The Teaching of Visual Literacy in Initial English Language Teacher Education

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Declaration

I certify that this thesis is my original work towards the Degree of Master of Arts. To the best of my knowledge, due reference has been made to all information source and literature used in this thesis, as well as to any material previously published or written by another person. This thesis does not incorporate any material previously submitted for another degree.

Signature

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Date

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We must teach communication comprehensively in all its forms. We live and work in a visually sophisticated world, so we must be sophisticated in using all the forms of communication, not just the written word.

George Lucas

Abstract

The pressure on teacher education to prepare student teachers to bridge the gap between the traditional literacy and multiliteracies/multimodality has intensified in the last years. Student teachers need to acquire richer and more complex learning experiences, they need to be aware that language is not the only or, sometimes, the predominant mode of communication (Early, Kendrick & Potts, 2015). Thus, this study attempts to integrate the teaching of visual literacy within an Initial English Language Teacher Education (IELTE) programme to help expand student teachers communicative potential in the foreign language classroom. Currently, student teachers´ literacy instruction favors the interpretation of the verbal mode; however, to promote literacy skills in this century, literacy programmes should promote the reading and the understanding of meaning making signs of both the verbal and visual mode and their relationship with the structural components of a narrative text (Painter, 2012). In the Argentinian context, there are studies that explore the teaching of visual literacy to student teachers´ but none of the works focuses on the teaching of visual literacy within an IELTE programme. This study will explore how the explicit teaching of visual literacy can enhance student-teachers´ communication skills in the second language. This case study involves twelve student teachers from the third year of an IELTE programme, a teacher observer and the researcher herself. To triangulate data, different data collecting tools were employed: a) pretest and posttest; b) classroom observation; c) document analysis, and d) interviews to students. The analysis of the data was of an interpretative nature supported by statistical data. Research findings, pedagogical implications and suggestions for further research are presented in the last chapters.

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Finally, I want to thank my family and friends for their emotional support over the years.

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Abbreviations/ Acronyms	Meaning
SFL	Systemic Functional Linguistics
LDC	Literacy Development Cycle
IELTE	Initial English Language Teacher Education
ST	Student teacher

CHAPTER 1

INTRODUCTION

1.1   Introduction

Multimodal texts have always been part of the communication landscape; however, in recent years, there has been a marked shift in the use of the semiotic resources employed to build a message. In the past, the verbal language was favoured over the visual one, and images tended to be downgraded to the margins as mere illustrations of the ideas expressed in written form (Kress, 2009). Currently, the pictorial language enjoys as much if not more, prestige as the verbal language. Nevertheless, one of the main challenges that education faces today is its staggering ability to keep up with the changes in text production and consumption as, in most educational institutions, the teaching of literacy remains narrowly focused on the verbal mode. Thus, visual literacy is virtually nonexistent in most literacy programmes (Roswell et al., 2013; Siegle, 2012). This fact is truly alarming if one considers that the production and consumption of multimodal texts has rapidly increased in our societies, and education would not be providing citizens with the tools to participate democratically in a visually saturated environment.

Some countries across the globe, such as Australia and England, have started to acknowledge the importance of teaching how to code and decode the visual mode. These countries have delineated educational standards in which they have specified the skills and information that learners need to acquire to be considered visually literate (Walsh, 2017). In the same vein, in the field of foreign language learning, the European Union has equated the skill of viewing with the four traditional macroskills. The Common European Framework of References for Languages has launched a companion volume in which there are new descriptors that specifically refer to the skill of viewing (Council of Europe, 2018). The integration of this skill is necessary to equip students with tools necessary to fully understand multimodal texts. Even when the exposure to these texts is quite frequent in the Argentinian society, within the country´s educational system, schools still tend to promote the teaching of literacy through texts that rely solely on the

interpretation of meaning making resources particular to the verbal mode. Undoubtedly, there is a gap between those texts which students encounter in their everyday life and the ones they use as study material at schools (Serafini, 2012). Thus, it seems necessary to understand that language is not the only or, sometimes, the predominant mode of communication (Early, Kendrick & Potts, 2015). Within this context, the integration of visual literacy in the Argentinian educational system becomes an urgent need to help expand students´ communicative potential in the foreign language and empower them as members of a democratic society.

At present, foreign language learners are faced with the challenge of understanding how to read and produce multimodal messages (Royce 2002, 2007) that would, in turn, promote students´ communicative proficiency in the foreign language. To this end, language learners need to understand what a multimodal text is and what its constitutive elements are. Traditionally, literacy programmes invest time, effort and resources in the explicit teaching of verbal linguistic resources. However, to aid the interpretation and production of multimodal texts, it is necessary to boost language learners´ perception of how visual resources work in any given text. This understanding is important as multimodal compositions rely on the synergy created between the verbal and the visual mode to convey meaning

In order to stimulate the teaching of literacy that promotes the decodification of both the verbal and the visual mode, teachers need to start receiving instruction on visual literacy as their training is often associated with literacy programmes which have favored the reading of the verbal mode over the interpretation of images. It is possible, then, to assume that foreign language teachers are not well versed in visual literacy, as it has not received the attention it deserves (Early, Kendrick and Potts, 2015). Formal instruction on the reading of images should not be limited to a mere artistic description of an image but needs to promote the reading and the understanding of different semiotic resources pertaining to the verbal and visual modes, and their relationship with structural components of a narrative text (Painter, Martin & Unsworth, 2012).

To foster the appropriate teaching of visual literacy, it is necessary that teachers become knowledgeable about this topic in their formative years. This is the reason why the design of this research contemplated working with participants who were student teachers undergoing their regular training. It was expected that by providing them with tools to unpack visual texts, they would become informed readers who could interpret a

wide variety of semiotic resources. In this particular study, the focus was on student teachers´ capacity to interpret visual cues that can be read from the perspective of the interpersonal metafunction as defined by SFL; in other words, that they could interpret the communicative value established by the connection generated between a reader and the interpersonal visual features present in the text. The research was conducted within the framework of Halliday´s Systemic Functional Linguistics (SFL) and Kress and van Leeuwen´s (2006) visual grammar.

In the light of these theories, participants explored picture books to capture the "visual voice" (Walsh, 2006) crafted by means of non-verbal meaning making signs, and later analysed how the "visual voice" and the "textual voice" interact to convey an ulterior meaning to the reader. The results were interpreted in terms of how the teaching of visual literacy through a Literacy Development Cycle (LDC) contributed to providing student teachers with knowledge to unravel visual cues.

1.2   Statement of the problem

Literacy is a key component in the development of citizenship. Thus, it is important to acknowledge that in this century the concept of literacy has expanded to encompass the ability to decode resources from the written as well as the visual modes.

> Literacy programmes need to assist students to become text navigators who can decode written text and understand the elements of design, visual images and other multimodal elements in multimodal texts; text interpreters who can understand what has been written and depicted in multimodal texts; text designers who can decide how a particular multimodal text is to be read, in a particular time and place, according to the particular sociocultural context and the design, textual and visual elements within the text and finally text interrogators who can interrogate the meanings in a multimodal text beyond a literal reading/ viewing (de Silva Joyce & Feez, 2016, p.34).

In a similar vein, Kress and van Leeuwen (1996) claim that the teaching of visual literacy will become a matter of survival in today´s world. However, as Kress (2017 in Donaghy & Xerri, 2017) states, our tools and theories do not meet today´s requirements to decode the vast world of meaning where the nonlinguistic modes have become the focus of representational and communicational attention. Images are not exploited as multimodal compositions and visual literacy has received little attention within the

world of academia (Donaghy & Xerri, 2017). Thus, the integration of visual literacy in the school curricula becomes a social imperative since the teaching of visual grammar can provide citizens with tools to navigate, interpret and interrogate meaning making resources pertaining to the visual mode. The use of visual resources is a common practice in foreign language teaching, mainly when working with children as pictures help introduce, practice and recycle learning content and language skills. However, to the best of my knowledge, the systematic teaching of visual grammar is not part of any Initial English Language Teaching programme in Argentina since, as Karastathi (2016) states, there may exist an underlying assumption that the integration of imagery in a class is self-evident. However, Begoray (2003) voices the need to understand that, in today´s society, good teachers need to develop their own set of visual skills. It seems natural then to argue that visual literacy should become part of teaching training courses to empower student teachers to analyse, produce and evaluate multimodal texts (Papadopoulou, et al. 2019; Karatathi, 2016). Future teachers should be able to help their students "analyse the rhetorical techniques and meaning making mechanisms in operation in visual texts – that is, to make them active viewers" (Karastathi, 2016, para. 29) and ultimately help students acquire multimodal communicative competence (Royce, 2002).

1.3   Literature review

There are several research studies that explore the concept of visual literacy in the foreign language classroom (Requena, Liruso & Bollati, 2016; Liruso, Bollati & Requena, 2012; Painter, Martin & Unsworth, 2012; Moya Guijarro & Pinar Sanz, 2009). Some researchers focus their study on the multimodal resources they have found on coursebooks from the Systemic Functional Linguistics (SFL, henceforth) framework. Requena, Liruso and Bollati (2016) explored English coursebooks that are employed to teach children. This analysis follows the SFL perspective enmeshed with Kress and van Leeuwen´s (2006) visual grammar configuration. The images of the coursebooks were analysed taking into consideration the interpersonal metafunction. The researchers focused specifically on two categories: contact and point of view to gain a better understanding of the interaction between the visual content of a coursebook and its user. A total of 226 images were manually coded to configure the dialogic interaction between text and viewer, and to examine how visual resources can have an impact on the

development of communicative competence in the foreign language and students´ critical thinking skills. Through their work, these researchers were able to raise awareness of the importance of interpreting the potentiality of different multimodal devices that are present in these books to teach multiliteracies to L2 young learners. Besides, another important insight from this research is the emphasis they place on teachers´ training promoting visual literacy so that they can later maximize the communicative potential of coursebooks. Barceló (2015) also reinforces this idea when she explores the use of picture books in the L2 young learners´ class. Focusing on picture books, Painter, Martin and Unsworth (2012) explore the strategic use of pictures from the SFL approach and Kress and van Leeuwen (2006) examine images in the context of teaching English as a second language to young children. In this study, the authors analyse seventy three picture books in which there was a balanced occurrence of words and pictures so as to assess the semantic weight that pictures can have within the communicative process. The picture books chosen were selected considering that their target audience was children.

Apart from the studies that analyse potential classroom material, there is an important research work in which picture books are actually used to teach young learners. Unsworth and Bush (2010) carried out a research work in which they employed picture books in the context of teaching English to young learners in a primary school in Sydney, Australia. What is interesting about their work is that they designed a literacy development cycle (LDC) (*Figure 1*) to introduce visual literacy in a way that is compatible with the communicative language framework and with content and language integrated learning. The LDC introduces modelled, guided and independent practice in the process of understanding and producing multimodal texts in print and electronic formats.
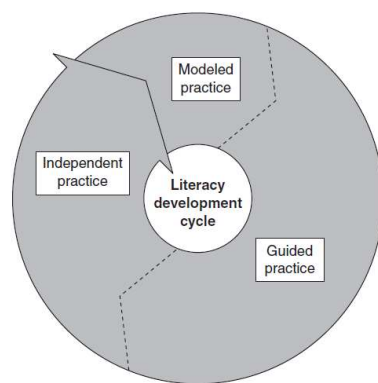
Figure 1. Literacy Development Cycle (Unsworth & Bush, 2010).

At an international rather than local level, there are studies related to student teachers´ training in visual literacy. Yi and Angay-Crowder (2015) state that teachers feel that they are not properly trained to integrate multimodal instruction into their teaching. To address this issue, these authors try different tasks to integrate visual literacy into a training programme targeted to teachers and future teachers of English as a foreign language in the United States.

In their paper, two pedagogical interventions are described. In the first one, teachers and future teachers had to translate the concepts learned in the course into multimodal texts. In a second intervention, the participants of the research expected to craft multimodal material to help learners of English as a second language to improve their multimodal literacy skills. Before both procedures took place, the participants received instruction on key concepts on multimodality, multimodal texts, and aspects of design related to multimodal activities. The authors faced some challenges during the implementation process of both interventions: a) epistemological challenges: decide what is considered knowledge and what is recognized as academic literacies; b) assessment issues: determine aspects and elements that should be assessed when evaluating multimodal projects; c) resistance to multimodal practices: some participants were unwilling to become involved in multimodal tasks as they did not consider the genre to be academic. Besides, some of them struggled to think and materialize ideas, while some others voiced certain concerns about their efficiency to implement multimodal literacies in their classes.

Yi and Angay – Crowder (2015) make some suggestions to guide future research or pedagogical interventions on this topic: a) reconceptualizing different aspects of multimodal practices so that teachers and future teachers understand that both monomodal and multimodal texts enjoy the same academic prestige; and b) reexamining our own beliefs about the status of mono and multimodal texts. The authors emphasize the importance of experimenting with different literacies in teaching programmes to promote a better understanding of the implications of designing and assessing multimodal texts. To that end, Painter et al. (2012) claim that educators should become familiar with the metalanguage necessary to design multimodal texts.

1.4   Significance of the study

Drawing from Kress and van Leeuwen´s (2006) framework of visual grammar, this research work focuses on the teaching of visual literacy to student teachers. The teaching of visual literacy paves the way for the analysis of nonlinguistic resources present in pictures books. In the LDC (Unsworth & Bush, 2010), student teachers move through different stages of modeled, guided and independent practice of the decodification of visual resources whose understanding can contribute to the process of communication in a second language. Although the steps described in the original LDC cycle remain the same: modelling, guided practice and independent practice to promote the analysis of print multimodal texts, the LDC is specifically adapted in this work to suit the requirements of the research. Finally, this adapted cycle is oriented towards the process of learning to read, *view*, an image. The analysis of picture books allows people to understand that verbal language is just one of the many resources through which meanings are (re)built, distributed and interpreted (Jewitt, 2008; Kress & van Leeuwen, 2001). Consequently, interpreting current multimodal texts is necessary to understand the myriad of semiotic resources that are singular to a community (Kress & van Leeuwen, 1996, 2006).

1.5   Purpose of the study

1.5.1   General Objetive

Explore in what ways the explicit teaching of visual literacy through the proposed adapted version of the LDC can contribute to the development of student teachers´ communicative skills in Initial English Language Teacher Education.

1.5.2 Specific objectives

- Explore student teachers´ knowledge about visual literacy: what meaning making resources they identify, what meanings they can interpret by observing an image, how they interrelate the meaning that can be abstracted from the verbal and visual modes to understand the communicative purpose of a text.

- Determine in what ways student teachers can gain a better understanding of multimodal texts after having concluded a series of literacy development cycles.

1.5.3 Research questions

The following questions will be guiding this research

a. In what ways can the explicit teaching of visual literacy contribute to the development of student teachers´ communicative skills in Initial English Language Teacher Education?
b. How can the adapted version of the LDC, as described in this research, promote the teaching of visual literacy and the understanding of the interpersonal metafunction?

1.6 Methodological assumptions

This research work is a case study framed within a qualitative approach. As defined by Stake (1995), a case study design allows the researcher to explore a process that is constrained by time and activity. In this case, the researcher gathered information by resorting to different data collection tools and procedures over a considerable period of time. This study´s conceptual framework takes into account the interpersonal metafunction (Halliday, 1978) grounded in Systemic Functional Linguistics. It also draws on the theoretical framework proposed by Kress and van Leeuwen (2006) who developed a grammar of visual design that guides the reading of images. The concepts from the theory are introduced and practiced at different stages of the LDC designed by Unsworth and Bush (2010), which was adapted to suit the needs of this study.

The examination of semiotic resources eases the understanding of how different modes intertwine within a text to bring out certain meanings. Mode is a concept that can be understood as a set of systematically organized resources that contribute to the production of meaning. It is important to understand that the decodification of the resources pertaining to one mode will lead to a partial reading of a text and a one-sided interpretation of the meaning of the text.

The systemic functional theory states that in every text there are three types of meaning that interact simultaneously to create the ultimate meaning of a text. The ideational metafunction deals with the representation of the content of a text; the interpersonal one (*Table 1*) points to the relationship between writer and reader and finally, the textual meaning refers to the coherent organization of a text in relation to the cotext and the context of a text by means of different relational resources.

In this paper, the unit of analysis will be the image. During the stages of modelled and guided practice, student teachers will be invited to analyse pictures in picture books based on Kress and van Leeuwen´s (2006) visual grammar and Painter et al.´s (2012) description of colour choices (*Table 2*). Painter et al. (ibid.) propose this colour classification to describe the settings where characters are depicted, which they name as ambience. However, this classification will be exploited to describe not only ambience but also the characters themselves. During the stage of independent practice, student teachers will be requested to work with a variety of multimodal texts, such as advertising pieces, leaflets as well as picture book images.

Metafunction	Aspects to be analysed	
Interpersonal Metafunction	*Social distance*	*Distance*
		Proximity
	Point of view	*Intimacy*
		Tension
		Powerful
		Powerlessness
	Contact	*Demand*
		Offer

Table 1. Interpersonal metafunction. (Adapted from Kress & van Leeuween 2006).

Colour Range Choice		
Colour	Vibrancy	Vibrant
		Muted
	Warmth	Warm colours
		Cool colours
	Familiarity	Familiar
		Removed

Table 2. Colour range choice. Adapted from Painter et al. (2012)

1.7 Overview of chapters

This dissertation comprises six chapters. In the first chapter, the research work is introduced by stating the purpose of the research, its research questions and its main objectives, as well as some methodological assumptions. The second chapter focuses on the theoretical framework that underlies this study. The third chapter offers a detailed recount of the context in which this study was carried out, the methodology employed to collect and analyse data, and steps taken to ensure validity and reliability. In chapter four, the results of this research are presented moving from statistical to interpretational analysis of the data gathered. Chapter five presents the discussion of the research findings and its limitations. Besides, some theoretical as well as pedagogical implications are proposed. Finally, chapter six introduces the conclusion of this work and the researcher´s personal reflection on the process of writing it.

CHAPTER 2

THEORETICAL BACKGROUND

The concept of literacy needs to be redefined taking into account that literacy is not just related to a single linguistic component but to the decodification of a myriad of verbal and nonverbal semiotic resources. Thus, the first section of this theoretical framework deals with the reconceptuatlization of literacy drawing from the frameworks of multiliteracies and multimodality. The second section addresses the concept of visual literacy, which is key to understanding the importance of interpreting pictorial resources. The third section introduces some basic concepts of the Systemic Functional Linguistics theory, focusing specifically on the interpersonal metafunction, which provides the reader with a reference framework to understand the visual cues that address the relationship between the text and the viewer. In this section, there will be specific reference to Kress and van Leeuwen´s (1996) visual grammar and Painter et al.´s (2012) system of ambience to explore how interpersonal meaning is enacted in visual images. The fourth section presents the adapted version of Unsworth and Bush´s (2010) Literacy Development Cycle employed in this study as a model to organize the instruction of visual literacy. Finally, the picture book as literature genre is discussed, together with the reasons that guided its selection for this research.

2.1. Literacy and multiliteracies

To pave the way to the understanding of the concept of multiliteracies, it is important to define first what literacy means. Traditionally, literacy was understood as a set of cognitive skills required to read and write a language in a print format at a certain level of proficiency (Serafini, 2014). In more recent times, this definition has been contended since being able to decode a print text is no longer enough to fully interpret the meaning of the messages embedded in our current 21st century culture. Changes in the way people communicate demand a new set of cognitive skills to interpret a variety of modes displayed in a myriad of formats that are produced within specific social

contexts. These transformations paved the way to the emergence of the notion of multiliteracies.

The term multiliteracies first emerged in 1996 when The New London Group drafted an agenda for a pedagogy of multiliteracies. This pedagogy is based on the multimodal nature of texts and their growing predominance in daily media and current sociocultural practices. As texts become more complex, more literacy skills are necessary to "navigate, interpret, design and analyse these texts" (*Table 3*) (Serafini, 2014, p. 40).

Essential Dimensions of Media Literacy Education	
1. Access	Finding and sharing relevant information through a variety of media.
2. *Analyse*	Using critical thinking to analyse message, purpose, target audience, quality, veracity, credibility, point of view, and potential consequences of media.
3. *Create*	Generating content with awareness of purpose, audience, and composition techniques.
4. *Reflect*	Considering the impact of media messages and technology tools upon thinking and actions in daily life, and applying social responsibility and ethical principles to our identity, communications and conduct.
5. *Act*	Sharing knowledge and solving problems in variety of social settings, and participating as a member in various organizations and institutions in such settings.

Table 3. Essential Dimensions of Media Literacy Education (Taken from Serafini, 2014, p. 41).

Within the perspective of sociocultural practices, Serafini (2014) states that being literate means "to be able to use the various modes of representation to make sense of

the world and convey meanings in particular social context for particular social purposes" (p.34). Multiliteracies can be thought of as a response to the new conceptualization of literacy and as "a redesign of a political and social theory for the redesign of the curriculum agenda" (Jewitt, 2008b, p. 245). Integrating multiliteracies in the state curricula will help teachers and students adopt active roles in their acquisition of literacy since this perspective provides them with a model to explore values, identity, power and design (Jewitt, 2008a).

The New London Group (1996) built a manifesto integrated by four main components: a) situated practice; b) overt instruction; c) critical framing; and d) transformed practice. The first constituent, *situated practice*, makes reference to the situation in which learners can enact different roles within their learning communities based on their shared and individual background and experiences. *Overt instruction* makes reference to the systematic graded interventions that instructors have designed to help learners gain knowledge about a specific topic and its corresponding metalanguage. In the third aspect, *critical framing*, involves students distancing themselves from their learning to be able to adopt a critical stance and, at the same time, to use what they have learned in new contexts. The last element, *transformed practice*, makes reference to students´ capacity to transfer, reformulate and redesign already existing texts, or generate new texts using the different meaning making signs learned in one context and use them in another (Angay-Crowder, Choi & Yi, 2013).

This theory considers that all forms of representation are embedded in a dynamic process of transformation, which means that text producers will use already existing semiotic resources and adapt them to generate new potential meanings. Thus, a pedagogy of muliliteracies trains text producers and consumers to exercise an empowered agent role since they can critically explore and generate different texts (Cope & Kalantiz, 2009). This newfound agentivity pressed the New London Group (1996) to replace the static concept of grammar by the term "design". According to the members of this group, the word "design" can be interpreted in two ways: a) it describes the intrinsic structure of morphology of a text; b) it refers to its construction. It is relevant to consider that each design choice is subjective and generates situated meanings.

To interpret all the potential meanings that a text can put forward, it is necessary to understand the different modes that have been employed in its design. Some of those modes are: written language, oral language, visual, audio, tactile, gestural and spatial representation. Each mode with its potentialities and affordances contributes to the generation of the ultimate meaning of the text. In this work, however, there will be explicit reference to the visual mode as the analysis of all modes would exceed the scope of this work.

2.2. Multimodality

Multimodality, as well as multiliteracies, emerged as a response to the current social and semiotic landscape. Focusing on the creation of meaning through the interaction of modes, Jewitt explains that "[m]ultimodality attends to meaning as it is made through the situated configurations across image, gesture, gaze, body posture, sound, music, speech and so on" (Jewitt, 2008 b, p. 246). Within the multimodal framework, all these elements constitute different modes "as organized sets of semiotic resources for making meaning" (p.246). As Serafini (2014) states, modes need to be conceived as cultural resources that enable the text producer to articulate, interpret and communicate concepts and information tied to social and ethical values. People draw from a variety of modes to convey a specific meaning within a certain socio-cultural context. Through the frequent selection of these meaning making resources, modes start to display certain patterns of regularity; however, it is important to bear in mind that new modes are regularly being created and old ones are being transformed as their users employ them to satisfy their changing communicative needs within their specific communities from a young age. Flewitt´s (2006), on her research work on multimodal communication in the preschool classroom, concludes that even children make intentional use of different semiotic modes.

The combination of linguistic and non-linguistic modes gives birth to a multimodal text (Kress & van Leeuwen, 1996). The use of a variety of modes enables the text producer to convey a multiplicity of meanings. One of the reasons why different modes are employed in a text is that one mode alone cannot convey the complexity of meaning of a unique concept. As each mode has its own specific affordances and its own limitations, all modes are partial. In print based multimodal ensembles, it is

possible to distinguish three mode categories: 1) textual elements: linguistic mode; 2) visual elements: non-linguistic mode; 3) design elements (Serafini, 2014).

Multimodality research has primarily drawn on Systemic Functional Linguistics and social semiotics. There are three coexisting perspectives that are employed to look into multimodality: social semiotics, multimodal discourse analysis and multimodal interaction analysis. Each point of view responds to different theoretical influences, understanding of social semiotics, emphasis on the context of production and reception of a multimodal message and the agency of the producer respectively.

In this work, the perspective adopted is built on social semiotics. As stated above, it is associated with the work of Kress and van Leeuwen (1996) since visual grammar is employed to analyse the meaning making resources of the pictorial compositions present in picture books. Social semiotics understands multimodal texts as complex signs to embody, articulate and interpret meanings. This view is interested in seeing how the context of communication, interest and needs of the text producers are embodied in resources that act as triggers of potential meanings within multimodal texts (Jewitt, 2009 in Serafini 2014).

2.3. Systemic Functional Linguistics: interpersonal meaning

Systemic Functional Linguistics will inform the analysis of the interpersonal meaning enacted in the visuals of the picture books employed to carry out this study. Thus, in this section, key concepts of SFL and their relevance to the study of visual texts will be addressed.

SFL views language as a semiotic system from which language users can select different linguistic resources that best help them convey certain intended meaning. Every instantiation of language use is seen as a text that has meaning potential to be unraveled by language users. As Painter et al (2012) state:

> For SF discourse analysis, any instance of meaning potential (i.e. any text) needs to be described in terms of what selections in meaning have been made against the background of what selections are available in the system and thus *could* have been made. (p. 9)

Thus, within the SFL framework, there is a dual focus (Painter et al, 2012) on the study of meaning: a) the meaning potential of the semiotic, and b) the actual pathway chosen to formulate a particular instance or text.

Texts are both crafted and interpreted within a context of situation (Halliday & Hasan, 1976) in which SFL identifies three contextual dimensions that influence the selection of linguistic resources: field, tenor and mode (*Table 4*).

Context of Situation	
Field	Social context including the subject matter.
Tenor	Temporary and permanent social roles and role relationships of participants including power and solidarity.
Mode	Medium and channel that language employs to transmit a message.

Table 4. Context of situation and dimensions (Halliday,1994).

Each contextual dimension is enacted by linguistic choices that 'realize' different types of meaning or metafunctions. (*Table 5*).

Contextual Dimensions		Metafunctions
Field		*Ideational:* makes reference to the content, to the world of experience construed in the text.
Tenor		*Interpersonal:* points to the relationship between writer and reader.
Mode		*Textual:* refers to how a text is organized in a coherent way in relation to the cotext and the context of a text by means of different relational resources.

Table 5. Metafunctions (Halliday & Matthiessen, 2004).

The relationship between context and meaning is commonly referred to as realization. This is a two-way relationship in which the discourse situation influences linguistic choices made in the construction of meaning and, in turn, linguistic realizations can influence the discourse situation. This relationship is expressed by the double-headed arrow in *Table 5*.

Strengthening its sociological focus, SFL draws from Bernstein (1996), the notion of code or coding orientation to describe people´s social positioning from which meanings will be encoded and perceived within a specific linguistic context. Both linguistic and visual semiotic resources are employed to construe interpersonal meanings in social contexts. In this work, the focus is on a close reading of visual elements considering the interpersonal meaning potential.

The study explores how feelings, emotions and associated value judgements are realized through visual elements. When children start their path towards literacy, they initiate their interaction mainly with picture books. At first, children are unable to decode the linguistic resources; thus, their attention focuses on the pictures which "are the most significant means for setting up an affective relationship" (Painter et al., 2012, p. 15). This emotional "tone" is depicted in the characters through their body language but it can also be conveyed through the use of colours employed to depict a character. The visual grammar proposed by Kress & van Leuwen (2006) link such aspects to the interpersonal MF, which refers to "a variety of semiotic resources and modalities that are used to establish relationships between the producer (artist and writer) and the consumer (reader and viewer)" (Serafini, 2014, p. 60). In picture books, which tend to be narrative texts, it is important to analyse the interpersonal relationship between reader and writer/ illustrator and between reader and the narrative characters. Kress and van Leeuwen´s (1996) framework will be employed to analyse this latter relationship by exploring the potential meanings that are realized through different meaning making signs and to analyse their enactment in visual grammar (Da Silva & Feez, 2016, p.75). To carry out this analysis, Kress and van Leuwen (1996) developed visual meaning making systems: a) social distance, b) point of view, and c) contact (*Table 6*).

Metafunction	Aspects to be analysed	
Interpersonal Metafunction	*Social distance*	*Distance*
		Proximity
	Point of view	*Intimacy*
		Tension
		Powerful
		Powerlessness
	Contact	*Demand*
		Offer

Table 6. Interpersonal metafunction**.** Adapted from Kress & van Leeuween (2006).

Social distance is enacted through the selection of frame: close up, mid shot or long shot. The closer the shot, the more intimate the relationship portrayed (proximity) (*Figure 2*). Long shots are preferred to generate an idea of distance. These two images taken from Browne´s picture book, *Into the Forest* (2004), illustrate how these meanings are enacted through shot choices. In *picture 1*, it is only possible to see the head and shoulders of a character; thus, a sense of intimacy is created. By contrast, in *picture 2*, the reader is placed in a more distant position to contemplate the significant moment that two characters are experiencing. Finally, *picture 3* is taken from the picture book, *Voices in the Park* (1998), in which an arrogant woman from the upper social class is being introduced. The use of the long shot generates the highest degree of public social distance.

Picture 1. Frame: close shot; Proximity (Browne, 2004).

Picture 2. Frame: mid shot; Distance (Browne, 2004).

Picture 3. Frame: long shot; Distance (Browne, 1998).

Figure 2. Social Distance

Point of view is conveyed through the use of perspective, which forces the reader to perceive a character from a particular angle (*Figure 3*). A horizontal angle helps to establish a relationship of intimacy or tension. Intimacy is created when the characters are depicted facing the reader directly. On the contrary, tension arises when characters are depicted in an oblique angle. In the picture book, *Piggybook* (Browne, 1986), the male members of the Piggot family are first depicted facing the readers (*Picture 4*). At this moment of the story, they are being introduced to the reader so this perspective helps to convey a sense of intimacy. However, as the story progresses, these characters face some difficulty and they are presented by means of an oblique angle *(Picture 5)*; thus, the reader can perceive the sense of tension that the characters manifest.
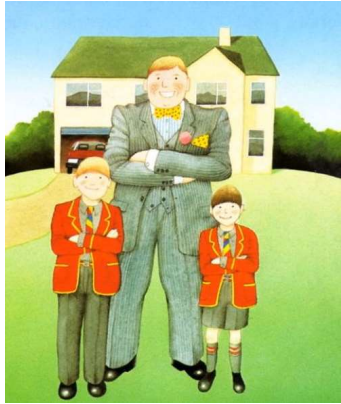
Picture 4. Horizontal angle: Intimacy (Browne, 1986).

Picture 5. Oblique angle: Tension (Browne, 1986).

Figure 3. Point of view – Horizontal Angle.

The analysis of the vertical angle sheds some light on the realization of power (*Figure 4*). If the viewer is invited to look up to a character, that character enjoys a position of power; meanwhile, if the viewer has to look down on a character, this one is portrayed as weak or vulnerable. *Picture 6* is taken from the picture book, *Zoo* (Browne, 1992). In this picture, the character, a father, is depicted from a high angle to help convey his position of authority and power. In *picture 7*, from the book *Piggybook* (Browne, 1986), the viewer sees three male characters that have metamorphosed into pigs due to the absence of the mother of the family and their inability to perform household chores. In this picture, the mother has decided to return to the family house and the male members of the family are begging her to stay. Thus, the choice of representation in a low angle succeeds in projecting the characters´ feelings of powerlessness.
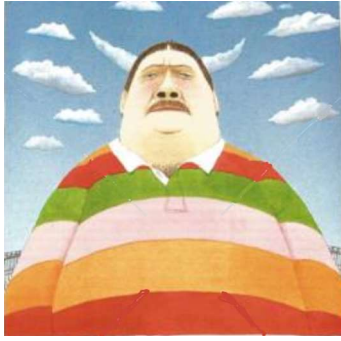
Image 6. Vertical angle: Power (Browne, 1992).
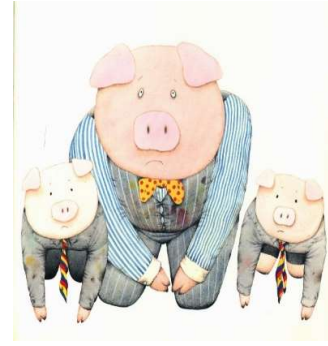
Image 7. Vertical angle: Powerlessness (Browne, 1986).

Figure 4. Point of view: Vertical Angle

The system of *contact* is enacted through the characters´ gaze at the viewer (*Figure 5*). On the one hand, when the characters look at one another, an object in the image or away from the viewer, the relationship developed between the viewer and the image is known as an *offer*. The role created for the viewer is the one of an outsider observing either actions being depicted or thoughts to be considered. The viewer is left with the role of a passive participant. On the other one hand, when the character directly addresses the viewer, the relationship between the character and the viewer is one of a *demand*. By looking directly at the viewer, the character demands a reaction from the viewer; thus, the viewer is assigned a more active role as a consequence of the intimate interaction that is triggered by this direct gaze. *Little Beauty* (Browne, 2008) is the story of a gorilla who wants a friend. In *picture 8*, the gorilla is gazing at the reader directly demanding their attention. At this moment of the story, the gorilla is putting forward a request to be provided with a friend so the readers´ attention is crucial. By contrast, in *picture 9*, the gorilla has made a friend, a small cat. In this case, the gaze of the gorilla is directed towards the cat; thus, he "offers" the reader the possibility to view his friend.
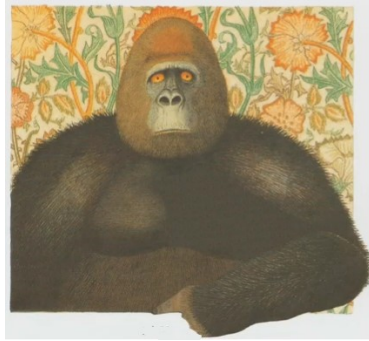
Picture 8. Contact: gaze - Demand
(Browne, 2008).

Picture 9. Contact: gaze - Offer
(Browne, 2008).

Figure 5. Contact

Colour (*Table 7*) is another semiotic resource that can be used to serve the interpersonal metafunction. Colour choice becomes significant as it may have an emotional effect on the viewer. Painter et al. (2012) put forward the system of ambience (setting) to analyse the use of colour in picture books. These authors proposed the system especially with students and educators in mindfocuses especially on three aspects: a) vibrancy; b) warmth; and c) familiarity. The same categories will be employed to analyse the use of colour to depict characters in this study.

Colour range selection and ambience		
Colour	Vibrancy	Vibrant
		Muted
	Warmth	Warm colours
		Cool colours
	Familiarity	Familiar
		Removed

Table 7. Colour range selection and ambience. (Adapted from Painter et al 2012).

Vibrancy refers to the saturation of colour present in an image (*Figure 6*). Vibrant colours convey a sense of excitement and vitality, while the lack of it creates a more restrained feeling. *Piggybook* (Browne, 1986) is the story of a mother who is expected to carry out all the household chores all by herself. At the beginning of the story, she is shown unhappy with her current living situation; thus, muted colours were chosen to

depict her (*picture 10*). As the story unfolds, different circumstances make the members of her family feel that they also need to contribute to performing household chores. Thus, the mother in the story has some free time to pursue her hobbies or carry out tasks she enjoys best. To convey the change of the mother´s feelings, the illustrator has chosen to colour her using vibrant colours (*picture 11*).

Picture 10. Vibrancy: muted colours (Browne, 1986).

Picture 11. Vibrancy, vibrant colours (Browne, 1986).

Figure 6. Vibrancy

Warmth helps convey emotional shades though the use of colours such as yellow, orange and red that contrast with cooler colours, such as blue, purple and green (*Figure 7*). The use of colours may facilitate the reading of the characters´ emotional mood. The picture books, *Susan´s Laughs* (Willis, 2000), shares the daily life experiences and feelings of a little girl called Susan. In *picture 12*, Susan is afraid of the dark. The use of cool colours to draw the ambience eases the reading of Susan´s emotions. However, as Susan´s parents come to her aid, the colours used to depict the setting change to warm colours to enact Susan´s mood shift (*picture 13*).

Picture 12. Warmth: warm colours (Willis, 2000).
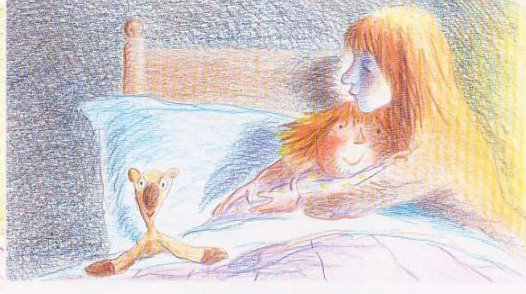
Picture 13. Warmth: cool colours (Willis, 2000).

Figure 7. Warmth

Familiarity is related to colour differentiation in the image (*Figure 8*). When an image is crafted by using many colours, it generates a sense of familiarity as people tend to experience in different colours. Restriction in colour choice conveys the idea that something or someone is removed from reality. *Into the Forest* (Browne, 2004) is the story of a little boy who has to leave his familiar surroundings at home (*picture 14*) to go into to the forest *(picture 15)* to take a food basket to his grandmother. The boy´s familiar surroundings are painted with a variety of colour so that the reader can perceive this to be a well-known environment for this child. However, as the boy walks into the forest, the choice of colours become more restricted to convey the boy´s lack of familiarity with this place.

Picture 14. Familiarity: familiar (Browne, 2004).

Picture 15. Familiarity: removed (Browne, 2004).

Figure 8. Familiarity

Each visual cue is selected to encode a particular social positioning in a specific context. In this study, the systematized framework of visual grammar creates a key to unravel the meaning of visual features in relation to the interpersonal metafunction, and more specifically to its subsystems: a) social distance, b) point of view and c) contact.

2.4. Visual literacy and visual grammar

> Not being 'visually literate' will begin to attract social sanctions.
> 'Visual literacy' will begin to be a matter of survival, especially in the workplace.
> (Kress & van Leeuwen 1996: 1–2)

One of the areas of multimodal research is visual literacy (Serafini, 2014). This type of literacy has come to the foreground of literacy research as academics have become aware of the role visual cues play at conveying meaning. Students have become "intuitive visual communicators" (Oblinger & Oblinger, 2005, ch 2); however, this intuitiveness does not imply that students or educators naturally possess visual literacy skills. As Felten (2008) states:

> Visual literacy involves the ability to understand, produce, and use culturally significant images, objects, and visible actions. These skills can be learned in ways analogous to textual literacy. With training and practice, people can develop the ability to recognize, interpret, and employ the distinct syntax and semantics of different visual forms (p.2).

The concept of visual literacy first appeared in a publication by John Debes (1968) defined as the set of skills and strategies needed to decode a pictorial text. In this first definition, the emphasis was on individual development of cognitive abilities to understand the visual image without considering their context of production, reception

and dissemination. Later, other theorists have expanded this concept to include sociocultural aspects and social semiotics (Chauvin, 2003 in Seraffini 2014). Serafini (2014) reconceptualises visual literacy as "a set of acquired competences for producing, designing, and interpreting visual images and messages addressing the various contexts in which images are viewed and the production and distribution of images" (p.35). This definition acknowledges the importance of the context to interpret and produce visual messages. Sturken and Cartwright (2001 in Serafini 2014) point out that meanings are produced through a process of negotiation among individuals and the artifacts of a particular culture. Best literacy practices invite to readers to look into how viewing informs people´s lives and identities.

In response to the development of the visual literacy notion, various literacy programmes soon started to implement /introduce preliminary notions of visual grammar and composition. It had become evident that the analysis of the visual components of a text allows to abstract complex and multidimensional meanings that appeal to different cognitive and aesthetic sensibilities. Visual grammar helps the reader understand how images can be read as if they were words. In images, for example, the actions expressed by verbs are communicated through vectors, while locative prepositions are realized by backgrounding and foregrounding an image (Cope & Kalantiz, 2009). "The process of shifting between modes and re-presenting the same thing from one mode to another is called synaesthesia (…) Children have natural synesthetic capacities …" (p.13) and schools should boost this capacity.

In order to understand a multimodal composition, text interpreters need to be equipped with visual literacy. Through education, learners could gain the skills and the ability to decode and understand images and to communicate visually. Rose (2001) emphasizes the importance that teachers help students understand the relevance of the social conditions in which images are crafted and the effects pictorial texts can have on different individuals and social groups. Pictures as well as words respond to a selection of meaning making resources that text producers do in the light of their ideologies and purposes.

Visual literacy in some countries, such as Canada and Australia, has landed on the–school curricula by equating viewing and visually representing with the four language macroskills. Deborah Begoray (2001) states that *viewing* is "an active process of attending to and comprehending visual media" (p.202), while *representing* "enables

students to communicate information and ideas through a variety of media" (p.202). In order to be able to view, students need to construct the meaning of interpreting the visual mode, and to understand both content and design. Unlike viewing, representing refers to the students´ ability to communicate their ideas visually by resorting to different media and formats.

Kress and van Leeuwen (1996) developed the grammar of visual design to "make explicit how the available resources of visual grammar form a potential for the production and communication of meaning through spatial configurations of visual elements" (p. 264). Like traditional grammar, visual grammar can be understood as a set of rules to decode and analyse a multimodal ensemble. Kress and van Leeuwen (ibid.) offer a list of elements and structures that are employed to produce and interpret images (see section 2.3). These elements need to be read within specific socio-cultural contexts; thus, these resources will trigger meaning potentials relative to their sociocultural contexts. Kress and van Leeuwen´s (ibid.) visual grammar contribute to the understanding of how different elements are represented in an image. This is relevant as visual texts mirror the text producer´s experiences, ideologies and intentions.

The usefulness of this visual grammar is that it works as an observational guide to approach, navigate and interpret different multimodal compositions. To truly understand an image, the viewers´ attention should be focused not only on the content but also on the structural and meaning making resources of an image. In other words, the composition of the text influences how the text is read (da Silva & Feez, 2016).

2.5.   Literacy Development Cycle

The Literacy Development Cycle (LDC) emerged as a result of the explorations to generate a literacy pedagogy that encompasses different skills and competencies required to be considered literate in the XXI century. This scenario of teaching multiliteracies led different researchers to select and connect theories of language and literacies to develop a sound pedagogical proposal that could also promote critical reflection after its implementation. Unsworth (2001) crafts a model that focuses on written and visual modes.

Unsworth (2001) presents a dual multiliteracy framework (Silva Joyce & Feez, 2016; McLachlan et al, 2012) constituted by the Literacy Development Cycle (LDC) and Curriculum Area Multiliteracies And Learning (CAMAL) framework. Both frameworks present a circular design. While the LDC provides "a systematic but flexible framework for optimizing the teaching and learning of multiliteracies" (p.185), the CAMAL framework is "a framework for designing and managing coherent programs of learning experiences that will facilitate the practicalities of implementing explicit teaching about how texts and images mean" (p. 221).
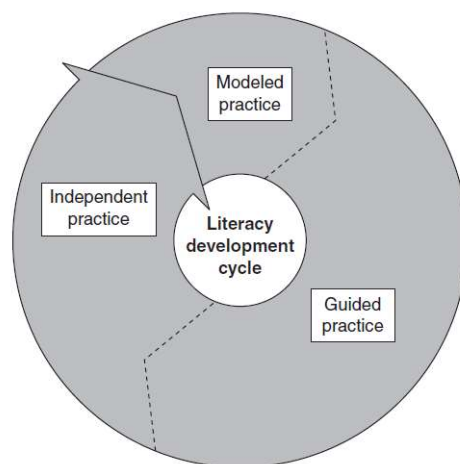
Figure 1. Literacy Development Cycle (Unsworth & Bush, 2010).

As shown in Figure 1, the LDC is constituted by three different stages: modeled practice, guided practice and independent practice. As teachers and students navigate the cycle, they moved from teacher-controlled lessons to more learner-centered sessions in which students show their understanding of multimodal texts in different formats. This cycle draws on a genre-based approach to literacy, on Bruner´s (1978) theory of cognitive development and on Vygostky´s social constructivism (1978). During the initial stages of the LDC, students are provided with scaffolded instruction prior to assigning them independent work.

One of the advantages of the LDC is that it can be accessed at any point depending on students' needs, the expertise of the students with a particular genre and their range of experiences. This flexibility also applies to comprehension and composition activities. Modelling, practice or independent practice may be lengthened or shortened

to suit the needs of the students. Unsworth and Bush (2010) present a series of strategies and steps that can be incorporated into the LDC (*Table 8*).

Strategies	Implementation steps	
	Reading	Writing
Modeled practice	Orientation to the text Reading the text	Orientation to text Writing the text
Guided practice	Working with the text	Reviewing writing
Independent practice	Reviewing reading	Publish writing

Table 8. Strategies and implementation steps in the LDC (Adapted from Unsworth and Bush, 2010)

Table 8 shows the main structure of the LDC proposed by Unsworth and Bush (2010). This LDC is used to teach primary school students to read and write multimodal texts by navigating three different stages: modeled practice, guided practice and independent practice. The *modeled practice* stage is subdivided into two substages: orientation to the text and reading the text. The substages are controlled by the teacher who will be initiating interaction, presenting metalanguage, and interpreting different visual meaning making resources. In the second stage, *guided practice,* students work more independently with a new multimodal text which they have to analyse applying the knowledge of multimodal text interpretation and construction. Finally, students work on their own in the final stage of *independent practice* crafting their own text and justifying their choices regarding visual resources.

Unsworth´s (2001) model integrates critical literacy as it allows the user to question the choices of visual and verbal resources used in a text that favour certain viewpoints. Moreover, the cycle makes it possible to explore how different choices may help construct alternative views. To this end, Unsworth (2001) and the New London Group (2004 in Seizov & Wildfeuer, 2017) argue about the importance of teaching metalanguage that eases the understanding of the connection between the visual and

verbal meaning making resources and their links to the social-historical context in which they have been produced. Mercer (2000) asserts that the teaching of metalanguage facilitates the process of developing conceptual and discursive understandings. Serafini supports this assertion by stating that "[w]ithout a theoretical and pedagogical framework and associated metalanguage or vocabulary for comprehending and analyzing multimodal ensembles, educators will struggle to prepare students to design and interpret these complex texts" (2014, p. 32). Callow (2018) states that, when teachers make use of metalanguage, it becomes evident that the teacher understands the skills and concepts revolving around multimodality, the aspects to be taught and to be assessed.

Arguing in defense of context in relation to visual literacy and metalanguage, Serafini states, Serafini (2014) states,

> when teachers connect the instructional experiences and resources they provide to the experiences and interests of their students, they begin to develop a more responsive curriculum, one that takes into account the students they work with in addition to the learning objectives derived from a mandated curriculum or standards document (p.106).

Thus, for this research, the choice of picture books is pertinent as these books attract students´ attention to the topics under consideration. Besides, they are classroom material that fulfill a three-fold purpose: teaching second language literacy, engaging students in learning and meeting the state curriculum requirements.

2.6 Picture Books

Lynch-Brown, Tomlinson and Short (2013) define picture books as books which "both words and illustrations contribute to the story´s meaning" (p.77). The illustrations, which are integral to the story, are present in every or every other page. Generally, the length of these books is thirty-two pages: this makes them suitable to be used in a regular class time.

Picture books are different from illustrated books. The main difference lies in the use the former makes of images. In illustrated books, images are used mainly as decoration or representation of what is being narrated through the written word. This

means that pictures do not play a crucial role in the meaning making process of the narration; in other words, these books can be understood if we can decode the linguistic mode. In contrast, images embedded in picture books play an active role in the transmission and creation of meaning. If readers intended to understand the meaning underlying a picture book just by decoding their linguistic mode, they would understand only part of the message that the text producer has intended to put forward. As the verbal and nonverbal resources are intertwined to generate the ultimate meaning, readers need to oscillate back and forth between these two modes as neither one standing in isolation would be capable of unravelling all the meaning potentials present in the book.

In picture books, the verbal and visual narratives fulfill different purposes and somehow impose different demands on the reader/viewer. When the verbal narrative invites readers to move forward in a linear fashion, the visual elements of the texts demand their attention slowing down their reading process. In conclusion, this implies that in order to fully exploit a picture book, educators need to stimulate the reading of both the pictorial and the linguistic text. Since the visual aspect of picture books tends to be underexploited, this study will focus its attention on the reading of images; however, the importance of the synergetic relationship among modes should not be underplayed. Readers can actively engage with picture books at their own pace while they decode the multiple levels of visual language. Providing readers with the tools to decode semiotic resources and structural elements will help them to understand the delicate process of production and interpretation of these multimodal ensembles. For this purpose, teachers need to become familiar with the visual grammar that will enable them to interpret elements of visual design in order to teach others how to explore this type of texts.

Sipe (1998) created a list of picture book terminology that was later adapted and expanded by Serafini (2014). The main purpose for including this glossary (*Table 9*) is to provide educators and students with the necessary metalanguage to describe picture books. Only the terms that have been employed during this study have been listed below. For a more detailed list consult Serafini (2014).

A Glossary of Picture book Terminology	
Bleed	When the illustration extends to the very edge of a page, with no white space or border, it is said to bleed. When the

	illustration extends to all four edges of the page, it is called a full bleed.
Borders	Illustrators often design a border for their illustrations in a picture book. Sometimes elements included in the border are used to tell more of the story, or to tell a parallel story.
Cross-Hatching	Fine parallel lines, usually drawn in black, are crossed with another set of parallel lines, to produce the effect of shading. Cross-hatching also gives an illustration a feeling of energy and vibrancy.
Cut-out	An illustration has no frame; it simply appears against the background.
Double-Page Spread	An illustrator may choose to spread the illustration over both pages of an opening. This is referred to as a double-page spread.
Frame	In a picture book, the illustrations are frequently surrounded by an illustrated border or white space, giving the impression of a framed picture. Sometimes, part of the illustration may "break the frame", seemingly breaking out of and overlapping the straight edge of the illustration.
Frontispiece	A decorative illustration or engraving that faces the title page at the beginning of a picture book
Gutter	When a book is opened, the middle groove where the pages are bound is called the gutter. If an illustration spreads over both pages, the illustrator must make sure that important parts of the illustration are not set in the gutter.
Half-title page	At the beginning of a picture book, a page is often included with only the title of the book
Montage	In laying out a page of a picture book, an illustrator may choose to include several illustrations on the same page. This is known as collage or montage.
Motif	A recurring element, pattern, or design included in the illustrations or text of a picture book that has symbolic significance.

Openings	Picture books are planned as a series of facing pages called openings. In a picture book, the pages are rarely numbered. Thus, It is difficult to refer to a particular illustration or page. The first opening is considered the two facing pages where the text of the books begins, and the openings are numbered sequentially after this initial opening.
Point of view	Every illustration is planned from a certain point of view, placing viewers in a certain position in relation to the scene in the illustration. We can be placed to look down on a scene, below the scene, or on level with it.
Recto/ verso	The right-hand side of a page opening (recto), and left-hand side of a page opening (verso).
Stamping	Visual images or letter are sometimes pressed into the front or back cover of a picture book by a heavy metal die.
Text box	The written text of a picture book may be printed below or above the illustrations, in a plain white space. The designer may also choose to print the text directly on the illustration. The text may be printed in a bordered box placed outside the illustration, as well.

Table 9. Metalanguage to refer to picture books (Adapted from Serafini, 2014, p 86).

Before children are capable of decoding the linguistic mode, they learn about the world around them mainly through direct experience, and then pictorial texts. When children access formal education, the number of images to which they are exposed increases. Thus, it is important that students become empowered with the necessary knowledge to understand the meanings embedded in images and develop an understanding of the decisions they make, the construction of their identities and their everyday life experiences (Serafini, 2014). Most importantly, students need to understand that multimodal ensembles have been crafted by designers who channel our attention and influence our thoughts to respond to other people´s needs (Hobbs, 2011 in Serafini 2014). To this end, the explicit instruction of strategies to interpret a multimodal composition becomes as relevant as teaching strategies to understand the written word. Taking into account that the texts our students read rely heavily on their ability to read

images, this lack of instruction is an obstacle for students to become literate and, in turn, empowered citizens.

2.6.   Conclusion of the chapter

In this chapter, the main theoretical framework underlying this research has been explained. In the first two sections, there is explicit reference to the concept of literacy, multiliteracies and multimodality. In the third section, SFL is introduced and the interpersonal metafunction is described. A link between SFL and visual literacy is established. In the fourth section, the concepts of visual literacy and visual grammar are explored. In the fifth section, the LDC is outlined and, finally, in the sixth section, the genre of picture books is explained.

CHAPTER 3

METHODS

This chapter describes the research approach and design of this study. The following subsection introduces the context as well as the participants of the study. Then, the instruments employed to collect data are outlined and the process of data analysis is explained. After that, the steps to ensure validity and reliability, some ethical considerations and my role as a researcher are addressed. The last subsection offers a summary to all the ideas present in this chapter.

3.1. Research approach and design

This research work falls into the qualitative paradigm. There are different core features of qualitative research (Dörnyei, 2007) but only the ones relevant to this research will be mentioned. First, this study had an *emergent* nature which means that the design of the study was not tightly prefigured and it was kept open to new details that could have emerged during the research process. For instance, the questions of the interviews were thought after the intervention had taken place. Second, the data was gathered employing *different collection methods* in order to capture rich and complex details to make the results credible and valid. The use of different methods at various points in the research process *benefits from* the strength of each type of data collection and minimizes the weaknesses of a single approach. Pretests and posttests, classroom observations and interviews were employed to allow the researcher to have diverse entry points to the phenomenon under study. Third, this research took place in a *natural setting*; in other words, there were no attempts to manipulate the setting since the interest of the researcher was to capture the phenomenon as it unfolded. When there was an external teacher helping with classroom observations, this external observer was a staff member of the institution where the study took place and, thus, the participants were familiar with her. This familiarity prevented any considerable disruption in the environment under scrutiny. Fourth, the focus of this study was to explore the *participants´ view* on this research phenomenon. In other words, "it is only the actual participants themselves who can reveal the meanings and interpretations of their

experiences and actions" (Dörnyei, 2007, p.38). Fifth, this work was conducted on *small sample size* as the group was made up by twelve student teachers. Finally, the findings presented here are the result of the *researcher´s subjective interpretation* of the data collected. This research is interpretative, descriptive and explanatory as student teachers´ actions will be given meaning when working with visual material.

The design chosen to carry out this work is an intrinsic case study. This research is self selected as it responds to this researcher´s interest in visual literacy, and there will be no attempt to compare the performance of this group of students to others since the interest of case studies lies in particularization. A case study is described in detail placing particular emphasis on its uniqueness and on understanding the case itself. As defined by Stake (1995), through a case study design the researcher may explore a process that is constrained by time and activity. The researcher will collect data by resorting to different data collection tools and procedures over a considerable period of time. This particular case study was undertaken to understand a particular phenomena (Salkind, 2010): the explicit teaching of visual literacy to student teachers in an IELTE programme by means of an adapted LDC (Unsworth & Bush, 2010) to improve student teachers´ communication skills in the foreign language. As Salkind (2010) states, case studies are about a bounded system in a similar way in which "[a]n entity is naturally bounded if participants have come together by their own means for their own purposes having nothing to do with the research" (p. 116).

This investigation extended over a six-month period since the aim of the researcher was to obtain information as detailed as possible using the different methods for data collection mentioned previously. Dörnyei (2007) points out that the strength of case studies lies in the "thick description of a complex social issue embedded within a cultural context" (155). This research approach enables the researcher to understand how intricate variables are intertwined in a certain context; thus, case studies constitute an excellent research method to explore uncharted territories.

The intervention consisted of four LDCs designed to teach visual literacy. This intervention was implemented in the subject Teaching Practice III in the third year of an IELTE programme during regular class time. All student teachers who attended the subject participated in the study. Classes at this institution start the second week of March. During this period, I requested the authorization of the institution to conduct the study. In April, the pretest as well as the training of the teacher observer occurred. The

four training sessions were conducted every Friday in April and lasted three hours each. During these sessions, I introduced the teacher observer to the structure of the LDC. She became familiar with the picture books and handouts crafted to work with the students. Finally we discussed the observation sheet and its coding system and student teachers´ expected answers. The materialization of the first and second LDCs were carried out in the first semester. In May, the first LDC took place. Student teachers met twice a week for two weeks. Two sessions lasted a hundred and sixty minutes and the two other, eighty minutes; thus, the first LDC expanded over a total of 480 minutes. This is the longest LDC since student teachers needed to become familiar with new concepts and new ways of approaching a multimodal text. The second LDC was carried out in June. Student teachers met twice a week for a total of four eighty-minute sessions. The third and the fourth LDCs took place after the winter break during the month of July. In October, the posttest and the interviews were conducted.

Implementation of the Research		
March	Authorization request	
April	Pretest	
	Training of teacher observer	
May	intervention	1st LDC
June		2nd LDC
August		3rd LDC
September		4th LDC
October	Posttest	
	Interviews	

Table 10. Calendar of implementation of research.

3.2. Context of the study

This study took place at an Initial English Language Teacher Education (IELTE) programme in a tertiary institution in Argentina where student-teachers have to undergo a four-year programme to obtain a degree as Teachers of English as a Foreign Language. Tertiary institutions offer a four-year programme that qualifies graduates to teach in pre-primary, primary and secondary school settings. The semi-private institution is located in a middle class neighbourhood in the capital city of Córdoba, Argentina.

The IELTE curriculum designed in Córdoba for tertiary institutions establishes that student teachers should be exposed to conceptual as well as procedural knowledge, and two modules in which future teachers can develop their teaching skills and experience. Thus, the curriculum includes twenty nine modules related to the learning of the English Language, such as phonetics and phonology, grammar and English Language, and other modules related to didactics, philosophy and Argentinian history. At the same time, the curricula offers three additional modules in which student teachers can acquire and develop skills related to teaching English as a Foreign Language. The modules related to the teaching practicum are offered in second, third and fourth year. In second year, student teachers start observing classes in a pre-primary context. In third year, for the first time, student teachers observe and impart classes in a primary school context. Finally, in fourth year, students have to carry out their last teaching practicum which is at a secondary school level.

This study was circumscribed to third year. This was the first year in which student teachers were in charge of planning a lesson and carrying it out, so this module favoured a practical approach to teaching. During the first semester, they became familiar with content knowledge related to characteristics of children as young learners, the teaching of the macroskills within the context of primary school and the writing of observation reports in primary school institutions. Alongside content knowledge, student teachers were presented with pedagogically designed activities suitable for this context, while they were also encouraged to contribute to classes with activities of their own. In the first semester, these future teachers also started carrying out classroom observations in the school in which, during the second semester, they would perform their teaching practicum

3.3. Participants

The participants of this study were the author of this work and the student teachers from an Initial English Language Teacher Education (IELTE) programme in a tertiary institution in Córdoba, Argentina. The average age of the students was 27. Out of the thirteen students, ten had had some teaching experience mainly teaching young children at language schools or at Jornada Extendida, which is a state-run programme in primary

schools in the province of Córdoba. The teacher researcher taught a subject in second year of this IELTE programme so she was familiar with this group of students and their background knowledge regarding the subject. At the beginning of the study, there were thirteen third year students of a four-year IELTE programme. At the end of the study, there were only twelve student teachers since one of them decided to drop the course. In this group, there were eleven females and one male. Female dominance over male is a general tendency in Argentine teaching programmes. In the previous year, they acquired knowledge about the pre-primary school setting and they observed classes with unique distinctive features. In the period the study was carried out, they became familiar with the teaching of English to young learners in terms of practical as well as content knowledge. The English level of these students was post-intermediate according to the Common European Framework of References for Languages.

Until the beginning of this study, none of the student teachers had received any formal training on visual literacy or systemic functional grammar since these are not topics regularly covered in the IELTE curricula. Just one student teacher had some previous knowledge on the interpretation of colour since she had pursued a degree in Fashion Design.

The teacher observer who belonged to the teaching staff of the institution where the investigation took place has twenty-year experience in the field of EFL. She has collaborated with the researcher in previous studies related to multimodality for the last six years. Consequently, the teacher observer was an informed collaborator. The subjectivity of the teacher observer was minimized by setting up training sessions in which the teacher observer became familiar with the project and the class material. During April, the teacher observer and the researcher gathered to prepare for the implementation of the intervention. First, the researcher informed the teacher observer about the selection of the picture books, the LDC and the concepts that were going to be introduced in the different LDCs. Second, the teacher observer was introduced to the observation sheet so that she could collect descriptive data that would later work supportive evidence of the potential acquisition of visual language. Aspects about the annotation systems were discussed. The focus of the teacher observer was record the student teachers´ observable legitimate behaviour. After the first LDC, the researcher and the teacher observer conferenced to sort out any uncertainty. For instance, they had to discuss what would be recorded as a right answer since during the preparation stage

they had not anticipated that the appropriate answer to a question would be completed by the contribution of two different student teachers.

The teacher researcher was in charge of designing the four LDCs. She was also in charge of providing student teachers with explicit instruction on visual literacy, and helping them navigate through all the stages of the LDCs. The main role of the teacher researcher was to instruct students and she only occasionally took down notes of certain aspects or elements that called her attention. For instance, the teacher researcher noted that student teachers seemed to start the analysis of pictures from the subsystem of contact and that the subsystem of point of view was the one that received the least attention. At the end of each LDC, the teacher researcher analysed student teachers´ work. Since the teacher researcher was an integral part of the study, in order to minimize any subjectivity, most of the data was registered quantitatively instead of qualitatively. Later on, these numbers fed the student teachers´ interpretation which is the result of a subjective interpretation, so all the tables are displayed in this work for other fellow researchers to check the results obtained.

3.4 Adaptation of the LDC

Unsworth´s (2001) LDC was adapted to suit the needs and the purpose of this investigation. The main adaptation (Table 11) was to restrict the focus of the LDC; it only concentrated on teaching student teachers´ to read and interpret visual cues that will later help them with the interpretation of multimodal texts. The writing of multimodal texts exceeded the scope of this investigation.

Strategies	Implementation steps	Possible activities
	Reading	
Modeled **practice**	Orientation to the text	- Reading the book without showing illustrations - Prediction of the content of the text - Discussion of the information pictures added to the text - Establish similarities and differences between the stories

		recreated by the images and the text.
	Reading the text	• Questions to guide the analysis of visual grammar elements related to the interpersonal metafunction • Introduction of metalanguage • Explanations of the meanings constructed by different visual elements. • Discussion about the use of color was introduced from the 2nd LDC onwards in this particular research.
Guided practice	Working with the text	• Analysis of images taken from ads, memes, among others. • Discussion of the possible context and targeted audience. • Written justification of the analysis of the texts considering the specific use of metalanguage. • Student teachers´ presentation of their findings.
Independent practice	Reviewing reading	• Student teachers´ selection of a topic related to the one discussed in the picture book discussed on that LDC. • Student teachers´ use of digital applications to create a multimodal text such as an ad.

		• Elaborate justification for their choice of linguistic and non-linguistic resources.

Table 11. Strategies and Implementation Steps in the LDC (Figure adapted from Unsworth and Bush, 2010)

Before the beginning of each LDC, there was a brief introduction to the picture book under study, which consisted in a short discussion about the author, the socio-cultural context in which the book was crafted, and the analysis of the cover of the books for student teachers to discover their potential content. The definition of picture book was also introduced before the first LDC. In subsequent LDCs, a short revision of the metalanguage taught in previous LDCs was carried out. Vocabulary that was considered to be new was introduced at this stage to help student teachers focus on the analysis of visual grammar through the different stages of the LDC.

Piggyback

Jack gives a John a **piggyback** ride.

_____

Pigsty

Pigs live in a **pigsty**.

New Words

6. Look, Think and Guess

PIGGYBOOK

Anthony Browne
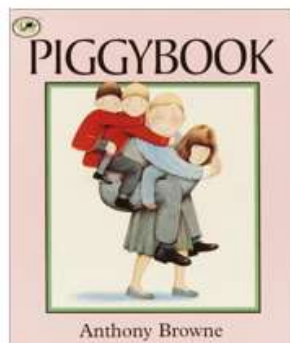
a. Can you see pigs in the cover of the book?
_____

b. Who can you see?
_____
_____

c. How do the dad and children feel? Why?
_____
_____

d. How does the mom feel? Why?
_____
_____

Figure 10. Orientation to the text: example of the first LDC. Introduction of key vocabulary and the cover of the picture book.

In their research, Bush and Unsworth (2010) present a series of cycles in which different types of text genres were employed to teach multiliteracies to second language learners attending primary school in Australia. In the context of this research, the participants were exposed to only one type of text genre, picture books, since storytelling is part of the content of teacher preparation. Besides, it was the first time that student teachers were introduced to both: picture books and visual literacy. The analysis of one type of genre helped the participants focus their attention on the decodification and codification of visual cues.

As the participants of this research were student teachers, in the modelling stage of the LDC, orientation to the text also included questions to guide understanding of the main theme/topic of the text and its links to the curricula. Further considerations regarding the implementation of picture books in the primary EFL class also took place at this stage. For instance, potential suitable topics to work with young learners were discussed. Student teachers were gradually introduced to a vast arrange of new concepts. In the first LDC, only the most salient features were presented. Color was mentioned but not explicitly instructed until the second LDC.

10. Let´s analyse some of the pictures of the story. As you listen, take down notes on metalanguage that will help you describe and understand the "voice of the picture".

Interpersonal Metafunction		
Subsytems	Pictures	Potential Meanings
Social Distance		

Figure 11. Reading the text: example of the first LDC. Pictures that represented each subsystem were analysed in detailed while student teachers took down notes.

In the guided practice section, student teachers worked with other multimodal texts that tackled the same topic as the picture book but they had to explore how other authors employed different meaning making resources to deal with a topic. Generally ads were used at this stage since they are short texts which exploit different visual cues. Thus, they constituted good reading material to work during class time in which student teachers could transfer all their knowledge.

12. Look at the following advertisements. Analyse the images using appropriate metalanguage. Justify your choices.

Metafunction	Aspects to be analysed	
	Social distance	*Distance*
		Proximity
Interpersonal Metafunction	*Point of view*	*Intimacy*
		Tension

		Powerful
		Powerlessness
	Contact	Demand
		Offer
Color	*Different meaning making colors*	-

Figure 12. Working with the text: example of the first LDC.

The final stage was independent practice. In this stage, student teachers had to create their own ad using the one presented in the previous stage as a model. The theme of the ad remained the same. During the first LDC student teachers were divided into groups and they were assigned a subsystem to create two different ads. One ad in which one component of the subsystem stood out and then another ad in which another component of the subsystem stood out.

1) **Production stage:** You work for an advertising agency, and you have been requested to develop different ads in order to promote gender equality in the household. Prepare two ads using different images considering different perspectives (this will be assigned to you be the teacher) and a short text to accompany them. You will have to justify your choices using the corresponding metalanguage.

2) In the following video, you will see the analysis of different ads that can inspire your analysis.
https://www.education.vic.gov.au/school/teachers/teachingresources/discipline/english/literacy/multimodal/Pages/visualmetalanguage.aspx

3) Choose an app or software, such as Canva, that can help you produce a good piece.

Figure 13. Reviewing the text: example of the first LDC.

All the different stages illustrated in this section were taken from the first LDC in which student teachers first became familiar with the subsystems of the interpersonal

metafunction. This theoretical knowledge was later put into practice during the stages of guided and independent practice.

3.5 Picture book selection

The selection of picture books was based on different criteria. First, Painter et al. point out, when children initiate their path towards literacy, generally they initiate their interaction with picture books. Therefore, picture books are a type of genre most young language learners are familiar with, which would facilitate students´ teachers multimodal analysis. Second, the topic of the picture books had to be relevant to the state curricula for teaching English in primary school. *Piggybook* (Browne, 1986), deals with the topic of gender equality and gender stereotypes, which are topics that must be included in the school curricula since the enforcement of the programme on comprehensive sexual educational (CSE) (Law 26,150 - Congreso de la Nación Argentina 2006). The second picture book selected, *Susan Laughs* (Willis, 2000), is linked to the topic of social integration enforced by the educational law 26.206 (Congreso de la Nación Argentina 2006). The third picture book, *Voices in the Park* (Browne, 1998), and the forth picture book, *Little Beauty* (Browne, 2008) verse on the topic of family and friends which are also listed on the state curricula (Diseño Curricular de la Educación Primaria). The second criterion was a match between the topics selected and the topics dealt with in primary school course books. The first and third picture books portray different family structures and realities while the fourth picture book touches upon the subject of friendship. Finally, the second picture book presents the topics of emotions and daily habits. Another reason to select these picture books was the type of language used: repetition of key lexical items and simple sentence structure. The idea was to present student teachers with picture books they could later use with their own students; thus, language input was assessed from the perspective of young learners of English. Since the books selected were authentic and not pedagogically manipulated material, the stories chosen exhibited a regular language pattern that fosters language learning with ease. Besides, restricted language input also favoured the analysis of the pictorial language to decode the meaning of the text since readers´ attention needed to focus on the visual components to gain understanding from the text. Forth, since the main purpose of using picture books is to teach visual grammar, these

books had to present rich illustrations that would lend themselves to the analysis of visual grammar according to the different subsystems of the interpersonal metafunction, and to the introduction of the metalanguage related to picture books. Potential access to these books was also considered, so books that could be found in Argentinian book shops are the only ones included in this study. Four picture books that met these criteria were selected for each LDC. Finally, these books are well-known, student teachers could find resources to analyse them independently if they wished to do so.

In the first LDC, the picture book employed was *Piggybook* (1986), by Anthony Browne. This book presents short sentences, repetition of key vocabulary related to the family and syntactic structures that employ the simple present tense. The book covers the topic of gender norms, fairness and autonomy. As the story unfolds, readers are invited to question the distribution of responsibilities in their households. At the beginning of the narration, the mother is shown as the only family member responsible for the household chores while her husband and children enjoy a relaxed time. Little by little, these characters undergo a process of animal metamorphosis into pigs as the mother decides to temporarily abandon her family. When she returns and everyone agrees to share responsibility for the household chores, all the characters return to their human condition.

In the second LDC, the picture book chosen was *Susan Laughs* (2000) by Jeanne Willis. This is a story of a child who, like any other child, has different likes and dislikes, enjoys different activities and experiences a wide variety of feelings. What is remarkable about this story is its focus on what the child can do since, as the reader learns at the end of the story, Susan suffers from a physical disability. This story presents a positive image of children with disabilities since the reader never sees Susan being constrained by her handicap or is invited to feel pity for the main character.

In the third LDC, the picture book employed was *Voices in the park* (Browne, 1998). It is a book that clearly represents how the same event can be interpreted differently depending on the subjectivity of each character. The book narrates a visit to the park from the perspective of four different characters: Charles (a young boy), Charles´ mother, Smudge (a young girl) and Smudge´s father. Charles and his mother belong to the upper classes and through their personal depictions of the events, the reader learns that Charles´ mother is unhappy with the fact that her son and dog want to play with a child, Smudge, and a dog who belong to a lower social class. Charles, who

feels lonely at home, is excited to have someone to play with. Smudges´ father, who looks sad at home, returns happy from the visit to the park while Smudge, who has enjoyed herself all the time, pities Charles as she perceives he is not a happy child. Thus, this book helps to teach about the subjectivity of human perception on an event.

In the fourth LDC, the selected picture book was *Little Beauty* (Browne, 2008) whose main topic is the importance of friendship. This is the story of a nameless gorilla who lives a quite comfortable life since his caretakers provide for him; still he is unhappy and wishes to enjoy the companionship of a friend. Hence, he is entrusted with a cat that he names Beauty. They start sharing their lives together and this paves the way to an interspecies friendship. Thus, the story focuses on the importance of the moments spent together rather than on evident differences that exist between these friends.

3.6   Data collection

To undergo the process of data collection, different procedures were selected from the qualitative methods strand. The choice of different data collecting instruments enabled the subsequent performance triangulation to determine validity and reliability.

This research took place within a module and the performance of the participants of this group was measured before and after the intervention. This assessment enabled the researcher to examine differences across time within the same group (Salkind, 2010). Other data collecting tools were selected to strengthen internal validity: a) classroom observations; b) analysis of student teachers´ productions and c) interviews to students.

To protect the identity of the individuals who agreed to participate in this research, no name of the student teachers is presented in the study. Coding of names or aliases were used instead.

3.5.1. Data Triangulation

To answer the research questions, information was gathered through a diversity of data collecting tools.
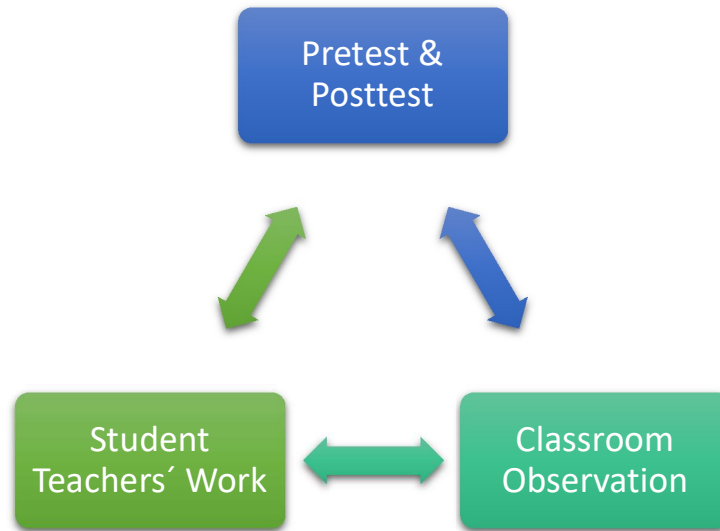
Figure 14. Process of data triangulation

First, the results of the pretest and posttest were examined considering a) identification of different visual cues using ~~of~~ appropriate metalanguage, and b) analysis of the meanings triggered by different visual cues. These data were compared against the one collected by the teacher observer obtained from different sessions of classroom observation, which were analysed using the same categories. In the same line, the data obtained through the content analysis of student teachers´ work was assessed looking for instances of appropriate use of metalanguage and in-depth analysis . After each LDC, it was possible to see that students could identify more visual cues using specific metalanguage. Student teachers´ justifications also show deeper analysis of visual cues. Finally, student teachers´ interviews provided more insights to the learning process from their perspective. These interviews were explored to look for student teachers´ own perception of the learning. These views were later contrasted with the results of the triangulation.

The result of the data triangulation showed that after the four LDCs, student teachers had acquired knowledge to analyse the visual components of multimodal texts to gain a better understanding of the meanings they convey. At the same time, the interviews helped to validate this finding but also added more information about student teachers´ perceptions on their learning process. Even when most student teachers expressed that the learning about visual literacy was useful, they did not feel that this experience provided them with the tools for them to feel comfortable teaching visual literacy. Since the focus of this study was on reading skills, student teachers were not

engaged in producing a lesson plan that included the teaching of visual literacy in the primary classroom. Hence, in most interviews, student teachers expressed that they would like to receive further instruction to feel that they are knowledgeable enough to instruct their own students on this matter.

3.5.2. Pretest and posttest design

The pretest and posttest research design became useful to measure the changes expected to take place after the intervention was carried out. These tests were administered in written form. As tests were being crafted, they underwent a piloting stage in which fellow colleagues themselves completed the tests, so that any necessary changes could be introduced to guarantee that these data collecting tools would serve their purpose in this context specific study. After the pretest and posttests were carried out, statistical analysis determined the effectiveness of the intervention.

a. Pretest

The first tool employed for this research was the pretest to inquire what meanings student teachers could decode from the observation and analysis of a visual text (see Appendix A). This test was administered to a total of twelve student teachers. It contained twelve pictures, eight of which were chosen since they presented the features under study while four of them worked as distractors. Participants had to respond some questions by selecting a picture that best suited each question. The aim of the pretest was to assess the participants´ ability to identify key visual meaning making resources that triggered certain interpretations from the perspective of the reader considering the interpersonal metafunction.

b. Posttest

The posttest (see Appendix B) replicated the pretest. It was administered to twelve student teachers. The test consisted of twelve images; eight were the expected answers for the questions posed and four images worked as distractors. Of these twelve pictures, six were exactly the same as the ones in the pretest; however, the other six had to be

replaced by images that displayed similar characteristics as the pictures from the pretest were present in the stories of the third and fourth cycle. It is important to point out that most of the pictures that were replaced were the ones that worked as distractors.

The posttest was implemented after the four LDCs had taken place, and it was used to measure he impact of the experimental intervention t on student teachers´ development of visual literacy to decode visual ensembles. The pictures were the same as the ones used in the pretest; however, as some of the images used in the pretest were analysed during the cycles, they were replaced by images which followed the same characteristics so as not to create differences in the degree of analysis required in the pretest and posttest.

3.5.2. Classroom observation

Classroom observation provided the researcher with the opportunity to watch and collect first hand direct information about student teachers´ learning process. The type of classroom observation that was employed during this research could be classified as non-participant. The non-participant observer was a teacher educator who did not participate in the classes but collected all the information on the observation sheet. This teacher educator received some training to learn to recognize the behavior that was relevant to this study. Observation involved completing a semi-structured form with some pre-established categories and room for field notes. The structured section helped to standardize information and enhanced inter-rater reliability. Since the observer obtained information first hand, this type of account provided some objective data and a rich descriptive contextual information of the setting in which the research took place.

The teacher observer was present during four sessions of a hundred and sixty minutes each. In each class, the teacher observer was present during the telling of the story, the analysis stage and the practice stage. It is important to state that these lessons took place during different semesters. The first two LDCs took place during the first semester while the other two were carried out during the second semester. This time distribution was necessary to help visual grammar concepts to be internalized and to create room for student teachers to cover other material that they needed to learn to perform their teaching practicum. This classroom observation data was recorded and

categorized into the themes: the interpretation of images, the use of metalanguage and the understanding of colour choice.

The teacher observer was present during the three stages of the LDC. During the modelled reading stage, the observer gathered some impressions of student teachers´ level of engagement with the task at hand. This information taken into account since student teachers´ interest in and attention on the topic would be conducive to learning.

During the observation of the guided practice stage, the focus of the observer was on capturing instances of the use of metalanguage that worked as evidence that student teachers could abstract meaning from pictorial texts in relation to the different subsystems of the interpersonal metafunction. In other words, only those instances in which student teachers showed some evidence of their understanding of the meanings communicated through visual cues were recorded. Other comments as regards, for instance, the presence of intertextuality in the text were welcomed but not coded as they exceeded the scope of this study. As the intervention took place, the use of metalanguage and its corresponding justifications were elicited from the student teachers by the teacher researcher through different activities.

The data was coded in terms of task achievement. The teacher researcher displayed each of the different images that constituted a picture book. Student teachers were asked to decode the image first because the researcher wanted to explore the type of elements students focused on to attempt to interpret each image. Then, the teacher researcher guided student teachers´ analysis through some questions during the intervention.

Student teachers´ interventions were considered in terms of task achievement. Thus, the teacher researcher employed the categories: a) *well achieved*; b) *achieved* and c) *not achieved*. In the first category, *well achieved*, the coded interventions were the ones in which student teachers made reference to specific metalanguage and provided a justification that was relevant to the metalanguage employed and the interpretation of the pictorial text. In the second category, *achieved*, the comments tallied were the ones in which student teachers used the appropriate metalanguage to interpret a visual cue but the justification that followed proved to be unsuitable for that category. If the teacher needed to provide the intended answer, the intervention was placed under the category, *not achieved*. As regards the expected metalanguage, the researcher expected the use of

Serafini´s (2014) metalanguage on picture books (see section 2.6) and Kress and van Leeuwen´s (1996) on visual grammar (see section 2.3).

Student teachers´ interventions were not measured in terms of frequency but in terms of relevance and spontaneous intervention as it was considered that student teachers´ initiated pertinent response meant that they had internalized the theory and that they were developing the skill of reading visual meaning making resources.

During the independent practice stage, the teacher took down notes related to student teachers´ working on the interpretation of images and their use of metalanguage. These notes were useful to gain an understanding of the aspects of visual literacy student teachers found the most difficult to grasp. However, when the data triangulation took place, only the results of the guided practice observation stage were used since they were coded employing the same categories as the ones implemented to analyse the pretest and posttest and student teachers´ work.

Classroom interventions fed this research with interesting insights since, in the pre and posttest, students were supposed to react to isolated features, while in class student teachers focused on different and sometimes co-occurring visual features present in pictorial texts.

3.5.3 Document Analysis

After each LDCs, student teachers produced a multimodal text and wrote a short justification explaining the use of visual cues. Student teachers´ productions was analysed as if they were documents. Document analysis can become a data source in qualitative research (Bowen, 2009). This author defines document analysis as a "systematic procedure for reviewing or evaluating documents" (p. 27). In order for the analysis to be successful, the data has to be carefully examined to extract meaning that would foster the understanding of the object of study and generate knowledge. One of the advantages of this data collecting method is that it allows the researcher to have access to information without any type of intervention; thus, the researcher can analyse data obtained at first hand. This method was used in combination with other research methods in order to favour the process of triangulation. Also, the use of multiple sources of data can reduce the impact of potential biases while boosting the credibility of the

research work (Salkind, 2010; Bowen, 2009). Document analysis, which is a method frequently employed in case studies, fits the conceptual framework of this study.

According to Bowen (2009), document analysis can serve five purposes: "provide background information and context, additional questions to be asked, supplementary data, a means of tracking change and development and verification of findings from other data sources" (pp. 31-32). In this research work, this data collection method was valued since it facilitated the process of data collection and validation of information. Document analysis supplemented the data obtained through the other data collection methods employed in this research, namely semi-structured interviews and classroom observations. Also, this data was used to corroborate information and findings. If there was convergence of information, research findings would enjoy credibility (Bowen, 2009).

Some of the advantages of using this method is that documents are not affected by the research process (ibid.). If compared to classroom observations in which the presence of the researcher may affect the daily development of a class, documents present themselves as stable since they will not be altered by the presence of the researcher; thus, they can be reviewed several times if necessary (Merriam, 1988). One of the main disadvantages of this method is biased selectivity; however, in order to avoid this limitation, all documents were analysed.

The analysis of documents involved three stages: a) exploratory reading: first reading to become familiar with the research material; b) thorough examination: reading to define categories to analyse the data obtained; c) interpretation: the researcher interpreted the data in the light of the categories that emerged from the document analysis. This interpretation was followed by a thematic analysis that resulted from reading the data until a recognizable pattern for analysis emerged and categories could be delineated. The coding and categorization construction was influenced by the research questions. In this particular research, predefined codes were used as they were the same employed to decode classroom observations and interview transcripts. However, the documents were analysed with an open mind so if a new category had emerged, it would have been taken into account and the documents would have been reanalysed to assess the presence of those categories. The use of the same codes and categories facilitated the integration of data collected by different methods (Bowen,

2009), and enhanced validity and sensitivity on the part of the researcher to select data from documents.

The documents analysed were student teachers´ productions after each cycle had ended. At the end of each cycle, student teachers had to analyse a pictorial image in the light of the theory seen in class to justify their readings of the visual cues that guided their interpretation. Those documents were produced with the aim of obtaining some evidence of the learning process that student teachers were undergoing after each intervention session. Student teachers wrote them having the teacher in mind as a target audience. Student teachers were asked to produce individual pieces; however, at times, they felt the need to consult with a classmate and this was allowed as it was considered that this debate would prove fruitful to their learning. The final product was a document that resulted from first hand experience. Each student teacher handed in a document after each cycle, so a total of forty eight written pieces were coded into substantive categories. Figure 15 is an example of student teachers´ work at the end of the first LDC. In this example, student teachers identified the subsystem of contact and the component offer; they also provided an explanation to the use of these labels. (note: The comment has been transcribed as it was written so it contains some language mistakes)

An aspect to be analysed is contact. There is offer on part of the people who are not looking directly at us with the intention to make us focus on the scene.

Figure 15. ST1 example of ad created during the independent practice stage in the first LDC.

3.5.4 Interviews

Interviews with the different participants were held after the instruction was completed. The main aim of employing this tool was learning about student teachers´ beliefs about the intervention. This view was important for the researcher to be able to compare the results obtained through different data collecting tools with student teachers´ perceptions of their own learning progress. The interviews were open ended as some questions were the same to all the student teachers but some others were added as the interview unfolded. The questions were related to the experience of learning about visual literacy and its impact on improving student teachers´ understanding of visual texts. The questions were reviewed by the researcher, the teacher who carried out the classroom observations, and the thesis advisor to be able to check the usefulness and relevance to guarantee content validity. The interview contained open-ended questions to avoid obtaining "yes" and "no" answers which would not provide much information to the research.

Each interview started with a short social conversation to help the interviewee to relax the interviewee and to make clear that information would remain anonymous. Afterwards, the purpose of the interview was stated. Permission to use the information provided was explicitly asked through a consent form. Different questions were asked and, when the answers failed to provide sufficient information, other questions were asked to gather the desired data. At the end of the interview, student teachers were properly thanked and informed that they might be contacted later in case that some clarification was necessary.

One of the advantages of using individual interviews was that the researcher was able to gather unbiased data as other participants´ views may not influence others. Still, the decoding of this data relied heavily on the interpretation of the researcher; that is why it was not the only method employed to collect information. After the interviews were held, they were transcribed, coded and analysed.

3.6. Data Analysis

Data analysis comprised different processes. On the one hand, the pretest and posttest were analysed using statistical information while classroom observation, data analysis and interviews were analysed following the three purposes for the analysis of qualitative information outlined by Miles and Huberman (1994): a) data reduction, b) data display and c) data interpretation. Data reduction refers to "the process of selecting, focusing, simplifying, abstracting, and transforming the data that appear in written up field notes or transcriptions" (p.10). Data display alludes to the organized presentation of information that eases the process of drawing conclusions. Finally, data interpretation makes reference to the process of analysis and explanation of the data in relation to the research questions.

3.6.1. Pretest and posttest

The information from both tests was submitted to a statistical analysis that consisted in calculating the number of frequencies and of percentages to all the relative variables in terms of value and performance taking into account the student teachers´ grade. This information allowed the teacher researcher to gather information about student teachers´ knowledge of visual literacy before and after the implementation of the intervention. After the results of the tests were obtained, they were compared against each other to measure the participants´ progress after the implementation stage.

The data was analysed using the InfoStat software (Di Rienzo, et al.,2018. FCA, UNC).

3.6.2. Classroom observation

The objective of the classroom observations was to assess if student teachers could use metalanguage related to the structure of a) picture books (Serafini, 2014) (see section 2.6), b) visual grammar (Kress and van Leeuwen, 1996) (see section 2.3) and c)

ambience (Painter et al., 2012) (see section 2.6), and provide a proper justification to make evident that they were able understand and apply newly acquired knowledge.

Structure of an LDC	
1st stage	**Orientation to the text** • No classroom observation was carried out at this stage.
1st stage	**Reading the Text** • Detailed reading accompanied by questions that guided student teachers´ interpretation of visual cues • Explicit instruction of metalanguage related to a) picture books; b) visual grammar
2nd stage	**Guided Reading** • Student teachers´ read a new text guided by some questions that foster the reflection on the use of different visual elements
3rd stage	**Independent work** • No classroom observation was carried out at this stage.

Figure 16. Stages of the adapted LDC.

During the substage, reading the text, the teacher researcher employed a power point presentation to retell the story. This type of presentation the projection all the images on a larger screen to analyse the details of the pictures in great detail. Figure 17 illustrates the cues used to stimulate the analysis and the use of metalanguage. First, the questions appeared on the screen to foster the analysis of the image. Second, metalanguage related to the interpersonal metafunction was introduced. Finally, vocabulary pertaining to picture books was taught.
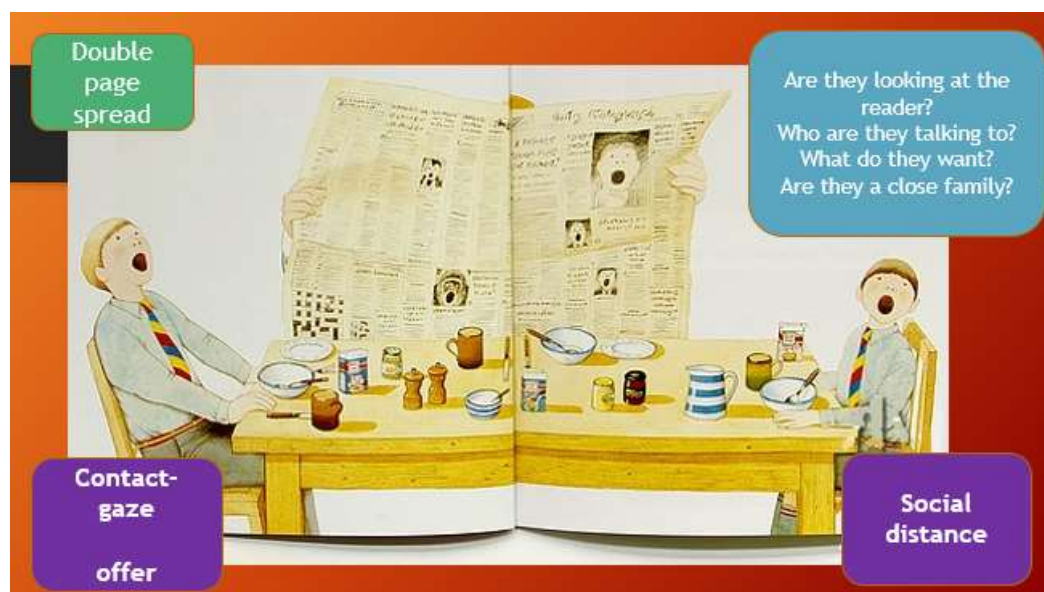
Figure 17. Example of explicit teaching of metalanguage related to the interpersonal metafunction and picture books.

From the second LDC onwards, the teacher researcher included the explicit teaching of colours. The different pages of the picture book were projected on a large screen and different questions were introduced to analyse the potential meanings that the different use of colours added to the meaning of the whole text (Figure 18). Then, specific metalanguage to discuss colour usage was introduced.
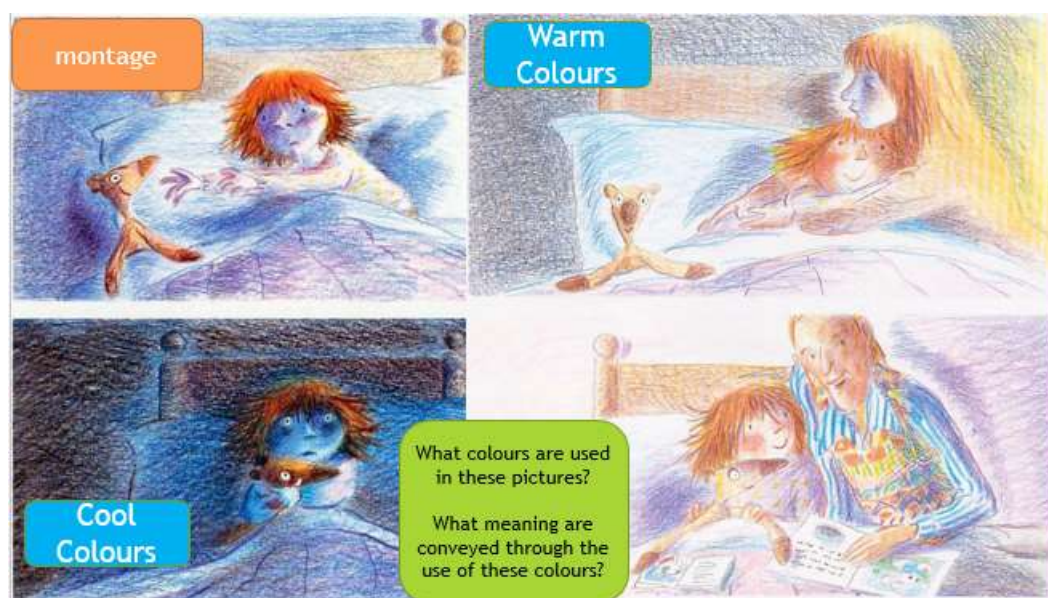
Figure 18. Example of explicit teaching of metalanguage related to colours during the second LDC.

Classroom observation fostered a continuous reflection about the data. After each LCD the researcher developed the habit of writing key aspects of the session and questions related to methodological queries. This reflection helped to strengthen the quality of this research.

3.6.3. Document analysis

The data under analysis was student teachers´ productions. The data was prepared for analysis using a code to ease the understanding, the representation and the further analysis of its meaning. This coding focused on the use of interpersonal metafunctions and the interpretation of colour and their corresponding justifications. Axial coding was employed since the different categories selected for the coding respond to the SFL and visual grammar theories.

Since the coding took place after each LDC was finished, the data also helped to feed the research itself as it informed the researcher about critical issues that emerged. Some points that arose were: the need to insist on student teachers producing complete answers and not just mentioning isolated metalanguage and the need to focus on helping student teachers understand the importance of the horizontal as well as vertical angle in the creation of pictorial meaning.

3.6.4. Interviews

All the twelve students answered the eight-question interview. The data was collected by means of eight questions (see Appendix 4). The first three questions (A to C) invited students to analyse their personal experience with regard to visual literacy instruction. These questions were important since student teachers´ personal experience set the tone for the rest of the interview. The next four questions (D-G) explored the capability of student teachers to establish a link between the explicit teaching of visual literacy with foreign language instruction. These questions were important to evaluate if they could understand the role that interpreting a pictorial text plays in communication. The final question (H) was an invitation for student teachers to mention any idea that may not have been explored by the previous questions.

As this was an exploratory study, all the questions were open ended to enable student teachers to elaborate on their beliefs without conditioning their answers. After all the student teachers were individually interviewed and recorded, there was a more

detailed analysis in which the data was segmented into sentences and labelled into categories. Then, all the similar topics were clustered together.

The topics were written down into columns and ordered in terms of relevance to the topic discussed: the usefulness of the intervention implemented. The ideas that were susceptible to be interconnected were linked by means of comments written down in the margins of the word document.

3.6.5. Memoing

From an early stage, the teacher researcher wrote down what had taken place in a class, e.g. students´ reactions to the decodification of pictorial information. Memoing contributed to the in-depth data analysis that would otherwise have been difficult to achieve. "Through the use of memos, the researcher is able to immerse themselves in the data, explore the meanings that this data holds, maintain continuity and sustain momentum in the conduct of research" (Birks et al., 2008, p. 69). Reflection lies at the core of qualitative research, and memoing facilitates the interplay between the research and the data collected that is necessary to foster the construction of context situated knowledge.

In this research, memoing proved to be useful since, after the end of each literacy development cycle, researcher´s thoughts on student teachers´ productions and events that had taken place in the class were recorded and reflected upon. This reflection produced useful insights that were shared and discussed with my thesis advisor, the teacher who carried out the classroom observations and the statistician. As a result of these consultations, my research increased in depth and gained more objectivity.

The main advantages as regards the use of memoing were that it contributed to maintaining productivity (Charmaz, 2006), solving any emerging issues that came up during the implementation procedure and fostering debate to improve interpretation of data.

Birks et al. (2008) lists four distinct functions that memos can perform in the research process.

1) *Mapping research activities*: memos allow researchers to keep track of their decision making involved in research design and implementation.

2) *Extracting meaning from the data*: analytical strategies are implemented to extract meaning from data that will be subsequently expressed in conceptual terms (Speziale & Carpenter, 2007). Memoing can facilitate the process of identifying parameters in each data group, which is key to conducting a comparative analysis. In other words, memoing results in "The result is the generation of theoretical assertions that grounded in raw data, yet possess the quality of conceptual abstraction" (Birks et al., 2008, p.71).

3) *Maintaining momentum*: in qualitative research, the data is filtered through the subjective perspective of the researcher. Memos enable researchers to record their thoughts to be reviewed and confirmed as the research unfolds. This technique also eases the process of moving from the stage of data collection stage to the one of data analysis.

4) *Opening communication*: memos are written by a researcher who ponders on specific research situations. This recording of ideas facilitates the process of sharing ideas and queries with fellow researchers or advisors to ensure validity.

3.7. Validity and reliability

As defined by Salkind (2010), validity is "an argument in support of a construct, made using data" (p. 1640). Investigators seek to minimize bias in the interpretation of data by selecting evidence that represents their findings and insights. In this research, the case studie was based on interpretative data drawn from different sources. These sources helped produce a methodological triangulation as the results of the observations, interviews and document data were cross-examined to validate the findings of each data collecting tool in isolation. As soon as an LDC finished, rich and thick descriptions were written by the teacher educator which were later used to corroborate her findings with the thesis advisor and fellow colleague. Also, each instrument was designed by the teacher educator and later assessed by thesis advisor and colleagues to ensure content validity.

3.8. Ethical considerations

In this study, the main source of data was student teachers´ work. Consequently, different ethical considerations were taken into account so as to protect student teachers´ identity and privacy.

First, all participants of this research were properly asked if they wanted to become part of this research work. They signed a consent form (Appendix 5) and were informed about the different stages that this investigation was going to follow. Student teachers were only informed about the general topic of the research and the fact that they were going to work with several literacy development cycles. However, key information about the research focus of this dissertation was not disclosed to avoid any participant bias. As they showed interest in learning about the research findings of the study, it was agreed that all students were going to be provided with feedback on their individual and group results.

Throughout this work, the participants of this study were identified with letters and numbers so that their identities remained anonymous; for example, each teacher student was identified as ST1 (= student teacher 1). Numbers were assigned at random. Numbers were necessary to clarify that comments belonged to different participants. No further identification was required as student teachers´ productions were not compared among each other.

3.9. Researcher´s role

In all the stages of this investigation, there has been constant exploration of research about the best procedures to provide a detailed account of the process with the highest degree of objectivity. Besides, major decisions were consulted with the thesis advisor, fellow colleagues and a statistician to ensure validity and reliability in this study.

3.10. Conclusion of the chapter

Chapter three has presented the methodology employed to carry out this research work. I have explained why this work can be categorized within the qualitative research paradigm. The context as well as the participants of the study have been described. The

procedure for data collection and data analysis was explored. The steps to ensure validity and reliability have been introduced. Lastly, this chapter has addressed ethical concerns and the role of the researcher so that confidence on the research can be boosted.

CHAPTER 4

RESULTS

This chapter is divided into five sections. First, a descriptive statistical analysis of the data of the pretest and posttest is examined. The second section introduces the results of classroom observation and document analysis. The third section explores the statistical results of the document analysis. In the fourth section, the results of the student teachers´ interview are summarized. Finally, the last section offers a conclusion to the chapter.

4.1 Results of the pretest and the posttest

The pretest designed contributed to measuring student teachers´ current understanding of visual literacy. In other words, this data collecting tool helped to explore if the participants of this study could identify, interpret and assess visual material. Equipped with this knowledge, the researcher was able to identify what aspects of the visual analysis caused greater difficulty for the students, so that they could be specially addressed during the implementation of the different LDCs.

The results of the pretest show what visual cues student teachers could decode from a visual text and how well they could interpret pictorial information before receiving explicit instruction on visual literacy. In *Table 12* presents information about student teachers´ performance in terms of grades while *Table 13* introduces the same information in percentages. To help the interpretation of the analysis, the results are stated considering each subsystem individually. Of all the subsystems, *contact* was the easiest to decode for the student teachers. As it was described in section 2.3, contact construes demand and offer. 91. 67 % of the student teachers could produce an appropriate answer that evidenced their understanding of the component of *demand* while 75% could produce an answer that showed their understanding of the component *offer*. The subsystem *social distance* is constituted by the components of *distance* and *proximity*. As it is shown in *Table 13*, 58.33 % of the student teachers could successfully decode *distance*. Unlike *distance*, *proximity* presented more challenge for the participants as 75% could not solve the task. The subsystem *point of view* proved to be the most challenging subsystem to read. It is constituted by the components: *intimacy,*

tension, power and *powerlessness*. None of the student teachers could identify visual cues related to *powerlessness.* 75% found it difficult to identify instances of *tension*, while 50% struggled to decode traces of *intimacy*, and 58.33%, to interpret *power*. Finally, considering the decoding of colour range selection, none of the student teachers made reference to colour to interpret images.

Grade (in terms of frequency)	Interpersonal metafunction								Colour Diff. meaning
	Social distance		Point of view				Contact		
	Distance	Proximity	Intimacy	Tension	Power	Power Lessness	Demand	Offer	
Not achieved	3	9	6	9	7	12	1	3	12
Achieved	2	0	3	0	0	0	0	0	0
Well achieved	7	3	3	3	5	0	11	9	0

Table 12. Grades obtained in terms frequency: Pretest**.**

Grade (in terms of percentages)	Interpersonal metafunction								Colour Diff. meaning
	Social distance		Point of view				Contact		
	Distance	Proximity	Intimacy	tension	Power	Power Lessness	Demand	Offer	
Not achieved	25.00	75.00	50.00	7500	58.33	100.00	8.33	25.00	100.00
Achieved	16.67	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00
Well achieved	58.33	25.00	25.00	25.00	41.67	0.00	91.67	75.0	0.00

Table 13. Grades obtained expressed in percentages: Pretest.

Table 14 shows the results of student teachers´ decodification of the pictorial language after the intervention of explicit instruction of visual literacy. The subsystem *contact* shows a high percentage of achievement; 83.33% (*Table 15*) student teachers could successfully decode *demand* and *offer*. As regards the subsystem, *social distance*, it is possible to see that 58.33% could interpret the component of *distance* successfully while 41.67% manage to read the component of *proximity*. Point of view holds the

weakest position in terms of student teachers' ability to interpret visual cues. 50% of the student teachers could successfully interpret traces of tension in visual texts. Only 33.33% could read visual cues related to power. The weakest interpretations are present in the components of intimacy (8.33 %) and powerlessness (8.33 %). Lastly, 58% of student teachers could successfully interpret the use of different ranges of colour within a text.

| Grade (in terms of frequency) | Interpersonal metafunction | | | | | | | | Colour Diff. meaning |
| | Social distance | | Point of view | | | | Contact | | |
	Distance	Proximity	Intimacy	Tension	Power	Power lessness	Demand	Offer	
Not achieved	1	4	1	5	5	8	1	1	5
Achieved	4	3	10	1	3	3	1	1	0
Well achieved	7	5	1	6	4	1	10	10	7

Table 14. Grades obtained in terms of frequency: Posttest

| Grade (in terms of percentage) | Interpersonal metafunction | | | | | | | | Colour Diff. meaning |
| | Social distance | | Point of view | | | | Contact | | |
	Distance	Proximity	Intimacy	tension	Powerful	Power lessness	Demand	Offer	
Not achieved	8.33	33.33	8.33	41.67	41.67	66.67	8.33	8.33	41.67
Achieved	33.33	25.00	83.33	8.33	25.00	25.00	8.33	8.33	0.00
Well achieved	58,33	41.67	8.33	50.00	33.33	8.33	83.33	83.33	58.33

Table 15 – Grades obtained expressed in terms of percentage – Posttest

When comparing the results of both tests, two areas show the most progression (*Table 16*). The most significant improvement is observable within the system of *colour* in which 58. 33 % of the student teachers who, before the intervention could not interpret colour selection could not only identify but also justify the choices of colours made by the text producer (*Table 17*). A reason that may account for this progression is that student teachers had never been taught how to interpret color or consider it as a meaning

making resource. During the intervention stage, the interpretation of colours was closely linked to the understanding of human feelings and emotions so that the level of concreteness could have facilitated their interpretations.

Another component in which there was significant development perceived in the post-test is *intimacy* as 58% of the student teachers could read the visual meaning making resources related to this component. In the pretest, student teachers seemed to equate the idea of people in close physical proximity sharing a same space with the idea of intimacy. During the intervention, several pictures that illustrated the concept of intimacy were analysed and student teachers learned how intimacy was expressed through gaze. Also, they understood that people who are together in an enclosed space are not necessarily connected. For instance, during the rush hour, people who commute using public transport are in close physical proximity in a specific space; however, all these people are mostly strangers to one another. At the same time, exploring people´s eyes locked in gaze allow student teachers to understand the importance of this gesture to convey different degrees of intimacy. However, at the same time, it was noticeable that 25% the student teachers also exhibited some regression.

In terms of achievement, *proximity* is the third component in which there is a positive change (50%) while little regression was evidenced (8.33%). During the pretest student teachers tended to select pictures depicting close physical proximity. As van Leeuwen (2005) states, our readings of the world are influenced by our bodily experience. When our bodies are close to others, we mention that we are in close proximity. Thus, the first concept to which we associate the word proximity is the one about being near to another person. Once student teachers related the concept of proximity with the concept of close shot, it was easier to select a picture that suited the concept of proximity as described by Kress and van Leeuwen´s visual grammar. There are two other components that show interesting improvement (41.67%): *tension* and *power*. Within the component of *tension*, it is possible to observe a slight regression (8.33%) whereas the component of power presents a more significant improvement (33.3%). Judging student teachers´ choices, it is possible to say that they were drawn to select those pictures which there were at least two characters. To them the idea of tensión is created by the tension perceived between characters, and not the author´s choice of angel. Since the pretest, student teachers tended to associate power with characters of picture books that exhibited physical traits linked to the idea of power, namely strong muscles, or to the idea of being mean people, such as people wearing dark clothes or

looking angry. In the posttest, there were more distractors that presented this type of characters than the pretest. The intervention seems to be unsuccessful in changing student teachers´ perception of how the idea of power is crafted employing visual resources. In the future, a comparative analysis and in-depth exploration of two pictures: one that exhibits mean-looking people and one that shows people whose power is conveyed by means of choice of angle may help remove pre-existing misconceptions of how the idea of power is conveyed in pictures. The components that evidenced the least development were *powerlessness* (33.3%), *offer* (25%), and *distance* (16.67%). Powerlessness could be the area that registers the least development because it was the least exploited component in picture books employed during this intervention. There is one component, *demand*, in which there is almost no change registered, just a slight regression of 8.33%.

| Results (in terms of frequency) | Interpersonal metafunction | | | | | | | | Colour Diff. meaning |
| | Social distance | | Point of view | | | | Contact | | |
	Distance	Proximity	Intimacy	Tension	Power	Power Lessness	Demand	Offer	
Significant improvement		3		4	3	1		3	7
Improvement	2	3	7	1	2	3			
No variation	10	5	2	6	3	8	11	7	5
Regression		1	2		1		1	1	
Significant regression			1	1	3			1	

Table 16 – Comparing pretest and posttest grade results in terms of frequency

| Results (in terms of percentage) | Interpersonal metafunction | | | | | | | | Colour Diff. Meaning |
| | Social distance | | Point of view | | | | Contact | | |
	Distance	Proximity	intimacy	Tension	Power	Power Lessness	Demand	Offer	
Significant improvement		25.00		33.33	25.00	8.33		25.00	58.33
Improvement	16.67	25.00	58.33	8.33	16.67	25.00			

No variation	83.33	41.67	16.67	50.00	25.00	66.67	91.67	58.33	41.67
Regression		8.33	16.67		8.33		8.33	8.33	
Significant regression			8.33	8.33	25.00			8.33	

Table 17 – Comparing pretest and posttest grade results in terms of percentage

Figure 9 below is a graphic representation of the changes student teachers´ underwent after the implementation of the intervention according the information provided by the pretest and posttest.
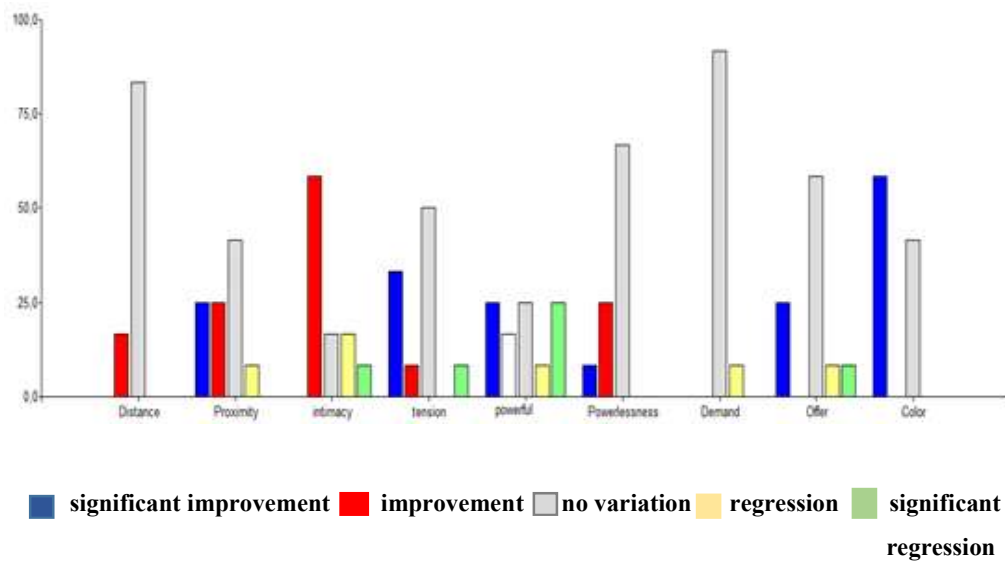
Figure 9. Percentage of Change.

The analysis of the pretest and posttest show that the intervention has been effective in introducing visual literacy in a context of higher education. At the same time, by comparing the results of both tests, it is possible to better identify those subsystems or components that proved to be the most challenging for student teachers. Armed with this information, future researchers may decide to provide participants with extra training directed to analysis of critical visual resources.

4.2 Results of the classroom observations

The results of classroom observations were assessed as follows: a) interest in the story (as motivation is conducive of learning); b) guided analysis; and c) individual practice.

First cycle

At the start of the cycle, the level of engagement with the story was high. After a brief discussion of the meaning of the story, the visual literacy instruction began. The picture book presented rich complex images in which there were certain "hidden" visual elements that demanded student teachers´ full attention and helped them to remain on task. The first images of the picture book were fully analysed in terms of the use of visual semiotic resources by the teacher. During the analysis, the teacher researcher explicit taught the metalanguage associated to visual grammar, interpersonal metafunction and picture books. There was reference to the use of colour; however, there was not a formal introduction regarding the potential meaning that different colour choices can convey as it was believed that so much information in one class could be cognitively overwhelming.

As the LDC progressed and moved into the introduction of metalanguage, the student teachers found it harder to remain engaged. This was the first time student teachers were required to perform such picture analysis and proved to be challenging for them. As the researcher moved forward with her analysis, she invited them to further assess the other pictures by posing guiding questions. There were some students who felt more confident and risked their first answers but the discussion was dominated by a few students while the others paid attention and tried to keep up with the information load and decodification.

The questions the teacher posed helped students to notice that there were certain elements in the pictures that formed patterns which most student teachers could identify; thus, they started to grow more confident and to risk more answers. At this stage, there were more of them participating, but not all of them provided complete answers. Some of them just provided a key word with which they felt confident either to refer to metalanguage or the interpretation of the image; however, when the teacher pressed them to justify the potential meaning that each of the visual resources was conveying,

some remained quiet and the teacher asked other students for help so as not to overwhelm anyone.

As the analysis progressed, students continued producing answers with their own words; however, instead of just producing the appropriate metalanguage as she did at first, the teacher posed further questions so that through association or analogy students could establish the connection between images, appropriate metalanguage and justification.

Student teachers could employ appropriate metalanguage spontaneously to describe different elements of the picture book more readily than metalanguage of the interpersonal metafunction. During this first LDC, most of the instances of the use of metalanguage were provided by the teacher, while all the connections between metalanguage and its corresponding justification were elicited by the teacher.

In this first cycle, students were asked to read visual cues present in advertising presenting stereotypical roles for men and women in the home, which was the topic of the picture book. Apart from the guided analysis carried out before, there was further scaffolding through a video that showed how other students analyzed pictures and justified there answers.

Students felt attracted towards the topic and this made it easy for them to explore different types of meanings through the creation of different ads in which they could exploit different resources. Students worked actively with a chart that guided their analysis to check whether they were addressing the different visual resources analyzed in class. In order to make sure they were using the right metalanguage, student teachers checked the video. As regards the justifications provided, the teacher researcher monitored their work and offered insights that future teachers could use to improve their work.

Second cycle

In the second cycle, student teachers were highly engaged in the reading of the story. After the reading, the teacher researcher proceeded to elicit the metalanguage in relation to the interpersonal metafunction and picture books. Then, the purposeful selection of colours and the potential intended meanings they could have in a story were formally introduced.

Interestingly, when student teachers initiated the decoding of the images, their attention was always first drawn to the interpretation of body language and facial gestures. The analysis of the other elements like the horizontal and vertical angle was triggered by the teacher´s questions. Once the student teachers had been exposed to the different visual resources associated with the interpersonal metafunction, they were invited to analyse different colour choices. Colours associated with feelings, e.g. red to denote anger, were interpreted without much difficulty. The understanding of colour selection to create ambience proved to be more challenging for students, mainly when the picture book producer chose cool colours instead of warm colours to set a specific atmosphere.

As student teachers identified the patterns of resources used to tell the story, they felt more willing to risk answers. Compared to the first cycle, in the second cycle, more people participated spontaneously. However, generally those instances of participation involved the analysis of recurrent features: gaze, colour to portray characters´ feelings, intimacy and social distance. In this story the choice of vertical angle was not exploited.

As this picture book touched upon the topic of acceptance and integration, student teachers were asked to look for pictures, such as those used in advertising, in which the topic was dealt with through the use of images. Student teachers went through the chart for picture analysis introduced the previous class to review the use of metalanguage. Student teachers could better exploit the metalanguage that was associated to the visual cues that they could decode with ease. For instance, the subsystem of proximity seems to have been easier to interpret than the subsystem of contact. There was an increase in the number of answers student teachers produced. At the same time, people who tended to be quiet participated more actively. Some students went back to the video of the first cycle to use it as a model to justify their choice of picture and its intended meaning.

Third cycle

This cycle was held after the winter break; thus, before the telling of the story, there was a warm up activity for student teachers to recall appropriate metalanguage in relation to the interpersonal metafunction, picture books and colours. As the teacher researcher told the story, student teachers were already providing different interpretations of what they could decode from some of the images. Not all the pictures of the picture book were analysed as a whole group since the teacher wanted the students

to be able to write an analysis on their own at the final stage of the cycle. It is important to point out that student teachers did not refer to the use of angle on their own; the analysis of this feature was generally elicited by the teacher. During the group analysis, student teachers could employ appropriate metalanguage to describe most of the elements of the picture book. During this stage, they struggled the most to retrieve the metalanguage related to the subsystem point of view and soft colours.

Students could explore most of the pictures without facing difficulties. This is the second book they read by Anthony Browne. Becoming somewhat familiar with the author helped them expect certain elements in the text; thus, they started to look for "hidden" visual meanings in the text or pictures that trick the reader into believing they were something different: e.g. fruits instead of trees, a tree that was a fire flame.

When student teachers had to work on their own, they were fully engaged in the activity. They found the analysis of the pictures highly motivating. Still, some of them reviewed certain concepts by rewatching the video presented to them the first class. Since this picture book exploited several visual semiotic resources, the level of analysis compared to the last previous cycles was the deepest.

Fourth cycle

This last cycle centered around a picture book about the friendship between a gorilla and a cat. Most of the participants of the study are animal rights defenders so they were hooked by the story from the moment they saw the cover.

During the guided analysis stage, they were highly engaged in the task of decoding the images as the knowledge was fresh from the revision in the third cycle and student teachers worked completely independently. Not all the images of the picture book were analysed as a whole group since the teacher wanted the students to be able to write an analysis on their own at the final stage of the cycle.

The exploitation of different visual resources was somehow limited compared to the picture book employed in the third cycle. In this book there were instances for students to analyse vertical angle but this feature was never the first aspect to be evaluated and generally the teacher researcher had to press student teachers to assess and justify the text producer´s choice of angle. For instance, they seldom mentioned the idea of powerlessness. Instead, student teachers naturally moved to the analysis of body

language and facial expression. The analysis of muted and cool colours also proved to be challenging.

When students had to work on their own, the use of metalanguage related to the interpersonal metafunction and the justifications provided evidenced that student teachers could offer a sound interpretation of images under analysis. At the same time, it was evident that students still needed further instruction to understand what "muted" colours are as they often mistook them for cool colours. Another interesting observation as regards the use of colours is that sometimes, students repeated certain justifications that were not necessarily pertinent to the resource they were assessing. For instance, they mentioned the idea of bright colours to create a sense of familiarity when they could not actually establish what was familiar to them in that picture.

The results of the observation of the different LDCs proved that gradually student teachers became better equipped to decode visual cues and, in turn, multimodal messages. This information is similar to the one provided by the pretest and posttest. Even when there are aspects in which student teachers still need to work, in general terms, student teachers could profit from this intervention.

4.3   Result of the document analysis

The results of the document analysis are presented taking into account each subsystem of the interpersonal metafunction and their corresponding components. The results obtained in each LDC is displayed in the same Table to facilitate a comparative analysis. Sometimes, the pictures selected for analysis did not exploit all the potential semiotic resources. In those cases, the acronym NA (not applicable) is used in the table to indicate that particular resource was not evaluated as it was not present in the pictorial text. Examples of the pictures analysed can be found in appendix 3.

4.3.1 Distance and proximity

In *Table 18*, it is possible to see that student teachers found it easier to decode visual cues related to the component of *distance* compared to *proximity*. In the first couple of cycles, more than the half of the students could decode *distance*, while fewer than the half of them could not interpret resources related to *proximity* (*Table 19*). The

high frequency of top marks towards the third and the forth cycle shows that student teachers were becoming better at analyzing visual cues at the end of the implementation of the intervention. The top grades are located in the third LDC.

Grade	Social distance							
(in terms of frequency)	Distance				Proximity			
	First LDC	Second LDC	Third LDC	Fourth LDC	First LDC	Second LDC	Third LDC	Fourth LDC
Not achieved	3	1	0	1	9	4	1	1
Achieved	2	5	2	2	0	5	2	2
Well achieved	7	6	10	9	3	3	9	9

Table 18. Comparing document analysis results in terms of frequency (social distance).

Grade	Social distance							
(in terms of percentage)	Distance				Proximity			
	First LDC	Second LDC	Third LDC	Fourth LDC	First LDC	Second LDC	Third LDC	Fourth LDC
Not achieved	25.00	8.33	0.00	8.33	75.00	33.33	8.33	8.33
Achieved	16.67	41.67	16.67	16.67	0.00	41.67	16.67	16.67
Well achieved	58.33	50.00	83.33	75.00	25.00	25.00	75.00	75.00

Table 19. Comparing document analysis results in terms of percentage (social distance).

Even before the beginning of the intervention, the component of distance was easily decoded as its depiction mirrors our experience of being in the world; thus, no significant progression was registered. Our readings of the world are influenced by our bodily experience. We tend to associate the word proximity with the idea of being near another person. Once student teachers related the concept of proximity with the concept of close shot, it was easier to select a picture that suited the concept of proximity as described by Kress and van Leeuwen´s (1996, 2006) visual grammar.

4.3.2 Intimacy and tension

The results of the first couple of LDCs proved that student teachers did not naturally decode the components of *intimacy* and *tension (Table 20)*. In the second LDC, student teachers did not do as well as in the first LDC. In this case, most participants interpreted intimacy when people were just standing together and did not explore for other signs of intimacy such as gaze which they could detect in the third and fourth cycle. In the third and fourth cycle, significant improvement in student teachers´ interpretation of these components (*Table 21*). In the Third LDC, participants were able to perform at their best.

As regards intimacy and tension, in the second LDC, the pictures selected by the student teachers did not present images in which the component of tension could be analysed; thus, they are marked as NA (not applicable).

Grade	Point of view							
(in terms of frequency)	Intimacy				Tension			
	First LDC	Second LDC	Third LDC	Fourth LDC	First LDC	Second LDC	Third LDC	Fourth LDC
Not achieved	6	6	1	1	9	NA	1	2
Achieved	3	5	2	3	0	NA	2	2
Well achieved	3	1	9	8	3	NA	9	8

Table 20. Comparing document analysis results in terms of frequency (intimacy and tension).

Grade	Point of view							
(in terms of percentage)	Intimacy				Tension			
	First LDC	Second LDC	Third LDC	Fourth LDC	First LDC	Second LDC	Third LDC	Fourth LDC
Not achieved	50.00	50.00	8.33	8.33	75.00	NA	8.33	16.67
Achieved	25.00	41.67	16.67	25.00	0.00	NA	16.67	16.67
Well achieved	25.00	8.33	75.00	66.67	25.00	NA	75.00	66.67

Table 21. Comparing document analysis results in terms of percentage (intimacy and tension).

This component exhibits significant regression. When analysing the component of *intimacy* at the beginning of the intervention, student teachers seemed to equate the idea of people in close physical proximity sharing a same space with the idea of intimacy. However, according to Kress and van Leeuwen´s (2006) framework the component of intimacy is realized through the semiotic resource of gaze. Thus, exploring people´s eyes locked in gaze would allow student teachers to understand the importance of this gesture to convey different degrees of intimacy.

The analysis of the component of tension only exhibited slight regression. Judging student teachers´ choices, it seemed that they were drawn to select those pictures in which there were at least two characters. To them the idea of tension is created by the strain perceived between characters, and not the author´s choice of horizontal angle. More exercises aimed at the analysis of this component may have a strong impact on student teachers´ learning of visual literacy.

4.3.3 Power and powerlessness

The components of *power* and *powerlessness* are the ones in which change is more evident (*Table 22*). If the results of the first LDC are compared to the results of the third, it is possible to observe student teachers´ progression. In the component of power, there could is a 50% progress in the participants´ capacity to interpret visual cues. The most significant improvement can be seen in the component of powerlessness (91.67%) (*Table 23*).

In the second and fourth LDC, the pictures selected by the student teachers did not present images in which *tension* could be analysed; thus, they are marked as NA (not applicable).

Grade	Point of view							
(in terms of frequency)	*Power*				*Powerlessness*			
	First LDC	*Second LDC*	*Third LDC*	*Fourth LDC*	*First LDC*	*Second LDC*	*Third LDC*	*Fourth LDC*
Not achieved	7	NA	1	NA	12	NA	1	NA
Achieved	0	NA	2	NA	0	NA	2	NA

| Well achieved | 5 | NA | 9 | NA | 0 | NA | 9 | NA |

Table 22. Comparing document analysis results in terms of frequency (power and powerlessness).

Grade (in terms of percentage)	Point of view							
	Power				*Powerlessness*			
	First LDC	*Second LDC*	*Third LDC*	*Fourth LDC*	*First LDC*	*Second LDC*	*Third LDC*	*Fourth LDC*
Not achieved	58.33	NA	8.33	NA	100.00	NA	8.33	NA
Achieved	0.00	NA	16.67	NA	0.00	NA	16.67	NA
Well achieved	41.67	NA	75.00	NA	0.00	NA	75.00	NA

Table 23. Comparing document analysis results in terms of percentage (power and powerlessness).

The concept of power proved to be an ambiguous term for some student teachers. They tended to select pictures in which the idea of power was conveyed by means of mean-looking people and strong muscles. However, following the framework of visual grammar, the concept of power is crafted by means of the vertical angle. Unlike the component of power, the component of powerlessness exhibited significant regression. One reason that may account for this is that there were very few examples of this semantic resource in the picture books chosen. Student teachers´ feelings also had a heavy influence on their interpretation since most of them considered this person to be sad, but not necessarily powerless. More exercises to help student teachers strengthen the connection between the author´s choice of vertical angle and the concept of power and powerlessness.

4.3.4 Demand and offer

These tables show that from the beginning of the intervention student teachers were able to decode the components of *demand* and *offer (Table 24)*. That capacity remained fairly stable all throughout the intervention (Table 25).

Grade	Contact							
(in terms of frequency)	Demand				Offer			
	First LDC	Second LDC	Third LDC	Fourth LDC	First LDC	Second LDC	Third LDC	Fourth LDC
Not achieved	1	0	0	0	3	1	1	1
Achieved	0	0	0	0	0	0	2	2
Well achieved	11	12	12	12	9	11	9	9

Table 24. Comparing document analysis results in terms of frequency (demand and offer).

Grade	Contact							
(in terms of percentage)	Demand				Offer			
	First LDC	Second LDC	Third LDC	Fourth LDC	First LDC	Second LDC	Third LDC	Fourth LDC
Not achieved	8.33	0.00	0.00	0.00	25.00	8.33	8.33	8.33
Achieved	0.00	0.00	0.00	0.00	0.00	0.00	16.67	16.67
Well achieved	91.67	100.00	100.00	100.00	75.00	75.00	75.00	75.00

Table 25. Comparing document analysis results in terms of percentage (demand and offer).

Student teachers were good at understanding offer and demand. One reason that may account for this is that people are automatically drawn to interpreting human expression. Human beings are wired for connection. When initiating interaction with someone new, people would tend to formulate first impressions by assessing how people look and based on that assessment, they tend to embark on different types of human interactions. This human experience could facilitate the reading of offer and demand on images.

4.3.5 Colour

Overall, there is a clearly observable progression in student teachers´ capacity to interpret potential meaning projected by different colour choices (*Table 26*). It is quite

interesting to observe that in the third LDC all of the student teachers (100%) (*Table 27*) succeeded in analyzing the pictorial text.

As it was stated in section 3.4, in the first LDC, there was no introduction to the interpretation of colour range choices; thus, information on color interpretation in the first LDC is marked as NA (no applicable).

Grade	Colour			
(in terms of frequency)	*Different meaning colour*			
	First LDC	*Second LDC*	*Third LDC*	*Fourth LDC*
Not achieved	NA	2	0	1
Achieved	NA	5	0	4
Well achieved	NA	5	12	7

NA = not applicable

Table 26. Comparing document analysis results in terms of frequency (colour).

Grade	Colour			
(in terms of percentage)	*Different meaning colour*			
	First LDC	*Second LDC*	*Third LDC*	*Fourth LDC*
Not achieved	NA	16.67	0.00	8.33
Achieved	NA	41.67	0.00	33.33
Well achieved	NA	41.67	100.00	58.33

Table 27. Comparing document analysis results in terms of percentage (colour).

Document analysis further corroborates the findings obtained in the pretest and posttest and classroom observation. A finding that is more unique to this reseach tool is the type of progression and regression movement after or before the third LDC. Until the third LDC, results show a steady progression in student teachers´ learning of visual literacy; however, in the fourth LDC, this progression is no longer perceivable. One reason to account for this is the material employed. Unlike the picturebook, *Voices in*

the park, used in the fourth LDC, *Little Beauty* exhibits a more restrictive use of visual meaning making resources; thus, student teachers could have struggled more interpreting the cues present in the text. In this text there were elements that resembled reality. For instance, there is a wall paper that resembles the foliage of a jungle. Since the wall paper is presented in a void, and not constrained by the limits of a zoo cage, some students read the visual cue shallowly taking for granted that they were looking at some real vegetation. However, they missed the author´s intention of using color and form to create a sense of contextual familiarity for the main character of the book, a gorilla, who is supposed to feel comfortable in nature.

4.4 Results of interviews

Interviews helped gather student teachers´ beliefs on their own learning process. The first question of the interview aimed at exploring how useful student teachers believed that visual literacy instruction was to help them to improve their reading of pictorial language. All twelve participants (100%) answered that they found learning about visual literacy useful as they could start paying attention to different meaning making resources that are exploited to convey a certain meaning. Their exposure to a profuse variety of images embedded within stories enriched the participants´ exposure to visual texts while presenting them with multiple opportunities for the interpretation of diverse visual cues. "Now, I can perform a more detailed reading of a picture", said (ST1). Some of the students even mentioned that this knowledge would help them in their future professional life to choose both stories and images rich in visual detail to engage their students in the critical consumption of visual messages while also promoting the learning of the second language.

In the second question, student teachers were invited to voice their opinions about their learning process of visual literacy in terms of the difficulties they had perceived during the implementation period. Student teachers´ replies were read and then coded into two categories: a) they found it difficult both to learn how to read an image and how to decode it using appropriate metalanguage and b) they just experienced difficulties with the interpretation of images employing appropriate metalanguage. Only two out of the twelve (16. 6 %) student teachers expressed experiencing difficulties at the moment of reading and decoding a pictorial text employing specific metalanguage.

The other ten (83. 3 %) student teachers stated that reading an image did not present any difficulties to them but the use of metalanguage did. However, in both cases, the participants acknowledged that the reading process and interpretation became easier as time progressed and they gained more knowledge about how to read visual cues. Neither of the student teachers had received previous instruction on visual literacy, so this was their first time learning metalanguage related to visual grammar, picture books and the interpersonal metafunction. Consequently, during the first cycles student teachers struggled to find the exact word to communicate what they had read. "At first, the whole process of reading and interpreting visual texts was difficult for me. However, once I learned about visual grammar and the potential meaning each detail can unveil, the work with pictorial texts became easy", ST2 said. Some student teachers also expressed that they would have liked to receive further theoretical instruction on metalanguage to be more confident. Others even realized that this was just the start of a learning path.

When student teachers moved to answer the third question about whether the knowledge of metalanguage aided their reading of visual cues, all of them (100%) stated that the learning of metalanguage was key to raising their awareness towards the importance of understanding visual meaning making resources. Most of the students stressed that the teaching of visual grammar helped them focus their attention on different details that they had never considered before. Besides, student teachers mentioned that their skills to interpret pictures had broadened as they could also now understand that even the choice of colours that are selected to create an image carries meaning. ST4 stated that "… authors encode messages through visual resources and it is our ability to decode those messages that enriches the story". Student teachers grew naturally curious about other elements in the picture and wished they had received further instruction in the interpretation of gestures and other elements pertaining to the other metafunctions.

The forth question was open in order to explore student teachers´ beliefs about the usefulness of learning about visual literacy for their future profession as foreign language teachers. In their role as teachers, student teachers felt that learning about visual grammar had helped them establish a criterion for the selection of images that may promote their students´ understanding of a particular message. Future teachers understood that children could use the meaning conveyed through images to make up for the meaning that some might not be able to obtain from the reading of the verbal

text. ST5 stated that "the reading of visual texts could lead to critical literacy as deeper meanings could be abstracted from a pictorial text". Besides, by guiding their potential students into the analysis of pictures, student teachers felt that they would be able to instruct students in values, the understanding of different perspectives and emotional intelligence. Visual literacy was valued as it was perceived to promote a deeper understanding of both visual and multimodal texts. Finally, there emerged aspects traditionally associated with the use of visuals as a teaching aid: a) to teach and elicit vocabulary, b) to engage students in diverse activities, c) to call students´ attention and d) to ease the understanding of a text.

The fifth question was intended to explore if after they had received explicit instruction on visual literacy, student teachers felt confident to teach it to their future students. Seven out of 12 (58.3 %) student teachers considered that they had enough knowledge to help their students focus on different visual cues that could guide the interpretation of "hidden" meaning conveyed in the pictorial language. This response is based on the fact that all students were aware that this was just an initial step in their visual literacy learning process; consequently, most future teachers acknowledged their need to continue learning about the topic. ST2 pointed out that "after having read many pictures I feel confident to teach my future students to interpret their own. Besides, I am convinced that I am going to learn from their interpretations as well". This perception of needing to receive further instruction about visual literacy made one student teacher feel that though she/he was qualified to deal with visual aspects, she would not be able to engage in a profound analysis. "On the one hand, I feel ready to instruct students since I have received formal instruction as well. On the other hand, I feel I could not guide a very profound analysis." The other four (33.3 %) student teachers claimed that they needed to receive further instruction to impart this knowledge, but they manifested they were ready to work with what they considered "simple" aspects of visual interpretation, namely colour choice.

The sixth question invited student teachers to consider if the interpretation of images from the perspective of the interpersonal metafunction boosted their students´ communicative skills in the second language. All student teachers stated the reading of pictures from the standpoint of the interpersonal metafunction provided students with a frame for interpretation of meaning making resources. In this vein, ST1 stated that reading images "helps to better interpret what the author of the text wished to expressed.

Sometimes, unveiling the hidden meaning of pictures allows the reader to better comprehend the whole message of a text". The decodification of these resources could also elicit some language production as the readers presented their subjective response to the reading of different visual messages. In those cases in which the readers could recover the meaning of the text relying on verbal cues, student teachers mentioned that the visual information could reinforce the textual one; thus, the message of the story was more likely to be retained in children´s memory and be elicited in the future. Besides, the interviewees considered that by paying close attention to visual cues, readers could focus their attention on the communicative aspect of the visual text.

In the seventh question, student teachers were asked to reflect on the literacy development cycle that was used to introduce them to the topic of visual literacy. Most students (75%) said that these cycles presented the topic and the material in an accessible way. Also, considering the tasks they had to perform, the theoretical framework as well as the practice activities were deemed enough. However, 25% of student teachers felt that they would have liked to receive further theoretical instruction. Some students presented interesting suggestions as well. For instance, S8 suggested that she "would have liked to work in groups, with each group assigned a story to analyse and to be later shared with classmates." Another student would have liked to analyse each of the images they had to work with individually during plenary sessions. Both cases indicate that future teachers would have liked to test their recently gained skill in a familiar environment.

At the end of the interview, student teachers were offered the opportunity to make any comment they thought could contribute to the assessment of the implementation of the intervention. Half of the student decided to produce a comment. Most of these were positive comments oriented towards the selection of picture books as they had never worked with them before. They liked the way authors exploited different resources to convey a message and also the choice of topics the books were about. Three students also stated that they liked this opportunity to learn how to read pictures since this was not something they had considered before. S10 claimed that "this has been a really enriching experience at both a personal and a professional level. I was a person that never paid much attention to the visual components of a text but now I have acquired the tools to analyse pictures. These tools will also help me to improve my teaching skills".

All in all, student teacher´s interviews helped to learn about their perspective about their learning process. Most students agreed that the LDC format and the resources employed during the instruction were conducive to learning. Still, it is important to consider that they feel that further instruction and practice would be necessary for them to feel comfortable with their knowledge so that they could transmit it to others.

4.5. Conclusion of the chapter

This chapter has presented the results of this research gathered through different data collecting tools. Classroom observations, document analysis and student teachers´ interviews were analysed qualitatively as these data was subjected to interpretation. At the same time, the results of both the pretest and posttest and document analysis were supported by statistical data that was qualitatively explained. The information obtained through different data collecting tools leads to the conclusion that visual literacy can be taught and that student teachers can become better at decoding pictorial information. At the same time, these results show that there are certain visual cues that are more susceptible to analysis than others.

CHAPTER 5

DISCUSSION AND IMPLICATIONS

This section presents the discussion of the findings introduced in chapter 4. Then, there is a detailed reference to the limitations of the study and some suggestions for further research. Finally, theoretical and pedagogical implications of the study are presented.

5.1 Discussion

This research focused on the explicit instruction of visual literacy to student teachers following Kress and van Leeuwen´s (2006) theory of visual grammar, hoping that it would impact on the student teachers´ communication process in a second language. The analysis of visual cues allows language learners to understand different visual resources through which meanings are (re)built, distributed and interpreted (Jewitt, 2008 a; Kress & van Leeuwen, 2001) within a singular community (Royce, 2007; Kress & van Leeuwen, 1996, 2006). This discussion involved the analysis of both interpretative as well as statistical data to document the learning process of the participants.

In this section, I will address the two research questions that have guided my analysis together with the research findings.

a. How can the adapted version of the LDC, as described in this research, promote the teaching of visual literacy and the understanding of the interpersonal metafunction?

b. In what ways can the explicit teaching of visual literacy contribute to the development of student teachers´ communicative skills in Initial English Language Teacher Education?

In order to address the first question, statistical data and students´ interviews were taken into account. It is possible to say that the adapted version of the LDC contributed

to the visual language teaching and learning process. In keeping with Papadopulus (2019) and Coccetta (2018), the teaching of visual literacy within the framework of SFL is compatible with the teaching of a foreign language as the frame of the visual grammar and the interpersonal metafunction worked as a springboard for students to enhance their communication skills in the foreign language. Both qualitative and quantitative data have produced evidence that the explicit teaching of visual literacy has contributed to boosting student teachers´ skills to read pictorial texts. In fact, at the beginning of the school year, most participants seemed unaware of all the purposeful choices a text producer makes when wishing to convey a specific meaning employing pictorial language.

Language teachers, especially those working with young learners need to exploit visuals by asking questions and making meaningful activities that promote thinking, e.g.: "Circle each character's eyes - who is looking at who? Do they look at us?"; as opposed to questions that only favour factual information such as the enumeration, colour, size of elements, e.g.: How many apples can you see? What colour is the car? Is the house big? Teaching these skills is compatible with general aims of education and with communicative frameworks of language education. The ability to observe and interpret the visual is closely linked to thinking and expression. Precisely, both verbal and visual expressions definitely relate to the interpersonal metafunction.

As student teachers mentioned in their interviews, "this [was] the first time we were invited to analyse pictures in such a detail" (ST4). This detailed analysis has helped them understand that similar to the verbal system, the visual one is also a semiotic system constituted by meaning making signs that text producers choose from in order to craft a message within a particular social context and with a specific purpose in mind.

The results of the analysis of the pretest and posttest show evidence that student teachers have gained some knowledge during the implementation of the four LDCs. The coded data of the tests also seem to indicate that there are some subsystems that student teachers found it easier to decode than others. This finding is further confirmed through classroom observation and document analysis. During classroom observations spontaneous instances of decodification of meaning were first directed to visual cues that directly appeal to student teachers´ emotions, namely gaze. However, visual resources pertaining to the subsystem point of view, received less attention on the part of the participants. One reason that may account for this fact is that the meaning potential

conveyed through the choice of angle requires a high degree of interpretative inference on the part of the viewer. Unlike contact, which involves a more or a less direct interaction with the viewer, point of view tends to offer a descriptive view of a character or/ and event; thus, angle seems to be a less compelling feature for student teachers to interpret.

Data from the pretest and posttest, and document analysis present written evidence that students have acquired more expertise in interpreting pictorial texts. These tools gathered the participants´ written analysis of images. In these productions, it is possible to trace evidence of the changes future teachers underwent during the research process as their renditions increased in length and in depth of analysis. This is of particular importance since the data was coded taking into account the use of specific metalanguage as well as the justifications for its use. Several authors (Serafini, 2012; Unsworth and Bush, 2010; Papadopolous et al., 2019; Papademetriou et al., 2015) state that the importance of learning about metalanguage is to facilitate the understanding of visual composition. "Metalanguage entails systematic, technical knowledge of the ways in which the resources of (…) images (…) are deployed in meaning making" (Unsworth, 2006, p.71).

During the first LDC, student teachers who had not been introduced to specific metalanguage struggled to find ways to refer to visual cues. The metalanguage was introduced in a systematic explicit way to aid the analysis of visual texts. As student teachers became familiar with this specific vocabulary, guiding questions were posited so that students could learn through directed self-discovery. Besides, by integrating the use of metalanguage to the instruction of visual literacy, viewers became familiar with the compositional organization of visual texts. Some of them were initially reluctant to learn the metalanguage and preferred to express what they could perceive with their own words. However, with the passing of time, they noticed that the precise use of precise metalanguage helped them to express and negotiate their ideas more effectively as all participants understood what aspect of a picture was being analysed and, in turn, this prompted further contributions. This process of learning specific language as participants analyse visual material has also been recorded by Papadopolous et al. (2019), Cocetta (2018) and Papademetriou et al. (2015). Metalanguage became so important for the student teachers that, when they had to carry out the posttest, they asked if they could write their answers in English as Spanish was no longer considered

to be the language that allowed them to express their ideas in depth. It was possible to see that student teachers made prolific use of metalanguage to discuss the interpersonal metafunction.

Throughout the intervention, there was a focus on the teaching and learning of the interpersonal metafunction; however, other readings were also welcomed as they were student teachers´ attempts to interpret images. At no time were student teachers informed that there were other metafunctions or other visual cues to access the meaning in the pictures. During the pretest and the posttest, teacher students attempted to assess the interpretation of each component of the three different metafunctions in particular. However, in each image, there are visual cues which project a variety of meanings simultaneously. Consequently, student teachers did not necessarily choose the picture considered to be *the* ideal answer in terms of its salient characteristics. Student teachers selected the pictures in which they could first interpret any of the components requested.

When students could not identify the visual cue pertaining to a certain component of the interpersonal metafunction, the task was graded as not achieved. However, this does not mean that students completely misinterpreted the pictures they selected. For instance, student teachers were asked to identify a picture in which there was clear tension between the speaker and the reader. From the perspective of the interpersonal metafunction, tension would be realized through the choice of angle. Most student teachers did not point to the expected answer but to a picture in which there were traces of tension conveyed through other visual cues, such as gestures.

The component in which there was the most notable progression was the component of colour. As can be seen in *Table 25*, student teachers could gather tools to help them decode the choice of colour range. Still, it is important to point out that the decodification of colour was the easiest when they were supposed to analyse vibrant rather than muted or cool colours. The only participant who had received previous instruction as regards the use of colours did not use this knowledge to analyse any of the images. Only when the teacher encouraged her to draw from her knowledge of the world of fashion did she feel a little bit more confident to use it. She found it strange to be able to apply this knowledge to the world of English since she saw little connection between fashion and second teaching and language learning.

Aspects related to both the horizontal and vertical angles were the most difficult to decode. Thus, more training on the decodification of visual cues related to the concept of powerlessness from the perspective of point of view would be necessary. A potential explanation for this is that these features are the least exploited in picture books. Besides, in the first LDC, student teachers had to read ads. Ads appeal directly to their audience; thus, people depicted in them generally tend to address the viewer by looking at them directly; hence, by working with this type of genre, student teachers were not really obtaining further practice in decomposing this component, contact. For this reason, in subsequent LDCs, student teachers had to read other material, such as posters, to replace ads. There was not an exercise in which they had to compare and contrast all the elements. This could be part of future research. There was analysis of pictures but it was not carried out from a comparative perspective. It would be interesting to see which material would be best to teach visual grammar. These observations can be compared to Yi and Angay-Crowder´s (2015) who stated that their student teachers also felt challenged when decoding visual grammar.

Turning to the second question of this study, the ways in which explicit teaching of visual literacy can contribute to the development of student teachers´ communicative skills in Initial English Language Teacher Education, the results of the study show that student teachers could gain a better understanding of multimodal texts by becoming better at decoding visual cues. The words of ST 8 offer a simple answer to this question, "I understood that there are different ways of communication", referring to the potential of both verbal and pictorial languages to convey meaning. By learning about the pictorial language, student teachers could grasp that each mode has its own limitations and affordances (Grapin, 2019; Bezemer & Kress, 2016; Kress & van Leeuwen, 1996).

Most important of all, student teachers greatly benefited from the study of visual literacy as their concept of communication broadened. Before the intervention took place, most of them considered that the process of communication involved the exchange of words between speakers in a certain social context. Now, they understand that the idea of communication is related to making meaning, and meaning can be constructed through verbal and visual structures, which can be interpreted in myriad of forms by different people in diverse social contexts. As Kress and van Leeuwen (2006) state,

> What is expressed in language through the choice between different word
> classes and clause structures, may, in visual communication, be expressed
> through the choice between different uses of colour and different
> compositional structures. And this will affect meaning. Expressing
> something verbally or visually makes a difference. (p.2)

Like verbal language, pictorial language is also constrained by certain rules that pave the way to its interpretation; thus, learning about visual communication and visual literacy will promote well informed readings. In this research, learning about the different elements that constitute visual grammar, such as angle, colour and distance, helped student teachers to engage in the decodification of meaning and to actively participate in communication.

After the instruction received, student teachers - who seemed to be quite familiar with the interpretation of emotions conveyed through gestures- were able to perceive and interpret a wide range of emotions based on colour range choices made by text producers. Most importantly, they have started to pay attention to the colours employed to depict ambience (Painter et al., 2012) which, in turn, contributes to the interpretation of characters´ moods.

Even though student teachers need to receive further instruction and input they seemed to have started to understand how different choices of angle (Kress & van Leeuwen, 1996) provide them with glimpses to the inner state of mind of different characters, their world view and emotions. When the participants focused on interpreting certain semiotic resources, a small discussion was generated and, as ideas were exchanged, their imagination and curiosity was sparked. As some students pointed out, "this is the beginning of a learning path rather than the end of it" (ST 5 and ST 6).

Students themselves ratified what statistical data obtained through this research informs. It is believed that participants have developed a growing understanding that the visual system works similarly to the verbal one in the sense that a selection of meaning making resources responds to text producers´ ideologies and purposes.

5.2 Limitations

During this research, one of the objectives was to explore the impact of explicit teaching of visual literacy through a series of Literacy Development Cycles on student teachers´ foreign language communicative skills within the specific context of an IELTE programme at tertiary level in the province of Cordoba, Argentina. The findings of this study have to be seen in light of some limitations:

a) Just one group of students was involved.
b) The teaching-learning process that fostered learning may not be appropriate since it is difficult to study a metafunction in isolation.
c) Lack of a well-developed framework to describe student teachers´ visual literacy skills before the beginning of the study to guide their training.

Addressing the first limitation, Stake (1995) states that intrinsic case studies are carried out to offer some insights about a particular feature of a wider domain. However, the information case studies provide is rich as it generates knowledge about a particular phenomenon even when their results cannot be generalized to a large population.

As regards the second limitation listed, this study sought to isolate the analysis of the interpersonal metafunction, but student teachers showed their readiness to read other visual cues. Intuitively the interpretations of their readings focused not only on the interpersonal metafunction but also on the experiential metafunction. Thus, attempting to isolate the study of the interpersonal metafunction was simple. Justifications played an important role to understand what type of visual cues student teachers were unveiling to see if they could grasp the meaning of the interpersonal metafunction.

Finally, another limitation is the lack of a fully developed framework for describing student teachers´ visual literacy skills to establish the exact extent of their competence (Papadopoulous et al., 2019; Rose, 2007). Without a preexisting national or international consensus of what skills student teachers should develop, the learning outcome of this study cannot be compared against other literacy standards. Consequently, the assessment of student teachers´ progress was rather subjective as it was based on the analysis of the pretest and posttests, class discussions and students´ production.

5.3 Suggestions for further research

The adapted version of the LDCs allows the researcher to explore student teachers´ capacity to decode visual cues. Employing an LDC that studies future teachers´ capacity to produce visual texts in the foreign language class could be a thought-provoking contribution.

As already noted, this research was situated in Córdoba, Argentina. Thus, the results obtained are bound to that specific context. It would be interesting to inquire if student teachers from other cultures tend to read with ease the same subsystems and components as the student teachers in this study, or if they are natural readers of other subsystems and components before receiving explicit instruction on visual literacy. Besides, further research on student teachers´ progress after the implementation of the intervention would be desirable.

In this study, after the intervention, student teachers exhibited more progress in the interpretation of colour range choices and the components of proximity and intimacy. One of the reasons that may account for this is the fact that the material employed touched upon the subject of emotions, acceptance, friendship and collaboration. Thus, it is understandable that these components should capture their attention the most. Another reason to explain the learning development in these areas is that intimacy and proximity appeal to the deepest human emotions, leaving a strong imprint in the cognitive system (Silverblatt, Miller, Smith & Brown, 2014). Consequently, future exploration on this topic should study whether the use of other types of visual material, instead of picture books, or material dealing with other topics would have the same type of impact on student teachers´ visual literacy. Besides, many of the multimodal texts students are exposed to are digital multimodal texts. Thus, a research on how student teachers would work to deconstruct multimodal meaning from digital texts would be interesting.

5.4   Theoretical and pedagogical implications

Although student teachers live in a media saturated world, it would be a mistake to believe that they are naturally visually literate. Even during the interviews, student

teachers expressed that they had learned to view pictorial texts in a new way. The results of this research seem to indicate that student teachers can benefit from direct and explicit instruction on the interpretation of images so that they can communicate effectively in the second language.

In order to integrate the teaching of visual literacy into the mainstream culture, there is a pressing need to reconceptualize literacy (Yi & Angay-Crowder, 2015). Visual literacy is a skill that every person considered to be literate needs to develop as stated by the standards of the European Framework of Reference for Languages and the Ministry of Education of countries, such as Australia, Canada and England (Unsworth, 2015). Gradually, the Argentinian system of education is incorporating the teaching of multimodality into the traditional classroom (Marco Pedagógico, 2011). Still in most official documents there is no explicit reference to multiliteracies or multiliteracies in the field of second language teaching. This research work attempts to demonstrate the strong need there exists to teach visual literacy in a systematic way.

Like any other skill, visual literacy needs to be introduced and developed through explicit teaching and practice. Consequently, the teaching of visual literacy should become a part of different teaching training programmes, so that future teachers become knowledgeable on the matter and, in turn, they can impart this knowledge to their students.

Teacher training colleges and universities could introduce visual literacy by integrating it into the teaching of different modules and by means of different resources. In our media influenced society, there are visual texts that illustrate a wide range of content; thus, suitable and adaptable material could be found with ease to teach different content and pedagogical material. Besides, if the teaching of visual literacy is embraced by different faculty members, students could be exposed to a variety of perspectives to read a text, and different types of visual texts as well (Rowsell, McLean & Hamilton, 2012). The use of different pictorial ensembles would facilitate the teaching of several visual literacy strategies.

According to Daly (2004), images are processed in our minds faster than words. This fact contributes to demonstrating the significance of being visually literate. Visual literacy requires a significant commitment on behalf of educators as well as students to learn the metalanguage suitable to carry out the analysis. Besides, "the metalanguage

must be based on systematic accounts of meaning-making potential" (Unsworth, 2006, p. 71) of multimodal texts.

Considering the teaching of visual literacy, Roswell and Walsh (2013) also point out that apart from the teaching of visual cues, students also need to be taught to analyse the why, where and when behind the text production. Drawing from Selfe (2007) and Hafner (2015), bringing visual literacy to the classroom can be beneficial for the students since a) they are better prepared for the literate lives, b) their classroom literacy practice "matches learners´ literacy practice in out-of-class environment", and c) they acquire active roles in language and literacy instruction (p. 487).

5.5 Conclusion of the chapter

This chapter offers elaboration on the findings of this study by attempting to answer the two research questions that have guided this study. The discussion of these findings has been supported by establishing links to other meaningful studies on visual literacy. Besides, by exploring the insights that the present study has yielded, this chapter contributes to expanding knowledge by presenting evidence that reinforces other authors´ claims, and introducing new insights. It delineates some limitations of the study and the decisions taken to overcome them. Moreover, areas for future research have been suggested. Finally, the main theoretical and pedagogical implications derived from the study have been brought to light.

CHAPTER 6

CONCLUSION

This final chapter summarizes the main insights that this research study has yielded considering the two main guiding research questions, and presents a personal reflection on how this work has contributed to my own professional and personal development.

6.1 Concluding remarks

This research study was carried out following the premise that the more visually literate student teachers are, the better equipped they will be to teach visual literacy. In line with that idea, this study introduced a pedagogical proposal through the use of an adapted version of the LDC (Unsworth & Bush, 2010) to explore how the explicit instruction of visual grammar could be integrated into an IELTE programme to foster communication in the foreign language and the development of visual literacy skills. The existing literature focuses mainly on the teaching of visual literacy to students rather than to student teachers. Besides, most of the research papers found present a collection of activities carried out with foreign language student teachers. To my knowledge, there is no pedagogy or methodology developed to work on the topic of visual literacy with student teachers in any IELTE programme. Another important aspect to consider is that most of the studies about multimodality focus on the decodification of digital multimodal texts; however, considering that this instruction was intended for future teachers working with young learners, the use of picture books was deemed to be more suitable. As Callow (2020) states, picture books can offer future educators the opportunity to explore and better understand "the attitudes, skills and knowledge required to become literate as a multimodal learner" (p.1). Consequently, performing research about visual literacy in an IELTE programme proved to be enriching.

The concept of literacy has long been extended to entail the readers´ capacity to read and navigate through different semiotic systems (Serafini, 2014). Progressively, more countries have started to integrate the formal instruction of visual literacy into their literacy programmes. This effort has not gone unnoticed in the Council of Europe, which has incorporated the skill of viewing into the Reference for Languages where other language skills are listed. Considering that second language learners need to acquire a set of tools to be able to develop language skills, not offering them the possibility of understanding the visual semiotic resources bound to the culture of the language they are studying is akin to providing them with limited access to the foreign language experience. As Grapin (2019) states "a multimodal lens can shed light on the unique affordances and limitations of language, a mode of particular relevance to ELs" (p.1). Consequently, as Cocetta (2018) points out, it is necessary that learners develop some multiliteracies to cope better with multimodal texts. The New London Group´s (1996) pedagogy on multiliteracies can be used in tandem with Unsworth and Bush´s (2010) LDC. Through each LDC, the teacher researcher created an instance of situated practice in which students explored a literacy practice pertaining to their learning community and which each of them could interpret following their own background knowledge and experience. During the overt instruction stage, the participants were exposed to systematic graded interventions in which they learned about visual literacy. When future teachers analysed other material apart from picture books, they had to navigate an uncharted territory relying on their critical knowledge. Finally, the knowledge acquired during the four LDCs was later applied to new texts and the posttest. Besides, during the interviews student teachers were asked to consider potential classroom activities including visual elements which they could carry out in their educational context.

The need to receive formal instruction of visual literacy debunks the common belief that viewing is an innate process. For foreign language learners to be able to undergo a comprehensive instruction, there should be a change in student teachers IELTE programmes. Royce (2007) claims that foreign language teachers´ concern with their students´ development of linguistic skills mirrors a global tendency in which IELTE programmes predominantly focus on the instruction of the language component. Current literacy practices need to be rethought to avoid solely placing the focus on decoding the written language and to move multimodal text into the foreground of

literacy programmes. In this way, certain forms of meaning and knowledge would not privileged over others (Anstey & Bull, 2006 in Serafini 2014).

According to Stein (2000), one way to enhance the teaching of literacy in a foreign language class would be by engaging students in tasks or projects that require the consumption and production of multiple forms of representation to be solved. Alberto et al. (2007) states that picture reading in a class can also foster the development of visual literacy. These activities were implemented in this research study through the LDCs.

The interpretation of visual cues could be fostered by the explicit teaching of metalanguage. Text producers can exploit different visual semiotic resources to convey a vast array of messages. Identifying and interpreting different visual cues can prove to be a rather elusive task so Painter et al. (2012) claim that educators and future teachers need to become familiar with the metalanguage necessary to decode pictorial language. The use of appropriate metalanguage allows readers to properly refer to what has called their attention, and to have a framework for interpretation.

The analysis of the different data collecting tools showed that, over the implementation of the intervention, student teachers developed a greater awareness of the importance of the selection of different visual cues for the construction of interpersonal meaning. Student teachers became more competent at interpreting visual resources and relating them with potential semiotic meaning that could be classified according to the different subsystems and components of the interpersonal metafunction. This was confirmed by the pretest and posttest, classroom observation and document analysis. Their decodification of visual meaning making signs within picture books seems to indicate that student teachers have become aware of the meanings that the visual incorporates to the text and of the multimodal nature of communication. Still, it is important to bear in mind that this study has focused on student teachers´ reading skill only.

In the design stage of this project, the expectation was that that students would apply different analytic strategies learned in class to decode visual texts. Now, after having completed the process and in light of the promising results, the expectation is *that* student teachers continue their own learning path to become producers of visual

texts as well. As some students expressed during the interview, they believed that this introduction to visual literacy was the beginning of a learning path.

6.2   Final reflection

Completing this dissertation as a requirement to obtain my Master´s degree in English has been a professional and personal learning experience. Professionally, I strongly believe that I have acquired both theoretical as well as practical knowledge about how to perform case study within the qualitative paradigm. I understood the importance of relying on previous research studies, frameworks and pedagogical proposal to take well-informed decisions and conduct the best research possible in the new context where I decided to implement my proposal. Secondly, during the LDCs, I gained further knowledge on how to implement a pedagogical proposal to introduce visual literacy. At the same time, these insights have led to new paths of inquiry that may be addressed into new research paths. Thirdly, from the many discussion sessions I held with my thesis advisor, statistician and other fellow colleagues I have learned to question my assumptions, to analyze material from other perspectives, and to produce new learning hypotheses.

From a strictly personal perspective, I think that elaborating this thesis has helped me gain confidence as a researcher. Most importantly, however, is the fact that I have understood the value of surrounding oneself with knowledgeable and generous people willing to sacrifice their personal time to help others become a better version of themselves. Thus, although research has been of my own making, I feel that it is somehow the result of collaborative work. I will always be grateful to all those who contributed to helping me fulfill this task.

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