ABSTRACT

PowerPoint presentations have become a main instrument for sharing knowledge in academic context. However, presentation is a multimodal event where speakers use a combination to artifacts to achieve a certain communicative goal. This means that, gradually, multimodal competence is becoming an essential skill to develop in students for an effective teaching-learning process. Previous literature adopting the social-semiotic approach has focused the research on moving and still image in L1, but analyzed categories were changeable from one study to another. For this reason, in this study communicability theory (Parodi, 2011, 2014) has been adopted for analyzing fourteen PowerPoint presentations in Spanish L2 Literature classes in an Exchange Program in a Chilean University. An exploratory qualitative approach is applied where all sessions have been observed and recorded for content analysis. Also, multimodal elements have been classified using the Multimodal Element Analysis Instrument (MEAI), which has been created based on Parodi’s (2010) taxonomy of multisemiotic systems. Results show a predominance of verbal system that is beneficial for the specific context of literature teaching in second language, which means that stra-
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tegic use of verbal semiotic system could help students achieve a certain learning goal set for their oral presentation.

RESUMEN
Las presentaciones en PowerPoint se convirtieron en un instrumento principal para compartir el conocimiento en el contexto académico. Sin embargo, la presentación es un recurso multimodal en el que los expositores utilizan una combinación de artefactos para lograr un determinado propósito comunicativo. Esto significa que, gradualmente, la competencia multimodal se está convirtiendo en una habilidad esencial a desarrollar en los estudiantes para garantizar un eficiente proceso de enseñanza-aprendizaje. La literatura anterior que adopta el enfoque semiótico-social enfocó la investigación en la imagen fija y la imagen en movimiento en el diseño de los videos en L1, pero las categorías analizadas eran cambiantes de un estudio a otro. Por esta razón, en este estudio se adoptó la teoría de la comunicabilidad (Parodi, 2011, 2014) para analizar catorce presentaciones de PowerPoint en clases de Literatura en español L2 en un programa de intercambio en una universidad chilena. Se aplicó un enfoque cualitativo exploratorio, en el que todas las sesiones se observaron y se grabaron para realizar un análisis de contenido. Además, los elementos multimodales fueron clasificados usando el Instrumento de Análisis de Elementos Multimodales (IAEM), que fue creado en base a la taxonomía de sistemas multiesemióticos de Parodi (2010). Los resultados muestran un predominio del sistema verbal que es beneficioso para el contexto específico de la enseñanza de la literatura en español como segunda lengua, lo cual significa que el uso estratégico del sistema semiótico verbal podría ayudar a los estudiantes a alcanzar un cierto objetivo de aprendizaje establecido para su presentación oral.

Keywords: multimodalidad, enseñanza del español como L2, presentación oral, PowerPoint, estudio de caso.
Introduction

The comprehension of written text is an area of study that is increasingly expanding, especially as the second language classroom has become a space where not only texts are read, but also discussed. However, comprehension in second languages has not received much attention and, in most cases, the same models of L1 have been extrapolated to study comprehension in L2. Furthermore, comprehension has been approached at the level of a single text presented in a given medium, in which the text is conceived as being in a predominantly verbal mode. However, texts can be presented in digital or paper format (Peronard, 2007; Singer & Alexander, 2017), can be extracted from multiple document sources (Braasch, Bråten & McCrudden, 2018; Britt & Rouet, 2020), which in turn are made up of multi-semiotic elements (van Leeuwen, 2013; Bezem & Kress, 2016 Sarıçoban & Yürük, 2016; Parodi & Julio, 2017).

For this particular reason, investigations started to focus on the deliberate use of multimodality for communicative and instructive function in academic disciplines (Bezem & Kress, 2008; Parodi, 2010; Boudon & Parodi, 2014; Parodi & Julio, 2015; Lirola & Simón, 2018; Morell & Pasto Cesteros, 2018; Rocca, 2018; Julio, Parodi & Loureda, 2019; Parodi, Moreno-de-León & Julio, 2020; Soliman, 2022). Multimodal composing is an indicator of learning from texts and being able to choose the most relevant semiotic resources to share knowledge with others (Kress & Selander, 2012). Whereas meaning making does not stick to a specialized disciplinary content, but also it implies achieving a learning goal and meet assignment requirements (Kress, 2013; Magnusson & Godhe, 2019).

This means that multimodality is becoming a key meaning expression and pedagogical methodology where text is not only composed of linguistic features. According to Zhao, Djonov and van Leeuwen (2014) this could be attributed to a certain assumption “that PowerPoint slideshows can be analyzed as ‘texts’. This often leads to a logo-centric approach” (p. 352). This reflects the relevance of considering the multimodal composition of slideshows and how it fits to a specific communicative purpose as a main element of the learning-teaching process, since it allows students to elaborate on their knowledge by designing PowerPoint slideshows that enables them to share with their
professors and colleagues the content of academic texts that they understood.

Hence, this study aims to specify the semiotic systems that Spanish L2 students use in meaning making in their PowerPoint presentations specialized in Literature and held in a student exchange program in Chile. The interest of this study arises especially from the few existing empirical evidence about the use of multimodality as a learning resource in second languages (Farías, Obilinovic & Orrego, 2010; Oskoz & Elola, 2016; Lirola & Simón, 2018). Specially that there is an increasing interest in the study of multimodality meaning making in poetry and literary analysis and how it helps students express and share with others their own interpretation of the text (Jewitt, Bezemer & O’Halloran, 2016; Höglund, 2017; Smith, 2019; Liang, 2019). This previous work is specialized in English Literature and the role of moving images that students use in composing instructional videos, nevertheless images in literature still have not received enough attention, especially in Spanish as a second language.

Due to the scarcity of theoretical and empirical support in Spanish L2 Literature classes, in this research a qualitative approach with an exploratory and descriptive scope is adopted. The aim is to explore in depth the incorporation of multimodal artefacts in the design of PowerPoint presentations to obtain a complete and detailed description of them. To this effect, data has been collected using the nonparticipant observation (Taylor, Bogdan & DeVault, 2015). Also, Instrument for the Analysis of Multimodal Elements (IAEM) has been developed, validated and applied following the theoretical background of Parodi (2010) and Parodi and Julio (2017). Finally, content analysis has been held using Nvivo 12 and the frequency of IAEM records is calculated for finding’s discussion.

To achieve this objective, this paper is organized in the following structure: the theoretical background about multimodality is presented. Subsequently, a description of the methodological procedures and results is made. The work closure is dedicated to the discussion and conclusions about these results, which, in turn, raise the possible future research possibilities.
Theoretical framework

This section will present the first approximations in the literature to the studies on multimodality and the contributions and limitations of each work.

The dual code theory (Sadoski & Paivio, 2001)

Sadoski and Paivio’s dual code theory (2001) represents one of the first approaches to multimodality which origins are framed in Pavio’s initial contribution that begins in the 1970s and results in a series of works (Paivio, 1976, 2010, 2014). It is the first theory to consider a code other than the verbal one in text processing. The authors of this theory propose a convergence of two interconnected representational codes: the verbal and the non-verbal. Concerning the verbal code, it brings together all the linguistic aspects of letters, words and sentences, while the non-verbal code includes all the sensory non-linguistic elements (auditory, visual, tactile and olfactory).

These two codes imply two basic units for their processing: logogens and imagens. Logogens are basic units for the verbal system that are adopted from Morton’s conception of logogens (1979). These units correspond to the processing of phonemes, words and sentences. Regarding the imagens, they are basic units for the non-verbal system that correspond to a mental image of the stimulus. As an example, the word cup can simultaneously activate different information about the object of the cup such as the aroma of the coffee, the tactile sensation associated with its hot temperature or the emotional experience when someone is reading while drinking a coffee on a rainy night. Although dual code theory offers the first theoretical cognitive approach to multimodality, it is insufficient to account for other codes in the text different than the verbal and the non-verbal one.

Cognitive theory of multimedia learning (Mayer, 2005)

With a central emphasis on didactics, Mayer’s cognitive theory of multimedia learning (2005, 2009, 2011, 2014) sustains that people learn deeply from words and images rather than just from words. The theory aims to improve student learning by involving instruction based on words and images. To achieve this goal, the theory is based on three major assumptions:
A) The dual channel assumption: This assumption is shared by the theory and the work of Sadoski and Paivio (2004), and argues that text processing requires a confluence of at least two codes: verbal and non-verbal.

B) The assumption of limited capacity: The theory assumes a limited capacity of the amount of information that can be processed in each channel. For this reason, the combination between more than one code contributes to speeding the processing, since a possible cognitive overload in a single code or a channel could occur.

C) The assumption of active processing and learning: This assumption presupposes that information processing is based on complementary cognitive sub-processes: 1) selecting relevant words and images for processing in short-term memory; 2) organizing these words and images in the sense of establishing connections between the words to build a coherent verbal model in short-term memory and establish relationships between the images that result in a pictorial model; 3) integrating these previously built verbal and pictorial models and linking them to prior knowledge.

The theory rests on two codes such is the case with dual code theory, but it goes beyond the second one by proposing that these two codes are integrated. Finally, the theory does not explain how this integration occurs and this is one of its main limitations.

The integrated text and image comprehension model (Schnotz, 2002, 2005)

The model draws on the earlier assumptions of dual code theory and multimedia learning theory but goes beyond the word level of these two theories and focuses on the text. The architecture of this model is based on multiple memory systems based on sensory registers in short and long-term memory (Schnotz & Bannert, 2003). The text is processed in the sensory registers depending on whether it is oral or written. It is then transferred to the working memory to undergo two types of processing according to the sensory mode of input: the descriptive and the depictive. The descriptive is associated with the processing of words, propositions and verbs in oral or written texts; conversely, the depictive is in charge of processing images or any iconic signs.
In opposition to the previous postulates, this model affirms that the combination between words and images does not necessarily improve learning, since it divides attention between both elements (Schnotz, 2002). This division implies a high cognitive demand that is produced by the constant discontinuity in the processing between image and word. Also, it can produce redundancy, especially if the content of the image is the same as one used in the text.

Multimodality in social-semiotic approach

Previous literature in multimodality went against the premise of the predominance of the verbal semiotic system in texts (Jewitt, Kress, Ogborn & Tsatsarelis, 2001; Jewitt, 2011; Rowsell, Kress, Pahl & Street, 2013). Currently, multimodal curriculum and textbooks design could be considered as a main element for effective teaching technique. Classroom is considered as a space of learning whereas literacy is based in a diversity of multimodal supports and “students are viewed as active meaning-makers who act from their interests in a specific situation and to their situated use of semiotic resources” (Höglund, 2017, p. 91). Moreover, multimodal approach is becoming fundamental in communicating meaning to others in language teaching and academic disciplinary education settings (Boudon & Parodi, 2014; Magnusson & Godhe, 2019).

In this regard, the social-semiotic approach has investigated still and moving images in video composition and how combining multimodal artifacts could represent knowledge and a certain domain of specific disciplines (Hodge & Kress, 1988; van Leeuwen, 2004; Bezemer & Kress, 2010). According to this approach meaning is socially shaped in modes that could cover any “matter for community and its social-representational needs” (Kress, 2010, p. 87). For this reason, a mode could be “image, writing, layout, music, gesture, speech, moving image, soundtrack and 3D objects” (Kress, 2010, p. 79). According to Jewitt (2008), gaze and body posture also could be considered as modes.

Academic textbooks might combine at least five modes to communicate curricular knowledge such as “image, writing, layout, color and typography” (Bezemer & Kress, 2010, p. 14). Image is based on a combination of semiotic resources like background, size, color, and shape. Writing, for instance, is centered in syntactics, grammar and
lexical items that compose phrases. The layout refers to the position of the image and how it gives different value to the information, while typographical resources cover type and size of font (Kress & Van Leeuwen, 2002, 2006).

Morell (2015) has used the social-semiotic frame to analyze oral presentations in academic context in English L2 classes. Her research explains how the presenter communicates to the audience a content based on verbal and non-verbal modes. In her study, verbal mode included all linguistic and paralinguistic features, while non-verbal discussed, all kinesic and proximity features such as eye contact, body language, facial expression and distance between speaker and audience. Morell and Pastor Cesteros (2018) applied the same approach in Spanish L2 oral presentation, and their main findings confirm that linguistic competence is not determinant for communicative effectiveness as long as multimodality is used during the presentation. Also, they highlighted the need for training students to academic presentation in second language, especially for the non-verbal communication skills.

Considerations on multimodality from the communicability theory (Parodi, 2011, 2014)

Schnotz’s integrated text and image comprehension model (2002, 2005), Sadoski and Paivio’s two dual code theories (2001, 2004), and Mayer’s multimedia learning (2005, 2009, 2011, 2014) have their contribution in being the first to study text as a multimodal construct. Furthermore, the proposals highlight the importance of image both in learning and in designing school materials. Like these multimodal works, the communicability theory (Parodi, 2011, 2014) manages to overcome the logocentric vision focused on the verbal semiotic system (Parodi & Julio, 2016, 2017).

However, the communicability theory (Parodi, 2011, 2014) underlines the multisemiotic aspect of the texts and extends the postulates of these works, since they offer general categories. These are insufficient, as they do not allow to label every multisemiotic element below them, e.g., numbers do not belong to words nor images. Also, the verbal channel that these works consider is very general and does not take into account aspects such as color, type and size of letter, among other aspects.
Texts for the communicability theory are multisemiotic, that is, they complement more than one semiotic system as briefly mentioned in Table 1. According to Parodi (2010), those systems are at least four: the verbal (it is composed of words or phrases and sentences); the typographic (color of letters, italics, capital letters, lower case and bold), the mathematical (Latin and Greek characters, numbers and punctuation marks), and the graphic (diagrams, figure, images and tables). In this sense, the texts are not only limited to the verbal content, but they also contemplate, according to Parodi (2011), “other types of graphic-visual and mathematical representations” (p. 152).

<table>
<thead>
<tr>
<th>Table 1</th>
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<tr>
<td><strong>A brief of multimodal systems according to Parodi (2010)</strong></td>
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<tr>
<td>1. Verbal semiotic system</td>
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<tr>
<td>2. Mathematical semiotic system</td>
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<tr>
<td>3. Typographic semiotic system</td>
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<tr>
<td>4. Graphic semiotic system</td>
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</table>

Source: Produced by the author.

For this reason, this paper considers that the communicability theory (Parodi, 2011, 2014) offers a comprehensive and complete view of the multisemiotic aspects and the role they have in the text. This theoretical frame offers a clear taxonomy of which artifacts could be considered as multimodal and why. In addition to the fact that in the academic world content is integrated from a multimodal text, or even multiple multisemiotic documents, which emphasizes the relevance of these elements for the understanding of the learning-teaching material (Sweis et al., 2020).

**Methodology**

**Design**

In this investigation a phenomenological approach has been applied using qualitative a case study with an exploratory and descriptive sco-
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pe (Merriam, 1998; Meyer, 2001; Marshall & Rossman, 2014). In this context, data analyzes in depth students’ use of multimodal artifacts in their PowerPoint presentation to explain what they understood from texts in an assigned reading task. The phenomenological framework allows to describe the phenomena from diverse sources and perspectives (Moustakas, 1994; Groenewald, 2004). At the same time, it reveals the rich and authentic details behind PowerPoint design in Spanish as L2 presentations which is an issue scarcely investigated. Its exploratory character is due to the lack of previous literature in the study of multimodality in Spanish as a second language, especially in the discipline of literature. On the other hand, its descriptive character is due to the need of offering details about the PowerPoints design.

Participants
Fourteen US students of 18 to 22 years old males and females attending a fall semester exchange program in Chile specialized in Spanish Literature B2-C1 proficiency levels. Students presented proficiency certificates to prove their domain of the language and participated after signing an informed consent to ensure their approval of all the investigation’s terms and conditions (Nijhawan et al., 2013). This language proficiency level has been preferred to avoid any possible linguistic or grammatical issues related to lower levels during the performance in the oral presentation.

Sample
Non-probabilistic sampling consisting of fourteen PowerPoint presentations held during the first semester in 2019 in a student mobility program belonging to a Chilean university. All oral presentations have been held in Spanish language and then translated for the purpose of this academic research.

Procedure
Multimodal semiotic systems have been classified by the Multimodal Element Analysis Instrument (MEAI), which has been developed based on Parodi’s (2010) taxonomy of multisemiotic systems (see Appendix 1). The IAEM aims to facilitate a systematic analysis of the multimodal elements detected in the PowerPoint presentations. The instrument has been va-
lidated to assure its use applicability in this Spanish L2 teaching setting. For its validation, a pilot testing has been held with 12 postgraduate students in Linguistics and an expert judgement with six academics specialized in written text comprehension and second languages teaching. The agreement between the evaluators according to the Miles and Huberman (1994) equation is 90 % and 0.90 in the Kappa index (Cohen, 1960). Additionally, presentations have been observed, audio recorded for its later analysis. After transcribing the fourteen sessions a content analysis has been held using the Nvivo 12 tool (QSR, 2018). Direct citations from the presenters quotes during their performance have been selected to get a full detailed record for the analysis (Maxwell, 2012).

Results

As shown in Table 2, the frequency is indicated in relation to the number of the slides where the multimodal system has been detected. In this context results confirm that there is a predominance of verbal and typographic systems in the PowerPoint presentations. The reason behind this predominance is the usage of the verbal system to offer a brief biographical note about the author of the short story, a summary of events, a critical literary analysis and comprehension questions for discussion. Mathematical system was mainly used for dates and typographic for bold or uppercase words that points to direct citations. Lastly, the graphic system was associated with images, maps, comics, and timeline where images were the most frequent (121), while maps (2), comics (1) and timeline (1) were less used.

Table 2

<table>
<thead>
<tr>
<th>Multimodal systems distribution in literature PowerPoint</th>
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<tbody>
<tr>
<td>Multimodal semiotic systems in the PowerPoint presentations</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Verbal</td>
</tr>
<tr>
<td>Mathematical</td>
</tr>
<tr>
<td>Typographic</td>
</tr>
<tr>
<td>Graphic</td>
</tr>
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</table>

Source: Prepared by the author.

Then, the predominance of the verbal system means that students are strategically combining it with images to be able to explain clearly
to their colleagues the content of the text. That is why the majority of the slideshows had verbal content, while images were only considered when students consider it necessary. Consequently, the use of the graphic system fulfilled considerably diverse functions that helped in explaining the short story and achieving the presentation’s goal. The first of these functions is announcing the main idea of the story as shown in Slide 1, where the verbal system complements the image used. This combination introduces the major conflict behind the short story, which is polygamy and how it leads to envy, jealousy and even murdering someone. During classroom observation, the presenter number 1 clarified that:

Not all of us know exactly what this word means, but I think that the image is explaining everything. Two women are fighting for one man. Everything is clear now. Polygamy happens when a man is in a relationship with two women at the same time. Maybe that was the reason they were fighting the whole time as we all read in the text. (P1. CC. 94, Presenter)

Slide 1
Association between words and image

On the other hand, Slide 2 offers a visual representation of every and each word in the poem: The foal, the taurus, the tiger, the flour and the storm. This visual connection between the linguistic code and the images makes it easier for the audience to understand the poem, even if they do
not know all the words, because it offers a synonym. In this context, presenter number 2 mentioned during the class discussion the following:

As you see the short story is so dramatic and a poem is presented in between the story which could make comprehension a little bit difficult. That is the reason why I decided to use this visual support because I was not sure if you know all those words or not. Specially all those animals, but here there is picture to present each word of the poem. (P2.CC. 25, Presenter)

Slide 2
The usage of the image as synonym

Images could display a metaphorical representation of key vocabulary to describe spaces and states. The visual representation in Slide 3 describes a circular shaped space. The image in the slide mentions information about a circular temple or amphitheater where some of the events of the story took place. To explain this presenter number 3 stated that:

In this case, as we see the place is inside the head of this person and its amphitheater that has diverse men thinking all over the place where this person dreams. I think it also could represent trauma or a person that has internal struggles. He wants to make up a real man in his own dreams and in the first dream of those repetitive ones he mentions that he was searching for a soul that is worth being part of the universe or perhaps he was referring to the dream again. (P2. CC. 34, Presenter)
Meanwhile, the Slide 4 refers to repeated patterns in the story that are visually replaced with a closed circle in between the two hands as the same presenter explained during her intervention:

Like in this circle the protagonist was fighting the repetitive dreams each and every day. Perhaps repeated patterns were due to spirituality and that is why one dream was leading to the other one. (P3. CC. 56, Presenter)

Source: prepared by the presenter.
As seen in Slide 5, physical condition could as well point to a current estate of a person. The image describes the meaning of the word suffocated man and the possible feeling of asphyxia and fatigue that he might be experiencing after being drowned in the sea and thrown on the shore.

Slide 5
*Image as a metaphorical representation of state*

Source: prepared by the presenter.

On the other hand, Slide 6 shows a different function of the image, where it establishes a relation between the short story and the movie. It discusses the similarities and differences between both in using the magic realism genre to weave fantasy in literature:

I think all of you have seen this movie before. It has too many elements in common with the story. At least the use of magic realism. Here fantasy is everything. (P5.CC. 12, Presenter)
Slide 6
*Image as a link between short story and movie*

![Image of "Otro ejemplo: El laberinto del fauno (2006)"]

Source: prepared by the presenter.

Slide 7 makes a totally different use of the images to narrate a sequence of events, where third-party relationship and infidelity led the protagonists of the story to divorce, which is the only written word that this slide includes. In this sense, presenter number 4 indicated the following:

> As we see here the story began with marriage where it was meant to be happy ever after and then third party and then they got separated and kids had to be divided between the both of them. (P6. CC. 84, Presenter)

Slide 7
*Image as a visual sequence*

![Image of a visual sequence showing a family and divorce information]

Source: prepared by the presenter.
Slides such as 8, 9, 10, 11 and 12 utilize images to describe the protagonists of the short stories, their character, and their physical aspects. In Slide 6 mechanism is manifested in the figures of Leonel and his wife, who are caricatured in superman and a woman doing all the housekeeping tasks. To explain this, presenter number 5 mentioned that:

There is a reason why Macarena was never happy about this life that she was obligated to live. She had to do everything at the house, take care of the kids and this was not fair for her. Her macho man Leonel obligated her to do so and moreover he never cared about her feelings or any details like anniversary or vacation. That is why she was not happy because she was as intelligent as him, but never received an equal treatment. (P9. CC. 90, Presenter)

Slide 8
*Image as a representation of personal characters*

Physical description of the persons is represented in Slide 9 and 10. In Slide 9, Bettina is represented as a beautiful woman in her mid-thirties and Lecaros as a tall man and big fan of wild animals that end up attacked by them. Presenter number 6 said about Bettina and Lecaros the following:

He was a tall and handsome man, but he was a disaster when it came how he dealt with his wife who was in her mid-thirties so pretty but so miserable beside him because all he cared for was how to hunt animals. (P8. CC. 49, Presenter)
The same applies to Slide 10, that shows Juan Carlos Osorio as a fat short person, whose image helped the presenter number 7 to recall old memories about himself:

Well, actually guatón means a little fat boy, but Carlos raised with this nickname, and this caused him a lot of insecurity issues. I had a similar experience when I was young, sometimes raising with a silly nickname could determine your whole life especially if people later
do not have good intentions behind how they will use this nickna-
me. You know what I mean. (P8. CC. 74, Presenter)

While Slide 11 express key facts about the protagonist’s professions
as mentioned by the presenter number 8:

Macarena was from the high social class all she cares about is mo-
ney, Leonel is human rights activist, Elenita as a cool successful wo-
man that makes Macarena feel jealous and Carolina as journalist.
(P12. CC. 90, Presenter)

Slide 11
Image as a representation of profession

On the other hand, Slide 12 illustrates the priest, the poet, the body-
guards and the widow as the central characters of the short story. Pre-
senter number 9 commented that:

Here we have four main persons, the priest who is the one who
always advises the rest, the poet, the bodyguard and the widow that
will change everything in this short story and later on we will see
why. (P10. CC. 19, Presenter)
Finally, PowerPoint slides were used to introduce the author’s life and to what extent it was related to his or her literary production, as stated by students. For this motive, contextualizing the life of the author was very important and examples can be seen in Slide 13 and 14:

As we discussed in previous sessions the life of the author many times determines how their literary work will be. It’s related because authors with sad life usually write about misery and grief, but authors with a happy or good economic life normally talk about positive things. Here we have a hint about the life of Elizabeth Subercaseaux. As we can notice from her last name, she had a foreigner one that determined her for lifetime because people never considered her Chilean, and this is what she was trying to prove wrong in her short stories. (P11. CC. 7, Presenter)
The lack of previous information about one of the authors even made presenter number 10 get worried as the student consider it essential part of the presentation as clarified by her:

I tried to search for more information about Carlos Cedra, but I did not find a lot of information, and this really made me worry because as you know we should get a conclusion about his work by thinking
how his previous life was. But seeing the image I can tell that he was involved in politics and he was a distinguished writer because many websites refer to his style. (P9. CC. 7, Presenter)

Discussion and conclusions

Communicability theory and the social-semiotic approach both consider academic text as a multimodal based meaning construct. Both theoretical frames cover the verbal and the non-verbal elements in the text, except that the conception of modes of the social-semiotic frame is quite general. Any category of analysis could be considered as mode which makes this concept very subjective and changeable according to the research question (Jewitt, Bezemer & O’Halloran, 2016; Höglund, 2017; Smith, 2019; Liang, 2019).

Therefore, while Morell and Pastor Cesteros (2018) consider modes like body language, linguistic, paralinguistic features and proximity, Liang (2019) focuses on the tone of voice and pauses during story telling in the oral presentation. Moreover, a mode such as the laid out is not clearly explained by this framework and to what extent it affects texts processing. The main premise is that the different image position should produce a different effect in visualizing the text (Kress, 2010). Though there is no precise explanation about why it is different or what is the best position for text visualization.

At the same time, the study of gestures as part of multimodal performance during presentation is quite challenging. For example, in this investigation students refused that sessions would be videotaped and only accepted audio recording, because they were shy and felt uncomfortable about it. This means that the study of gestures might be inapplicable sometimes. Plus, there is no way to prove that getting emotional during the presentation is related to the slide’s content. Finally, there is a need of an observation class scheme to detect and systematize the interaction with multimodal texts. This is noticed in Morell (2020) whereas greeting, eliciting information, negotiating meaning and all other interaction categories are grouped in interpersonal pedagogical function with no distinction.

In relation to the communicability theory, it allows a systematic count of multimodal artifacts and how it complements the verbal se-
miotic system. This helps to get conclusions about which system is predominant and how this affects the meaning construction of the PowerPoint presentation as a meaning delivery tool. In this context, the use of multimodality could compensate for the lack of vocabulary while describing protagonists, personalities, places, or scenes. However, this theoretical frame does not take into account aspects like moving images, audio support, gestures or classifying the metaphor as a distinguishing element of the literary text. In other words, this theory offers fixed classification of multimodal systems that do not include characteristic features of specialized texts such as metaphor in literature.

As well as previous empirical evidence, the findings of this study suggest a predominance of verbal semiotic system (Parodi & Julio, 2015; Lirola & Simón, 2018; Julio, Parodi & Loureda, 2019). Although, in this case this predominance was beneficial, because it helped students to discuss the main points of the short story and ask comprehension questions that enabled their colleagues to share their ideas and activate their previous knowledge. Nevertheless, the limited possibility to get access to more oral presentations, such as in Morell and Pastor Cesteros (2018), makes it recommendable or perhaps necessary implement future studies to corroborate if the predominance of verbal system is useful for PowerPoint design in literature or not. Also, it remains a pending challenge to implement future research on the multimodal design of PowerPoint in other disciplines and inform about similarities or differences.

References


### Appendix 1

**Semiotic system**

#### Verbal system

<table>
<thead>
<tr>
<th>Slide</th>
<th>Words</th>
<th>Phrases</th>
<th>Sentences</th>
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<td>Slide 1</td>
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<td>Slide 2</td>
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<td>Slide 3</td>
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<td>✓</td>
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**Semiotic system**

#### Mathematical

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<th>Operators</th>
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**Semiotic system**

#### Typographic

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**Semiotic system**

#### Graphic

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<th>Images</th>
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