación de nuevos contenidos. En cuanto a la educación literaria, fomentan la lectura, actúan como sistemas de sugerencias y contribuyen a la construcción de una identidad lectora, aunque su incidencia en la competencia interpretativa resulta limitada. Estos hallazgos ofrecen implicaciones relevantes para la promoción lectora en contextos educativos y digitales.

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1. Introduction

21st-century students devote at least 1 hour every day to social media use (Ballesta et al., 2021), which they also use for academic purposes (Villalba-Condori et al., 2021). The success of these platforms has led to the emergence of more specialised social networks, as well as others focused on specific target audiences. The latter includes book social networks, where users discuss the books they have read, share their favourite books on their personal profiles and find out what is new in the world of literature.

The appearance of these social networks has not only aroused the curiosity of young people (Kaplan, 2016), academics have also focused their attention on studying their design and technical configuration (Asadi et al., 2017; Moradi & Safavi, 2013), their impact on the citation of academic works (Piryani et al., 2018; Wang et al., 2019), their recommendation systems (Cho & Han, 2019; Kart et al., 2020), the behaviour and influence of their most popular users (García-Roca, 2020) and the reading behaviour and participation dynamics of their members (Laspa, 2013; Thelwall, 2019). These networks also provide information about the relationships among publishers, readers, and writers (Moody, 2019; Shea et al., 2018).

Book social networks have mainly been studied from the fields of library science and webometrics, although researchers such as García-Roca (2020), Lluch et al. (2018), Manso-Rodríguez (2015), Sánchez García et al. (2021) and Vlieghe and Rutten (2013) use methods such as surveys and content and discourse analysis to examine the potential of these environments in the promotion of reading. Following this educational line but focused on the possibilities offered by these platforms rather than their reception, this study uses the RESOLEC validated tool (Hernández-Heras et al., 2022) on a sample of 25 book social networks to analyse the potential for developing informal learning and literary education. Within the context of this objective, this study attempts to:

- Compare networks to verify whether there are significant differences depending on the language of their main interface.
- Analyse the relationships between the number of visits of each social network in the last quarter and their global ranking according to the results produced by the sample in each of our seven dimensions.
- Measure the predictive capability of the seven dimensions for the network's global ranking and number of visits.

1.1. Informal learning through social networks: activity theory

In recent years, the observation of social network use in the educational environment has increased significantly, especially in the context of formal education (Díaz-Herrera et al., 2022). This has favoured the consolidation of social network analysis (SNA) as a research field. These studies have explored networks as useful resources to improve the relationship between students and teachers (Bugeja, 2006; Ziegler, 2007), to make students the centre of the teaching-learning process (Ferreira-Fernández, 2018) or to improve their academic performance (Arslan, 2018).

As the activity theory assumes that learning is produced through the communication of actors in social practices mediated by an artefact, some studies have approached SNA using this theoretical framework, although it has been employed to a greater extent for the analysis of e-learning (Liaw et al., 2007; Zurita & Nussbaum, 2007). In this context, studies have shown that social networks can be used to acquire and convey knowledge (Park et al., 2011), foster the intrinsic motivation of students (Imamyartha et al., 2022), connect students with their interests —thereby stimulating their commitment to the community or other causes (Alghamdi & Plunkett, 2021)— or strengthen their social ties (Abdullah & Said, 2015; Alghamdi & Plunkett, 2021). They also promote the reinforcement of cognitive and metacognitive skills by creating a supportive (Imamyartha et al., 2022) and self-regulated environment (Park et al., 2011) that reduces the distance between the formal context and actual practices (Abdullah & Said, 2015).

1.2. Book social networks in literary education

Unlike the cultural models of traditional literacy, these virtual communities promote vernacular reading, characterised by personal and self-regulated user choice (Cassany, 2019). Connected by the act of reading, the members

of these communities appropriate books and make their opinions and observations public (Matthews, 2016). Thus, reading becomes a performative act that readers use to construct their own reading identity (Nakamura, 2013), as reported by Driscoll and Rehberg (2018), who demonstrated that 68% of reviews are written from a personal, emotional interpretation of texts. Ceballos (2010), Laspa (2013) and Nakamura (2013) found similar results.

Consequently, exegesis becomes a communal act arising from the numerous personal interpretations readers share (Kaplan, 2016). The act of reading is enriched by conversation, because the group can delve into the book in a way that would be impossible individually (García-Roca, 2020). Indeed, as Trott and Naik (2012) state, readers do not limit themselves to sharing the personal impressions that reading arouses in them; there is also a tacit agreement of social reciprocity, as users show their willingness to discuss texts and recommend books to their peers (Thelwall, 2019). As knowledge is built through dialogue with others, these webs help develop the reading and literary skills of young people (Vlieghe & Rutten, 2013), who can elaborate on the interpretation and comprehension of texts. They are also useful for promoting reading (Rovira Collado, 2015), as reading becomes a valued leisure activity (Ceballos, 2010).

However, some authors report that readers' comments are characterised by poor linguistic skills and limited literary understanding (Sánchez-García et al., 2021), because these spaces prioritise *res over verba* (Ramos & Oliva, 2018). In fact, the influence of the self means the dilution of the reasoned view in favour of readers' opinions (Moody, 2019).

2. Materials and methods

A non-experimental quantitative methodology has been used, based on descriptive, correlational and variance statistical techniques.

2.1. Sample and variables

The intentional sample consisted of 25 free social networks accessible via the internet, aimed at encouraging user interaction around the reading of books. Table 1 shows the main data about the book social networks included in the study.

Table 1. Characteristics of the sample.

Book social networks	Main language	Position in global ranking	Visits in the last quarter
Goodreads	English	302	364800000
Librarything	English	31622	5677000
Anobii	English	110713	1547000
Tú qué lees	Spanish	4308557	18143
Lovelybooks	German	37085	6106000
Lecturalia	Spanish	70286	3000000
Booknode	French	22595	6958000
Readgeek	German	2119888	30596
Babelio	French		31566
Quelibroleo	Spanish	42538	5839000
Litsy	English	796576	78476
Biblioteca	Spanish	2937317	49083
Sopa de libros	Spanish	1592719	83152

(continued)

Table 1. Characteristics of the sample. (*continued*)

Book social networks	Main language	Position in global ranking	Visits in the last quarter
Livraddict	French	104655	1101000
Blablalivre	French	8654846	4900
Booksloth	English	2158311	44488
Glose	English	146157	1019000
Readernaut	English	13200830	3500
Bookworm	English	4220866	4800
Büchereule	German		
Büchertreff	German		
Wasliestdu	German	383688	289711
OnlineBook	English	53072	2058000
Vorablesen	German	315003	286652
Lecteurs.com	Frenc	368913	421934

The analysis focused on networks that vary in the primary language of their interfaces, so that teachers can use these environments across different multilingual contexts. The aim was to discover whether there are noticeable similarities in the same culture. The variables used to examine the defining features of the most popular networks were visits received between August and October 2022 and their global ranking. This information was extracted from SimilarWeb—a website specialising in web traffic and performance that classifies websites based on the traffic they generate—to determine the interests of ordinary readers (Rohrbach, 2017). Büchereule, Büchertreff and Babelio are not included in the SimilarWeb database (<https://www.similarweb.com>).

2.2. Instrument

The analysis was conducted using the RESOLEC instrument, which had been previously validated (Hernández Heras et al., 2022) through expert judgements and a pilot test that produced a Cohen's kappa of $k=.876$ and a Cronbach's alpha of $\alpha=.921$. The tool is divided into two scales and has 53 indicators, which are evaluated using a Likert scale, where 1= nothing, 2= a little, 3= quite a lot, 4= very much. The first scale measures the capacity of networks to foster informal learning and consists of three dimensions, adapted for the RESOLEC assessment instrument, with Park et al. (2011) as a reference. These dimensions are: 1) learning by acquisition; 2) learning through self-reflection and self-expression; and 3) learning through social interaction and active commitment to the community. The second scale includes four dimensions aimed to calculate the potential of the networks to promote literary education: 1) the development of interpretive competence; 2) the construction of reading habits as an enjoyable and personally committed relationship with books; 3) literary discussion; and 4) corpus.

2.3. Procedure and data analysis

The assessment instrument was applied by two trained researchers through the observation of each network, using a rubric configured to standardise the point totals (Hernández Heras et al., 2022). Then, the data were subjected to descriptive analysis, and the social networks were ranked according to the potentiation indices obtained for each network on both scales. The networks were compared through variance analysis regarding their main interface language. Then, the relationships between the number of visits in the last three months and network rankings were analysed using bivariate correlations. Finally, a multiple linear regression analysis was performed to identify the possible predictive variables among the seven dimensions regarding the global ranking of networks and the number of visits. Data were processed using the Statistical Package for the Social Sciences.

3. Results

3.1. Descriptive analysis

Table 2. Capacity to foster learning by acquisition of the analysed networks.

Dimension 1.1	Nothing	A little	Quite a lot	Very much	M	ST
1.1. The social network stimulates the circulation of knowledge and information.	.0	.0	76.0	24.0	3.24	.436
1.2. The social network incorporates its own publications.	8.0	28.0	32.0	32.0	2.88	.971
1.3. The social network corrects content by users if it is incorrect.	.0	36.0	40.0	24.0	2.88	.781
1.4. The social network allows users to improve their experience in different areas.	4.0	16.0	44.0	36.0	3.12	.833
1.5. The social network helps users to discover new interests.	.0	4.0	72.0	24.0	3.20	.500

Source: Compiled by the authors.

As shown in Table 2, social networks, in general, develop considerably through learning by acquisition. All of them stimulate the circulation of knowledge and information to a great extent, though almost half report low rates of publishing their own content. The vast majority (96%) allow users to discover interests beyond books. Of all the networks analysed, 36% correct the content they consider incorrect only if one member reports it, 44% entrust this task to other users, and 36% delegate it to specialist managers within the network.

Table 3. Capacity to foster learning through reflection and expression.

Dimension 1.2	Nothing	A little	Quite a lot	Very much	M	ST
2.1. The social network allows users to describe and/or express their thoughts.	.0	.0	44.0	56.0	3.56	.507
2.2. The social network helps users to express themselves using different formats.	.0	8.0	40.0	52.0	3.44	.651
2.3. The social network offers users the possibility to clarify their doubts on different issues.	.0	32.0	68.0	.0	2.68	.476
2.4. The social network allows users to evaluate the creations of other members.	12.0	28.0	56.0	4.0	2.52	.770
2.5. The social network provides spaces for discussion	.0	12.0	72.0	26.0	3.04	.539
2.6. The social network provides users with means to report content they consider abusive.	.0	4.0	40.0	56.0	3.52	.586

Source: Compiled by the authors.

Table 3 confirms that book social networks provide spaces for users to reflect on the product and the process, as 96% of the websites offer members reporting mechanisms for posts they consider upsetting the platform's social dynamics. Almost all networks allow free expression of opinions, either a lot or very much, through various formats, though 40% impose length limits in some spaces. Of all the networks analysed, 32% do not include a section for questions, although conversation between members can resolve questions that users raise. In contrast, the other 68% do include a specific section for questions so that other members can resolve them, though none of them guarantees feedback from the website managers. Only 4% of networks allow users to rate contributions from peers with a like or dislike; 40% allow only positive ratings via the like option; and 30% allow only qualitative ratings via comments.

Table 4. Capacity to foster learning through a practice-based community process.

Dimension 1.3	Nothing	A little	Quite a lot	Very much	M	ST
3.1. The social network serves as a means for users to establish networks of contacts.	.0	.0	80.0	20.0	3.20	.408
3.2. The social network allows sharing the content of other users.	12.0	36.0	48.0	4.0	2.44	.768
3.3. The social network encourages the collective creation of new content.	4.0	32.0	60.0	4.0	2.64	.638
3.4. The social network allows users to be part of group decision-making processes.	32.0	60.0	4.0	4.0	1.8	.707
3.5. The social network offers users the possibility of achieving group goals within a collectivist.	28.0	40.0	32.0	.0	2.04	.054
3.6. The social network stimulates the articulation of a collective identity among users.	8.0	40.0	48.0	4.0	2.48	.714
3.7. The social network establishes operating rules that must be accepted by all members.	.0	4.0	20.0	76.0	3.72	.542
3.8. The social network allows users to climb the social ladder within a hierarchy imposed by the network itself.	4.0	60.0	24.0	12.0	2.44	.768

Source: Compiled by the authors.

Table 4 reveals that these book platforms fulfil the social function that justifies their creation by fostering a community among users to a great extent (80%) or to a very great extent (20%), who must follow the rules imposed by 94% of the websites. However, only 4% of these websites allow users to share all content posted by their peers across any space and via any social media, such as Facebook or Twitter, meaning that most of these websites are structured as closed spaces that do not foster communication between networks. Compared to 60% of the networks that allow users to participate in the preparation of reviews, 4% also allow them to create lists, and another 4% to also share their own stories.

The development of group dynamics in these environments depends to a large extent on whether members are given the capacity to set up new groups within the membership or not: in fact, only 4% of these platforms include users in collective decision-making processes by granting them access to voting systems and the freedom to organise events. The social networks do not offer the chance to achieve group goals within a subcommunity, as most collective projects in which members participate are personal goals for the members themselves. In fact, none of them encourages achieving goals related to major campaigns.

Over half the networks (60%) establish their own hierarchy by identifying the most outstanding users, who are distinguished from the rest by their participation rates and popularity. Around 24% not only recognise these members, they also create a higher status using the tag “partner” or similar, thereby allowing their cooperation in the management of the website. The remaining 12% not only register the most well-known members, they also implement two or more special statuses in the hierarchy—using the tags “librarian” and “super-librarian” for example—which users aim for by collecting various merits.

Table 5. Capacity to foster interpretive competence.

Dimension 2.1	Nothing	A little	Quite a lot	Very much	M	ST
4.1. The social network introduces disciplinary knowledge of literature.	16.0	40.0	32.0	12.0	2.40	.913
4.2. The social network asks users questions about readings.	32.0	44.0	20.0	4.0	1.96	.841
4.3. The social network makes relevant use of concepts from the literary system.	.0	68.0	24.0	8.0	2.4	.645
4.4. The social network allows the sharing of fragments of works	.0	36.0	40.0	24.0	2.88	.781
4.5. The social network includes spaces for the description of the socio-cultural framework of the works.	16.0	60.0	20.0	4.0	2.12	.724

Dimension 2.1	Nothing	A little	Quite a lot	Very much	M	ST
4.6. The social network checks the tags assigned to works descriptions if they are incorrect.	20.0	36.0	40.0	4.0	2.28	.843
4.7. The social network evaluates the quality of the readings.	40.0	44.0	16.0	.0	1.76	.723
4.8. The social network gives readers freedom to evaluate the readings.	.0	.0	24.0	76.0	3.76	.436
4.9. The social network guides users' interpretation processes	48.0	44.0	8.0	.0	1.60	.645
4.10. The social network encourages the construction of intertextual relationships.	8.0	24.0	68.0	.0	2.6	.645
4.11. The social network evaluates users' literary competence	24.0	52.0	24.0	.0	2.0	.707

Source: Compiled by the authors.

Based on the information provided in Table 5, book social networks do not foster interpretive competence, as they lack mechanisms that impact users' metalinguistic abilities, their knowledge of literature, and the knowledge required to read and interpret a text. Indeed, the majority (68%) use basic literary terms, 24% introduce higher concepts and only 8% use very specialised vocabulary. None of the networks evaluates book quality, and only 8% guide users' interpretation through exegesis from other users and information provided by the network.

Regarding the review of tags assigned to text descriptions, only 4% of networks have specialist users for this task and their own review system. The 60% include space for a description of the author, 20% for the socio-cultural context of the author and the book, and only the remaining 4% include a description of the movement to which the book belongs. Of all the networks analysed, 24% allow the inclusion of book extracts via the comments menu and provide their own space for users to share extracts from any book. In addition, they include a section in the book description to include quotes or extracts from these texts.

Around 68% foster the creation of intertextual relationships by linking each book to other writings by the same author or by other writers, while 24% only connect a book to the author's works. Also, 76% allow readers to evaluate books qualitatively and quantitatively. Half the networks evaluate the literary competence of their members through tests and games created by other users, compared to 24% that do so through tests created by the network itself.

Table 6. The capacity to form reading habits as an enjoyable and personally committed relationship with books.

Dimension 2.2	Nothing	A little	Quite a lot	Very much	M	ST
5.1. The social network offers users the possibility of approaching texts from different perspectives (affective, aesthetic, philosophical, socio-cultural).	.0	.0	56.0	44.0	3.44	.507
5.2. The social network gives users freedom to construct their self-image as readers.	.0	.0	16.0	84.0	3.84	.374
5.3. The social network puts users in contact with agents in the literary system, such as libraries, authors or publishers.	24.0	16.0	48.0	12.0	2.48	1.005
5.4. The social network promotes users' participation in activities related to reading in their locality.	32.0	36.0	20.0	12.0	2.12	1.013
5.5. The social network fosters reading promotion practices.	.0	16.0	80.0	4.0	2.88	.440
5.6. The social network updates readers about what is new in literature.	8.0	8.0	32.0	52.0	3.28	.936
5.7. The social network incorporates games related to works and reading.	4.0	60.0	24.0	12.0	2.44	.768
5.8. The social network promotes creative writing activities.	20.0	48.0	12.0	20.0	2.32	1.030
5.9. The social network allows users to discover the reading habits of other members.	.0	.0	24.0	76.0	3.76	.436

Source: Compiled by the authors.

As shown in Table 6, these environments help foster reading quite a bit. They not only promote a personal approach to the reading experience, 84% also allow members to build their reader profile by encouraging them to include their biographical details, the groups and lists they follow, their favourite authors and genres and the books they have read and want to read. By sharing this information, reading becomes a public act that reveals the reading habits of all users (76%).

Only 12% connect readers with libraries, authors, and publishers, compared to 48% that connect them to two of the three aforementioned agents, and the remaining 16% that facilitate access to only one of them. Indeed, the networks are characterised more by facilitating large-scale (68%) rather than small-scale contacts. Although most networks reach moderately high scores in items related to promoting the practice of reading (5.5, 5.6) that they define in a leisure context and not as an obligation, they hardly exploit the ludic part of the language, given that 68% of networks do not include sections for the promotion of creative writing. Finally, although most include reading challenges or literary tests, only 12% promote reader participation in large-scale games like Cluedo.

Table 7. Capacity to foster literary discussion.

Dimension 2.3	Nothing	A little	Quite a lot	Very much	M	DT
6.1. The social network favours the creation of subcommunities that share the same interests.	12.0	16.0	60.0	12.0	2.72	.843
6.2. The social network helps readers to enrich their personal reading through dialogue.	4.0	12.0	36.0	48.0	3.28	.843
6.3. The social network encourages the collective interpretation of readings.	.0	12.0	76.0	12.0	3	.500
6.4. The social network discussion format is determined by the specificity of the texts.	.76	16.0	8.0	.0	1.32	.627
6.5. The social network guides the conversation from more generic to more specific questions.	100.0	.0	.0	.0	1	0
6.6. The social network allows users to act as managers and dynamisers of the literary discussion.	16.0	28.0	56.0	.0	2.4	.764

Source: Compiled by the authors.

Table 7 shows that book social networks do not stimulate literary discussion in all its aspects. On the one hand, they promote the creation of various types of subcommunities (60%) and dialogue among members (84%), which, in turn, affects the collective interpretation of books (88%). On the other hand, they hardly have tools of their own to guide debates. All conversations, about any book, share the same format and, therefore, do not elaborate on their most important literary aspects, the comprehension difficulties they represent or the questions they raise. In this regard, 56% of the networks leave this task to certain users, even though they do not require any minimum literary knowledge from them.

The information provided in Table 8 reveals that social networks have a quite varied (52%) or very varied (48%) corpus of books from various genres and periods, including both fictional and non-fictional readings. Although 20% do not impose any criteria for their selection, or do impose very few (64%), over half of them

Table 8. Quality, diversity and selection criteria of the corpus.

Dimension 2.4	Nothing	A little	Quite a lot	Very much	M	DT
7.1. The social network hosts a varied corpus of readings.	.0	.0	52.0	48.0	3.48	.510
7.2. The social network imposes criteria for the selection of works.	20.0	64.0	12.0	4.0	2	.707
7.3. The social network guides readers in the choice of texts by proposing works that are close to their interests	8.0	36.0	20.0	36.0	2.84	1.028
7.4. The social network guides readers in the choice of texts by proposing works that are completely different from their interests.	16.0	16.0	40.0	28.0	2.8	1.041

Dimension 2.4	Nothing	A little	Quite a lot	Very much	M	DT
7.5. The social network stimulates the recommendation of titles among peers.	.0	12.0	44.0	44.0	3.32	.690
7.6. The social network includes reading itineraries,	.0	52.0	44.0	4.0	2.52	.586
7.1. The social network hosts a varied corpus of readings.	.0	36.0	60.0	4.0	2.68	.557

Source: Compiled by the authors.

offer personalised recommendations to readers, whether by suggesting new titles based on the books they have read. They have indicated for future reading (20%) or by providing them with access to a specific section of suggestions where they can perform a personalised search. Of all the networks analysed, 68% show readers books that are completely different from their interests, while 88% encourage, to a large extent, peer-to-peer book recommendations. Although 52% include large collections of completely different types of books and 44% also organise them by thematic or generic criteria, only 4% reproduce or give readers the option to construct reading routes, created as journeys in which one book leads on to another.

3.2. Ranking of networks that most promote informal learning and literary education

Table 9. Ranking of networks that most promote informal learning and literary education.

Book social networks	D1.1	D1.2	D1.3	Informal learning dimensions	D2.1	D2.2	D.3	D2.4	Literary education dimensions	Total
Lovelybooks	95.0	83.3	84.4	87.6	61.4	86.1	87.5	75.0	77.5	81.8
Goodreads	75.0	87.5	84.4	82.3	56.8	88.9	79.2	78.6	75.9	78.6
Lecteurs	90.0	87.5	68.8	82.1	72.7	91.7	58.3	75.0	74.4	77.7
Biblioteca	95.0	75.0	71.9	80.6	75.0	80.6	66.7	75.0	74.3	77.0
Wasliestdu	100.0	83.3	65.6	83.0	72.7	80.6	62.5	71.4	71.8	76.6
Quelibroleo	70.0	87.5	75.0	77.5	56.8	75.0	91.7	75.0	74.6	75.9
Booknode	85.0	91.7	65.6	80.8	59.1	80.6	66.7	71.4	69.4	74.3
Vorablesen	80.0	87.5	65.6	77.7	63.6	86.1	58.3	78.6	71.7	74.3
Librarything	85.0	79.2	62.5	75.6	56.8	80.6	79.2	67.9	71.1	73.0
BücherTreff	95.0	75.0	75.0	81.7	54.5	77.8	58.3	75.0	66.4	73.0
Glose	70.0	75.0	71.9	72.3	63.6	77.8	66.7	64.3	68.1	69.9
Onlinebook	70.0	75.0	68.8	71.3	65.9	77.8	66.7	64.3	68.7	69.8
Büchereule	85.0	79.2	68.8	77.6	50.0	75.0	58.3	67.9	62.8	69.2
Livraddict	75.0	79.2	62.5	72.2	63.6	72.2	58.3	67.9	65.5	68.4
Litsy	75.0	79.2	59.4	71.2	61.4	66.7	54.2	78.6	65.2	67.8
Lecturalia	90.0	79.2	50.0	73.1	77.3	63.9	54.2	53.6	62.2	66.9
Bookwurm	65.0	66.7	62.5	64.7	54.5	75.0	66.7	75.0	67.8	66.5
Booksloth	65.0	75.0	62.5	67.5	59.1	72.2	58.3	64.3	63.5	65.2
Tú Qué Lees	85.0	79.2	53.1	72.4	47.7	63.9	54.2	71.4	59.3	64.9
Blablalivre	65.0	75.0	62.5	67.5	59.1	72.2	58.3	60.7	62.6	64.7
Babelio	70.0	75.0	59.4	68.1	52.3	63.9	66.7	64.3	61.8	64.5
ANOBII	50.0	83.3	68.8	67.4	40.9	55.6	83.3	60.7	60.1	63.2

(continued)

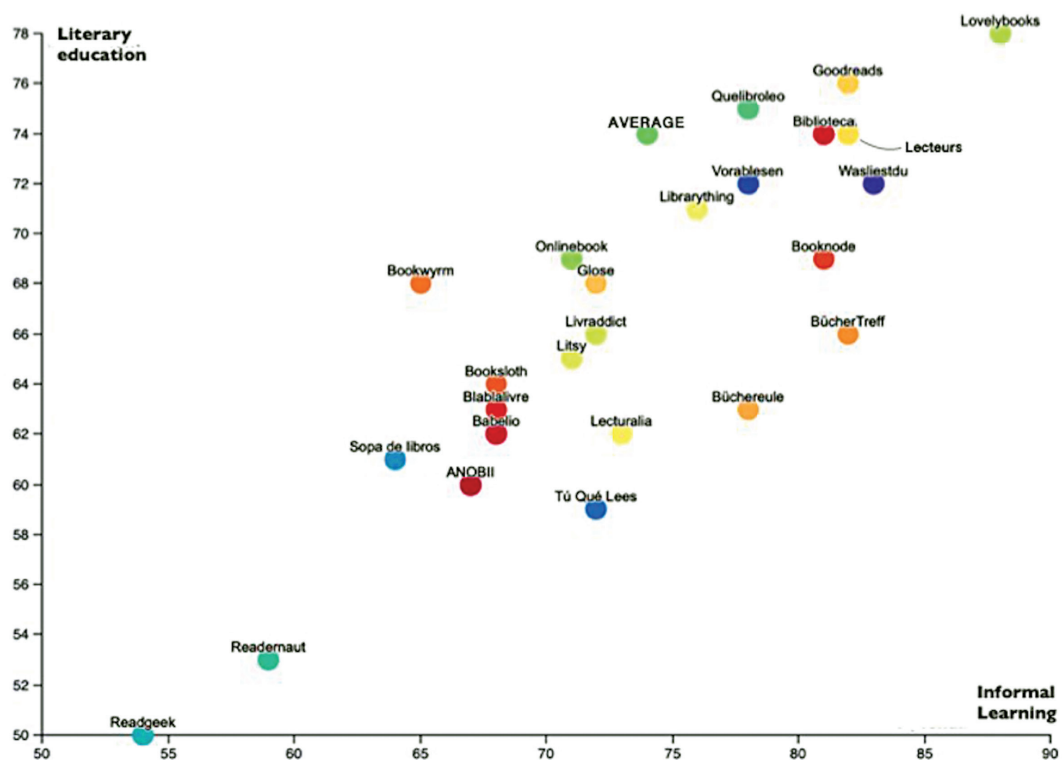
Table 9. Ranking of networks that most promote informal learning and literary education. (*continued*)

Book social networks	D1.1	D1.2	D1.3	Informal learning dimensions	D2.1	D2.2	D.3	D2.4	Literary education dimensions	Total
Sopa de libros	70.0	70.8	50.0	63.6	61.4	63.9	41.7	75.0	60.5	61.8
Readernaut	60.0	58.3	59.4	59.2	34.1	66.7	50.0	60.7	52.9	55.6
Readgeek	50.0	66.7	43.8	53.5	43.2	50.0	50.0	57.1	50.1	51.5
AVERAGE	76.6	78.2	64.9	73.8	58.5	73.8	63.8	69.1	73.8	66.2

Source: Compiled by the authors.

The social networks that most promote informal learning and literary education are Loveybooks, Goodreads and Lecteurs (see Figure 1). The first is notable for holding book raffles for members (which can be won by answering questions), providing free book extracts, connecting readers with libraries, publishers, and authors, and creating groups that are truly appealing to users. For example, they have invented the Crime Club, where members share books, hold question rounds and raffles. Depending on their merits in this environment, members can rise the social scale in the group to the peak status of “Mafia boss”.

Figura 1. Scatter plot graph.



The book social network with the most members in the world is notable for the number of group activities it promotes, which explains its high percentage in the third dimension. Group challenges, events, and quizzes created by the whole community, along with collective lists, are among the reasons readers might choose Goodreads, despite its lack of excellence in knowledge transmission. Its large community of readers and strong recommendation system influence the size of its corpus.

Although in third place, Lecteurs is perhaps the most comprehensive social network, as shown by its high ratings across most dimensions, and it is also one of the most innovative: although it does not offer the creation of reading groups, it hosts literary meetings online, generally organised by booksellers. In these completely free

meetings, readers have the chance to get to know famous authors, who are nearly always Francophone, and talk to them. Also, each year they award numerous literary prizes according to various rules and criteria.

3.3. Comparison of means

Given the small sample size, the nonparametric Kruskal-Wallis test was used to assess whether there were differences in the means across the seven dimensions based on the main language of their interfaces. The test confirmed the null hypothesis, as no differences were found in the distributions of dimensions 1 ($p = .053$), 2 ($p = .652$) and 3 ($p = .487$) in the first scale and of dimensions 1 ($p = .701$), 2 ($p = .281$), 3 ($p = .36$) and 4 ($p = .475$) in the second. The existence of differences in the number of visits and in the ranking of networks by language was also investigated, yielding p -values below 0.05 in both cases.

3.4. Bivariate correlations

Non-parametric correlations were used to analyse the association between the number of visits received by each network and its global traffic ranking, using the means of each dimension. As shown in Table 10, there is a fairly high relationship between learning through acquisition ($r = .429$, $p < 0.05$) and through social interaction and active commitment to the community ($r = .584$, $p < 0.05$) with the number of visits received by each network during the three months from August to October. There is also a very high correlation between the number of visits and learning through self-reflection and self-expression ($r = .721$, $p < 0.001$). Regarding the second scale, there is a fairly strong relationship between the number of visits and the dimensions of reading habits as an enjoyable activity and a relationship with books based on social commitment ($r = .472$, $p < 0.05$).

Similar results are found in the association of the global ranking of the websites, showing a fairly high negative relationship with learning through social interaction ($r = -.516$, $p < 0.05$) regarding scale 1 and with the dimension of construction of reading habits as an enjoyable and personally committed relationship with books ($r = -.450$, $p < 0.05$) in scale 2. There is also a strong relationship between learning through self-reflection and self-expression ($r = -.673$, $p < 0.001$). Therefore, it is confirmed that the higher the means in dimensions related to self-expression, interaction, and commitment to books, the more visits websites receive and the higher their global traffic ranking.

Table 10. Results of correlation analysis.

SPEARMAN'S RHO		D1.1	D1.2	D1.3	D2.1	D2.2	D2.3	D2.4
Visits in the last quarter	<i>r</i>	.429*	.721**	.584**	.305	.472*	.388	.186
	<i>p</i>	.041	.000	.003	.157	.023	.067	.396
Position in the global ranking	<i>r</i>	-.337	-.673**	-.516*	-.185	-.450*	-.341	-.127
	<i>p</i>	.125	.001	.014	.410	.036	.120	.574

Note: * $p < .05$; ** $p < .01$.

3.5. Regression analysis

Finally, a multiple regression analysis was conducted to determine which dimensions predict a higher number of visits and a higher global ranking for websites. Regarding the first case, the determination coefficient indicates that the model's reliability is 56.6%. Since the Durbin Watson test (1.817) has a value close to 2, the assumption of independence is met, and also the assumption of non-collinearity, since values > 0.2 are obtained in the Tolerance test and < 5 in the VIF test. As shown in Table 11, learning through social interaction is the dimension with the highest predictive capability, followed by literary discussion; however, in the latter, a higher number of visits maintains a negative relationship.

Regarding the ranking of the websites, the model, with a reliability of 44.7% ($p < .001$), indicates that only learning through self-reflection and self-expression predicts a high global traffic ranking ($B = -1167251.6$, $t = -4.243$ and $p = .000$). Again, the assumptions of independence (Durbin Watson = 2.480) and non-collinearity (tolerance values = 1.000; VIF = 1.000) are fulfilled.

Table 11. Predictor variables of the number of visits.

Predictor variables	B	t	p	Tolerance values	VIF	R	R2
Learning through a practice-based community process	30237469.3	4.119	.001**	.285	3.510	.683	.466
Literary discussion	-26684635	-3.111	.006*	.285	3.510		

4. Discussion and conclusions

Social networks promote informal learning by 73.8% (Table 9), which is consistent with the conclusions of other studies (Jiménez Cortés, 2019; Manca & Ranieri, 2013). Their potential to open new horizons for users by suggesting new interests helps with this (Alghamdi & Plunkett, 2021). They also give users an active role in creation and management, enabling them to self-regulate their learning (Imamyartha et al., 2022; Park et al., 2011). This production, however, occurs most frequently in the form of comments or reviews, at the expense of other practices such as the collective creation of new content. In this regard, the results of dimension 3 show that, although these platforms foster contact and interaction between users (Abdullah, 2015), they do not elicit the same level of involvement, as indicated by the low values of items 3.4 and 3.5. In this regard, book social networks are not promoting major group initiatives.

Regarding the second scale, these websites are used for the dissemination of reading suggestions between peers (Trott & Naik, 2012), conversation about books and contact with new releases (Ramos & Oliva, 2018; García-Roca, 2020), which makes them the online version of visiting a library (Trott & Naik, 2012). Therefore, they help users to develop their self-image as readers and become personally involved with literature by highlighting the importance of their emotional-cultural memory and their internal library. However, while social networks foster reading through ludic and social practices that do not challenge opinions (Thelwall, 2019), they fail to enhance readers' interpretive competence. Neither the quality of books nor users' exegeses is assessed, leading to underinterpretation (Ceballos, 2010). As they do not use specialised language that would improve readers' metalinguistic abilities, they do not promote explicit knowledge about literature. These networks, therefore, show signs of unidirectionality, as they rarely provide feedback to readers.

As they lack advice, guidance, and specialised knowledge about literature (Sánchez-García et al., 2021), in formal contexts, they need an expert's intervention to achieve a balance between fostering reading, which they already do, and the required advisory work, in which they fail.

The regression model and the correlation analysis have revealed a relationship between the number of visits and a high global ranking, with dimensions particularly connected to the creation process, followed by social interaction and a personal commitment to books. Therefore, as other studies demonstrate, users visit these types of sites to share their opinions and construct who they are by becoming part of a community (Jiménez Cortés, 2019). That is the reason why networks have good results in indicator 3.6. capture the attention of users. This fact also explains the fairly high correlation between the number of visits and the reading habits dimension, in which most networks reach high values in indicators (5.2, 5.6) related to readers' reading identity (Nakamura, 2013). In this regard, users exhibit what they are reading. At the same time, they also exhibit themselves (Ramos & Oliva, 2018), and this turns reading into a mechanism for social improvement (Ceballos, 2010), as shown by the hierarchical organisation of members by using tags such as "librarian" or "super-librarian".

Linked to the marked relevance of the self and of the identity-related process, the negative relationship between the number of visits and the literary discussion dimension could be because this factor includes some items related to the task of mediation (6.4 and 6.5), which suggests that members value most independence and self-directed learning (Park et al., 2011). Users' preference for self-expression and self-referentiality at the expense of guidance by a given mediating agent shows the power of ordinary readers over expert knowledge and, therefore, the decentralisation of knowledge. This idea explains the individualism that these networks promote to a certain extent by not including users in collective decision-making processes or by providing few resources to evaluate users' contributions.

This study can guide teachers on using these platforms in their subjects, as it provides a list of websites that best suit their teaching goals and the language of their lessons. For example, if their goal is to promote reading among their students, they can use platforms such as LovelyBooks or Goodreads. In contrast, if they wish to improve their students' literary competence, Lecturalia would be the best option. Teachers can compensate for weaknesses in their practice by intervening or by drawing on the strong points identified in this study regarding the use of social networks in literary education.

Limitations of the study include the small sample size, which could not be expanded due to the gradual disappearance of some networks (Shelfari, BookJetty, Lectyo and Entrelectores) and the exclusion of some platforms with other goals—such as fostering creative writing (Wattpad, DevianArt) or book exchanges (Bookbub, BookMoock) and book sharing (Bookcrossing)—that could lead to biased results. In addition, although the regression model has provided insights into the consumption habits of ordinary readers, the number of visits and the global ranking depend not only on user preferences but also on other SEO (Search Engine Optimisation) factors.

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Authors' contribution

Lucía Hernández Heras: Conceptualización, Análisis formal, Investigación, Metodología, Curación de Datos, Software, Validación, Visualización, Redacción - borrador original.

Diana Muela Bermejo: Conceptuación, Investigación, Supervisión, Validación, Redacción -revisión y edición.

Rosa Tabernero Sala: Conceptuación, Supervisión, Validación, Redacción -revisión y edición.

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