

MENDIVE



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Original article

The use of Facebook as a pedagogical tool to improve reading comprehension in Higher Education

El uso de Facebook como herramienta pedagógica para mejorar la comprensión lectora en Educación Superior

O uso do Facebook como ferramenta pedagógica para melhorar a compreensão leitora no Ensino Superior

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<https://mendive.upr.edu.cu/index.php/MendiveUPR/article/view/3035>

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Received: April 18th, 2022.

Accepted: May 22nd, de mayo 2022.

ABSTRACT

Before the pandemic, reading was developed through printed texts; however, when virtual education was established, especially at the University level, it required a change in the teaching learning process. This situation raised new expectations regarding the reading of multimodal texts and the interaction of a social network: Facebook. The purpose of this research was to identify the levels of reading comprehension, in the exit exam with the application of multimodal texts in a social network. The research was developed with a qualitative approach, with an exploratory quasi-experimental and descriptive scope. The method used was inductive. The sample consisted of 186 students distributed in three sections (A, B and C) of the first cycle of a private university. They were subjected to two reading comprehension evaluations: beginning (traditional objective test) and exit (test with multimodal texts uploaded on a social network). The findings showed that the exit test with multimodal texts in digital support (Facebook) showed that the students reached a satisfactory level in the three levels of reading comprehension. In conclusion, the use of multimodal texts in a social network facilitated a new way of student interaction with reading.

Keywords: assessment; Facebook; reading; comprehension levels; multimodal text.

RESUMEN

La pandemia, producto de la COVID-19, generó cambios con respecto a la lectura en el soporte digital. Este soporte permitió la interacción comunicativa de textos multimodales y una red social entre docentes y estudiantes. La presente investigación tuvo como propósito identificar el nivel de comprensión lectora que alcanzaron los jóvenes universitarios en el examen de salida, con la aplicación de textos multimodales en *Facebook*. La investigación se desarrolló con un enfoque cualitativo, de alcance exploratorio, cuasiexperimental y descriptivo. El método empleado fue inductivo. La muestra estuvo conformada por 186 estudiantes distribuida en tres secciones (A, B y C) de primer ciclo de una universidad privada. Fueron sometidos a dos evaluaciones de comprensión lectora: inicio (prueba objetiva tradicional) y salida (prueba con textos multimodales subidos a una red social). Los hallazgos en la prueba de salida, en los tres niveles, demostraron un resultado satisfactorio de comprensión lectora mediante textos multimodales en *Facebook*. En conclusión, el uso de este tipo de textos en una red social facilitó una nueva forma de interactuar del estudiante con la lectura.

Palabras clave: evaluación; *Facebook*; lectura; niveles de comprensión; texto multimodal.

RESUMO

A pandemia, produto da COVID-19, gerou mudanças no que diz respeito à leitura nos meios digitais. Esse suporte permitiu a interação comunicativa de textos multimodais e uma rede social entre professores e alunos. O objetivo desta pesquisa foi identificar o nível de compreensão leitora alcançado por estudantes universitários no vestibular, com a aplicação de textos multimodais no *Facebook*. A pesquisa foi desenvolvida com abordagem qualitativa, com escopo exploratório, quase-experimental e descritivo. O método utilizado foi o indutivo. A amostra foi composta por 186 alunos distribuídos em três turmas (A, B e C) do primeiro ciclo de uma universidade privada. Eles foram submetidos a duas avaliações de compreensão leitora: inicial (teste objetivo tradicional) e saída (teste com textos multimodais carregados em uma rede social). Os achados no teste de saída, nos três níveis, mostraram um resultado satisfatório de compreensão de leitura por meio de textos multimodais no *Facebook*. Em conclusão, a utilização deste tipo de textos numa rede social facilitou uma nova forma de interagir com o aluno com a leitura.

Palavras-chave: avaliação; *Facebook*; leitura; níveis de compreensão; texto multimodal.

INTRODUCTION

Traditionally, in the classes of different courses, the reading of printed texts was promoted, where decoding was the most important; meanwhile, other cognitive reading processes such as interpretation, analysis and reflection were relegated. However, in recent decades, the use of Information and Communication Technologies (ICT) has promoted another form of academic reading and expository texts. Subsequently, social networks, especially *Facebook*, have become the most widely used tools for the development of skills, abilities and competencies in students related to reading and the processes of comprehension, analysis and textual construction. In this context, academic activities become interesting for students, because they promote interest in this type of social network. For this reason, teachers must reconsider new ways and teaching-learning strategies of digital reading, because it promotes better understanding, interaction and a wide range of information.

Definition of reading

With the use of new technologies, digital reading has changed the focus and perspective for the reader. Thus, it does not depend on a single factor, but on a set of capabilities, skills and competencies. These manifests themselves simultaneously, alternating and interrelated. In this sense, "reading in digital media shows a conjunction of diversified and complex processes, which imply a plural approach, such as the one proposed from the perspective of literacy" (Marqu ez and Valenzuela, 2018, p. 1). These authors indicate that, in this new approach, literacy encompasses broader skills of decoding and understanding what is written.

Reading diffusion, in young people, is developed through digital media on the Internet (Cassany and Ayala, 2008). In other

words, from different technological tools, students have found different ways to read for different purposes: obtain information, meet and interact with other users, review multiple pages, among others. For this reason, the teacher assumes the challenge of improving the results in the reading comprehension process. In this way, literate practices in classes should be promoted, since they allow the student to approach reading and thus achieve significant learning that revolves around their daily experiences.

Definition of reading comprehension

In reading comprehension, the reader plays a fundamental role, since he processes the information provided by the author. That is, it analyzes the text and the information issued by the issuer, infers the author's proposal and contributes with its own knowledge. Ultimately, the reader makes an interpretation of the text read.

Each reader, depending on their origin, their language, their education and their knowledge, has a different way of reading and interpreting a text. Therefore, each person adopts different ways to understand and interpret a discursive genre. That is, as Cassany (2006) states, there is no single way of reading; since, during this process, it is necessary for the reader not only to develop cognitive processes, but also to be able to acquire sociocultural knowledge of each discursive text.

Following the position of the aforementioned author, there are three conceptions of reading comprehension that give meaning to the text: linguistic, psycholinguistic and sociocultural. The linguistic conception of reading occurs when the reader is the one who provides meaning to the text and is basically limited to the literal level. Regarding the psycholinguistic conception, the reader interprets the text according to his previous knowledge and attributes a new

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meaning to it. In relation to the sociocultural conception, the context of the reader is related according to their cultural influence; this is due to the communicative activity in a society and presents independence to the performance of the receiver. In this case, the reader has the innate ability to acquire language; but there are other determining factors such as its history, traditions, customs, habits and social practices that intervene in its interpretation and personal vision.

Reading levels

Every reader needs to master levels of reading comprehension. In other words, this cognitive process involves understanding the meaning of a text and the intention of the author. Cassany (2013) distinguishes three levels of reading: literal reading, inferential reading and critical reading. The first level refers to the decoding processes and this depends on the semantic meaning of the words. The second level, inferential, includes not only the domain in lexical and semantic aspects, but also syntactic and pragmatic. In other words, reading varies according to the experience of the reader. The third level is critical reading, also called met cognitive. This type of reading requires prior knowledge on the part of the reader; since meaning depends on more than one situational context. For this reason, the critical reader reads each situation differently and interprets the information not only in one way, but also depends on various communicative situations.

Reading in multimodal contexts

Reading in multimodal contexts is defined as a contextualized practice; According to the social environment, the reader will interact with different types of texts. In this context, the academic practices, selected for reading with multimodal texts in a social network, generate a more interesting and interactive

reading for the student who will review various texts and interact with them in a social network (Segura *et al.*, 2021). In this regard, Cassany and Ayala (2008) affirm that, at present, the act of reading with digital supports is gaining momentum, since the reading of multimodal texts has increased in the various social spheres, since, through ICT, adolescent and young readers have adapted to multiple ways of reading for different purposes: search for information, knowledge, and interaction with other users and web pages. This new way of reading becomes an objective for teachers in the programming of their sessions, in order to promote digital reading with multimodal texts on the web and on social networks.

Among the theorists that previously investigated multimodality, Kress and Van Leeuwen (2001) stand out. These authors argue that multimodal texts employ various forms of representation and communication in messages. For example, the development of content such as: digital photos, videos and multiple animation formats. These new forms help the reader to process, understand, analyze and interpret the information in the message.

In social networks, platforms allow audiovisual (visual, auditory, tactile, gestural) and verbal (words) languages to be mixed simultaneously. The approach to digital reading through multimodal texts allows university students to put into practice a series of processes with the use of ICT: the interpretation of situations, the construction of arguments, the analysis and approach of situations. This will help their formation as critical citizens.

Multimodal text definition

A multimodal text is the combination of two or more semiotic systems in order to communicate its content efficiently through different languages: verbal, visual, auditory,

gestural, and tactile, among others (Kress and Van Leeuwen, 2001). Segura *et al.* (2021) refer that the multimodal text emerges as a necessity of digital transformations and is consolidated in the changes of teaching-learning, through virtual spaces. Reading multimodal texts is an interesting and motivating experience because it favors reading in a different way, since the images facilitate the understanding of the message that combines texts with static or moving images, as a complement to what is written. In this situation, readers are more motivated when they see images, which make it possible for them to easily understand the information presented.

Multimodal text includes multiple data representation systems: digital photos, videos, presentations, voices, music, graphics, icons, virtual avatars, among others. Currently, there are fewer mono modal texts or texts with a single format, since color, shapes and the set of elements convey meanings that are easy to understand, so it is unlikely to use only writing (Cassany, 2013).

Virtual environments have allowed multimodality to transform the traditional conception of reading printed texts to texts with images, videos, sounds. This type of text is immersed in the category of multimodality. In this sense, the educational system presents the challenge of promoting spaces and transformations in thought; likewise, it establishes versatile teaching spaces (Segura *et al.*, 2021). Therefore, in the written or virtual modality, multimodal texts fulfill a communicative purpose: the effective transmission of information.

Role of multimodal texts in reading

The application of multimodal texts on *Facebook* allows the teacher monitor students' development and progress in the comprehension process at each level: literal,

inferential, and critical. As Cassany (2006) states, the act of reading has changed in recent times and it is a skill that students must achieve. That is, it is essential to analyze, understand, interpret and make value judgments. While, when interacting with other types of texts on the web with a multiplicity and variety of information, readers relate and interact in a different way and, consequently, assume a different vision of the world. For some students it is not easy to read comprehensively, and if they do not know and apply the appropriate strategies, reading can be very complex for them.

Multimodal texts have become very important visual resources for improving text comprehension. These are used in different formats: electronic texts, pages and documents published on the Internet or on social networks. For this reason, Kress and Van Leeuwen (2001) indicate that the written language is related to images, since it improves the development of communication skills in a virtual modality, for which the concept of traditional literacy has been modified with the inclusion of electronic reading and writing. This type of text has allowed the student to interact not only with the data, but also with the purpose of interpreting various communicative purposes (Cocchetta, 2018). Likewise, it enhances their creativity to the extent that they relate to various formats and, in turn, express their ideas, their feelings, and their opinions (Jiménez *et al.*, 2017).

Literacy

Literacy is a word of the English origin "literacy". Likewise, it is a term that not only encompasses skills such as decoding or interpretation in written texts (printed media), but also involves rhetorical, social and cultural abilities that are acquired in a specific context with the influence of a literate culture (Marquéz and Valenzuela, 2018). In recent decades, literacies are understood as new social practices that vary

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from one context to another (Cassany, 2013). Although literacy allows for a more comprehensive analysis, this research has focused on reading comprehension of multimodal texts.

Facebook

Facebook is a social network where people share information and create content about their photos, videos and news with friends, family, work colleagues, among others (Abúndez et al., 2015). For his part, Basterrechea (2015) maintains that "Facebook is a social tool that connects us with people, brands and organizations that matter to us" (p. 2). In other words, due to its social nature, it becomes an easy and accessible resource to interact with people on certain information.

Facebook in education

Facebook, in the educational field, is a virtual network that offers students a horizontal space, which allows them to participate in a free, stable and unpressured way (Abúndez et al., 2015). In addition, in the university setting, for Delgado-García et al. (2018) this pedagogical tool is a new proposal in teaching-learning, to establish interaction between users in different virtual communicative contexts. On the other hand, it is a collaborative, participatory and dialogical learning. According to Salazar and Nájuez (2021), it is considered an effective tool for the teaching-learning process, because it offers an equal space and develops socialization, mutual collaboration and interaction among its participants. In other words, this instrument not only enables students to achieve assertive interaction, but also offers learning spaces.

In these contexts, the student is called a "digital native", who has knowledge about their creation and use of this digital technology, different from the young people

of previous generations, in which the way of teaching and learning was different and traditional (Abúndez et al., 2015). Consequently, the student has a different perspective of understanding, uses the digital world to learn, in addition to processing information and collaborating on the educational platform. Therefore, the need for teachers to seek virtual spaces that guide, develop and benefit teaching-learning in students, especially if reading comprehension is worked with multimodal texts.

Facebook in reading comprehension

Reading comprehension, in the virtual environment, has become a challenge for the 21st century, since students use social networks such as *Facebook*, *Twitter*, *Instagram*, among others, more frequently. This interaction allows the teaching-learning process of understanding multimodal texts that favor analysis and interpretation (Álvarez and Taboada, 2016; Parodi, Moreno-de-León and Julio, 2020).

For Álvarez and Taboada (2016), *Facebook* is the digital tool most used by students, due to its social nature, since it facilitates the practice of their learning in reading comprehension with expository texts. Another specialist such as Bernier (2019) points out those students who read multimodal texts on *Facebook* significantly improve their reading comprehension levels, unlike traditional readers who only focused on decoding. In this sense, reading comprehension in virtuality develops in the reader the ability to search, select, analyze and interpret various digital texts (Parodi, Moreno-de-León and Julio, 2020).

The objective of this research was to identify the level of reading comprehension reached by students in the exit exam, through multimodal texts in a social network: *Facebook*. With this medium, the student not

only improves their reading comprehension levels, but also masters' different types of texts.

MATERIALS AND METHODS

The research was developed with a qualitative approach. It is exploratory, quasi-experimental and descriptive in scope. The population consisted of 300 students from the Faculty of Health Sciences, corresponding to the Academic Unit of General Studies of a private university.

The sample was applied to 186 students in a non-probabilistic way, for convenience, under inclusion criteria: study the first cycle, be a student of Oral and Written Communication and belong to the three sections A, B and C. Two questionnaires were used as an instrument: one input and one output.

The Oral and Written Communication course consists of 16 weeks. In the first instance, the teachers applied a diagnostic exam as an entrance test during the first week. This objective test consisted of developing five readings. The student had to answer four questions for each text (one literal question, three inferential questions and one critical question). In the second instance, the students obtained unfavorable results in reading comprehension. Given this, during the other 13 sessions, the teachers designed an objective test with images, videos and written texts, uploaded to a digital medium. Both start and end tests had the same number of readings and questions. Ultimately, the exit evaluation was published on a social network: *Facebook*. Next, the work process in the second and third instance is detailed:

a. To improve reading comprehension, a virtual community was created with the

sample of students called "Oral and Written Communication". For this, a set of strategies and activities were applied in order for the students to proceed with the reading of multimodal texts.

b. The teachers promoted the dynamics of reading with multimodal texts, adapted in each of the sections to develop the levels of literal, inferential and critical understanding regarding the reading of multimodal texts on *Facebook*.

c. At the end of the course, a reading comprehension test with multimodal texts was applied, which was posted on *Facebook* for three sections: section A (60 students), section B (64 students) and section C (62 students). The test was objective, prepared by the teachers, which included five texts. Each text included four questions for each reading (one literal question, two inferential questions and one critical question).

d. A comparison of the results of the diagnostic and exit test was established between the three sections regarding their reading comprehension processes of multimodal texts.

Applied teaching strategies for understanding multimodal texts

Literal

To develop the literal level, the text-image relationship was applied, in which students read short texts mixed with images, in order to answer questions posed to locate the explicit and relevant information of a text, according to their reading objectives. The strategies used were the formulation of key questions such as: What? How? When? Where? How many? Why? So that? The identification of repetitive content was also applied by asking basic questions such as: What ideas are repeated or similar in the multimodal text? What do you see in the

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image presented? or underline these ideas with a certain color and label them. Another strategy was to discover the meaning of unknown words from the context (key words or verbal traces) and consult the RAE dictionary. The use of the image in the texts enables the reader to extract the implicit content that is not expressed in verbal language, but can be recognized from the gestural language, shapes, sizes and colors that compose it. In this regard, Cassany (2006) maintains that the act of understanding a text not only implies the development of cognitive processes, it also requires assimilating sociocultural knowledge characteristic of each discourse, of each specific reading and writing activity. When it comes to the literal, understanding the lines of a text is knowing the meaning of the words.

Inferential

To develop the inferential level of reading, we began by analyzing images of selected texts. A series of questions was formulated to interpret and make conjectures, that is, to make inferences. In addition, the students constructed meanings from the explicit information of the multimodal text, with questions such as: What do you infer from the image presented? What is the relationship between...? What do you mean when...? What did the author mean about...? In this regard, Cassany (2006) calls the inferential level as "reading between the lines", since the reader deduces in reading from a set of words, even if it has not been fully explicitly stated.

Critical

The critical level was linked to the reflection that implied a position on the themes of multimodal texts. In the first place, they were given a basic and simple commentary strategy that involved the following elements: point of view or position on the

subject, arguments that support their critical or evaluative judgment, contrast the information with other sources or videos on the subject, application of the exemplification argument or other types of arguments and reflection. At this point, this type of reading in digital support makes it easier for the student to interpret communicative situations, build arguments, analyze and, finally, encourage the practice of reflection. At this level, Cassany (2006) proposes the theory of critical literacy, in which no text is neutral. That is, in every reading there is an implicit ideology that the reader must discover, since a critical reader determines and discriminates the author's intention and way of seeing and interpreting the world. The students' comments were published on Facebook to be shared and debated, in addition to generating likes or dislikes.

RESULTS

Table 1- Levels of reading comprehension (diagnostic). Section A

Reading comprehension levels	Number of students and percentage according to their location in the levels		# of questions	# of students	fx	F x
	literal level	2 5	41.6 %	0-2 3-5	9 16	9 16
inferential level	2 2	36.6 %	0-2 3-6 7-10	5 12 5	5 12 5	5 17 22
critical level	2 4	40.0 %	0-2 3-5	11 13	11 13	24 11

In the first week of the Oral and Written Communication course, 60 students from section A were evaluated through a reading comprehension diagnostic test. The results showed that 25 students only answered literal level questions, which corresponds to 41.6%. In addition, between 0-2 and 3-5 questions, 9 and 16 students answered,

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respectively. Regarding the inferential level, 22 students reached this level; this represents 36.6%. Likewise, between 0-2, 3-6 and 7-10 questions, 5, 12 and 5 students answered. Finally, at the critical level, 24 were located at this level; which represents 40%. Between 0-2 and 3-5 questions were answered by 11 and 13 students.

Table 2- Levels of reading comprehension (diagnostic). Section b

Reading comprehension levels	Number of students		# of questions	# of students	fx	Fx
Nivel literal	36	56,2 %	0-2	11	11	11
			3- 5	25	25	36
Nivel inferencial	19	29,7 %	0 -2	7	7	7
			3 -6	6	6	13
			7-10	6	6	19
Nivel crítico	15	33,3 %	0 -2	7	7	7
			3 -5	8	8	15

In the first week of the Oral and Written Communication course, 64 students from section B were evaluated by means of a reading comprehension diagnostic test. The results showed that 36 students only answered literal level questions, which corresponds to 56.2%. Furthermore, between 0-2 and 3-5 questions were answered by 11 and 25 students, respectively. Regarding the inferential level, 19 students reached this level; this represents 29.7%. Likewise, between 0-2, 3-6 and 7-10 questions, 7, 6 and 6 students answered. Finally, at the critical level, 15 were at this level, which represents 33.3%. Between 0-2 and 3-5 questions were answered by 7 and 8 students.

Table 3- Levels of reading comprehension (diagnostic). Section C

Reading comprehension levels	Number of students		# of questions	# of students	fx	Fx
Nivel literal	45	72,6 %	0-2	20	20	20
			3- 5	25	25	45
Nivel inferencial	20	32,2 %	0 -2	7	7	7
			3 -6	7	7	14
			7-10	6	6	20
Nivel crítico	18	44,0 %	0 -2	6	6	6
			3 -5	12	12	18

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In the first week of the Oral and Written Communication course, 62 students from section C were evaluated by means of a reading comprehension diagnostic test. The results showed that 45 students only answered literal level questions, which corresponds to 72.6%. Furthermore, between 0-2 and 3-5 questions were answered by 20 and 25 students, respectively. Regarding the inferential level, 20 students reached this level; this represents 32.2%. Likewise, between 0-2, 3-6 and 7-10 questions, 7, 7 and 6 students answered. Finally, at the critical level, 18 were at this level, which represents 44.0%. Between 0-2 and 3-5 questions were answered by 6 and 12 students.

Table 4- Reading comprehension levels (exit test). Section A

Reading comprehension levels	Number of students and percentage according to their location in the levels		# of questions	# of students	fx	Fx
Nivel literal	56	100 %	0-2	0	0	0
			3-5	56	56	56
Nivel inferencial	45	80,3 %	0-2	10	10	10
			3-6	13	13	23
			7-10	22	22	45
Nivel crítico	40	71,4 %	0-2	13	13	13
			3-5	27	27	40

In the penultimate week of the Oral and Written Communication course, of the 60 students in section A, 4 withdrew. These 56 students were evaluated by means of a reading comprehension test. The results showed that 56 students answered the literal level at 100.0%. Regarding the inferential level, 45 students reached this level; this represents 80.3%. Likewise, between 0-2, 3-6 and 7-10 questions, 10, 13 and 22 students answered. Finally, at the critical level, 40 were at this level, which represents 71.4%. Between 0-2 and 3-5 questions were answered by 13 and 27 students.

Table 5- Reading comprehension levels (exit test). Section b

Reading comprehension levels	Number of students		# of questions	# of students	fx	F
	literal level	5	100 %	0-2	0	0
9			3-5	59	59	59
inferential level	5	89,9 %	0-2	0	0	0
	3		3-6	19	19	19
			7-10	34	34	53
critical level	4	69,4 %	0-2	0	0	0
	1		3-5	41	41	41

In the penultimate week of the Oral and Written Communication course, of the 64 students in section B, five withdrew. These 59 students were evaluated through a reading comprehension exit test. The results showed that 59 students answered the literal level at 100.0%. Regarding the inferential level, 53 students reached this level, which represents 89.9%. Likewise, between 3-6 and 7-10 questions were answered by 19 and 34 students. Finally, at the critical level, 41 were located at this level. And this represents 69.4%.

Table 6- Reading comprehension levels (exit test). Section C

Reading comprehension levels	Number of students		# of questions	# of students	fx	Fx
	Nivel literal	58	100 %	0-2	0	0
			3-5	58	58	58
Nivel inferencial	51	87,9 %	0-2	0	0	0
			3-6	20	20	20
			7-10	31	31	51
Nivel crítico	41	70,7 %	0-2	12	12	12
			3-5	29	29	41

In the penultimate week of the Oral and Written Communication course, of the 62 students in section C, four withdrew. These 58 students were evaluated through a reading comprehension exit test. The results showed that 58 students responded 100.0% at the literal level. Regarding the inferential level, 51 students reached this level; this represents 87.9%. Likewise, between 3-6 and 7-10 questions were answered by 20 and 31 students. Finally, at the critical level, 41

were at this level, which represents 70.7%. Between 0-2 and 3-5 questions were answered by 12 and 29 students.

DISCUSSION

Although it is true, reading comprehension favors the student in the organization of ideas and, in addition, contributes with their own knowledge; however, the reading comprehension result did not achieve the expected objective because it was based on traditional readings. Consequently, the students did not achieve favorable results in the other two levels: inferential and critical, proposed by Cassany (2013).

In the result of the exit test, the three sections: A, B and C, obtained significant changes in the three levels because the classes were developed through multimodal texts using *Facebook*. This proposal for reading in digital media has become more relevant on the Internet. In addition, it was found that the teacher, by promoting vernacular literate practices, generates in the student that learning is more significant and experiential. That is, digital environments bring the student closer to reading (Cassany and Ayala, 2008).

In order to improve the results of the reading comprehension diagnostic test, the multimodal texts of the topics proposed for the final evaluation were uploaded to a social network: *Facebook*. Álvarez and Taboada (2016) consider this social network an educational tool, since it facilitates student learning. It also allows an agile, horizontal, free, and stable and pressure less interaction (Abúndez et al., 2013). This interaction improves the teaching-learning process of understanding multimodal texts, especially in analysis and interpretation (Álvarez & Taboada, 2016; Parodi, Moreno-de-León & Julio, 2020). On the one hand, it is not only

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an educational tool, but also a social one, because it connects with people, organizations and brands worldwide in a simple way (Basterrechea, 2015). Similarly, Salazar and Nández (2021) proposed reading comprehension strategies on *Facebook* with multimodal texts. These obtained good results in the reading levels, since they generated greater virtual interaction in any communicative context. For this reason, the students participated in an interactive way with this type of texts, since they are digital natives; that is, they have knowledge of the functions of this virtual medium. Consequently, the images, photos and videos facilitate a better reading comprehension for the student at all three levels.

Indeed, the topics proposed as: " Health service present more than 47 thousand claims so far this year", "Every year 15 thousand people die as a result of contamination", "Companies should reformulate foods with excess fat", " Sunedu : research is the weakest point of universities that do not obtain licenses" and "What are computer crimes in Peru?" showed that the students not only identified with the topics mentioned and with the multimodal texts through a digital medium, but also understood reading at all three levels. Likewise, it was shown that the student as a reader is capable of acquiring sociocultural knowledge in each discursive text (Cassany, 2006).

As mentioned above, the entrance evaluation at the beginning of class did not achieve the expected result. This is because the exam proposal was based only on printed texts, not contextualized. For this reason, the teacher, in the exit evaluation, proposes strategies, such as multimodal texts, to improve reading comprehension levels. On the other hand, with the use of ICT and new technological resources, reading is seen from a different perspective: literacy (Márquez and Valenzuela, 2018). That is, the student

develops rhetorical, social and cultural skills and identifies the texts mentioned with their experiential environment, since they have the facility not only to decode, but also to interpret, analyze, reflect and create content with the readings. In other words, it is a social practice and is situated in a certain context.

For a further description, at the literal level, the students managed to achieve total mastery, because reading with multimodal texts helped them to generate interaction with various types of texts and images. These results show that they showed total ease in retrieving and decoding explicit information, as well as recognizing the meaning of the word and the sentence. In this regard, Cassany (2013) maintains that literal reading is not related to decoding processes, but is linked to the meaning of words. Although a text is made up of paragraphs, the understanding of multimodal texts establishes an effective form of communication, focusing on other semiotic elements to present the messages, in combination with other elements (images, videos, infographics, hypertexts) in the context of the text's social practices (Kress & Van Leeuwen, 2001).

These results show a significant improvement in the level of inferential understanding of the investigated group. In this phase, students access a higher level of understanding that involves the discovery of information and non-explicit meanings. In this sense, the reader approaches a global understanding of the text read. To do this, it establishes relationships between the express information and the underlying information. From the information, the student constructs meanings and infers correct data. In this regard, Cassany (2013) states that, at this level, inference is a skill and ability to understand certain lexical and semantic aspects of a reading. From its context and experience it builds new

Translated from the original in Spanish

meanings during the process of understanding.

Finally, at the critical level, greater motivation and predisposition for reading multimodal texts was evidenced. In addition, the approach of Cassany and Ayala (2008) is corroborated, stating that the interest of students in reading this type of text increases. That is, they showed disposition in their reading preferences, since they spent more time interacting with the information proposed by the course on Facebook. In this way, a significant improvement in the results of this level was achieved.

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Conflict of interests

The authors declare no conflict of interest.

Authors contribution

All authors managed the information, reviewed the writing of the manuscript and approved the version finally submitted.



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