ORIGINAL ARTICLE

ACTIVE LEARNING METHODOLOGIES IN ENGLISH CLASSES: INTERACTION IN A VIRTUAL ENVIRONMENT

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▪ ABSTRACT: The coronavirus pandemic has intensified the creative use of technological resources that significantly promote dynamic communication among learners. This study investigated the contribution of active methodologies in remote English language classes for the interaction between basic level learners. Based on this goal, we analyzed the resources that promote the linguistic development of students through interaction in virtual environments, based on studies on active methodologies on learning, interaction and teaching of foreign languages and sociocultural theory. Data were generated from an online questionnaire applied to students, interactions in the Google Classroom environment, and the field observation journal of synchronous interactions in Google Meet and were analyzed in the light of grounded theory. By contrasting the instruments, we obtained three global categories that emerged from the comparison and contrast between them: flexibility, autonomy**,** and interaction. The categories showed that creative tasks developed through active methodologies, such as video production, autonomous activities such as prior access to video classes and flexible tasks such as the activities available in the weekly forums, allowed learners to identify possible errors regarding the use of the language and collaborate with colleagues, solving problems collaboratively and answering questions. The results confirm the contributions of active methodologies in the online environment.

▪ KEYWORDS: active methodologies; remote learning; teaching English; grounded theory; pandemic.

Introduction

Foreign language teaching and learning were affected by the context of isolation during the coronavirus pandemic (Nóbrega, 2022). The work with the four language skills, namely production skills and oral and written comprehension, changed according to the use of technological tools that have fomented interaction among learners.

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These new forms of interaction, based on the use of tools and virtual environments, promote alternative ways of teaching and learning the English language. The application of active teaching methodologies found fertile ground due to the immensity of the online universe, leading students to a prominent place, where one can exercise their autonomy and protagonism during the learning process (Brito; Diniz, 2022).

In order to deepen research on the interactions that took place in the virtual environment during the period of isolation due to Covid-19, we investigated the contribution of active methodologies in remote English language classes for the interaction between basic level language learners. More specifically, we analyzed the resources that promoted the linguistic development of English learners through interaction in virtual environments.

Based on this investigation, we propose to answer the following questions: How do active methodologies applied to English language classes, in a remote environment, contribute to the interaction among learners? We also asked ourselves which digital resources are responsible for contributing to the development of language skills through interaction between English learners. These issues were raised due to the change between face-to-face teaching and remote teaching imposed by the necessary isolation caused by the coronavirus pandemic.

The change between face-to-face teaching and emergency remote teaching (hereinafter ERT) motivated the use of digital resources that made it possible not only to present the input of classes, but also issues related to the way we are used to grouping students, selecting tasks to be carried out individually, practicing listening skills, among others.

Although much commented in recent years, the idea of using active methodologies was born in the 1980s, in opposition to methodologies that highlighted the transmission of knowledge unilaterally, starting with the teacher and ending with the student. The grammar-translation method is an example of a traditional methodology in which the teacher teaches grammar rules to students, who must translate texts in order to learn the target language (Figueiredo; Oliveira, 2017; Larsen-Freeman, 2000). In the face of the problems found in language learning through traditional methods, we emphasize the responsibility of the learning process. With the use of active teaching methodologies, this responsibility is divided between teacher and student, making the student also develop their self-learning capacity (Mota; Rosa, 2018). Self-learning is manifested from incentives designed and planned by the teacher, who mediates not only the learning of a foreign language by their students, but also the acquisition of the target language learning strategies. The discovery of their own strategies by each learner is encouraged by the way they interact with their peers, who are also English learners. When looking for solutions to specific problems such as vocabulary use, pronunciation and use of grammatical structures, students experience different learning strategies. Swain (1985) reiterates that the action of learning a foreign language is more effective when the target language is used interactively.

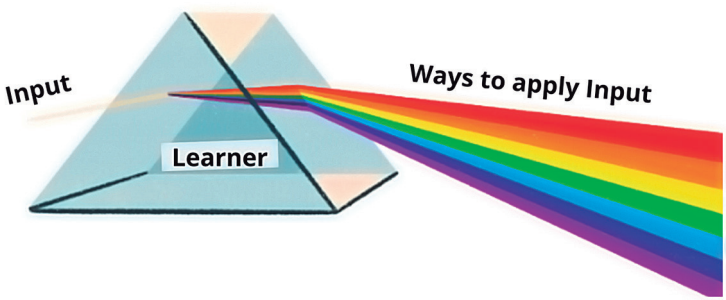
The real-world speech context is important for learners to become aware of their strategic and linguistic limits. Ellis (1993) states that interaction in the classroom is important not only to practice the language, but also to check one's understanding. With the application of an active teaching methodology, there is a change in behavior regarding the role of the student, who starts to play an active and dynamic role while interacting with their classmates. We can also observe a change in teacher behavior, who goes "from a transmitter of knowledge to a monitor, with the duty of creating learning environments full of diversified activities" (Mota; Rosa, 2018, p. 263).

Throughout our investigative path, we have dialogued with authors and their studies on active methodologies (Bergmann; Sams, 2012; Mota; Rosa, 2018; Novak, 2011), foreign language learning theories (Ellis, 1993; Figueiredo, 2023; Larsen-Freeman, 2000; Swain, 1985), interaction and foreign language teaching (Figueiredo, 2001, 2003, 2006, 2019) and sociocultural theory (Vygotsky, 1981, 1998), being the latter essential for the research on interactivity concerning the Flipped Classroom methodology application.

Active methodologies and interaction in English language learning

In the presence of the diversity of definitions of the term active methodologies, we built a prism (figure 1) in which we centralized the fact that the learning process is an active process, that is, the learner has a prominent place, being the protagonist of their learning. In its definition, the prism is "a prismatic solid of triangular section, made of glass or crystal, which serves to decompose light rays" (Prisma, 2023).

Figure 1 – Prism of the active English language learning process



Source: Authors' elaboration.

The inputs used in English language classes are generally offered by the teacher, but it is the learner's role to subjectify these inputs according not only to their knowledge of the world, but also from the interaction with other classmates. The input, in Figure 1 — represented as a single color —, when encountering the learner and their role

within the learning process, is fragmented into different colors, which represent the multiple contexts of the language and acquired knowledge application. The learner is, then, profuse about the dissemination of linguistic knowledge and, through interaction with their classmates, is able to adapt new ways of applying this acquired knowledge.

According to Brown (2007), active learning is a process in which students decide on aspects of their learning to become self-regulated. As Vygotsky's theory clarifies, the individual goes through three stages of cognitive development (Vygotsky, 1981). They are: a) object-regulation: the environment influences the individual; b) other regulation: the individual is capable of performing certain tasks with the help of other people; c) self-regulation: the individual independently develops strategies to perform tasks. The transition from the stage of other regulation (interpsychological activity) to the stage of self-regulation (intrapsychological activity) is endorsed by support structures known as scaffolding and occurs in the zone of proximal development, in which the child and the adult engage in a dialogic process (Lantolf; Appel, 1994).

Scaffolding is described as a process that enables a child or a learner to solve a problem, accomplish a task, or achieve a goal that would be beyond their efforts without the help of another person (Wood; Bruner; Ross, 1976). As Figueiredo (2019, p. 57) clarifies, scaffolding "can occur in several ways: through questions, demonstrations, incentives, instructions, explanations or models that guide the performance of the task".

By becoming self-regulated, learners begin to understand their knowledge acquisition process and exercise control over it, which results in a metacognitive process that, in turn, favors the individual's cognitive development (Ivić, 1989).

According to Bakir (2011), this self-regulation learning arouses not only the student's critical thinking, but also their creativity, that is, the student must be aware of their learning process, not only being the center of it, since this turns them into a more creative and active learner.

Studies on active learning methodologies encompass cognitive psychology, more specifically the concepts of metacognition and socio-constructivism, in which metacognition reinforces "the importance of reflection and student autonomy in the learning process" (Mota; Rosa, 2018), and social constructivism leads the learner to be seen as "an active participant in the construction of knowledge" (Figueiredo, 2019, p. 61). Linguistic practice is, above all, a social practice and interactivity is a highly relevant factor for learning the target language.

Vygotsky's studies (1998) present the individual as someone who learns from interaction with others. In a foreign language classroom, the student not only learns from the interaction with classmates, by talking, narrating, or asking questions, but also reflects on the processes acquired during language learning. During our investigation in an online environment, we saw this happen in specific means of interaction, such as chatting during synchronous classes in Google Meet, comments being made by classmates in forums in Google Classroom, and on virtual extra sessions (made in pairs or in groups) to practice oral skills using Google Meet. Another moment in which interaction between students could be observed was during their video production. When

they were recording their videos, they could watch themselves and correct errors they identified before sending the video to the teacher.

Therefore, we affirm that learning English is possible not only by interaction, but also by the act of reflecting, which arises from natural interaction with other learners and with the resources available in their linguistic practice environments.

Significant learning, which occurs in the so-called Zone of Proximal Development (ZPD), leads the learner to assimilate real and potential knowledge; the first type of knowledge, when learners can apply that knowledge by themselves. The second type of knowledge happens when knowledge is applied with the help of others. This aid provided by classmates can be stimulated through a teaching method known as the Flipped Classroom. In this method, there is a change in the traditional way of teaching; that is, the content is studied at home, and the tasks are carried out during classes, making the time in the classroom better used for clarifying questions and discussing the content to be learned. As explained by Schneiders (2018, p. 1),

> [the] inversion of the classroom basically consists of doing at home what was used to be done in class, for example, activities related to the transmission of knowledge and, in class, the activities designated to be carried out at home, responsible for the assimilation of knowledge, how to solve problems and perform group work.

When using the Flipped Classroom methodology, we observe that there is greater emphasis on the learner, and the student's protagonism appears as a central element in this gap between what they can produce by themselves after consuming the inputs offered by the teacher and what they can produce and use with other classmates. This construction of knowledge acquired during classes can occur through video classes, in which the student watches the material recorded by the teacher, at their own pace, through synchronous meetings with the whole class using a videoconferencing platform or by commenting on the peer responses in an online forum.

The flipped classroom (Bergmann; Sams, 2012) invites the student and the teacher to an inversion not only in the way of teaching and learning, but also in the ways of acting in the learning environment. With the use of the Flipped Classroom methodology, teachers and students change their roles and responsibilities in the learning process, which now belong to the learners. Classroom inversion occurs when students are provided with inputs related to vocabulary, grammatical structure, pronunciation, and sociocultural aspects of the target language, associated with moments of practice aimed at solving problems and opportunities to express themselves in another language. For this to occur, there must be a change in the student's attitude (Schneiders, 2018), who ceases to be a supporter in their learning process and becomes the main author, being responsible for the consumption of the offered inputs and for the use of these inputs with the mediation of their teacher and classmates.

Inverting the classroom requires preparation and that starts with the teacher, who must select available materials or create authentic ones and make them available to their students before classes take place. An example of authentic materials are the classes produced on video, in which the teacher records their classes and guides their students to seek external references in order to complement what was worked on. The teacher is the main curator of the materials to be made available to students. In class, interaction will provide linguistic practice as a whole, favoring the use of linguistic strategies.

We performed the procedures previously described with the investigated groups in this paper. The Flipped Classroom methodology was applied to the classroom through the availability of recorded classes (asynchronous classes) and other teaching materials such as textbook exercises and short videos with pronunciation, grammar, and vocabulary tips. For the active learning methodologies to be dynamically applied to the students, different approaches were used, according to the needs of each of the classes, always using tasks that favored interaction between the students.

Working with tasks makes learning meaningful for anyone learning a foreign language (Long, 2016). Chen and Wang (2019), in their studies on task-based language teaching (TBLT), state that, by performing tasks, learners develop their autonomy and self-regulatory capacity. For Smith and González-Lloret (2021), TBLT becomes TMTBLT, in which, in addition to the task, we also have the use of digital technologies, being the term updated to technology-mediated task-based language teaching.

As the authors advocate:

> Technologies for language learning need to be based on theoretically grounded research and also take into account the context of teaching and learning. This idea must be supplemented with research on how affordances of these technologies interact with tasks and activities in a way that maximizes the benefit of transformative new technologies. That is to say, there must be a principled way for teachers to develop and sequence technology-mediated tasks that elicit the intended type of learner behavior and language use as well as sufficient linguistic growth, given the resources and access available. In TBLT, task sequencing is directly tied to the notion of task complexity. Accordingly, another area in need of intense research is how the introduction of technology affects a task's complexity and even problematizes the very notion of task complexity. (Smith; Gonzáles-Lloret, 2021, p. 522).

Students engage differently with digital technologies when they use them to support learning. According to Jenkins *et al.* (2009), students engage in different ways with digital technologies, often even more sophisticated than those found or offered at school. TMTBLT is an approach that found, in the use of different digital technological supports, an aid to promote the acquisition of the target language through interaction between learners who were physically distant.

The use of different technological resources for learning a foreign language in a virtual environment enabled the teacher of the classes surveyed in this study to develop individual and collective actions: individual with regard to the study of the language based on the inputs provided by the course teacher, and collective because there was the English language practice within a communicative approach, which fomented the meaningful use of the target language with real people. The following section presents the methodological path traced during our research, in which the Grounded Theory (GT) was used to carry out our analytical procedures.

Methodological path

The mainstay of our investigative action includes the use of the Grounded Theory (GT), by Strauss and Corbin (2008), as well as the Constant Comparison Method (CCM), by Charmaz (2009), which were applied in the data analysis of this research.

The Grounded Theory is an analytical method that enables the construction of a theory based on the investigated data. It receives this name because there is no theory that anticipates the data, but rather the possibility of a theory that arises from the data itself. There is no collection *per se*, there is a data generation process, which is conceived from the observation of the investigated reality, organizing conceptual categories that explain these phenomena.

In our research, due to time constraints, we restricted the investigation of phenomena to the emergence of categories from our lexical incidents, making use of GT to carry out comparison and contrast movements between the lexical incidents of our instruments.

On the other hand, the Constant Comparison Method (CCM) comprises the classification of the data generated in each of the instruments used during the triangulation. In our investigation, we used three research instruments: INST1, the online questionnaire applied to students, INST2, interactions in the Google Classroom environment, and INST3, the field observation journal of synchronous interactions in Google Meet.

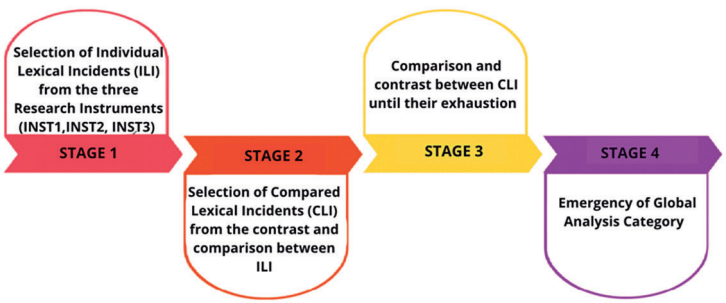
The actions of the research instruments were carried out and documented through written texts, which allowed the extraction of the so-called lexical incidents (LI), which are words that refer to the phenomena observed during classes. These words can belong to any grammatical class (noun, adjective, verb, etc.) or be combined in different phrasal structures. The LI were located from the INST texts and grouped according to the phenomena they shared with each other. An example resides in INST1, the online questionnaire, in which the interaction phenomenon was evident through the lexical incidents: *dialogue, conversations, discussion, understanding, interaction, people, social, exchange of experiences, trust in the other,* and *mutual learning*. This group of words refers to the perception that learners had about the use of the Flipped Classroom methodology during virtual classes in their responses to the questionnaire applied at the end of the course. The LI Interaction is also called an Individual Lexical Incident (ILI), since it was obtained from the analysis of only one instrument (Silva, 2019).

After obtaining all the ILI of each of the instruments, we can compare and contrast the ILI between instruments, generating the Comparative Lexical Incidents (CLI).

For INST1, the ILI were extracted from the texts of the answers themselves, while in the case of INST2, the ILI were the texts of the students on the Google Classroom platform, when the learners interacted with each other within the proposed tasks. In the case of INST3, the texts in the teacher's observation diary contained words related to the phenomena studied, such as interaction, use of active learning methodologies, digital technologies, among others. Each ILI corresponded to a phenomenon that occurred during the observation of the use of digital technologies with the inverted classroom in remote teaching, always highlighting the interaction between learners. After the ILI of each of the INST emerged, the CLI emerged from the grouping of ideas described by each word/phrase present in the instruments. The comparison and contrast between the CLI occurred between the three research instruments. Triangulation occurred dynamically and continuously, until it was no longer possible to reduce the category grouping.

In summary, at the end of our analytical movement, the categories related to the investigated phenomena emerged from the lexical incidents (LI), these being words that indicated phenomena that were later compared and contrasted until their exhaustion. Thus, the extraction of individual lexical incidents (ILI) gave rise to compared lexical incidents (CLI), which resulted in global analysis categories (Silva, 2019). The actions taken to analyze the data of this research are represented in figure 2.

Figure 2 – Linear diagram of analytical movement in four steps



Source: Authors' elaboration.

Fifty-two English language learners from two basic level (A1) classes participated in this research. The students were regularly enrolled in the Casa de Cultura Britânica, an extension project of the Federal University of Ceará, Brazil. In the context of the ERT, the classes were taught by the first author of this text, who was the teacher responsible for data generation procedures during the first semester of 2021, and the data were analyzed by the two authors of this article, characterizing this research as a

collaborative action research with a qualitative approach (Burns, 1999). This research, approved by the National Research Ethics Committee (CONEP), has a favorable opinion number 4.979761.

The use of the data used in this paper was carried out by signing the Free and Informed Consent Form (FICF), by the students of the classes in which the research was carried out, digitally available through Google Forms. The FICF was drawn up in accordance with operational rule number 001/2013[1], which governs the organization of the CEP/CONEP system, and its procedures for monitoring research involving human beings in Brazil.

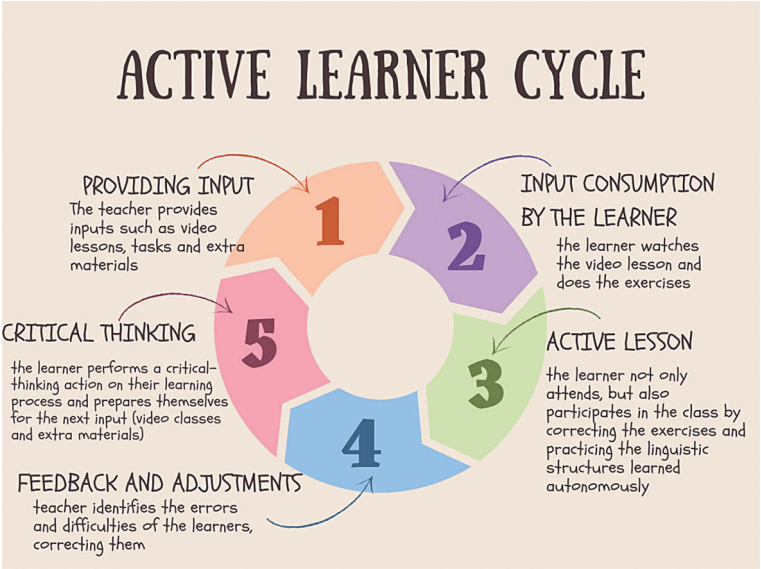
For each of the two teams, two separate rooms were created in Google Classroom. Although the classrooms are specific to each class/team, the syllabus was the same since all classes were at the A1 level and used the same teaching material. The Flipped Classroom methodology was applied to these classes and, therefore, the virtual environment of each class was necessary for the teacher to provide the students with inputs, as well as to promote student interaction via discussion forums.

With the frequency of twice a week, classes took place on alternate days (Mondays and Wednesdays or Tuesdays and Thursdays). During the semester, extra meetings for oral practice were offered to students who were grouped in pairs or in groups of up to four people.

The students received the inputs (video lessons made by the teacher, reference materials and extra activities) in one day (Monday or Tuesday), so that, on the next day of class, during the synchronous meeting (Wednesday or Thursday), they could practice the input previously offered, as represented in figure 3. Students were asked to solve the workbook after they attended the video lessons. All activities were corrected in the synchronous meeting, followed by conversation dynamics in which students interacted in real speech contexts.

[1] Available at: http://www.hgb.rj.saude.gov.br/ceap/Norma_Operacional_001-2013.pdf. Access on: 15 Feb. 2022.

Figure 3 – English language active learning cycle



Source: Authors' elaboration.

As previously mentioned, the research instruments of this investigation were: an online questionnaire (INST1), consisting of 23 questions, applied to the investigated classes; Interactions in Google Classroom (INST2); and the field observation journal of synchronous interactions in Google Meet (INST3). The data were analyzed in the light of Grounded Theory (GT) (Strauss; Corbin, 2008; Charmaz, 2009) and discussed according to the dialogues we established with studies about autonomy (Figueiredo, 2019), learning theories of foreign language and interaction studies, based on sociocultural theory (Vygotsky, 1981, 1998). At INST1, students talked about their personal experiences while using active learning methodologies in the semester. Despite not being mandatory, the questionnaire reached 53.8% of respondents in the two investigated groups. The procedures adopted in our methodological analysis are described in the section that follows.

Analysis and results

With the purpose of investigating the contribution of the resources used in remote English language classes to the linguistic development of basic level learners, we applied a diagnostic questionnaire (INST1) to students at the end of the first semester of 2021. INST1 was composed of 23 questions that sought to identify the learners' facilities and difficulties regarding the use of digital technologies and the adopted methodology. Through the questionnaire, it was possible for us to investigate how

the interaction between students in the ERT took place and how this interaction acted within their learning process. There were 28 respondents, a total of 53.8% of the 52 students enrolled in the A1 classes, who all declared that they had read and agreed with the Free and Informed Consent Form (FICF).

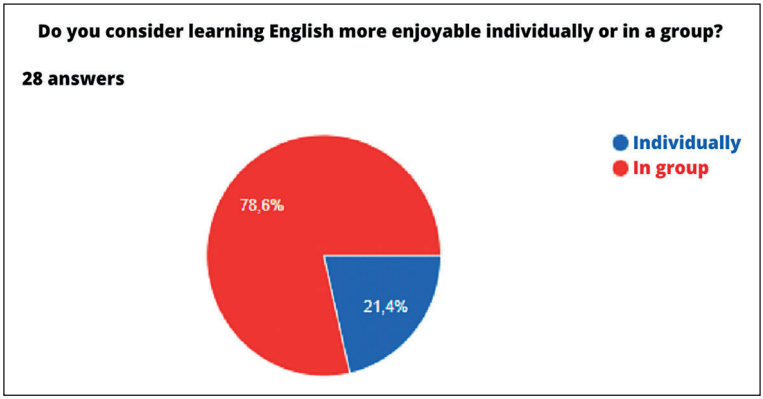
Fifteen respondents (53.6%) out of 28, were enrolled in the "Structure and Use of the English Language I" course, offered exclusively to students of all undergraduate courses at the Federal University of Ceará, while 13 students (46, 4%) were students enrolled in the "English A1-S1" course, offered to the entire community (university students or not).

To understand the context of the respondents, we asked if they had already had any contact with the English language. Out of the 28 respondents, 12 (42.9%) stated that this subject symbolized their first contact with an English language course, and 16 (57.1%) were already familiar with English classes in open language courses. With that, we have more than half of the respondents who had already studied the language in an English course, having access to some type of language teaching methodology. We can relate previous experiences with the English language in virtual environments to the possibility of applying TMTBLT, since applications, games and digital resources were present in learners' lives. In this sense, tasks involving research in digital media or user immersion in a cultural environment in English-speaking countries can contribute positively to the acquisition of a foreign language, as advocated by Smith and Gonzáles-Lloret (2021).

Sixteen respondents (57.1%) out of 28 said they liked ERT, while 12 students (42.9%) said they didn't like it. Among the justifications of those who liked ERT, we highlight the fact that the virtual modality shelters an environment that favors learners' autonomy (Nóbrega, 2022). According to their responses, this autonomy was achieved not only by the ERT context, but also due to the flexibility that students had in relation to their study schedule. As classes were available on the Google Classroom platform, students could access classes at the most convenient time and as many times as necessary. On the other hand, those who stated that they did not like the remote model justified the precarious contact with classmates, which often only occurred through chats, making them feel that the interaction was incomplete, as in the case of student X, who stated: "The lack of face-to-face interaction with my classmates and professors unfortunately makes teaching more boring and difficult to assimilate."

Regarding the interaction between learners, we asked about the most pleasant way to learn English, whether it was individually or in a group. The students' responses are described in the graphic below.

Graphic 1 – Students' response to the question about interaction and English learning

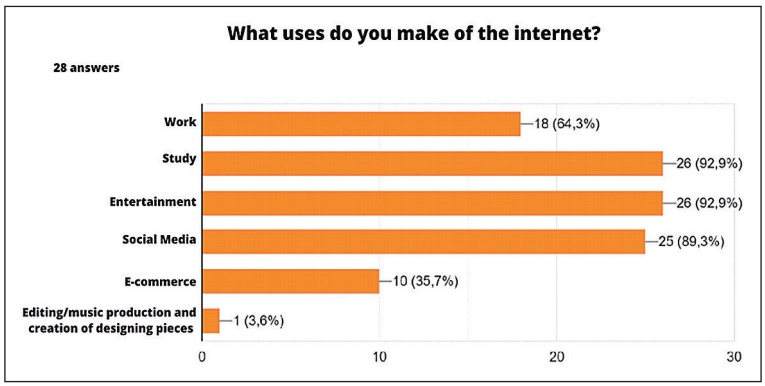


Source: Research data (2021).

Twenty-two respondents (78.6%) out of 28 said it was more enjoyable to learn English in a group, and only 6 (21.4%) preferred to learn individually. From the justifications presented in the questionnaires, we concluded that interaction is the main responsible factor for the practice of the target language, because, according to the students' perception, they learn with their colleagues when they talk, ask questions, and listen to each other (Figueiredo, 2006, 2019; Swain, 1985). As a fundamental pillar of Vygotsky's theory, interaction is responsible for the individual's ability to understand the other and the universe around them. So, the individual builds knowledge socially, in community (Vygotsky, 1998).

When asked about their familiarity with digital technologies, 27 respondents (96.4%) claimed to have some knowledge about their use. In this way, the online tools in the remote modality were inserted in a natural and organic way, since the students already had the technical knowledge about the resources used. Twenty-six participants (92.9%) out of 28 in this study responded that they already used the internet for study/work. When asked about the uses of internet that students usually make, 18 (64.3%) answered that they use it for work, 26 (92.9%) answered that they use it for studies and entertainment, 25 (89.3%) stated that they use to browse their social networks, 10 (35.7%) answered that they use it for online purchases (e-commerce) and only 1 (3.6%) answered that they use the internet for editing/music production and creation of design pieces. Graphic 2 shows the percentage of each answer.

Graphic 2 – Answers about the uses that students make of the internet

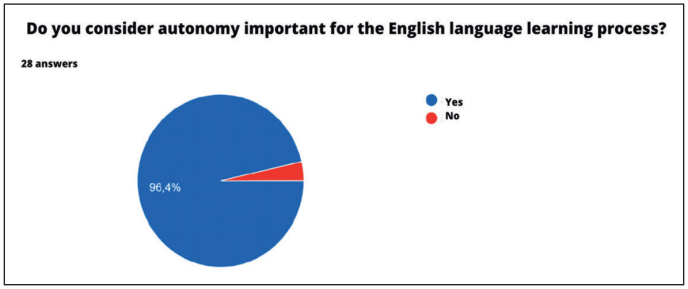


Source: Research data (2021).

These numbers describe a reality in which only 1 student (3.6%) used the internet to produce materials, such as editing or making media. This low percentage makes us reflect on the protagonism of our students, since a high percentage claims to use it for work and studies. We can infer that the production of materials, such as a video, does not seem to be associated with the act of studying. The main advantages of using the internet for English language classes lie in the access to digital resources such as videos, activities, search engines, films, books etc., which can contribute to a better understanding of the English language. They are resources that facilitate the understanding of words and offer oral forms to help with pronunciation tasks. These resources contribute to students' learning due to their speed; that is, it is quick and practical to carry out a search using a smartphone or a computer. There is also flexibility in schedules, which allows students to watch the recorded classes at the most convenient times for them, in addition to allowing them to watch the classes as many times as they want. This flexibility is the result of the use of active learning methodologies, which consequently promotes learners' autonomy, as they become responsible for their learning process (Brito; Diniz, 2022; Figueiredo, 2006, 2019).

Regarding students' autonomy, to the question: "Do you consider autonomy important for the English language learning process?", 27 (96.4%) students said yes, while only 1 (3.6%) %) responded negatively, as shown in graphic 3.

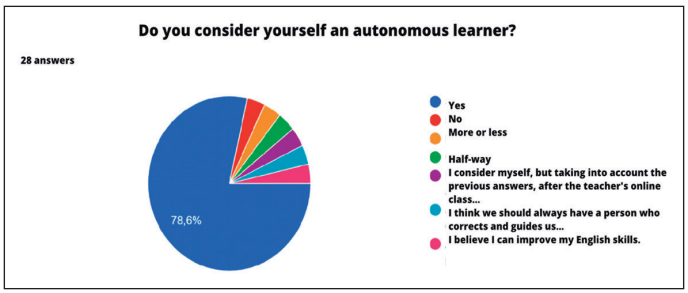
Graphic 3 – Percentage of responses on the importance of autonomy for learning English



Source: Research data (2021).

In an attempt to carry out a self-critical movement, and in order to understand how they see themselves, the learners were asked about their autonomy. We obtained the following results that can be seen in Graph 4.

Graphic 4 – Percentage of answers about self-employed learners



Source: Research data (2021).

Twenty-two respondents (78.6%) out of 28 considered themselves autonomous learners, 1 (3.6%) did not consider themselves to be autonomous learners, 2 (7.2%) answered "more or less", 1 (3.6%) answered with "half way", 1 (3.6%) answered "I consider myself, but taking into account the previous answers, after the teacher's online class, I would have to continue studying on the computer. This bothers me. Unless the class was face-to-face and you used the computer to improve yourself", and 1 student (3.6%) answered that they believe they can improve, especially in the English language study.

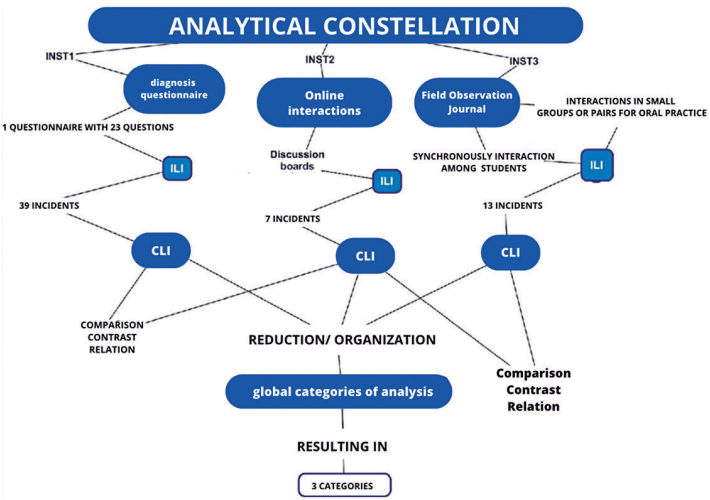
These answers show us that the acquisition of autonomy is an activity to be improved. As stated by Candy (1989), autonomy is an innate ability of the individual that is sometimes suppressed or distorted by institutionalized education, when the teaching-learning process is centered on the teacher. In this way, through active learning methodologies, the teacher will be providing students with more chances to become

autonomous. As we know, the appropriation of knowledge, according to Figueiredo (2019), occurs simultaneously both in social practice and in the individual's mind. The students stated that they missed face-to-face interaction in the classroom, but mentioned the flexibility to study alone, search for online content and use tools that facilitate learning at home as a positive factor.

The process of emergence of lexical incidents occurred after comparing and contrasting the words present in the three analysis instruments, with INST1 being the questionnaire made available through Google Forms, INST2, the interactions between students in their virtual classes on Google Classroom, and INST3, the observation diary of synchronous interactions, written by the researcher teacher after each meeting (synchronous class via Google Meet and meetings for oral practice in pairs or in groups).

The first list of lexical incidents that pointed to the use of digital technologies as an action to promote the autonomy of English language learners was made up of words that referred to the difficulties presented by learners during remote classes. Among these difficulties, we highlight the difficulty in practicing oral production in a virtual environment, in which some students recognized the meeting time in synchronous classes as insufficient. Figure 4 presents the analytical constellation (Silva, 2019) in which the individual lexical incidents (ILI), present in INST1, were compared and contrasted with the individual lexical incidents present in INST2 and INST3, giving rise to the compared lexical incidents (CLI). This movement performed using the CCM can be observed in the constellation (figure 4). After an exhaustive movement of comparison and contrast, from these incidents emerged the global categories of analysis.

Figure 4 – Analytical constellation of movements for the emergence of global categories

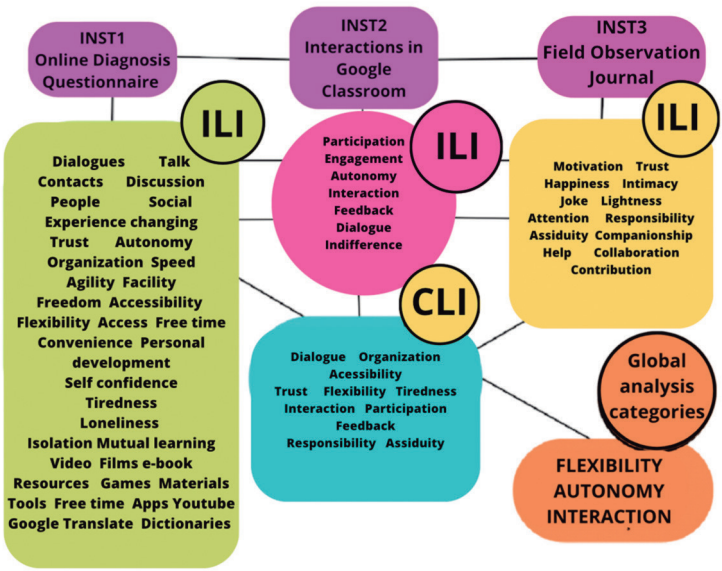


Source: Authors' elaboration.

The analytical constellation represents the dynamism of the data triangulation process that emerged from the three analysis instruments. The CCM can be seen from the connections between ILI and CLI, always starting from INST 1, 2 and 3. The movement, as in a starry sky, is not linear and allows the researcher to transit between different instruments, always comparing their incidents. These movements are performed repeatedly until the process of grouping the categories is exhausted. Using the CCM, we extract the ILI from INST1, INST2 and INST3.

The diagram represented by figure 5 presents all the ILI that were extracted during the first stage of data analysis. When we compared the words that represented the events related to the interaction and learning of English, we could see that 11 CLI emerged, this aspect is represented in the blue part of the figure. The CLIs reinforce the use of digital multimedia resources, digital and digitized books, films, music, online exercises, and applications on mobile devices as a support for learning English. After contrasting the CLI, we obtained three global categories of analysis, namely flexibility, autonomy and interaction, as seen in figure 5.

Figure 5 – MCC applied to the extraction of ILI, ILC and global analysis categories



Source: Authors' elaboration.

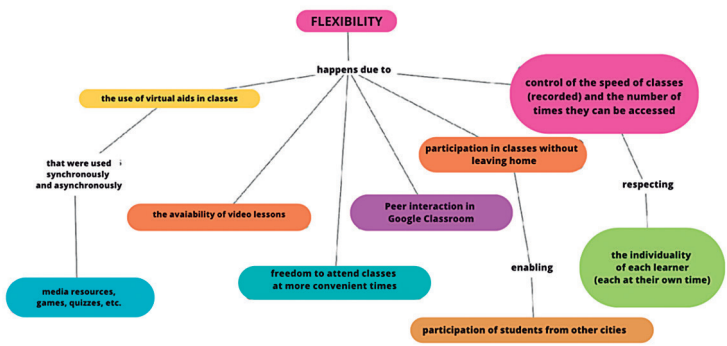
The global categories that emerged from our analytical movement were flexibility, autonomy and interaction. Flexibility emerged as a category related to resources and activities that allowed the student to choose the most convenient times to access the input offered by the teacher and to the act of carrying out tasks that had pre-established

deadlines for delivery, not being necessary to carry them out in the synchronous meeting. This flexibility was observed throughout the semester, which resulted in the promotion of learners' autonomy, as they attended classes in more convenient shifts, becoming more active in their learning process.

Figure 6 represents the conceptual map of the factors that justify the emergence of the category flexibility, based on the triangulation of data generated by INST1, INST2 and INST3. In it, it is possible to see that this category emerged due to the presence of the use of virtual resources during classes (synchronous and asynchronous), the availability of video lessons and the freedom that learners had to manipulate the recordings, with the possibility of speed control, for instance. With the tools available in the teacher's video lessons storage environment, it was possible to skip parts of the video that were already known by students, watch it more than once, pause the video to solve tasks in the book or even do some necessary research.

Another phenomenon described by this category was the fact that students did not have to be in a physical classroom environment, allowing the presence of students in remote classes more frequently. In INST3, for example, we obtained the ILI attendance, collaboration, contribution and attention (Figure 6). We observed that the attendance of students in synchronous classes was almost total, except in cases where the students themselves justified their absence or had Internet connection difficulties.

Figure 6 – Conceptual map of the category flexibility

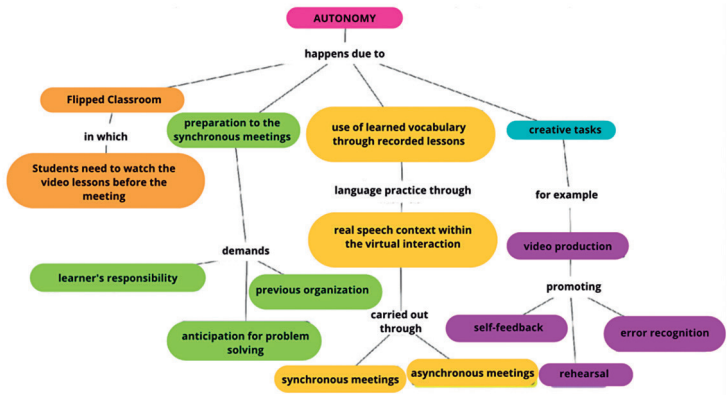


Source: Authors' elaboration.

The category autonomy, in turn, described the phenomena related to the use of the Flipped Classroom methodology and the provision of input prior to the synchronous meetings. Of the 28 respondents, 22 (78.6%) saw themselves as autonomous learners, which leads us to think of the process of acquiring autonomy as an activity to be improved. 100% of the respondents stated that the interaction with colleagues was the main factor that helped them in their English language learning process. All the students declared that they felt harmed by the lack of personal contact with colleagues, despite

pointing out the flexibility achieved in the individual study as positive. In Figure 7, we observe the factors that justify the emergence of the category autonomy, based on the triangulation of data generated by INST1, INST2 and INST3.

Figure 7 – Conceptual map of the category autonomy



Source: Authors' elaboration.

Based on the results presented, we can conclude that autonomy was present from the use of the Flipped Classroom methodology. In this methodology, in which the student is the main character of their learning process (Bergmann; Sams, 2012; Brito; Diniz, 2022), it is necessary to recognize that the teacher is a mediator and not the transmitter of the content to be learned (Figueiredo, 2019). We could also observe a better performance of the students during the practice of oral skills. The time that used to be devoted to the teacher's speech, for the presentation of grammatical structures, now becomes time for problem solving practice. Therefore, the student is active inside and outside the classroom.

Figure 7 represents not only the conceptual map of the global category autonomy, but it also expresses the actions promoted from activities carried out by the learners. In it we can see that autonomy is a process promoted by the application of the Flipped Classroom methodology, by the preparation that the learners must do for their synchronous meetings, due to the use of the vocabulary learned while the students watched the recorded classes and due to the creative tasks. The protagonism of the learner is evident when a task is required in which there must be prior organization and anticipation of problem solving, as is the case of the use of the input by the learner before the synchronous meeting.

Creativity is present not only in the activities previously planned by the teacher, but also in the freedom of choice given to the student, since he/she feels free to think about the format of the task he/she wants to carry out to practice a certain language

skill, as in the case with audiovisual production during the investigated semester. The teacher asked the students to make a video with information about their own life (a short autobiography) and about some family members. A guide with questions was made available to the students, but they had the power to choose how they would like to carry out this task, whether through an Instagram story, a Tik Tok video, an interview in a videocast format on YouTube, among others.

The use of digital resources enhances the creative use of language through the employment of semiotic resources (Schreiber, 2015). The recording of the final videos, a task called the Final Project, contributed to the development of the learners' autonomy (Bergmann; Sams, 2012; Brito; Diniz, 2022), since, during the process, they reported the need to re-record their videos, because, when they watched them, they identified pronunciation errors (self-feedback). In a conversation held on the last day of the course, the students narrated their experience while recording the final project. They stated that they had to re-record the video each time they watched it and found pronunciation errors or grammatical errors in the English language.

They stated that, before recording, they rehearsed their texts, which were previously written, characterizing the use of the rehearsal resource (Nguyen; Newton, 2019) for foreign language acquisition. The rehearsal consists of repeating tasks. According to Bygate and Samuda (2005, p.29), "part of the conceptualization, formulation and articulation work carried out on the first occasion is kept in the students' memory storage and can be reused on another occasion" that is, students script, record, revise, provide self-feedback, and re-record. Learning occurs during the process of carrying out the task and not from the final product. During the process, there is a critical-reflexive movement that enables the learner to master the most efficient means of using the language within their reality.

Interaction emerged, therefore, as a category related to the phenomena of practice of oral English language skills. This practice, which took place online, required the support of tools such as Google Meet, to promote dialogue synchronously, Whatsapp, for exchanging messages, and Google Classroom, for interaction through forums mediated by the course teacher.

Google Meet was used both for synchronous classes, in which the whole class attended, and for group/pair practicing, mediated by the teacher. These practices took place after school time and were offered as an extra activity. Despite taking place at different times, there was good adherence by the class. WhatsApp was also an important tool for students to exchange materials, audios and reminders. The interaction mixed the use of English and Portuguese. Students interacted spontaneously, taking questions from their classmates, and sharing support materials, such as mobile applications and websites.

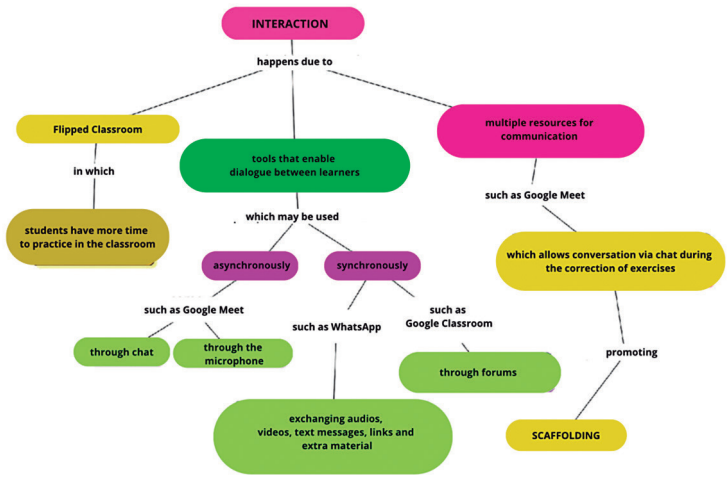
Interaction in Google Classroom, on the other hand, had low frequency and occurred from the comments that students made about the answers of their classmates. The most evident interaction was observed during synchronous meetings, with the whole class or in extra practice groups. During the synchronous meetings, with the whole class, high

interaction between learners was observed due to the possibility of using the chatting feature on Google Meet. This data shows a preference of students for more interactive environments, in which conversations can occur synchronously.

The virtual environment also provided moments of correction and assistance among students. In the Google Meet environment, via chat, this interaction occurred in a way that learners who mastered more than one content taught it to their classmates. That is, the students did not rely solely on the teacher to solve their problems or answer their questions. Scaffolding (Figueiredo, 2019; Wood; Bruner; Ross, 1976) was provided organically, without specific preparation or prior planning of activities for this purpose, happening as the moment students have questions. While the teacher was correcting the activity during the online meeting, the students answered questions via chat, asking other classmates who were mastering the content. Some helped others while the teacher was busy correcting an exercise. We were able to verify, by analyzing the data, that the students did not ask about previous contents, instead, they consulted their peers via chat. Feeling the need, the teacher would bring the content for discussion in the classroom, but questions were usually solved by classmates via chat.

Figure 8 presents the conceptual map of the category interaction and its development based on the phenomena observed in INST1, INST2 and INST3. Through it, we can observe that the interaction occurred due to the use of the inverted classroom, the tools that enabled the dialogue between the learners and the environments with multiple communication resources. When making use of the chat during online classes, scaffolding was promoted among learners. Thus, we can say that the Flipped Classroom methodology allows learners to have more time for practicing during the classroom.

Figure 8 – Conceptual map of the category interaction



Source: Authors' elaboration.

Interaction occurs not only because of the time allocated for this purpose, but also because of the use of resources that decentralize the role of the teacher, previously seen as the person in charge of answering questions about pronunciation, use of vocabulary and grammatical structures. The idea of learning remotely using active learning methodologies also results in making the teacher an individual who provides "a learning environment in which students engage in activities in which they have the chance to interact significantly" (Figueiredo, 2019, p. 108). That is, the teacher furthers interaction, but this must occur organically, based on the students' need to communicate, interact and exchange experiences.

Final remarks

The use of digital tools in teaching English has made it possible to foment alternative ways not only for teaching, but also for learning English. Within a context of remote classes due to the social isolation caused by the covid-19 pandemic, active learning methodologies gained prominence, and, with them, the student also stood out, who came to be seen as a central element of their learning process. In this study, we presented the results of the investigation on the interactions that took place virtually in two classes of level A1 (basic) at *Casa de Cultura Britânica*, an extension project of English language teaching for the community and students at the Federal University of Ceará, Brazil. We aimed to investigate the contribution of active methodologies in remote English language classes for the interaction between basic level language learners, also analyzing the resources that promoted their linguistic development through interaction in virtual environments.

We understand the autonomy acquisition processes of English learners in a virtual environment as a result of the use of active online methodologies, as it is the case of the Flipped Classroom methodology. Among our findings, we highlight the use of digital technologies as an element to further the autonomy of learners, the flexibility in the ways a student learns the language, and the shared responsibility of the learning process. The teacher, despite no longer being a central element in student learning, is the captain of the ship within the immense sea of possibilities that digital resources can provide. The teacher is the key element for an efficient application of methodologies that make the learner the center of the process, which must be interactive and offer students different opportunities to make meaningful and creative use of the target language.

From the use of the CCM, the categories flexibility, autonomy and interaction emerged, characterizing remote teaching through the flipped classroom as a fertile environment for the practice of language skills despite the physical distance. Interaction through multiple communicative resources, such as the chat, available on Google Meet and messaging via Whatsapp, for example, offered students the opportunity to interact to solve problems.

Carrying out creative tasks such as video production ensured self-feedback based on the identification of oral and grammatical errors after repeating the task using the

rehearsal resource. Learning English virtually is possible based on the application of active learning methodologies that consider the use of resources for free interaction between learners. In this way, it is up to us, teachers, to provide a virtual environment favorable to interaction, because, in this way, we will be able to provide a learning-friendly environment. Now, the student is the center of their learning process and an important part in the process of the other, encouraging learning through collaboration.

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SILVA, C.; FIGUEIREDO, F. Metodologias ativas no ensino de línguas: a aprendizagem por interação em meio remoto. Alfa, São Paulo, v. 67, 2023.

- *RESUMO: A pandemia do coronavírus intensificou o uso criativo de recursos tecnológicos que promovam a comunicação dinâmica entre os aprendizes de forma significativa. Este estudo investigou a contribuição das metodologias ativas nas aulas remotas de língua inglesa para a interação entre aprendizes de nível básico. Com base nesse objetivo, analisamos os recursos que promovem o desenvolvimento linguístico dos alunos por meio da interação em ambientes virtuais, tendo, por referencial teórico, estudos sobre metodologias ativas, aprendizagem, interação e ensino de línguas estrangeiras e teoria sociocultural. Os dados foram gerados por meio de questionários respondidos pelos estudantes, das interações no Google Classroom e do diário de observação da docente sobre as interações síncronas no Google Meet e analisados à luz da teoria fundamentada nos dados. Ao contrastar os instrumentos, obtivemos três categorias globais que emergiram da comparação e contraste entre eles: flexibilidade, autonomia e interação. As categorias mostraram que tarefas criativas desenvolvidas por meio de metodologias ativas, como a produção de vídeo, atividades autônomas como o acesso prévio a videoaulas e tarefas flexíveis como as atividades disponíveis nos fóruns semanais, permitiram aos aprendizes identificar possíveis erros no que concerne ao uso da língua inglesa e ajudar os colegas, resolvendo problemas de forma colaborativa. Os resultados confirmam as contribuições de metodologias ativas no ambiente on-line.*

- *PALAVRAS-CHAVE: metodologias ativas; interação em meio remoto; ensino de inglês; teoria fundamentada nos dados; pandemia.*

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