

## RESEARCH ARTICLE

# Analysis of discursive patterns for curricular contextualization

Richar Jacobo Posso-Pacheco<sup>1</sup>, María Gladys Córdor-Chicaiza<sup>2</sup>, Jannet del Rocío Córdor-Chicaiza<sup>2</sup>,  
Bertha Susana Paz-Viteri<sup>3</sup>, Victor Arufe-Giráldez<sup>4,\*</sup>, Alberto Sanmiguel-Rodríguez<sup>5,6,7</sup>,  
Norma Amabilia Ortiz Bravo<sup>8</sup>

<sup>1</sup> Ministry of Education of Ecuador, Quito 170515, Ecuador

<sup>2</sup> Municipal Educational Unit Eugenio Espejo, Quito 100206, Ecuador

<sup>3</sup> National University of Chimborazo, Riobamba 060110, Ecuador

<sup>4</sup> University of A Coruña, 15008 A Coruña, Spain

<sup>5</sup> Nebrija University, Hoyo de Manzanares, 28248 Madrid, Spain

<sup>6</sup> University of Vigo, 36310 Vigo, Spain

<sup>7</sup> University Camilo José Cela. C/ Castillo de Alarcón, 49 · Urb. Villafranca del Castillo · 28692 Madrid

<sup>8</sup> Central University of Ecuador, Quito 170129, Ecuador

\* **Corresponding author:** Victor Arufe Giráldez, v.arufe@udc.es

## ABSTRACT

With the application of remote education due to the pandemic, Ecuadorian teachers contextualized the curriculum to the needs of their students. The objective was to analyse emerging dialogue patterns during the COVID-19 pandemic, focusing on teachers' experiences and stories about their interaction with their students. The research was qualitative in which the method of indirect observation of the transcription of 73 semi-structured interviews with teachers from educational institutions in Ecuador was applied through the Zoom platform. To analyze the results, they were categorized and conceptualized following the triple pattern of dialogue and discourse proposed by Mehan in its three dimensions: initiation, response and evaluation. Three phases were established: construction of the final indirect observation instrument; quality control of the information so that there is no subjectivity through the agreement of the criteria of three research authors; and the interpretation of indirect observation through contextualization by curricular contents, methodological strategies and didactic resources. It is revealed that teachers demonstrated remarkable adaptation during the COVID-19 pandemic, focusing on emotional containment and creativity.

**Keywords:** contextualization; curriculum; equity; learning; COVID-19

## 1. Introduction

The Ecuadorian National Curriculum responds to an open and flexible social constructivist paradigm. León et al.<sup>[1]</sup> mentioned that their learning is structured in three parts: a skill that responds to “what should the student do?”, a curricular content that responds to “what should the student know?”, and a level of complexity that responds to “with what depth should the student know?”. This design allows the curriculum to be contextualized to the needs and realities of the students.

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During the pandemic, traditional education was transformed into remote education due to the need to contextualize the Ecuadorian curriculum in a socio-health and educational emergency situation. According to Posso-Pacheco et al.<sup>[2]</sup>, it was carried out in two lines: the first for students who had access to connection and use of electronic devices, and the second for students who did not have any of these technological resources. This is how the requirement to contextualize the curriculum became a priority, establishing a permanent dialogue between educational actors<sup>[3]</sup>, which made it possible to understand family conditions, personal, economic, social, cultural and health aspects.

In the remote education modality, students and teachers connect through digital platforms, such as video conferences, online forums, email, instant messaging, among others, to exchange information, carry out activities and evaluate learning<sup>[4]</sup>.

Contextualization is an educational process that helps students understand and significantly assimilate learning through the relationship with their real situations. In the context of this study, it refers to the adaptation of the current national curriculum to the circumstances experienced by students during the pandemic. To achieve contextualization, teachers must carry out a constant dialogue to understand the conditions of the students and adjust the curriculum accordingly. This allows the integration of learning from various areas of knowledge in their environment and daily activities. Adapting the curriculum to the specific circumstances of the students could generate topics that were potentially perceived as novel. This perception certainly increases motivation, interest in learning, the development of critical thinking and the practical applicability of learning.

Furthermore, contextualization is essential, since it recognizes and values the cultural and linguistic diversity of students. Educators can strive to ensure that materials and activities are culturally relevant and appropriate for all students, regardless of their cultural or linguistic background. For curricular contextualization, the place where the students lived was also taken into account. According to Zabalza<sup>[5]</sup>, contextualization should consider the mesoenvironment, that is, the family, friends, neighbours and the local community, and then, the macroenvironment such as the “natural, social and general cultural context of the students. From natural phenomena to flora, fauna, lifestyles and forms of production, the various social instances and institutions, social and citizen organization.”

Following these ideas, Martínez<sup>[6]</sup> further develops the idea of contextualization, establishing that there are three different types: the first is a pedagogical intervention that contextualizes knowledge according to each subject; the second is a didactic intervention that seeks to contextualize the methodological strategies and evaluation in order to improve the teaching-learning process; and, finally, the third refers to a discursive intervention that addresses the contextualization of curricular approaches and learning environments based on the creativity of educational practice.

This approach allows for a comprehensive view of contextualization, considering both the context closest to the student and the broader context of their natural, social and cultural environment. Ultimately, it seeks to provide a more complete framework for understanding educational contextualization.

Contextualization responds to the adaptation of the teaching-learning process from all curricular elements, such as objectives, contents, methodologies, resources, programming and evaluation; based on the requirements of the student as a centre of learning, reaching the exit profile of the Ecuadorian high school graduate and the necessary skills to function in a globalized and changing society<sup>[7,8]</sup>.

According to Montes<sup>[9]</sup>, these competencies should not arise from standardized processes but from the contextualization established in an educational policy, so that each educational institution can build its own pedagogical proposals, pointing to the reality and articulation of the entire educational community, giving solution to the problems that affect it.

It is clear that if learning is contextualized to the reality of the students, it will be significant. This thought is defended by Heckman and Weissglass<sup>[10]</sup> when they say that significance and reasoning are acquired when learning is contextualized to social interactions, affirming the importance to contextualize based on the student's interest, and this in turn to contact and productive development in society.

## **1.1. Objective**

The objective of this article was to analyse the emerging dialogue patterns during the COVID-19 pandemic, focusing on teachers' experiences and stories about their interaction with their students, for a comprehensive view of the adaptation of teaching in crisis situations.

## **1.2. Theoretical review**

### **Dialogue in the classroom for curricular contextualization**

Dialogue is a conversation that two or more people have, in which ideas, feelings and thoughts are shared, always carrying a message. Bakhtin<sup>[11]</sup> goes further by introducing the concept of the dialogic author. This author, like the functions of a teacher, plays two essential roles. First, he acts as an organizer of structured information by asking open-ended questions for the purpose of gaining understanding, promoting multiple responses and the construction of agreements. This approach facilitates connection with the student and encourages a fluid and deep dialogue. Second, he assumes the role of participant by showing the ability to listen and understand all the details in order to express his own point of view in a timely manner.

In the dynamics of verbal and auditory exchange, Bakhtin<sup>[12]</sup> emphasizes that dialogue presents consistent patterns that encourage two-way communication. In this interaction, the sender communicates his message, and the receiver responds verbally, physically or in other ways, without defined temporal restrictions for the dialogue. Expanding on this notion, Wegerif<sup>[13]</sup> argues that these interactions generate multiple messages without a pre-established closure, which requires the teacher to behave as a dialogic author. The teacher must carefully plan the content of the class to meet the objective of understanding the needs and realities of his students. These actions should not be interpreted as limiting dialogue, as Johnstone<sup>[14]</sup> indicated. Instead, it is a strategy that enriches communication and understanding in the classroom.

Instead of being perceived as limitations, these actions should be considered as starting points to engage in dialogue with the purpose of better understanding the student and adapting the curriculum. In this process, the teacher must possess qualities such as empathy, which leads him to listen and transmit trust, thus fostering an environment in which students feel comfortable sharing their thoughts freely. Boyd and Markarian<sup>[15]</sup> refer to this quality as a "dialogical stance" since it helps students express and share their experiences, creating supportive spaces that improve students' understanding and enrich teaching. Although there are no specific studies to classroom dialogue for curricular contextualization, what was proposed by Mehan<sup>[16]</sup> about the initiation-response-evaluation (IRE) process can be taken as predominant in the classroom. This allows the teacher to collect valuable information about the needs and realities of the students during the pandemic. The strategy (IRE) is not part of a teaching-learning process but is used as a prior diagnostic evaluation for curricular contextualization. For Lee<sup>[17]</sup> open dialogue does not generate conflicts at any time in terms of teaching or interaction.

Finally, the Ministry of Education of Ecuador<sup>[18]</sup> launches its contextualized curriculum for the Galapagos Islands with a focus on sustainability, in which spaces for pedagogical dialogue were developed for its construction, first knowing the learning needs of the students, their reality and future expectations. Dialogues were also carried out between teachers in study and contextualization circles, and finally the socio-environmental diagnosis that exists on the islands. With this they were able to build a completely

contextualized curriculum aligned to their requirements.

## 2. Methodology

This research follows a qualitative approach to analyse emerging dialogue patterns during the COVID-19 pandemic, focusing on teachers' experiences and accounts of their interaction with their students<sup>[19]</sup>. To analyse the emerging dialogue patterns during the COVID-19 pandemic and their relevance in the contextualization of curricular contents<sup>[20]</sup>, methodological strategies and teaching resources, the indirect observation method<sup>[21]</sup> was used and was oriented towards the analysis of textual material that focused on the contextualization of the national curriculum during the pandemic.

### 2.1. Instrument design

The interview questions were developed following a procedure based on a theoretical review of classroom dialogue for contextualization, based on Mehan's<sup>[16]</sup> findings on the initiation-response-evaluation (IRE) process. This approach allowed the development of an interview guide based on the triple pattern of dialogue and discourse. The guide was structured in three parts corresponding to the initiation, response and evaluation (IRE) patterns. Each part included specific questions designed to gain a deep understanding of teachers' role during remote education, their strategies for learning about students' needs and situations, and how they used that information to contextualize the curriculum. The guide was applied in semi-structured interviews with the participating teachers.

**Table 1** shows the questions asked in the interview guide following the IRE dialogue and discourse pattern. This instrument was validated through the methodology by the judgment of five experts, which made it possible to comprehensively address the understanding of the contextualization process of the national curriculum during the pandemic from the teachers' perspective.

**Table 1.** Initiation-response-evaluation (IRE) interview guide.

Dialogue and speech pattern	Questions
<b>Initiation</b> Deeply understand the needs and real situation experienced by students during the pandemic	What is the importance of social-emotional diagnosis and what has your teaching role been like during remote education? What strategies did you use to understand the needs and situation of your students during the pandemic? What questions did you ask to understand the needs and situation of your students during the pandemic?
<b>Response</b> Listen and record all the details. Rephrase questions to keep the dialogue flowing.	Did you listen to and record everything your students said? What actions did you use to make the dialogue free, friendly and fluid? Did you ask questions to gain an in-depth understanding of the needs and situation of your students?
<b>Evaluation</b> Analyse the information to contextualize the curriculum.	Once the collected information has been analysed: What content did you contextualize in your planning? What methodological strategies did you contextualize in your planning? What resources did you contextualize in your planning?

### 2.2. Sample

The sample for this study was made up of a total of 73 teachers, of which 42 were women and 31 men, from various educational institutions in Ecuador. The selection of participants was carried out using a non-probabilistic approach for convenience, based on good personal and professional relationships with the researchers and their availability. This choice facilitated the organization and logistics of the study and guaranteed the participation of the interviewees.

The inclusion criteria applied for the selection of participants were the following: possess a third-level

university degree, age between 30 and 55 years, have more than 5 years of teaching experience, have taught virtual classes throughout the period of the pandemic and belong to the areas of knowledge defined by the Ministry of Education<sup>[22]</sup> as social sciences, natural sciences, physical education and cultural and artistic education. These criteria were carefully developed to ensure that participants had strong teaching experience and were directly related to the areas of interest.

For the exclusion criteria, the following aspects were taken into account: lack of time availability to participate in interviews and non-compliance with any of the inclusion criteria. This ensured that the selected teachers met the specific requirements of the study.

The interviews were carried out individually and synchronously through the Zoom platform, lasting 30 to 45 min each. Previously, informed consent was obtained from each participant to record and use the information collected in the research, thus ensuring transparency and confidentiality in data management. At no time were the names of the participants or the institutions where they worked revealed, guaranteeing the privacy and anonymity of the teachers. Additionally, it is emphasized that no teacher left the interview during it. In all stages of the research, the ethical recommendations for educational research were rigorously followed, in accordance with the guidelines provided<sup>[23]</sup>.

### **2.3. Phases of indirect observation**

During the interviews, Bakhtin's<sup>[12]</sup> interaction of speaking and listening was considered, where dialogue follows stable patterns so that communication flows in both directions. Subsequently, transcriptions and segmentations of the 73 interviews were made, following orthographic and syntactic criteria<sup>[21]</sup>, which allowed the systematization and coding of the data.

For indirect observation, three phases had to be completed:

- (1) Design of the indirect observation instrument: three final indirect observation instruments were developed to collect relevant data from the transcripts of the 73 teachers' interviews. It focused on emerging dialogue patterns in three dimensions initiation, response and evaluation.
- (2) Information quality control: in order to guarantee the objectivity and quality of the data collected, a rigorous control was carried out in this phase. Cohen's<sup>[24]</sup> Kappa coefficient was used to reflect the agreement of the criteria of three author researchers called intraobserver 1, intraobserver 2 and intraobserver 3. This phase was essential to ensure that there was no subjectivity in the interpretation of the data.

Interpretation of indirect observation: focused on the interpretation of data obtained through indirect observation. A contextualization approach was used, considering aspects related to curricular content, methodological strategies and teaching resources used by teachers during the pandemic.

### **2.4. Quantitative analysis**

The quantitative analysis focused on obtaining average instances of dialogue, that is, measuring how many times, on average, different categories<sup>[25]</sup> of dialogue were observed in the three dimensions: initiation, response and evaluation, during the interviews with the teachers. This involves calculating the average number of times each type of dialogue interaction occurred in conversations with teachers. For the analysis, the dialogue categories were organized into subdimensions.

## **3. Results**

The results of the interviews with 73 teachers provide data on the application of the final indirect observation instrument, the quality control of information, the detailed analysis of the information obtained in

the educational context and the quantitative analysis by average instances of dialogue.

### 3.1. Final indirect observation instrument

The triple pattern of dialogue and discourse proposed by Mehan<sup>[16]</sup> was taken into account, with which the final indirect observation instrument could be constructed, establishing three dimensions: Initiation, Response and Evaluation which were categorized, conceptualized and coded.

By analysing the first dimension Initiation, it was possible to know the first process carried out by the teachers. It was through direct dialogue in which questions were asked to know the socio-emotional state of their students, supported by different information collection strategies, obtaining a socio-emotional diagnosis of the negative impact caused by the pandemic crisis, which served as a basis for curricular contextualization as indicated in **Table 2**.

**Table 2.** Final indirect observation instrument: Initiation dimension.

Subdimensions	Conceptualization	Categories	Codification
1) Socio-emotional diagnostic questions asked to students	Way to present ideas or doubts, which allow for information from students	How did you feel in this pandemic?	DIPREDI1
		How does your family feel in this pandemic?	DIPREDI2
		Have your family members gotten sick with COVID?	DIPREDI3
		Has anything changed in your house during the pandemic?	DIPREDI4
		Do you like to study virtually?	DIPREDI5
		What do you like about in-person and virtual classes?	DIPREDI6
2) Diagnostic strategies	Set of activities that allow us to understand the negative impact caused by the pandemic crisis through dialogue	Guided discussion	DIESTDI1
		Focal activity	DIESTDI2
		Individual interviews	DIESTDI3
3) Socio-emotional diagnosis	Information on the negative impact caused by the pandemic crisis.	Learning motivation	DIDISO1
		Fear of getting infected and infecting	DIDISO2
		Parental job loss	DIDISO3
		Money shortage in the family	DIDISO4
		Poor connectivity and device accessibility	DIDISO5
		Confinement and isolation	DIDISO6

With the second dimension, response, the second process carried out by teachers during the pandemic was known, which was how the information was extracted and what its meaning was. For this, they proposed the premise of dialogue, directing the student to share his ideas, thoughts and feelings; expressing confidence so that they do not have limitations when speaking, listening to each word of the student, recording the connections without limiting the time of intervention, asking cross-questions to expand the information, connect experiences and give sequence to the dialogue.

Furthermore, the interviewees were able to create meanings from the responses through the connections of all the ideas and opinions expressed by the students; They also related the content to be able to contextualize the curriculum, they had to direct its total description and finally assigned an emotional value experienced during the pandemic, as indicated in **Table 3**.

**Table 3.** Final indirect observation instrument: Response dimension.

Subdimension	Conceptualization	Categories	Codification
Equitable	Possibilities of generating	Teacher-student communicative interactions	DRINTEQ1

interactions in dialogue	dialogues in a shared and equitable way, which comply with rules of reciprocity	Connection of experiences	DRINTEQ2
		Dialogue duration	DRINTEQ3
		Dialogue sequence	DRINTEQ4
		Quality of response to questions	DRINTEQ5
		Dialog register	DRINTEQ6
		Connected ideas	DRCRECOL1
Collaborative creation of meaning	Collaborative and participatory construction of a chain of ideas to reach a reasoned conclusion.	Relationship towards a content/topic	DRCRECOL2
		Description of a content/topic	DRCRECOL3
		Assigning value to a content/topic	DRCRECOL4

Finally, with the third dimension, evaluation **Table 4**, the third process carried out by teachers during the pandemic was known. For this, the interviewees considered the transversal axis of emotional containment determined by the Ministry of Education<sup>[18]</sup> throughout the teaching-learning process. In this way, it was possible to contextualize the curricular contents, the teaching methodology and the support resources for the 2022–2023 school year.

**Table 4.** Final indirect observation instrument: Evaluation dimension.

Subdimension	Conceptualization	Categories	Codification
Contextualization of curricular contents	It is defined as the adaptation and complexity of the contents established in the skill with performance criteria to the learning needs and requirements of the students by year or grade of each educational sublevel/level.	Contextualization of the natural environment	DECOCO1
		Cultural contextualization	DECOCO2
		Social contextualization	DECOCO3
Contextualization of methodological strategies	It is defined as the adaptation of methods, techniques and steps carried out by the teacher, to reach a significant active understanding of student learning, depending on curricular content, level of complexity, situation and approach.	Contextualization emotional containment	DECOES1
		Contextualization to the subjects	DECOES2
		Contextualization to the type of study modality	DECOES3
		Contextualization aimed at inclusion	DECOES4
Contextualization of teaching resources	It is defined as the adaptation that the teacher makes to any concrete and digital material, helping it to fulfill the function of teaching, so that the student obtains meaningful learning with performance in theory and practice.	Contextualization depending on learning	DECORE1
		Contextualization depending on the methodological strategies	DECORE2

**Note:** Own elaboration.

### 3.2. Information quality control

Prior to the analysis of the coded information, the quality control of the information was carried out<sup>[26]</sup> in order to guarantee the absence of bias using Cohen’s Kappa concordance index<sup>[24]</sup>. The segmentation into textual units was carried out with their coding of the same interview by three author researchers (Intraobservers 1, 2 and 3) individually for each of the subdimensions.

The results indicated in **Table 5** state that there is a degree of agreement between the textual segmentations and quality control among the three observers. In particular, there is good agreement between intraobserver 1 and intraobserver 2, which suggests that they had a high similarity in their evaluation of the quality of the information. Furthermore, there is a moderate agreement between intraobserver 1 and intraobserver 3, as well as between intraobserver 2 and intraobserver 3, this means that there is a certain

variability in the evaluation of the quality of the information, but it is still a moderate agreement. In general, the results suggest that the quality of the information evaluated by the three observers is acceptable.

**Table 5.** Information quality control.

<b>Category</b>	<b>Codification</b>	<b>Intraobserver1 Intraobserver2</b>	<b>Intraobserver1 Intraobserver3</b>	<b>Intraobserver2 Intraobserver3</b>
How did you feel in this pandemic?	DIPREDI1	0.63	0.63	1
How does your family feel in this pandemic?	DIPREDI2			
Have your family members gotten sick with COVID?	DIPREDI3			
Has anything changed in your house during the pandemic?	DIPREDI4			
Do you like to study virtually?	DIPREDI5			
What do you like about in-person and virtual classes?	DIPREDI6			
Guided discussion	DIESTDI1	1	0.571	0.571
Focal activity	DIESTDI2			
Individual interviews	DIESTDI3			
Learning motivation	DIDISO1	0.600	0.793	0.786
Fear of getting infected and infecting	DIDISO2			
Parental job loss	DIDISO3			
Money shortage in the family	DIDISO4			
Poor connectivity and device accessibility	DIDISO5			
Confinement and isolation	DIDISO6			
Communicative interactions teacher-student	DRINTEQ1	0.600	0.800	0.400
Connection of experiences	DRINTEQ2			
Dialogue duration	DRINTEQ3			
Dialogue sequence	DRINTEQ4			
Quality of response to questions	DRINTEQ5			
Dialog register	DRINTEQ6			
Connected ideas	DRCRECOL1	0.667	0.667	0.667
Relationship towards a content/topic	DRCRECOL2			
Description of a content/topic	DRCRECOL3			
Assigning value to a content/topic	DRCRECOL4			
Contextualization of the natural environment	DECOCO1	1	0.500	0.500
Cultural contextualization	DECOCO2			
Social contextualization	DECOCO3			
Contextualization emotional containment	DECOES1	1	0.429	0.692
Contextualization to the subjects	DECOES2			
Contextualization to the type of study modality	DECOES3			
Contextualization aimed at inclusion	DECOES4			
Contextualization depending on learning	DECORE1	1	1	1
Contextualization depending on the methodological strategies	DECORE2			



### **3.3. Analysis of information in indirect observation**

Taking into account Mehan's<sup>[16]</sup> proposal for this study, it can be stated that the evaluation dimension allowed us to know how teachers used the initiation-response-evaluation (IRE) process during classroom dialogue, collecting information about the needs and students' realities during the pandemic; and how this information was used to contextualize the curricular contents, methodological strategies and teaching resources.

The evaluation dimension also allowed us to understand how teachers adapted teaching to the current situation, and how they met the needs of the students. Furthermore, they identified successful teaching practices, which will be useful for teaching in similar situations in the future. In short, this dimension and its subdimensions allowed us to obtain valuable information on the adaptation of teaching during the pandemic and the impact of the measures adopted on the teaching-learning process, which is why they will be analysed individually.

#### **3.3.1. Contextualization of curricular contents**

The contextualization of the curricular contents was the main strategy used by teachers. They took into account the categories of the natural, cultural and social environment, which allowed students to connect in the teaching and learning process according to their experiences during the pandemic. The contextualization of knowledge from the natural environment that occurred during the pandemic reached achievement 1 or the so-called basic of the learning standards proposed in each subject. This was obtained through interdisciplinary work through monthly projects or through disciplinary work proposed in the distance or virtual modality. In addition, it was determined that many students did not have access to green spaces, so it had to be contextualized based on the access to open or green spaces that the students had.

The contextualization of the curricular contents based on culture occurred when the learning was adapted to the emotional development, coexistence and artistic participation of the students. Cultural activities were promoted that took place in their homes, locality or region, always aiming at emotional support and meaningful learning<sup>[27]</sup>. The contextualization of the curricular contents based on the social aspect allowed for the generation of harmonious and flexible coexistence within the home, promoting values such as solidarity, empathy and mutual respect between family members. Activities and dynamics were proposed that allowed students to reflect on interpersonal relationships and how to maintain effective and positive communication within the home.

Without a doubt, the contextualization and linking of conversations and agreements in the construction of exercises and activities of different subjects allow them to be contextualized depending on the student, since they were adjusted according to the planned class structure. This adaptation not only implied a higher level of significance for the students, but also allowed them to see the relevance of what they are learning in their daily lives and in their environment.

Finally, this subdimension allowed us to know the adjustments made to the learning for the learning needs and requirements of the students. This adaptation was based on the natural environment, culture and society. In no case did they imply a decrease in the quality of teaching, but rather an adaptation to the needs of students in a particular context.

#### **3.3.2. Contextualization of methodological strategies**

The analysis of methodological strategies reveals how teachers adapted and employed various methods, techniques, and steps to provide meaningful learning to students during the pandemic. Factors such as curricular content, level of complexity, situation and pedagogical approach were considered. The evaluation dimension made it possible to identify the most effective methodological strategies in the pandemic context

and how they were adjusted to the needs of the students. These adaptations were divided into four categories: contextualization for emotional support, subjects, study modality and inclusion. The contextualization of the methodological strategies intended for emotional containment focused on the teaching of values and the search for solutions to challenges that emerged as a result of the pandemic. At the same time, it was possible to identify school dropout intentions, which led to the implementation of actions to encourage the expression of feelings, as well as the reception of motivational and spiritual aspects.

It is important to highlight that not all strategies were contextualized in the same way for each subject, since interdisciplinarity was promoted during the pandemic. Instead of focusing on individual contextualization for each subject, they aligned with the objectives of the learning projects established by educational policy. Each subject contributed from the same methodological line, allowing efficient adaptation.

Regarding the methodological strategies, these varied depending on the study modality, considering whether the classes were synchronous, asynchronous or distance learning. Additionally, each student's individual situations and problems were addressed, which often required additional effort that extended beyond the conventional schedule. Opinions in the category of contextualization of methodological strategies aimed at inclusion indicated that teachers faced significant challenges. This was due to technological limitations, time constraints and available resources. However, they ensured that teaching strategies were appropriate by being flexible and adapting materials and activities to meet each student's individual needs.

### **3.3.3. Contextualization of teaching resources**

In line with the analysis of the dimensions of initiation, response and evaluation, the difficulties in adapting and creating teaching materials for virtual and distance education during the pandemic are explored. Two categories of contextualization were considered: depending on the learning process and depending on the methodological strategies. Regarding the contextualization of the teaching resources according to the learning process, the teachers agreed that they could not develop the learning satisfactorily due to various difficulties, such as the lack of continuous training, understanding, time for elaboration, predisposition for construction and institutional pressures. In addition, the need to have a greater variety and accessibility of virtual resources was evident in order to adapt to the different needs and learning styles of students.

Finally, the category contextualization from teaching resources according to methodological strategies addressed the motivation inherent to teaching, which promoted the exploration and use of new methodological strategies to adapt to virtual education. Strategies such as gamification, online collaborative work, the use of educational videos, the use of virtual platforms and tools to carry out activities and evaluations were highlighted.

These strategies allowed greater interaction and participation of students in the learning process and greater motivation to get involved in the proposed activities. However, the need to improve training and education in the use of these strategies was evident, as well as having accessible resources for their implementation.

### **3.4. Quantitative analysis results**

The quantitative results provide a detailed view of the dialogue instances observed in the three key dimensions: initiation, response and evaluation. These dimensions capture the different moments and types of interaction that emerged during the interviews with the teachers. This analysis focuses on the quantification of the average instances of dialogue in each of these dimensions, which allowed us to understand the variety of approaches used by teachers to establish a dialogue with their students in the context of the COVID-19 pandemic.

### 3.4.1. Result of the quantitative analysis of the initiation dimension

**Table 6** details the results of the quantitative analysis in the Initiation dimension, where various subdimensions and categories of dialogue were explored. The average numbers and implications of these findings are presented in detail below, highlighting the diversity of approaches used by teachers to understand and adapt to students’ social-emotional needs.

**Table 6.** Result of the quantitative analysis of the initiation dimension.

Subdimension	Category	Average instances per teacher
Socio-emotional diagnostic questions asked to students	Way to present ideas or doubts, which allow for information from students	5
Diagnostic strategies	Set of activities that allow us to understand the negative impact caused by the pandemic crisis through dialogue	3
Socioemotional diagnosis	Information on the negative impact caused by the pandemic crisis	6

These quantitative data provide an overview of the average frequency with which dialogue instances were observed in each subdimension. These average figures are based on analysis of interviews and represent a snapshot of teacher-student interaction during the COVID-19 pandemic in Ecuador. It reveals that, on average, teachers asked 5 socio-emotional diagnostic questions to students. In addition, 3 instances of diagnostic strategies were identified per teacher interviewed and an average of 6 instances of socioemotional diagnosis. The variety of approaches used by educators to understand the experiences and needs of students in the context of the pandemic, and the adaptation strategies used by teachers and their commitment to the socio-emotional well-being of students, are highlighted.

### 3.4.2. Result of the quantitative analysis of the response dimension

**Table 7** shows the results of the quantitative analysis in the response dimension. The analysis focuses on quantifying the average number of dialogue instances observed in each subdimension and category.

**Table 7.** Result of the quantitative analysis of the response dimension.

Subdimension	Category	Average instances per teacher
Equitable interactions in dialogue	Teacher-student communicative interactions	3
	Connection of experiences	4
	Dialogue duration	3
	Dialogue sequence	3
	Quality of response to questions	5
	Dialog register	3
Collaborative creation of meaning	Connected ideas	3
	Relationship towards a content/topic	4
	Description of a content/topic	4
	Assigning value to a content/topic	5

This quantitative data provides an in-depth understanding of how teachers addressed and fostered equitable interactions and collaborative meaning-making in their dialogues with students amid the COVID-19 pandemic. These average numbers reflect the diversity of approaches employed by educators to foster equity and co-construction of knowledge, underscoring their continued commitment to effective teaching and student

well-being in a challenging environment like the pandemic.

### 3.4.3. Result of the quantitative analysis of the evaluation dimension

**Table 8** presents the results of the quantitative analysis in the Evaluation dimension, which is divided into three subdimensions: Contextualization of curricular contents, Contextualization of methodological strategies and Contextualization of didactic resources.

**Table 8.** Result of the quantitative analysis of the evaluation dimension.

Subdimension	Category	Average instances per teacher
Contextualization of curricular contents	Contextualization of the natural environment	4
	Cultural contextualization	3
	Social contextualization	4
Contextualization of methodological strategies	Contextualization emotional containment	2
	Contextualization to the subjects	2
	Contextualization to the type of study modality	3
	Contextualization aimed at inclusion	4
Contextualization of teaching resources	Contextualization depending on learning	3
	Contextualization depending on the methodological strategies	4

These quantitative data reveal how teachers adapted curricular content, methodological strategies, and teaching resources to meet the needs of students in the challenging context of the COVID-19 pandemic in Ecuador. They reveal a variety of approaches used by educators to ensure effective teaching and a meaningful learning experience for their students in this exceptional situation.

The dedication and flexibility of teachers to provide education like in-person in virtuality highlights a continuous commitment to the well-being and learning of students in exceptional situations. They were able to adapt their pedagogical practices and resources to ensure meaningful and equitable education amid the pandemic.

## 4. Discussion

The research allowed us to know the instances of dialogue proposed by Bakhtin<sup>[12]</sup>, through dialogue processes between teachers and students during the pandemic, achieved through diagnostic sessions that led them to know their ideas, thoughts and feelings. These were carried out outside of working hours, so they sought different diagnostic strategies that varied according to the teachers and the particularities of the students.

Teachers were able to establish positive interactions with their students, which allowed them to retrieve all the information without prior knowledge in dialogic lessons. This communication was effective by connecting all the experiences assigned to emotional value, obtaining a contextualized meaning. Supporting this statement, Cazden<sup>[28]</sup> and Saikko<sup>[29]</sup> emphasize the importance of dialogue in the learning process, because it can be used as a diagnostic tool to build shared meanings.

The implementation of dialogue processes is valuable to improve teaching and learning in crisis situations, because it allows us to know the student continuously, and thus understand their thoughts and needs to make adaptations in curricular planning. In this sense, it is important to identify discursive patterns, have discursive interaction and permanent dialogue in the curricular context<sup>[30]</sup>.

There are different combinations of options associated with these roles, which gives rise to triadic dialogue and its variations in the classroom. These discursive patterns are useful to improve teaching and

learning<sup>[31]</sup>, because they allow the teacher to identify the strengths and weaknesses of the discourse, collect this information and contextualize contents, resources and adapt them to their teaching style, depending on the IRE exchange<sup>[32]</sup>.

It is important to note that triadic dialogue is not only limited to the IRE pattern, but can also adopt other interaction patterns involving more than three participants. Therefore, it is necessary to make triadic dialogue more flexible and its ability to adapt to different situations and teaching contexts<sup>[33]</sup>.

Furthermore, it is highlighted that triadic dialogue is not only limited to the interaction between the teacher and students when fulfilling different communicative functions, but can also include the participation of other actors such as parents or experts in different topics; that is, the inclusion of other actors in the triadic dialogue can enrich the discussion and allow a deeper understanding from the contents of the class<sup>[34]</sup>, as was the case in this study where there was the indirect participation of the parents and the contagion prevention and public health communications.

In the very context of the pandemic, it is observed how teachers have had to adapt to new forms of teaching and learning, which has required the use of effective diagnostic strategies, stating that the implementation of diagnostic dialogue processes proved to be a valuable resource for the construction of shared meanings<sup>[35]</sup>.

Furthermore, the teacher's role as initiator and manager of triadic dialogue is essential to establish effective interactions; that is, the teacher can ask questions that invite the student to extend or qualify his or her learning need<sup>[36]</sup>.

During the pandemic, traditional teaching-learning processes were broken, because educational institutions adopted the modality of virtual and distance studies. Leal and Silva<sup>[37]</sup> mention that for this reason, educational centres made curricular adaptations to guarantee equity in the learning of all students.

But these adaptations were not only given by the teacher but were issued as educational policies. In this case, Ecuador issued a Ministerial Agreement which provided for the contextualization and flexibility of curricular content<sup>[18]</sup>; Venegas<sup>[38]</sup> assured that during the pandemic Chile carried out curricular prioritization in its learning but taking into account its learning objectives for adequate contextualization.

Curricular contextualization allowed adaptation to emerging educational cases such as those caused by COVID-19. Baeza Duffy<sup>[39]</sup> states that the contextualization of learning in the pandemic should be provisional, because they will only be effective for this health emergency, leaving open the possibility that they respond to complete learning when face-to-face is returned<sup>[40]</sup>.

Essentially, the teacher is the one who knows the student and is the one who must contextualize the learning, resources and methodological strategies, Ascorra et al.<sup>[41]</sup> talks about the autonomy of contextualization, indicating that the contents must be contextualized to the students' requirements to improve learning. As Avila Perozo<sup>[42]</sup> also asserts, contextualization allows us to achieve curricular justice.

The contextualization during the pandemic was thanks to the diagnostic dialogue established with the students. León<sup>[11]</sup> mentions that only in this way was their reality known based on the natural, cultural, social, emotional environment and the complexity of the subject. Venegas<sup>[38]</sup> also comments that it depends on the type of study modality, the special educational need associated or not with the disability, and the type of learning.

## **5. Conclusion**

The teachers demonstrated a progressive adaptation to the virtual and remote teaching modality, standing

out for their creativity throughout the teaching-learning process in response to unfavourable circumstances. These qualities were not necessarily acquired in their university training, but rather come from their vocation and experience, which guaranteed successful teaching practices. It is important to highlight those educators adapted the learning environments, addressing emotional containment and the participation of family members in the construction of knowledge. It is highlighted that this contextualization was the best alternative to guarantee educational continuity in adverse situations, for these active methodologies were the bastion of adjusted or personalized learning situations.

This contextualization stands as the optimal strategy that allowed learning experiences to be adapted according to individual needs. Likewise, the pedagogical function provided by videoconferencing platforms is highlighted, which facilitated diagnostic and permanent dialogue between teachers and students during the pandemic.

## **Author contributions**

Conceptualization, RJPP and JdRCC; methodology, RJPP and JdRCC; software, NAOBB; validation, NAOB, BSPV, and MGCC; formal analysis, RJPP; investigation, RJPP; resources, RJPP; data curation, RJPP; writing—original draft preparation, RJPP AND VAG; writing—review and editing, RJPP, VAG and ASR; visualization, RJPP; supervision, VAG; project administration, RJPP and VAG; funding acquisition, RJPP, MGCC, JdRCC, BSPV, NAOB. All authors have read and agreed to the published version of the manuscript.

## **Conflict of interest**

The authors declare no conflict of interest.

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