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RECEIVED 06 November 2024

ACCEPTED 14 May 2025

PUBLISHED 05 June 2025

CITATION

Thibaut P, Lizasoain A and
Lira-Muñoz N (2025) Understanding
repertoires of pedagogical practices and
multiliteracies in Chilean schools: how to
connect content and experience for learning.
Front. Commun. 10:1523806.
doi: 10.3389/fcomm.2025.1523806

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Understanding repertoires of pedagogical practices and multiliteracies in Chilean schools: how to connect content and experience for learning

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Introduction: We live in a context of cultural and linguistic diversity enhanced by the ubiquity of digital technology. This environment enables greater diversity in the way we construct meaning, make sense of the world and project identities, which challenges educational institutions to prepare new generations for the future. Studies have pointed to the importance of expanding pedagogical repertoires in the classroom and new ways of meaning-making. However, more research is needed in order to move beyond this analysis.

Methods: This qualitative study seeks to contribute to this research gap, by analyzing two Chilean schools with the objective of understanding the relationship between knowledge processes, types of modes used in the classroom and pedagogical repertoires. The methodology included the observation of 975 min of 12 language (Spanish) classrooms-grades 6th, 7th and 8th-in a rural and urban school, and interviews with teachers conducted at various moments of data collection. Data were analyzed through a mixed-methods approach.

Results: The results suggest that there is a dissonance between the pedagogy of multiliteracies and the observed pedagogical and modality repertoires. The results show a predominance of traditional pedagogical practices in the Chilean classroom focused on conceptualization and, to a lesser extent, critical analysis through conventional modes such as written text and oral language.

Discussion: Consequently, to move beyond traditional models, such as those observed in this study, emphasis should be placed on teaching semiotic modes that depart from the classical canon both in initial training and continuing professional development as well as on teaching pedagogical repertoires focused on contextualization and application. In this way, there would be a stronger balance between the cognitive, socio-emotional and embodied domains in the classroom. Therefore, experienced and functional pedagogy should have greater visibility, which is also related to the use of a greater variety of modes in educational contexts.

KEYWORDS

multimodality, multiliteracies, pedagogical practices, learning, knowledge processes

1 Introduction

The social outcomes of language and literacy learning are profound and depend largely on how learning is promoted in school. Considering that society is increasingly diverse, both culturally and linguistically, and digitally mediated, there are new literacy learning needs in the present century (Bromfield and Curwood, 2023). Despite this, the literature reports a lack of models that move toward teaching repertoires that explicitly target diverse epistemological domains and integrate different modes of representation and meaning-making in the classroom. Research accounts for the relevance of education that prepares students for the challenges of a digitally mediated world, highly changing, which faces complex contexts such as social, environmental and political crises of the 21st century (UNESCO, 2022). This is relevant in a context in which the processes of meaning-making and knowledge dissemination have changed with respect to the 20th century (Jenkins, 2014; O'Neil, 2017). Thus, traditional teaching based on a teacher-centered model, on the transfer of content and on a passive role of students, with low development of autonomy and collaboration has long been questioned (Collins and Halverson, 2010; Cullen and Oppenheimer, 2024); likewise, a single form of representation of meaning, based only on the culture of the written text leaves out possibilities of construction with other semiotic resources, and also excludes urgent educational aspects today, such as the critical analysis of information and propagation of digital content, like fake news (Bromfield and Curwood, 2023; Hodgins and Kahne, 2018). Moreover, research shows that the use of various modes enriches the experience of content, making learning more significant (Ausubel et al., 1983; Couso, 2023).

Thus, from the perspective of multiliteracies (The New London Group, 1996), the need has arisen for the integration of new ways of making meaning, based not only on written and spoken language, but also on broader modes such as visual, auditory, corporal and multimodal, as well as for the balance among pedagogical repertoires (Kalantzis and Cope, 2023; Lim et al., 2022). These changes have been driven by the rapid advancement of technologies that have massified access to digital tools, thus leading to new forms of production and content exchanges with global audiences that are located in intercultural contexts that promote new and challenging discourses for classical models. In this way, we seek to move from a canonical model to one that integrates diversity in a broad sense. As Lim et al. (2022) point out, “while language will remain fundamental in the literacy classroom, the incorporation of multimodal literacy contributes to educational justice to ensure that the literacies needed for young people to participate agentively and fully in the digital age are not ignored in formal learning” (p.12). This is only possible in school.

In the present article, we address this research gap, borrowing from new literacies studies (The New London Group, 1996) and adapting from pedagogies of multiliteracies (Cope and Kalantzis, 2015) in order to analyze language (Spanish) lessons in sixth, seventh, and eighth grades. Our findings are based on 12 lessons from three teachers, which account for a total of 975 min of classroom observation. Teachers were from two schools, one teacher worked at a public and urban school, and the other two worked at a state-subsidized rural school. The following research questions guide this research:

How are meaning-making and types of modes connected in the classroom?

How balanced are pedagogical repertoires in the classroom?

Answering these questions may contribute to understanding the current state of the Chilean Language classroom, the school curriculum, and students' multiliteracy development, as well as offering suggestions to incorporate in teacher training and classroom interaction that leads to quality education for all. The study can also contribute to the discussion in similar contexts.

2 Literature review

2.1 Multimodality

Recently, research on literacy has highlighted the importance of integrating the concepts of multiliteracies and multimodal theory in the classroom, as we live in a digitally mediated world and in intercultural contexts in which the ways of making meaning have been greatly expanded (Cope and Kalantzis, 2015; Gee, 2005; Lankshear et al., 2013) and have enhanced multimodal processes that previously occurred at a reduced scale. Consequently, digital composition is now part of today's literacy landscape (Bromfield and Curwood, 2023), which encompasses knowledge generation through different modes and with changes in the uses, distribution, and scope of content (Applebee et al., 2011; Gee, 2015; Thibaut, 2020). However, multimodality is not specific to digital technology, although it is sometimes used interchangeably. The term points to the semiotic modes with which meaning is constructed, for instance, on advertisements, textbook covers, packaging, WhatsApp messages, etc. Multimodality is related to the sensory channels with which we interpret the world (Berninger et al., 2019). Therefore, communication integrates several modes.

In formal education, however, the integration of new ways of making meaning has been slow. In the words of Kalantzis and Cope (2023), “literacy has been stubbornly singular in teaching the correct use in standard forms of the national language and the great aspiration of its canons” (p.1). Speech and written text continue to shape the canon of language education, which is characterized by a linear and singular form. In contrast, in the pedagogy of multiliteracies, non-linear, multiple ways of making meaning are included through the use of different modes of representation, such as image, sound, space, body, and multimodal texts (Husbye and Vander Zanden, 2015). Multimodal construction and analysis include understanding the presence, absence, and co-occurrence of written and spoken text along with visual, auditory, bodily, and spatial modes (Curwood and Gibbons, 2010). Therefore, schools should train multiliterate individuals who are able to understand and produce multimodal texts in order to participate in society in equal terms.

The concept of multimodality can also be linked to differences in learning inside and outside the classroom (Lave and Wenger, 1991; Resnick, 1987). Research shows that the adoption of new ways of making meaning driven by new technologies has occurred more naturally or initially in non-formal spaces, first, and related to educational contexts afterwards, showing a disconnection between school and out-of-school learning (Ito et al., 2018; Lankshear and Knobel, 2011; Thibaut, 2020). Moreover, multimodality has been studied from the perspective of “funds of knowledge” and identity, focusing on the construction of an inclusive pedagogy (Llopert and Esteban-Guitart, 2018).

Regarding the development of multimodality at a curricular level, Chile's Ministry of Education has set the comprehension and production of multimodal texts as learning goals (Ministerio de Educación, 2015). Regarding oral comprehension, particularly, the curriculum stresses that "given the advances in technology and the proliferation of diverse media that include image as one of their main components, developing students' oral comprehension also implies addressing reflection on the resources of audiovisual media" (p. 41). Therefore, some aspects of multiliteracies are indeed addressed in the Chilean national curriculum, although they are not all explicitly included. In this regard, a recent study conducted in the Chilean context that investigates the learning opportunities for multimodal literacy in the curriculum detected a low presence of multimodal literacy development, being a dimension that is addressed in a tangential way, being written and spoken language the skills with a greater presence at the curricular level (Meneses and Maturana, 2023).

The evidence above mentioned shows the importance of sensory experimentation for cognitive understanding, yet language teaching continues to focus strongly only on verbal language (Meneses and Maturana, 2023) leaving aside the understanding of other semiotic modes and the diverse nature of communication. This is related to a separation at an epistemic level, that emphasizes cognitive domains, to the detriment of knowledge processes that focus on embodied and socio-emotional domains. This separation dissociates the learning process in school with experience and practice (Brown et al., 1989) and, in terms of teaching, with authentic and functional pedagogy (Kalantzis and Cope, 2023).

In this article, we will consider oral, written, visual, sound, body and multimodal texts for the analysis of classroom observations. Particularly, multimodal text is considered as a tangible product of the relationship between two or more semiotic modes that combined achieve a single communicative goal (Lim et al., 2021). For example, an interactive game integrates visual, writing, and kinesthetic aspects for its resolution. In the next section we will unpack the concept of multiliteracies.

2.2 Multiliteracies and pedagogy

Multimodality is a pedagogical proposal that seeks to incorporate the various semiotic modes of everyday communication in the 21st century beyond the written text, which has dominated canonical education (The New London Group, 1996). This pedagogical proposal arose from the reflection on the cultural and technological changes occurring in the late 1990, which we not being reflected in the language classroom.

That is, the concept of multiliteracies refers to new ways of making meaning, pointing to innovative ways of teaching literacy that address 21st-century learning needs (The New London Group, 1996). Scholars have long pondered on the profound question of the social outcome of developing literacy and, in recent decades, have revisited the ways in which literacy is taught in an increasingly diverse and globalized society (Kalantzis and Cope, 2023).

Traditionally, school education has centered on cognitive domains, approached via transmission pedagogy and the written text. Ideas, concepts and classifications are transmitted verbally, and students receive such information typically in a passive way. This reinforces the domains of mental processing, which is in line with classical epistemological models (Immordino-Yang and Damasio, 2007), while more applied and situated studies have lagged behind,

except for studies that have focused more recently on social and affective areas (Alvarez Bolaños, 2024). Thus, the perspective of Kalantzis and Cope (2023) helps to connect those areas with pedagogies associated with situated and functional pedagogy.

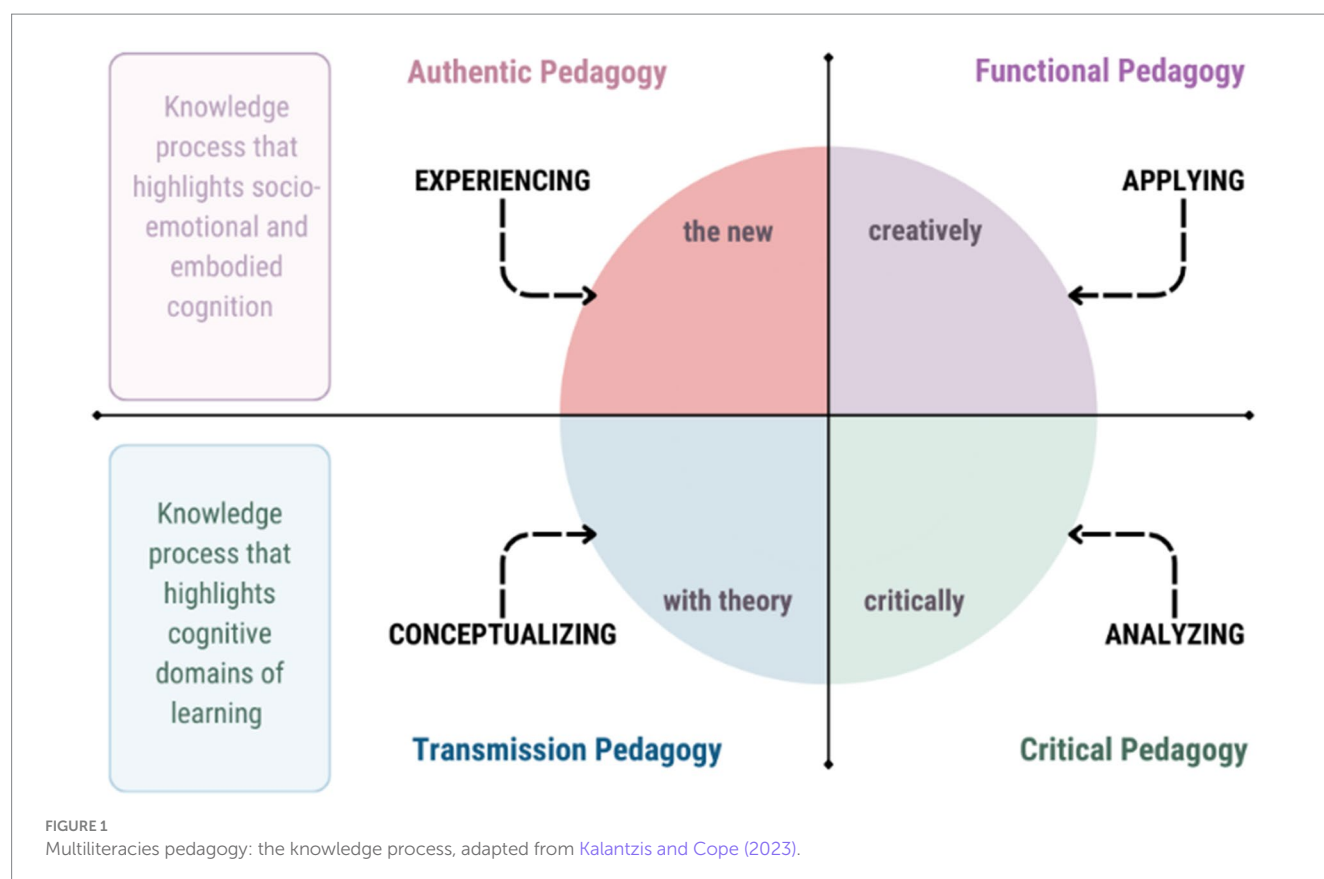
Cognitive science has added to this discussion, showing the key role of the body in the processes of cognition (Pearce and Miller, 2025; Varela et al., 1993). As Varela et al. (1993) state, "what we are suggesting is a change in the nature of reflection from an abstract, disembodied activity to an embodied (mindful), open-ended reflection. By embodied, we mean reflection in which body and mind have been brought together" (p.27). Thus, the authors stress that reflection is a way of experience in which the subject must be included in order to change the "view from nowhere" that characterized how investigations and theories have been traditionally undertaken. This perspective criticizes how science has separated the researcher from what is investigated, which has generated a distortion in the process of knowledge, relegating the relevance of the world of phenomena to a second plane and consequently the perceptual apparatus in the scientific process. This perspective has had an impact on education, in which knowledge is transmitted as an abstract phenomenon detached from human situated experience.

The study of situated learning during the 80s and 90s (Lave, 1996; Lave and Wenger, 1991; Resnick, 1987) also showed the need to connect traditional ways of formal learning related to abstract thinking with tangible domains based on situated experience. Moreover, material representations are highlighted by this view in the sense that learning does not only happen during conceptualization and mental processes but, importantly, also when our senses are activated by the diverse contexts that may surround learning processes (Lim et al., 2022). Considering this need, we analyze how cognitive, socio-material and affective domains are displayed in the classroom, borrowing from the concept of pedagogical repertoires and the pedagogies of multiliteracies (Kalantzis and Cope, 2023). Specifically, the pedagogy of multiliteracies distinguishes practices of transmission, critical analysis, situated and applied pedagogy. This conceptualization of pedagogical strategies provides space for understanding in greater detail how pedagogy is (or should be) linked to knowledge processes, cognitive domains, and forms of learning that occur in the classroom (Kalantzis and Cope, 2023).

Figure 1 shows the four axes in which the main pedagogical strategies are illustrated from the perspective of multiliteracies. The lower axes point to domains with a focus on conceptualization and analysis, which are related to knowledge processes that underline mental processes and correspond to critical pedagogy and transmission pedagogy. The upper axis points to domains with a focus on experience and application, underlining embodied and socio-emotional cognition processes associated with situated and functional pedagogy. Therefore, this map connects knowledge building, the learning perspective to which it corresponds and its pedagogies. The perspective, then, connects the abstract world of concepts with the more concrete world of tangible everyday experiences.

2.3 Discourse analysis for further describing knowledge building

Discourse analysis from a systemic functional point of view can help to understand knowledge or meaning-making further from a linguistic perspective that conceptualizes language as a system of resources that individuals select oriented by the context in order to



create meaning (Schleppegrell and Oteíza, 2023; Halliday, 2004). That is, language is conceived as a socio-semiotic system that offers potential repertoires to make meaning (Asp., 2017). Therefore, individuals must be exposed to different manifestations of this potential to either build common sense knowledge or specialized knowledge (Bernstein, 1999). Common sense knowledge is usually processed in familiar, daily activities and does not need to be taught explicitly; in contrast, specialized knowledge develops in institutionalized contexts, such as school, and needs to be taught in an explicit way. In this sense, multiliteracies—which we interpret as specialized knowledge—must be developed by raising awareness of the existence of different modes to understand today's world.

Systemic Functional Linguistics (SFL) (e.g., Halliday, 2004; Martin, 1992) has proven to be an effective theoretical and methodological framework for examining language in various ways (Bateman, 2017). One of these ways takes place through the identification of the discourse processes in which individuals get involved when building meaning. Halliday (2004) identifies three main types of meanings in discourse. First, ideational meanings, through which we convey what we know about the world (be it common sense or specialized knowledge). Second, interpersonal meanings, which refer to social interaction and ways to build personal relationships. Third, textual meanings, corresponding to the way we organize ideational and interpersonal meanings in texts of different natures. In sum, in meaning-making, we communicate something to someone in a particular way influenced by the context; that is, we get involved in social semiotic processes. Identifying the linguistic resources that build meaning helps to further visualize and understand knowledge as a concrete situated human experience.

SFL offers analytical tools to identify these linguistic resources. Because of space constraints, we only refer to discourse processes (verbs) involved in ideational meaning-making. Four processes are involved in the human experience of reality, which account for what is happening or the knowledge that is being built in a written, oral or multimodal discourse (Halliday and Matthiessen, 2014). Broadly speaking, processes can be material (go), mental (want), verbal (say) and relational (be) (Eggins, 2012). First, material processes have to do with concrete, observable actions (Little Red Riding Hood *went* into the woods and *found* the wolf around the corner). Second, mental processes convey what individuals think or feel (it can be two pages or two lines, depending on what we *want* to say). Third, verbal processes refer to actions of saying and all their forms (the most important characteristics, if we had to like, determine or *say*). Finally, relational processes are related to states of being (what *is* a microstory). (Examples have been taken from the actual corpus). Identifying these processes contributes to describing the pedagogical repertoires found in the classroom context. For instance, the suggestion from one of the teachers of the study, “I recommend that you *read* the story again” favors the pedagogy of transmission, strongly based on written text.

3 Materials and methods

This article is framed within a mixed methodological design (Merriam and Tisdell, 2015) that seeks to observe the recurrence of pedagogical practices in the classroom, as well as the modes of meaning-making and knowledge-building used by teachers. To

answer the research questions on how meaning-making, types of modes and pedagogical repertoires are connected in the classroom, the learning opportunities of multiliteracies in the observed classrooms were identified. For this purpose, firstly, we took a quantitative perspective, which allowed us to measure the use of multiliteracies in the classroom. The pedagogical repertoires observed in each classroom were also quantified according to Kalantzis and Cope's (2023) scheme. Secondly, we worked from a qualitative perspective using two frameworks: content analysis and discourse analysis. On the one hand, content analysis allowed us to describe, understand and explain teachers' classroom design, pedagogical repertoires, learning objectives and perspectives on literacy and its role in the context of the 21st century, the world experience we are living today. On the other hand, systemic functional discourse analysis contributed to greater granularity and depth in the understanding of the data (Denzin and Lincoln, 2013) by identifying the linguistic resources (particularly, verbs) that were selected by the participants of classroom interaction to develop multiliteracies.

3.1 Participants

The study is part of a larger research that includes schools from two regions of Chile (Metropolitan and Los Ríos). A purposeful sample (Merriam and Tisdell, 2015) of two schools was built: one state-funded public school located in an urban area and one state-subsidized privately owned school located in a rural area. We made this decision to ensure the presence of educational establishments that represented different contexts. Sixth, seventh, and eighth grades were selected, and language (Spanish) teachers were invited to participate. All the teachers—one in the urban school and two in the rural school—voluntarily agreed to participate in the study.

3.2 Data collection instruments

We used two instruments for data collection: classroom observation and interviews. We observed a total of 975 min of classroom recordings consisting of consecutive 90-min classes by each teacher (exceptionally, one 45-min class and one 30-min class). Table 1 summarizes relevant information about the sample. Both classroom observations and interviews with each teacher were recorded and then transcribed into Word documents before being analyzed using Atlas.Ti software. AtlasTi helped us to codify and

manipulate the data gathered according to the coding system that is explained below. The triangulation between instruments—interviews and classroom observations—allowed us to contrast the data collected in different ways, generating greater data reliability (Denzin and Lincoln, 2013).

3.3 Data analysis

3.3.1 Classroom observation

Regarding classroom observation, the coding system was developed at two levels quantitatively. In the first place, at the semiotic mode level (level 1), the coding was carried out according to the five types of modes defined for the purposes of this study: written mode (reading and writing), visual mode, auditory mode, body and multimodal mode. It is important to note that oral language mode was not included in this part of the analysis, as the frequency of verbal interactions is much higher, therefore, it cannot be compared with other modes. A review of this analysis is currently being done in parallel as part of a larger research (Thibaut and Lizasoain, 2024). Yet oral language was included in the discourse analysis technique which is described below. In addition, based on the literature review we defined multimodal mode as the use of two or more modes to convey meaning, including both, digital and analogue combination of modes. Table 2 above summarizes the coding system.

A second level of pedagogical practices was coded based on the four axes of pedagogical repertoires defined by Kalantzis and Cope (2023): practices of transmission, critical analysis, authentic and functional pedagogy (Table 3).

The analysis of semiotic modes was carried out observing the presence or absence of the five types of modes. That is, we analyzed whether the teacher generated instructional opportunities for students to perform tasks associated with the five modes defined in the article. A double coding and a contrast between researchers' interpretations were performed when differences were detected to ensure the reliability of the process. From this, a descriptive quantitative analysis of the data was carried out in order to map the learning opportunities according to mode.

At level 2, in which the pedagogical repertoires were analyzed, the presence or absence of instructional design was codified. Each class transcription was coded in Atlas.Ti based on the "Observation Guideline: Multiliteracies" (elaborated on the basis of the literature review) through which we observed whether students were given opportunities to define or generate taxonomies (conceptualizing);

TABLE 1 Description of the sample.

Teachers	School type	Grade levels	No. of students	Time
Teacher 1 (female)	Rural subsidized school	7th and 8th grades (combined)	24	2 lessons of 90 min each and 1 lesson of 45 min.
Teacher 2 (male)	Rural subsidized school	6th and 7th grades (combined)	31	2 lessons of 90 min each.
		8th and 9th grades (combined)	29	2 lessons of 90 min each.
Teacher 3 (female)	Urban public school	7th grade	23	2 lessons of 90 min each.
		8th grade	31	2 lessons of 90 min each and 1 lesson of 30 min.
Total	2 schools		83	12 lessons and 975 min

Source: Authors.

TABLE 2 Level 1: semiotic mode.

Semiotic mode	Category	Examples observed in classroom coding
Verbal	Writing	Students write answers in their notebooks
	Reading	Students read the guidelines projected on a PowerPoint.
Visual	Graphic map	Presentation of images to prompt content
Auditory	Song sound effects	Audio of a poem on YouTube
Body	Dramatization	Not observed
Multimodal	Video	Digital game

TABLE 3 Level 2: pedagogical repertoires.

Knowledge process	Pedagogy associated
Conceptualizing	Transmission pedagogy
Analyzing	Critical pedagogy
Experiencing	Authentic pedagogy
Applying	Functional pedagogy

to evaluate information and generate arguments (analysis); to situate the content in context or based on experiences (experiencing); and finally to create and elaborate something new based on the theoretical knowledge acquired (applying). The process of codification was reviewed and checked by the researchers, ensuring reliability. Descriptive tables of results were generated according to each teacher and type of establishment.

The quantitative analysis of classroom observations was complemented with discourse analysis from a systemic functional linguistic point of view, which is fundamentally qualitative. The corpus was examined to identify the types of processes involved in classroom interaction (material, mental, verbal, and relational) and illustrate the kind of language involved in meaning-making, with the purpose of highlighting the pedagogical repertoires and modes found in the classroom and supporting quantitative analysis. For example, an expression such as “who can *read* the *definition* of the lyric genre” (Example 1 below) clearly points to the pedagogy of transmission and the verbal mode.

3.3.2 Interviews

Interviews were also addressed from a qualitative perspective. They were transcribed and analyzed in Atlas.Ti through a content analysis technique in which we codified the meanings given by teachers to aspects related to class design, the relevance of multimodality in the 21st century, pedagogical orientations, advantages and challenges of language class design in the classroom. These aspects were selected as the codes of the content analysis.

Interviews were conducted at three different moments: one at the beginning and at the end of each class, which aimed at understanding teachers’ goals for the lesson; in-depth interviews that gathered teachers’ beliefs on multiliteracies, classroom interactions and pedagogy; and, finally, a group interview that focused on multimodality and the pedagogy of multiliteracies from the teachers’ perspectives.

Example 1 Defining the “Lyric Genre” in a multigrade rural school classroom

Teacher 2: The last one, yes, the dramatic genre. Ok, who can **read** the definition of the lyric genre? [ANDRÉS raises her hand] Andrés?

Andrés: [PABLO].

Teacher 2: Please, **start**.

Andrés: [reads from a handout] “The lyric genre. The lyric **is** the poetic form through which the poet **expresses** their personal feeling, **positioning** themselves at the center of the psychological, introspective...”

Teacher 2: Introspective.

Andrés: Introspective, remi-, re-...

Teacher 2: Remi-...

Andrés: Reminiscent.

Teacher 2: Exactly.

Andrés: “...evocative or fantastic discourse with which the experience of the ‘I’ **is** determined. The lyric genre **allows** the speaker to **express** their intimacy, their feelings, their emotions, their mood.”

Teacher 2: Ok, let us **stick** to this last part, ok? Do you **remember** the three attitudes? We will **see** them in the handout later, right? But, do you **remember** what the three lyric attitudes **were**? Which we had **worked** with? **Tell** me one [he looks at Camila].

Camila: The enunciative type.

Teacher 2: The expository type.

Teacher 2: Daniel?

Daniel: Carmine.

Teacher 2: Carmine.

3.4 Validity and trustworthiness

In order to increase the validity and trustworthiness of the study, a triangulation strategy was applied (Merriam and Tisdell, 2015). Triangulation took three forms. First, triangulation between the instruments/methods of data collection, including interviews and classroom observations, allowed us to contrast the data collected in different ways, generating greater data reliability (Denzin and Lincoln, 2013). The classes observed were later contrasted with the teachers’ interviews, which permitted the contrast between teachers’ construction of their classes and what was observed during actual interaction between teachers and students. Secondly, triangulation between researchers’ findings was carried out. This allowed the comparison, verification and integration of different researcher’s perspectives looking at the same data (Patton, 2002). Thirdly, we conducted the triangulation of analyses through the use of a quantitative and a qualitative perspective, specifically through the use of a descriptive quantitative technique at two levels (semiotic mode and pedagogical repertoires); a content analysis technique; and discourse analysis from a systemic functional linguistic perspective. In addition, validity and trustworthiness of the data was also promoted by the selection of a sample that allows variation (Merriam and Tisdell, 2015) in terms of school dependency (state funded and subsidized school) and location (urban/rural).

3.5 Ethics

This study was carried out in accordance with Chilean law N. 20,120, which regulates research with human subjects in Chile, and with the Ethics Review Board recommendations and approval of the Austral University of Chile comiteeticocientifico@uach.cl. All participants gave written informed consent.

4 Results

4.1 Types of modes and learning opportunities of multiliteracies

We adopted the categories identified in the literature review to describe how meaning is represented and constructed in the classroom. Therefore, we include the presence, absence and co-occurrence of written text (reading and writing), visual, sound, body, and multimodal texts.

Firstly, as observed in Table 4, the written text stands out as the most used mode, which responds to a more canonical form of literacy

and is clearly related to the four language skills established in the Chilean national curriculum (7th grade to 10th grade), which are written and oral comprehension and written and oral production (Ministerio de Educación, 2015). This is illustrated in the frequent use of reading comprehension texts, books, guides and presentations. It is interesting to note that this pattern is observed in the three levels of analysis: results from the total sample; rural and urban schools; and results by teacher.

Secondly, multimodal text is observed in over 50% of the classes, which shows that multimodality is more present than expected. It is important to remember that we codified as a multimodal text when two or more modes were combined to convey meaning. Data shows that multimode is often used in the classroom to illustrate or activate prior knowledge or to motivate students, and less frequently to engage students in actual meaning-making processes. For instance, digital media such as YouTube are used as a supplementary tool for understanding texts and promoting online searching. In one teacher's words:

I recommend that you read the story again. Look on YouTube with your cellphones, that you like to watch, and search for The Golden Beetle, all that can help you (teacher 1, rural school).

TABLE 4 Used of modes: total number of classes.

Semiotic mode		%	N	Total
Written text	Reading	100	12	12
	Writing	100	12	12
	Visual	33	4	12
	Sound	8,33	1	12
	Body	0	0	12
	Multimodal	58,33	7	12

TABLE 5 Use of modes: type of school.

Rural school					Urban school		
Semiotic mode		%	N	Total	%	N	Total
Written text	Reading	100	7	7	100	5	5
	Writing	100	7	7	100	5	5
	Visual	43	3	7	20	1	5
	Sound	0	0	7	20	1	5
	Body	0	0	7	0	0	5
	Multimodal	29	2	7	100	5	5

Thus, the use of videos is merely to support the comprehension of a written text, but it does not support multimodal objectives from the Chilean curriculum, such as “the comprehension of the relationships established between images, text, and sound” (Ministerio de Educación, 2015, p. 53).

Regarding the presence of multimodality, Table 5 shows the distribution of opportunities to use semiotic modes by type of school, in this case urban and rural schools. While the use of written text in reading and writing is the same, the use of the multimodal mode is notably higher in the urban school (100%) compared to the rural school (29%). This means that in the sample observed the urban school provides more opportunities to engage with a combination of two or more modes which, in this case, correspond to digital multimodality, such as videos or games. This might be linked to the fact that, in general, Chilean urban schools have better Internet connections and are better equipped than rural schools.

Table 6 illustrates the percentage of modes used by the three teachers in the sample. On the one hand, we can observe that the use of written text remains the same, but there are differences when observing other modes. For instance, Teacher 1 (urban) provides more opportunities for students than Teachers 2 and 3 (rural) to engage with the visual mode, whereas Teacher 3 is the only one that

TABLE 6 Use of modes by teachers.

Semiotic mode		Teacher 1			Teacher 2			Teacher 3		
		%	N	Total	%	N	Total	%	N	Total
Written text	Reading	100	3	3	100	4	4	100	5	5
	Writing	100	3	3	100	4	4	100	5	5
	Visual	67	2	3	25	1	4	20	1	5
	Sound	0	0	3	0	0	4	20	1	5
	Body	0	0	3	0	0	4	0	0	5
	Multimodal	33	1	3	25	1	4	100	5	5

allows students to engage with sound in the Language classroom. On the other hand, there are some variations that are interesting to observe; for example, Teacher 3 works more with multimodal modes (e.g., short interactive games to review content, movie trailer, interactive books uploaded from the digital library, as well as humor included in videos) and also includes sound (audio of a poem on YouTube) unlike the other teachers in the sample. This means that there is variation in pedagogical practices and that it is possible to make modifications in the pedagogical repertoire.

Finally, the analysis shows that regardless of the teacher, the semiotic mode of the body is not implemented which can be linked to a lesser presence of authentic pedagogy and functional pedagogy in the sample, which will be analyzed below. This result is interesting to observe because it accounts for an orientation of traditional pedagogy in which the reasoning process is disconnected from the body. This contrasts with studies coming from the perspective of situated studies (Lave and Wenger, 1991), embodied cognition (Varela et al., 1993) and recent evidence from neuroscience, which shows the relevance of activating the body for learning because the senses are the sensors of the context from which the brain can understand the world; therefore, it is very relevant for a significative learning (Maldonado, 2024).

4.2 Pedagogical repertoires in the classroom

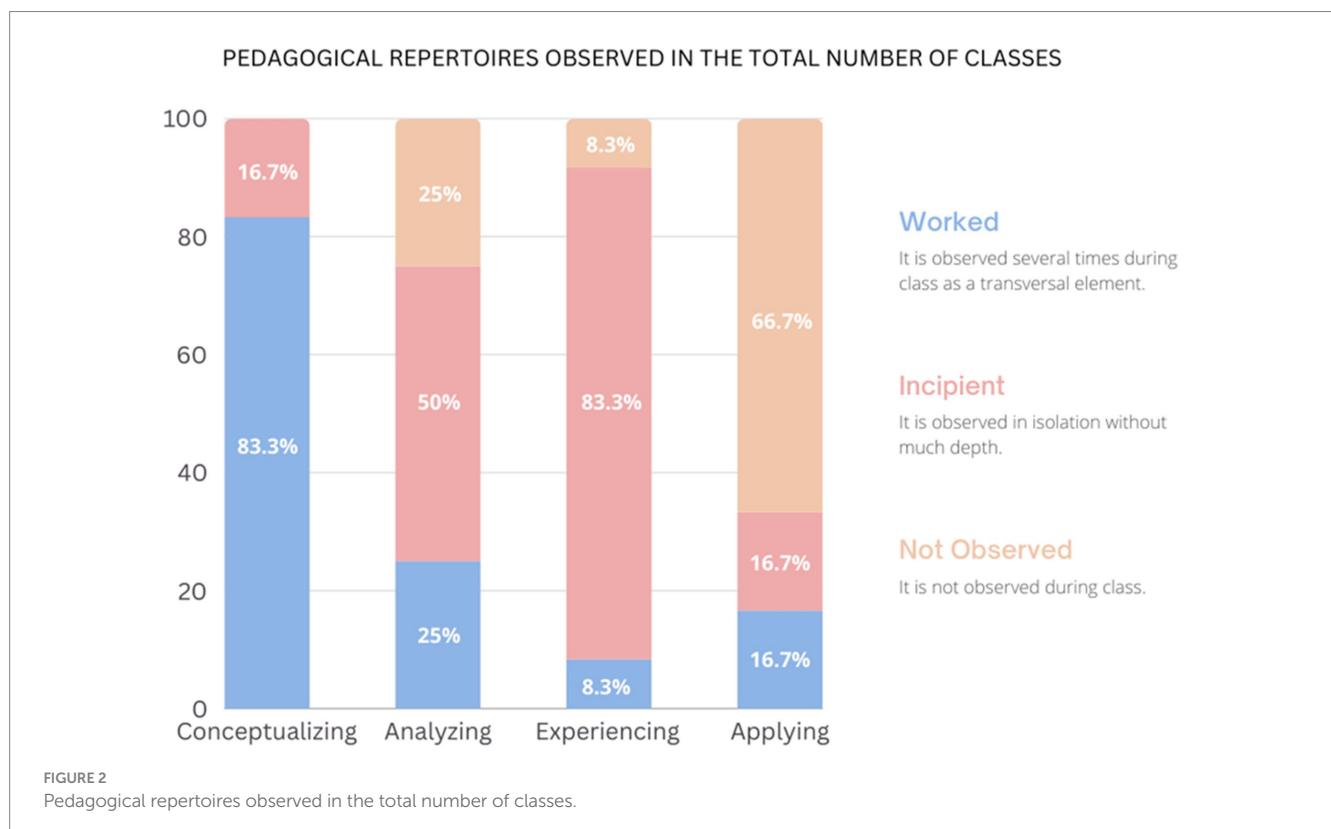
From the perspective of the pedagogical repertoires of multiliteracies proposed by Kalantzis and Cope (2023) including the pedagogy of transmission (conceptualization), critical pedagogy (analyzing), authentic pedagogy (experiencing) and functional

pedagogy (application), the most recurrent practices observed are those related to the knowledge process of conceptualizing, that is, those in which teachers present information through naming, defining, or recalling content previously seen or read in a text. Its use is supported by guides in which, for example, students must describe characters or synthesize information provided in pen.

As shown in Figure 2, conceptualization is positioned as the basic domain from which lesson planning derives and to which the rest of the pedagogical repertoires are used. In addition, it is observed that regularly stating and remembering definitions represents the corroboration of whether learning has been achieved or not. This shows the centrality that the pedagogy of transmission has in the sample observed.

Secondly, we observe the process of analyzing associated with critical pedagogy, which is, however, at a much lower percentage than the pedagogy of transmission. Thus, critical pedagogy is observed in the classes but at an incipient level. This shows that aspects of critical pedagogy such as the selection of information, evaluation of its veracity and relevance, and the proceeding generation of arguments and counter-arguments are practiced at a superficial level (Lipman, 2017; Schleicher, 2019). A qualitative approach to the data shows some attempts by teachers to make pedagogical proposals to encourage critical analysis through the selection of information, evaluation of its veracity and pertinence (Lipman, 2017; Schleicher, 2019); however, these efforts are not always responded to by students, which generates that the learning processes through the transition between conceptualization and analysis do not always manage to articulate in an organic and effective way.

Figure 2 shows that the application of knowledge (“worked”) is observed in 16.7% of the classes, with a high percentage of “not



observed” (66.7%). This points to a low presence of functional pedagogy, which is associated with the creation of new content based on the integration of new knowledge or skills. An example of this integration is an activity in which students designed an oral presentation, created a poem or underwent a dramatic reading from a story; that is, students read a written text and then created something new based on the reading.

The least observed pedagogical repertoire at a “worked level” is authentic pedagogy, related to processes of situated learning. Thus, immersive aspects in which students can incorporate their personal experiences, situate the content in the real world, and connect with aspects of personal motivation are less covered in the classes observed. Although the observations do not represent the totality of the classes, they do exhibit regularity in the lower use of functional and authentic knowledge processes.

Furthermore, from the teachers’ perspective, it is interesting to note that in the interviews they attribute that their practices focus more on a pedagogy of transmission because that is how they learned from their teachers. This shows the implications of vicarious learning (Lankshear and Knobel, 2011) during teacher training and the dissonance between theory and practice, even when ideas and theories have long shifted towards a constructivist model. As one of the teachers said:

I fail in the development of methodologies, in that sense, because at university, for example, they teach you the content, but one becomes a student of the content, but there are very few didactic branches, of other techniques, strategies, modalities. Then finally you arrive to work in school and, what do you start to do? You start to replicate strategies that were applied to you (Teacher 2).

I feel that there is a lot of emphasis on literature, a lot of emphasis on philosophy, but very little emphasis on didactics (Teacher 1).

In addition, teachers point out that regularly applied standardized national assessments in Chile largely mark classroom decisions as they try to prepare students for the assessment, which does not include pedagogical and multimodal variability. As mentioned by one of the teachers:

I think that this puts us teachers under a kind of rope, because sometimes you would like to do other things but, on the other hand, you have the pressure that you have to make the students know how to demonstrate what they have learned in the way they are being asked, because they may know it, but they cannot demonstrate it in the formal way that these instruments have (Teacher 1).

4.3 Integration of results from a discourse analysis perspective

Discourse analysis supports the interpretation above, in the sense that transmission is more prominent than critical, functional and authentic pedagogies. The prominent presence of relational processes (e.g., be or have) in classroom interaction is in line with the building of conceptualization through naming, defining and recalling information.

Let us observe Example 2, which is an excerpt from the corpus analyzed by Thibaut and Lizasoain (2024); the processes are highlighted in bold. Wordings of a relational nature such as “what is a microstory,” “They are, they consist of 2 pa-a, 2 pages” or “the concept would be the short, the shortness” are the most used, followed by mental (*means, want, represent*), material (*went, found*) and verbal processes (*say*). In this interaction, the students are clearly prompted to name, define and recall microstories.

In the following example, we can observe the exchange of Teacher 2 and three of his students, in which they work collaboratively on a 14-page handout that included content from the first trimester, incorporating new knowledge related to the lyric genre. They had already covered the narrative and dramatic genres, and the teacher began the lesson by activating that knowledge based on the definitions of these genres.

In this example, a student is reading aloud a section from a handout. Based on the reading, the teacher makes sure the students remember the three lyric attitudes one can find in the lyric genre.

Example 2 Defining “microstories” in a rural multigrade school

Teacher 1: Which ones? – the most important characteristics, if we **had** to like, to **determine** or **say**, right?, roughly, what **is** a microstory.

BRAULIO: They **are**, they **consist** of 2 pa-, 2 pages, 1 page, 1 paragraph, even a line.

Teacher 1: Ok, so that **means**...?

NAY: How short they **are**, how short they **are**.

Teacher 1: Exactly, we **are** on the right track, right?/ the concept would **be** the short-, the shortness, right? Which **means**, like it **says** there, right? that it can **be** two pages or two lines, depending on what we **want** to **say**, as long as it **is** understandable, right, and we can, NOST, we can **represent** our objective. NOST, do you **know** any microstories?

NOST: A microstory?

Teacher 1: Yes, another microstory.

NOST: Mmm, Little Red Riding Hood.

Teacher 1: Hehehe, that’s a story, because it **is** long, right? We get to **identify** beginning, development, and ending, right? Easily...

NOAN: A microstory would **be** tiny [she makes the gestures of shrinking with his fingers].

Teacher 1: A microstory would **be**, for example...

NOAN: A tiny little story!

NOAD: The witch **is** dead!

Teacher 1: Little Red Riding Hood **went** into the woods and **found** the wolf around the corner.

NOAN: That would **be** a [she makes a shrinking gesture with his fingers].

Teacher 1: That would **be** a microstory. Why? Because a great change **occurs**, in which, right, we **get** to **describe** a different event. So, now, we will **listen** to and **read** paying close attention, right, the following microstory, *El turno* [The Turn].

They have learned these words in the previous class, and the teacher announces that they will find them later in the handout. As we can observe, the negotiation remains in the cognitive exercise of remembering, consistent with the prominence of mental processes such as *read*, *positioning*, *stick* and *remember*. After acknowledging that the students remember the technical vocabulary, they continue reading from the handout without “unpacking” knowledge that likely seems highly abstract to a Chilean student in sixth or seventh grade. Indeed, reading comprehension rates in Chile are below the OECD average (OECD, 2023), and it is probable that most of these students do not know concepts such as “introspection,” “the ‘I,’” “attitude,” or “carmine,” for instance, in the sense of understanding and being able to use them in a real-life communicative situation, be it academic or quotidian.

Finally, in the example below, the interactants (Teacher 3 and a co-teacher) and three 7th-grade students contrast literal and figurative language in order to recall previous knowledge and introduce the topic of myths and heroes. The pedagogical materials are textbooks, notebooks, and cellphones.

Although the focus of the interaction remains in the conceptualization domain of knowledge building, this kind of interaction (Example 3) works better than the previous examples for three reasons. First, the pattern incorporates more feedback than evaluation; the teacher takes advantage of students’ consolidated knowledge about the world (turtles are slow, cars can be driven slow or fast) and “packs” this knowledge, renaming it as literal and figurative language (comparing turtles and driving cars). Second, the teacher situates the learning by relating uncommon knowledge (literal and figurative language) with people who the students relate to (Miss Fernanda) and things they are interested in (cars). Third, humor is part of the class, as they laugh together about a ridiculous situation. This way, there is a clear movement from transmission to authentic pedagogy.

5 Discussion

Identifying patterns of pedagogical practices and multimodal resources is key to, first, understanding the current state of literacy education. The patterns can also help to define the spaces that are being made for preparing school students and pre-service teachers for a complex, diverse, and transforming society in which the meaning-making practices and the process of communication have changed radically due to technological advances. This contrasts with pedagogies in schools, which have remained the same since the last century (Collins and Halverson, 2010). From this perspective, the current school system is obsolete (Gardner, 1983). Nowadays education does not prepare new generations to navigate a multidimensional and multimodal world, in which experience is not only built through dialogue and written texts, but by the combination of these and other modes of communication.

Although transmission pedagogy is often criticized, changes in the classroom do not seem to be frequent. In line with this diagnosis, the results of this study show that the most common teaching and learning strategies (level 2 of analysis) are those that highlight the cognitive dimensions of learning in the form of constructions of categories or concepts and their definitions. While this is fundamental for the acquisition of curricular content and should not be neglected,

Example 3 Contrasting literal and figurative language

Teacher 3: “I **dropped** the pencil,” well done, an example of literal language. And now, how about an example of figurative language, who can **help** me?

Juan: [raises his hand] “It **was** a turtle.”

Teacher 3: “It **was** a turtle” is figurative language. [Pablo raises his hand] **Go ahead**. [pointing at Pablo].

(...)

Teacher 3: **Was** it a turtle? It can also **be** literal language if we are **looking** at a turtle that is there and I **say**, “Look, it **was** a turtle.” [it would **be** literal.

Pablo: I would have to **say**].

Teacher 3: But if I am **referring** to, for example, Miss Fernanda, when she is **driving** and she **goes** slowly, 10 kilometers per hour, I will **say**, “Ah, Miss Fernanda **is** a turtle,” in that case, yes.

Enrique: 120 [km/h].

Teacher 3: Then it would **be**... in the Lamborghini.

the use of other repertoires can promote meaningful contextualized learning (Lave and Wenger, 1991). In other words, specialized knowledge is not built based on common sense knowledge, and, in consequence, new knowledge is not effectively incorporated in the students’ understanding of the world (Bernstein, 1999). Consequently, using a wider repertoire of pedagogical practices such as applied and authentic pedagogy can support the transfer of such practices to a context that is beneficial for life outside the educational sphere, as well as promote long-term memory. In this vein, practices associated with analysis and experience are observed in an isolated and sporadic manner in this study, acting more as support tools than as a basis for the construction of student’s learning. From the perspective of situated cognition, this implies that learning is approached using decontextualized and unmotivating methods, which is concerning since learning is constructed in the activity and context in which it originates (Brown et al., 1989); if knowledge does not make sense or is considered as boring or useless, it will not stick.

At the same time, an emphasis on written text was observed, still strongly based on traditional modes, in line with the literature (Bromfield and Curwood, 2023; Gironzetti and Lacorte, 2025; Meneses and Maturana, 2023). We argue that it is key to expand the opportunities of modes used in the classroom to other modes such as auditory, body or multimodal in order to broaden the possibilities of meaning-making and representation of knowledge. Although we observed a few examples, they were scarce. The latter is especially important considering the evolving, dynamic meaning-making practices connected to the current technological context outside the classroom, which go beyond written or oral text. In fact, 21st-century learners engage more with sources coming from digital platforms, which actually integrate multimodality (e.g., written and oral text, body movements, sound, image) and might serve to develop multiliteracies if pedagogical material were carefully and explicitly designed for it. This in combination with traditional materials –such as books or textbooks– which are undeniable productive and effective.

The predominance of the verbal modes is in line with a preponderance of knowledge processes focused on the cognitive domain of learning, which relegates the socio-emotional domain and embodied cognition to a secondary plane (Alvarez Bolaños, 2024). Practices associated with situated learning are observable, although their approach is superficial and anecdotal. Examples from daily life are often used to complement explanations or to recall shared experiences associated with the content, without delving into them or linking them explicitly, which means that these intentions remain only in the enunciation. Thus, application is rarely observed; when it occurs in an incipient way, it is due to the realization of a specific creative activity, while the occasions when it is worked on correspond to classes specifically aimed at the generation of a concrete product such as calligrams and stories. From the perspective of neuroscience, research shows that the generation of moderate emotions associated with feelings of well-being such as exploration, wonder, and joy promotes long-term memory (Tyng et al., 2017). This latter tradition is connected to the study of embodied cognition (Varela et al., 1993), in which learning is understood by both the cognitive aspects of scientific learning and aspects of perception of the senses usually integrated into social and emotional aspects of learning (Kalantzis and Cope, 2023). However, these emotions are scarcely observed in the classroom in this study, with the exception of one of the teachers who integrates short interactive games to review content, as well as humor. This point is interesting since it indicates an existing space in which it is possible to work at a pedagogical level and that is not generally considered when teaching is based on transmission.

In a digitally mediated world, individuals who have not developed multiliteracies in their schooling processes are left behind in the socioeconomic terms (UNESCO, 2022). The latter is a synonym of social inequity and injustice, since illiterate people do not have access to the same quality knowledge as literate people do. Regarding equal access to education, diversity must also be considered; the inclusion and combinations of several modes to make meanings in teachers' pedagogical repertoires can increase opportunities to learn for students coming from diverse contexts and having different educational needs. For instance, students with hearing disabilities might take advantage of the inclusion of body language. Technology may play a relevant role in the need for multiliteracies development since it usually entails multimodal meaning-making devices, rendering it motivating and engaging for students. For instance, Thibaut and Lizasoain (2024) were able to show that critical thinking could be developed through an app that incorporated written text, images, and interactive prompts.

Motivation must not only be thought in relation to students and learning, but also to teachers and teaching. Interviews point to teachers' concern that they are not trained to develop multiliteracies and, therefore, do not have the skills to prompt pedagogies other than the transmission pedagogy, because it has been their role model. This lack of training may lead to teachers' demotivation to teach. Consequently, both teacher training and professional development should incorporate these teaching practices.

At this point, it seems relevant to us to point out that these kinds of reflections and consequent decisions to change the state of the art and prepare teachers to become real agents of change can only come

from applied science. Classroom studies have proven to be useful in making these changes because oftentimes researchers themselves are teacher trainers and can encourage such changes. In the Chilean Language classroom, in particular, teachers must incorporate innovative pedagogies that help students to understand the world and be able to participate in it effectively in order to, for example, improve results in the local and international standardized tools that measure reading comprehension, which systematically yield poor results. Results are not worrying per se but they show that Chilean citizens are not able to understand what they read (OECD, 2023) and, therefore, are not able to distinguish fake from real pieces of news, with the dangers that this entails (Schleicher, 2019). Finally, how do we connect content and experience for learning? Probably, it can be done by bringing the real world to the class with all the forms to communicate that individuals encounter and deploy on an everyday basis rather than teaching to the curriculum, which always falls behind ongoing needs.

6 Conclusion

This study sought to answer two questions: How are meaning-making and types of modes connected in the classroom? How balanced are pedagogical repertoires in the classroom? The results showed a lack of integration of repertoires of multimodal literacy in the classroom and an emphasis on traditional modes of communication. This could be associated with the fact that modes are not explicitly considered at the curricular level in the subject of Language and Communication, unlike other subjects such as Arts, Technology and Sports. Thus, based on the data and the sample used for the analysis we found that the connection between the types of modes used for meaning-making and the pedagogical repertoires exist in a traditional way. The learning opportunities are based on canonical forms in which knowledge processes that emphasize cognitive domains such as conceptualization, classification and memorization and that are taught using the written text are more frequent. Consequently, knowledge-building is preferably performed at a mental level. In conclusion, the results show a dissonance between the expected results on the use of varied pedagogical repertoires that target diverse cognitive domains and a myriad of modes according to the theory of Kalantzis and Cope (2023), and what was observed.

At the same time, the interviews with the teachers show that despite agreeing with the ideas of repertoires and the use of multiple modes, they replicate the way they learned to learn and teach during their teacher training, which was mainly traditional. We argue that this illustrates how conceptual ideas do not necessarily imply changes in behavior and the need for explicitly model how to balance pedagogical repertoires and multimodality during teacher training in order to bring about changes in the classroom.

An area for future research is to investigate how national standardized assessments may be impacting the maintenance of traditional teaching models, despite the push for a more inclusive education that emphasizes various pedagogical repertoires and literacies that integrate the linguistic and cultural variability of the 21st century.

We argue that it is key for 21st-century pedagogy to better integrate knowledge processes that emphasize mental domains as

well as socio-emotional and embodied domains. Therefore, experienced and functional pedagogy should have better visibility in the classroom which is also related to the use of a greater variety of modes in the classroom. Clearly, if proprioception and the activation of bodily, auditory, visual and multimodal modes are not used, there will be a tendency towards mind-centered learning, disconnected from the richness and significant learning. Besides, classroom diversity is not addressed. In addition, from the perspective of neuroscience, research shows that the generation of moderate emotions associated with feelings of well-being such as exploration, wonder, and joy promotes long-term memory (Tyng et al., 2017). However, these emotions are scarcely observed in the classroom in this study, with the exception of one of the three teachers, who integrated short interactive games to review content, as well as humor. This example illustrates that it is possible to make changes at a pedagogical level; however, as indicated by the teachers, major changes are required at the system level, for instance, during initial teacher training, professional development and assessment, in order for those changes to be consistent and have implications for students learning in the long term.

Data availability statement

The datasets generated for this study are available on request to the corresponding author.

Ethics statement

This study was carried out in accordance with Chilean law N. 20120, which regulates research with human subjects in Chile, and with the Ethics Review Board recommendations and approval of the Austral University of Chile comiteeticocientifico@uach.cl. All participants gave written informed consent to participate in this study.

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PT: Funding acquisition, Conceptualization, Data curation, Project administration, Formal analysis, Validation, Supervision, Resources, Writing – original draft, Writing – review & editing. AL: Conceptualization, Data curation, Formal analysis, Validation, Writing – original draft, Writing – review & editing. NL-M: Writing – original draft, Data curation.

Funding

The author(s) declare that financial support was received for the research and/or publication of this article. This study has been funded by the Chilean National Agency of Investigation and Development through the Fondecyt Regular project #1220685.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Generative AI statement

The authors declare that no Gen AI was used in the creation of this manuscript.

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