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Exploring affordances in digital tools: interaction and technology in a reading course

Samantha G. Mancini Ramos
saramos@uel.br
orcid.org/0000-0001-9528-2271
Universidade Estadual de Londrina (UEL), Londrina, Paraná, Brasil

Henrique Rodrigues Oliveira
henrique@rodrigues@uel.br
orcid.org/0000-0002-4948-120X
Universidade Estadual de Londrina (UEL), Londrina, Paraná, Brasil

ABSTRACT

English language teaching has advanced rapidly with the use of digital tools. During the COVID-19 pandemic, many teachers employed apps, websites, and platforms to create learning opportunities for their students. However, there are discussions about the real effectiveness of these teaching technologies. For this reason, this research seeks to reveal and analyze how students in an online instrumental reading course for high-schoolers interacted with the digital platforms used throughout the lessons. This research was developed based on the concept of affordances. For Gibson (1986), this theory aims to explain the contact that an animal has with its environment. Later, in applied linguistics, Van Lier (2002) stated that affordances are the relationship established between the user and the object. This interaction can provide opportunities for action and interaction to the subject (TUROLO, 2020). For data collection, two questionnaires were applied to the course students, in order to discover the affordances perceived by each of them during their interaction with the platforms. The results revealed categories of perceived action opportunities: practicality and playfulness; content review and language development; identification of students' difficulties. In addition, some reports of limitations with the platforms were raised. The findings of this research show that digital platforms can bring favorable moments for learning, moments of reflection in students about their own studying performance, and questions about access exclusion to technology.

KEY WORDS: Digital tools; Affordances; Technologies; English teaching; Quizizz.

1. INTRODUCTION

Foreign language teaching has advanced rapidly and significantly with the use of technologies. It can be said that the industrial revolution and, soon after, the digital revolution in the 20th century have contributed to technologies that became of great importance in today's world. Moreover, they have become part of the everyday lives of teachers and students. However, teaching technologies can be seen either as allies or barriers in the language teaching- learning process. In the English language field, cell phones, tablets, computers, websites, and apps are part of the range of technologies that are available to teachers and learners and sometimes are deemed beneficial, while in other cases, they are considered to be excluding tools, due to numerous factors.

Recently an increasing number of studies have investigated the use of technologies and their potentialities in education. Children are already born and grow up connected to the technologies that are within their reach. In education, as LeLoup and Ponterio (2004) suggest, foreign language teaching has always pioneered the use of several technologies, such as tape recorders, radio, slide projector, video, etc. Furthermore, Celik and Aytin (2014, p. 2) add that "integrating digital technologies in the English language classroom facilitates multimodal practice, encourages collaboration; and increases the 'fun' factor for learners". Thus, teachers may have at their service several technological tools to enhance their English language classes and motivate their students in the learning process. However, the lack of infrastructure in some countries makes the implementation of technology difficult.

Studies have investigated the potentialities and learning opportunities of digital technologies through the concept of affordances. Van Lier (2002) affirmed that affordances are the several meanings, which become available when the subject interacts with that environment and may help with language acquisition. Also, this author defends affordances as the relationship and interaction that is established between the user and the object. Consequently, action opportunities may arise to this user throughout this interaction in a certain environment depending on their thoughts and perceptions (TUROLO, 2020). In addition, Beatty (2003) argues that affordances are visual clues that an object may offer and its design is related to its use.

The COVID-19 pandemic brought significant impacts to education. One of these impacts has been the increasing use of digital tools for teaching. In remote teaching, teachers had to rethink and rediscover how to conduct their classes in a way that would bring them "closer" to their students, even when they were far from each other. To this extent, websites, applications and platforms were responsible for guiding students and teachers in this process with virtual classrooms, games and dynamics, showing opportunities for action. However, there is a lot of criticism about the use of these digital tools and questioning whether they really guarantee quality teaching and learning. Instrumental reading courses have also experienced this process of re-adaptation, but they are little portrayed in research related to technologies. In other words, there is little information about the use of digital tools in instrumental reading courses during the pandemic, and whether these tools offered opportunities for action to learners.

For this reason, this investigation seeks to analyze and reveal how brazilian high school students interacted with the digital platforms used throughout a reading course. Furthermore, this research aims to reflect on whether the learning of these students was enabled or constrained when interacting with such technologies. In the present work, first, the literature about technologies and affordances is reviewed; then, the methodology adopted for the study is explained. Next, the results of the research will be explored considering the following affordances: practicality and playfulness, content review and language development, identification of difficulties and constraints. Finally, the conclusions are presented.

2. THEORICAL AND METHODOLOGICAL BASIS FOR STUDIES ON AFFORDANCES

When learning about teaching technologies and their evolution, it is important to mention the term "information and communication technologies" (ICT). Ammanni (2016, p. 100) presents the definition of ICT from an education point of view as “Information and Communication Technology such as computers, communications facilities, tools and features that variously support teaching-learning and a range of activities in education.” In addition, "the use of ICT makes teaching and learning more effective, interesting, lively, motivating and successful" (PAUDEL, 2021, p. 46).

However, Beach (2012, p. 47) alerts that there are considerable barriers when implementing ICTs in education. The author states that digital tools are not available to low-income students compared to higher-income ones. Also, in one of their studies, Al-Kahtani and Al-Haider (2010) argued that the lack of infrastructure in developing countries create barriers for the implementation of technology in the classroom; difficulting the access to digital tools in education. Furthermore, “access issues are more likely to result in a difference in internet skills, especially in low- income schools.” Currently, there are several technologies being used in educational scenarios, the big challenge is to know how to use them efficiently. For Rodrigues Junior (2014), another challenge is to allow these technologies to contribute, in a more decisive way, to improve pedagogical practices and take advantage of their potentialities for student learning.

The connection between digital technologies and students' learning is reinforced by the idea of affordances. In general, the term refers to the features of a certain environment or a tool may offer to an individual or a group of people. Besides that, these objects may benefit the user somehow with their potentialities. In other words, every technology can benefit its user with their affordance. In this sense, it is imperative to explain that the concept of affordances has changed and evolved throughout the last decades until it becomes what we know nowadays; and authors seem to have a different perspective of this term.

For the American psychologist Gibson (1986), affordances are mutuality created when the animal and the environment are in contact with each other. Therefore, the author explains the perception and action of the individual, understanding what the environment tends to offer them and how they will

need to act to meet their needs. Also, he affirms that “the affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill (GIBSON, 1986, p. 127). According to him, many affordances can be offered in the same environment, but each agent will have a different thought about it depending on their experiences and needs. This theory debated by Gibson was named Ecological Psychology.

On the other hand, Gaver (1991) believes the concept is mainly related to action and interaction. Furthermore, the writer affirms that "affordances are not passively perceived, but explored" (GAVER, 1991, p. 82). His point of view in the theory tends to recognize the role of the socio-cultural background. The researcher exemplifies the theory saying that to know that a key needs to be plugged into a hole and be turned to turn on a certain technology requires mediation. In this sense, Graver defends that affordance is a dominant approach to debate technology.

The term affordances was introduced into the language teaching field by Van Lier (2002). The author argues in his study that the subject is inserted in an environment containing several meanings, which become available when the subject interacts with that environment. Considering the ecological perspective, the researcher points that the perception and interaction of the subject are essential elements for cognitive development and language acquisition. Van Lier (2004), in this point of view, says that learning does not have to be understood as just knowledge intake, but as a process of management and evaluation.

Moreover, Menezes (2011) affirms that the concept of affordances and the ecological perspective were crucial to the understanding of what language learning is because it considers the cognitive and social processes as integrated elements in language learning. In agreement with the theories presented, “the learning process depends on the contexts in which the student is inserted, how they perceive the process and the tools used for learning and it also affects how they relate to the environment” (ARAÚJO, 2011, p. 63, my translation).

In order to investigate the potentialities of digital technologies with undergraduates from an English Language Teaching course in Brazil, Gomes *et al* (2018) cited several affordances achieved by undergraduate students in an oral comprehension and production course. The participants used six digital tools to record their talks, create avatars and videos, narrate slides and discuss through audio. As a result, the participants of the research affirmed that these tools allowed them to plan and edit their oral production, identify their own difficulties, practice oral comprehension and practice oral exercises in multiple places.

Furthermore, El Kadri (2018) sought to investigate the affordances of Teletandem identified by English teachers-to-be. In the results, the author observed affordances that concerned linguistic development, technology, and personal development. Regarding language development, improving pronunciation, talking in English about other subjects, reviewing content, asking questions about vocabulary, expanding/updating vocabulary, making mistakes without fear, and enabling cultural exchanges were some of the affordances of teletandem identified in the study. Regarding the technology, renouncing the traditional method, promoting language learning, and

interacting in a systematic way were some of the affordances achieved by the students.

In a recent study, Turolo (2020) aimed to describe the mechanisms of engagement with affordances in an English language teaching course, focusing on written interaction through forums. Among the affordances, the undergraduates highlighted the asynchronous nature of the forums as an environmental affordance, since it allowed time for reading, studying and elaborating messages. Individual and community presence through the text editing tool, signatures, and individual addressing styles on the AVA platform were considered technological affordances of engagement. Regarding linguistic affordances for language learning, the identification of information gaps can be highlighted as a constraint that helped students to be more careful and thorough in their readings.

It is imperative to reaffirm that the conception of affordances is not just related to the potentialities a certain tool may offer in its environment. In this sense, affordances can also be defined as the relationship and interaction that is established between the user and the object (VAN LIER, 2002). Moreover, it can be stated that within this interaction, various opportunities for action may arise for learners, promoting engagement (TUROLO, 2020). The author reveals that this concept is directly related to the perception of action opportunities an individual may have in an environment where language is existent through semiotic artifacts. In other words, it is the perception of the different things the learner can do with the same object depending on their background and thoughts.

Also, Beatty (2003) argues that affordances are visual clues that a tool can offer about how it should be used. In addition, their function may or may not be related to their design. Beatty uses the example of the chair, which is designed for sitting, but can also be used as a weapon. For the author, when the central purpose of an object is disguised and leads the subject to other uses of it, it is considered a *misaffordance*. Beatty (2003) reminds us that this is very common with digital tools and applications, because a noticeably attention-grabbing element can, for example, distract students from the proposed reading.

In the same way that a particular tool can offer opportunities for action to the subject, it can also offer restrictions in this interchanging. Turolo (2015) states that technological restrictions in the interaction regarding tools, services, and apps can occur due to internet service outages and failure in the synchronization of these tools. Moreover, the same study states that there may also be incomplete and misunderstood language actions in these environments; which ends up hindering the subject-tool interaction. In fact, these restrictions may prevent the subject from exploring the tools' action opportunities and their potential in this interaction.

Therefore, this paper continues these authors' work, trying, this time, to identify and categorize the affordances that promoted interaction on the digital tool (Quizizz) during an online course. This research was effectuated in an instrumental reading course in English for high school students in Brazil, a context not yet visible in research about teaching technologies.

As previously mentioned, this article aims to reveal how students

interacted toward the digital technologies employed in the instrumental reading course and to reflect whether the learning process was enabled or restricted.

This is a qualitative research of an interpretivist nature. Dörnyei (2007) states that the procedures of this type of research generate open and non-numerical data, being further analyzed by methods considered non-statistical. Moreover, the qualitative approach was chosen for this study because "the affordances of digital technologies are social constructions: perceptions and experiences (re)created in the participants' interaction with the tools, apps, and virtual environment (GOMES *et al*, 2018, p. 66).

The data for this research were generated from a gamified course of instrumental reading in 2021 that, due to the COVID-19 pandemic, was offered in remote modality. The course, which lasted three months, had a workload of twenty hours including weekly synchronous meetings on Wednesdays on Zoom video call platform and materials posted on Google Classroom. The synchronous classes lasted one hour and forty minutes in the afternoon. This course was targeted at students from all years of high school who were preparing for university entrance exams and the *Exame Nacional do Ensino Médio* (ENEM). On average, 26 students attended the classes during this period.

The course urged students to develop reading skills in English in order to answer interpretive questions. Within the course contents, students learned to activate strategies for recognizing textual genres, cognate words, nominal groups, verb identification, and so on. For the development of these skills, students relied on the use of digital tools such as: Quizizz, Mentimeter, Google Forms and Jamboard (in table 01 below, it is possible to visualize the plataforms, their descrition and how they were used in the course). In addition, students answered an evaluative quiz in Google Forms every three lessons, applying the content seen in class. One of the requirements for participation in the course was that students had to own a computer, because not all the tools that would be used worked via cell phone.

Table 1 – The platforms, their descriptions and how they were used in the course

Plataform	Description	Course activities
Quizizz	Digital platform which allows teachers to create and edit quiz activities for students. Once a quiz is created on this website, students are able to access it, answer questions and score points in a ranking in real time.	Games in quiz format
Mentimeter	Mentimeter combines the digital tools of quizzes, polls, and word clouds to offer a central point for class and remote learning interactions. Essentially, this is a super powerful presentation tool for teachers and students.	Collaborative quiz and word cloud
genially	Genially is a media creation platform focused on designing and sharing media creations and presentations of all kinds. From the dashboard, students can start from blank or predesigned templates organized into 12 types, including videos, infographics, interactive images, quizzes, and more.	Games, board games and user profiles

Google Forms	It allows teachers to create surveys and evaluation sheets for students to answer it. After answering it, teachers can correct, give feedback and send grades through email.	Creation and participation in forms
Jamboard	Jamboard is a digital whiteboard that lets you collaborate in real time using either the Jamboard device (a 55-inch digital whiteboard that works with G Suite services), web browser or mobile app.	Collaborative whiteboard and economical transactions (gamified activitites)
Canva	Canva is a free graphic design platform that's great for making invitations, business cards, Instagram posts, and more.	Mind maps and poster creation (gamified activitites)
Google Sheets	With Google Sheets, you can create and edit spreadsheets directly in your web browser—no special software is required. Multiple people can work simultaneously, you can see people's changes as they make them, and every change is saved automatically.	Collaborative glossaries and weekly ranking (gamified activitites)

Source: The authors

In regard to the research participants, 11 students volunteered for data generation. These students were between 15 and 17 years old and were in high school in public and private sectors in the state of Paraná. The other 15 students did not participate in the research because they did not attend the class on the day of the data generation, which was done at the beginning and end of the course. Before data collection, students and their parents had to sign digitally the Free Informed Consent.

For the first research data collection, a questionnaire was applied on the Quizizz platform at the end of the fourth lesson. This quiz aimed to have students understand, apply, and review strategies for reading images, keywords, and non-verbal language in authentic texts. There were six questions in total and students had about two minutes to answer each question presented on the screen in real time. To participate, students were required to access the website, enter the activity code, and insert a nickname. As students answered the questions, their answers were also collected in real time and transposed into a ranking.

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Also, two virtual questionnaires on Google Forms were used to collect data. The first questionnaire was applied after class three in one of the evaluative activities (called checkpoint) and the second questionnaire was applied to the students at the end of the course, during class ten. The first questionnaire was used with the objective of having the students express their first impressions of the affordances of the technologies employed so far in their

own words. The second questionnaire aimed to explore and express specifically the affordances achieved by the participants through the course's technologies. The table below presents the translated questions from the first and second questionnaire:

Table 01 – First and second questionnaire

First questionnaire
Are the digital tools that have been used so far (Mentimeter, Quizziz, Jamboard, etc.) motivating and helping you to learn the content taught during the lessons? Why?
Second questionnaire
For your learning, what were the advantages of using the digital platforms (Zoom, Quizizz, Jamboard, Mentimeter, Google Slides, Genially, Google Classroom, Google Forms, Google Spreadsheets, Canva) during class, in the bonus activities and checkpoints? Do you think the digital platforms we used in class (Zoom, Quizziz, Jamboard, Mentimeter, Google Slides, Genially, Google Classroom, Google Forms, Google Spreadsheets) helped you to improve your English reading skills? How? Tell us more

Source: The author

Data analysis followed the parameters and procedures of qualitative research (DÖRNYEI, 2007). First, there was a search for meaningful units (HOLIDAY, 2002), that is, statements that revealed the affordances related to the digital tools used throughout the course. After that, they were grouped according to their regularities and compared to each student's performance on the Quizizz ranking. This procedure was adopted to analyze whether their performance in the quiz activity matched with the affordances they mentioned in the questionnaire. For ethical reasons, the real names of the participants in this research were omitted and named from A1 to A11.

3. EXPLORING AFFORDANCES IN DIGITAL TOOLS: INTERACTION AND TECHNOLOGY IN A READING COURSE

As mentioned previously, this investigation seeks to analyze and reveal how high school students interacted with the digital platforms used throughout an instrumental reading course. More specifically the data reveals whether their learning process was enabled or constrained when interacting with such technologies. The analysis, that will be explored in this section, lead to the following aspects: 1) practicality and playfulness, 2) content review and language development, 3) identification of difficulties and 4) constraints.

3.1 Practicality and Playfulness

Students were asked about the advantages of using digital tools during class, and they listed several affordances. The ease, diversity, and practicality

of these tools were mentioned by the students of the course as something that facilitated the learning process. Moreover, according to the questionnaire responses, the use of these technologies led the participants to show more interest in the proposed content. Below are some of the responses from the initial and final questionnaire that illustrate this idea:

> *A2: Yes, because it engages and stimulates our learning.*
> *A3: It made learning more practical and diversified, a fact that leads the student to have more interest in the content.*
> *A7: It was a more attractive way, websites in general have several tools.*
> *A8: In fact, with the use of these tools it simplified and mastered the work, making it more practical and focused.*
> *A9: Yes, they are motivating me a lot, because it is more fun and dynamic.*

The discourses above suggest that the digital teaching tools used in the reading course had a motivating aspect to the students. In other words, by interacting with these technologies during class, learners could feel more attracted and interested in the content being worked on. In addition, the practicality, activity diversification, and playfulness of these tools stimulated learning.

This interpretation confirms what Paudel's (2021) study argues, when he states that digital technologies make learning and teaching more interesting and motivating. Also, the use of digital tools and the increase of the "fun factor for learners" is pointed out in the study by Celik and Aytin (2014, p. 2) as one of the advantages of this implementation. This student-technology interaction can contribute to the emergence of new opportunities for action and, consequently, engagement with the platform (TUROLO, 2015). The next subsections show some of the opportunities for action achieved.

3.2 Content review and language development

When students were asked whether digital tools helped them improve their English reading skills, some affordances could be highlighted. Content review was one of the affordances highlighted by students. According to some participants, exercises that made use of platforms such as Quizizz assisted in reviewing the subject explained in class. Below, it is possible to visualize, through the discourses, the action opportunities achieved by students when interacting with the platforms:

> *A3: Yes, they helped because they allowed us to learn and review the same subject in a different way.*
> *A4: Yes, especially the Quizizz, which is a totally different way of learning, with the possibility of using images and texts.*
> *A11: Yes, these platforms helped me put into practice everything I learned and all the content taught throughout the classes and enabled me to be more productive in classes and activities.*

According to the comments presented, digital tools have provided an opportunity to fix and review content. The great emphasis given to Quizizz by student A4 confirms that he experienced this affordance on Quizizz and may have realized the importance of the platform for learning, in other words, for his own linguistic development. In addition, it is worth mentioning the

discourse of student A11, who sees the digital tool as an opportunity to practice the strategies he observed in theory, allowing him to be more active in the classes and activities.

In this sense, it is suggested that the platforms, such as Quizizz, may have helped students to review the content learned satisfactorily. The participants' discourses may be in line with the ideas of Gomes et al (2018) and El Kadri (2018). Both argue that it is possible to achieve affordances of language development on digital platforms. Considering the A4 talk, it is believed that, by revisiting a content through a quiz, their linguistic development could be benefited. However, it is worth mentioning that it is subjective to measure the learning effectiveness of a student only by means of a quiz activity. Therefore, the statement is only a suggestion of what may have been achieved by the participants through the technologies.

Moreover, in some statements, it is possible to assume that the activities using digital platforms may have also contributed to the development of the participants' reading skills. When asked whether the platforms contributed to the development of reading skills in the English language, students highlighted relevant points. Below are the discourses related to the development of reading skills:

> *A5: Yes, because most of the times we accessed these platforms there were texts in English so we could answer some questions.*
> *A6: Yes, with the assignments that were proposed to us on these platforms, they helped our reading skills a lot.*
> *A10: Yes, although it took a while to get the hang of these tools, but I was able to have a better view of English.*

The speeches presented above suggest that the digital platforms used in the course may have enabled the development of the participants' reading skills and the development of the language itself. These discourses confirm that affordances are cognitive and social processes of language skill acquisition (MENEZES, 2011). Moreover, the tech activities may have achieved the goal that Rodrigues Junior (2014) advocates; which is to allow technologies to contribute to pedagogical practices and student learning. In this sense, it is considered that the activity in the digital platforms may have provided opportunities not only for the application of reading skills, but also for the learning of the English language.

In addition, it is worth mentioning student A10, who managed to have a perspective of English even with some difficulties in adapting to the platforms. On the contrary, A5 and A6 did not mention difficulties with the platforms. In this sense, the participant A10 states a different perspective from the students A5 and A6 regarding the platforms, since their experiences varied. Therefore, this difference in the perception of platforms happens because each subject has a different view of an environment, and this will depend on their experiences and needs (GIBSON, 1986).

3.3 Identification of difficulties

Students reported the perception of identifying their own difficulties in reading when interacting with the digital platforms during class. In addition, they were able to identify their weaknesses when answering certain types of

exercises. The discourses below present these perceptions:

> *A2: Yes, in the use of the verb*
> *A7: Yes, I get quite confused whether the words are cognate or not.*
> *A11: Yes, I discovered some difficulties in reading.*

Considering the speeches above, the interactions may have helped them to detect difficulties in their learning. More specifically, students A2 and A7 expose which strategies offered them some difficulties when reading a text in English: in the use of the verb and in the identification of cognate words. Thus, it is suggested that digital platforms can have a self-evaluative character for students, and they can make students reflect on what they need to improve learners. This data confirms that learning is not only based on knowledge absorption, but also that management and evaluation are involved in this process (VAN LIER, 2004).

In addition, interactions with the platforms may also have provided opportunities for participants to think about strategies for solving certain types of activities. The insights are presented below.

> *A4: Yes, with the games I realized that we should pay a little more attention and not go for what we think is too obvious.*
> *A8: I just realized that I need to concentrate more when answering a question with a short time.*

Based on the speeches presented, it is assumed that the digital tools may have provided moments of reflection on their own learning. It is worth mentioning that the main purpose of the use of digital tools in the course was not the identification of difficulties, but the application and review of reading strategies. In this sense, it is suggested that the reflection of their difficulties is classified, according to Beatty's study (2003), as a misaffordance. This classification occurs because the central purpose of the digital tools was disguised and, consequently, led the students to other uses of them, as they mentioned in the questionnaire. Even if the identification of their own difficulties is a misaffordance, this action helped the participants to evaluate themselves as learners.

3.4 Constraints

When asked if there was any difficulty in accessing any digital tool, the students presented diverse answers. According to the answers given, some students had no difficulty with access, while others reported this constraint. Below are the answers of the research participants:

> *A1: No*
> *A3: I had no difficulty*
> *A4: I had no problems, but sometimes the microphone kept turning on and off by itself, but nothing that would hinder learning.*
> *A5: I had a little problem with Canva in the beginning, I couldn't log in, but then I managed to solve it and it didn't bother me.*
> *A6: Yes, some sites are difficult to access on a cell phone.*
> *A7: No*
> *A9: Quizizz. I wasn't able to answer the questions, but it didn't hinder much during the course.*

By interpreting the student's answers who had no difficulties with the platforms, it can be assumed that the potentialities of the technologies were offered in a satisfactory way. Consequently, students A1, A3 and A7 may have taken advantage of the action opportunities that these platforms were able to offer (TUROLO, 2020). However, it is worth highlighting participant A4, who had problems with the microphone on the Zoom platform, but reported that it was not a limitation. This argument is worth questioning, because his participation in the classes and dynamics may have been limited because of this fault.

For students who faced difficulties with the platforms, there are several interpretations for the cause of this constraint. The problem that participant A5 faced with the login on Canva suggests that the student may not have understood the visual clues that the platform has (BEATTY, 2003) and could not find the appropriate place to login. By not understanding these visual clues, the student is unable to benefit from the potential of the tool. Another hypothesis for this limitation is that perhaps the language of the login page was incomplete, causing misunderstandings with the participant and the functionalities of the website. This hypothesis confirms what Turolo (2015) argues, when she says that in a virtual environment, the language can be incomplete and be misinterpreted by the user, causing restrictions when accessing it.

The discourse of participant A6 deserves attention and is worth highlighting in this research. By reporting that some tools are difficult to access via cell phone, it can be inferred that this student did not have a computer to access these digital platforms. It is necessary to remember that one of the requirements to participate in the instrumental reading course was having access to a computer, since not all platforms work on mobile phones. Student A6 may not have been able to access a computer due to the high cost of this device. Al-Kahtani and Al-Haider (2010) confirm this when they say that the lack of infrastructure in certain countries creates barriers to accessing some technologies. In the case of this student, the computer was not accessible.

The words of participant A9 also deserve to be highlighted, because there were difficulties when accessing the Quizizz platform. It is assumed that this difficulty may have occurred due to some factors. By viewing the ranking of the activities performed in Quizizz, it can be seen that participant A9 could enter the quiz, but could not answer the questions. It is believed that this limitation may have occurred due to internet access failure or speed oscillations. Another hypothesis is that there was a failure in the synchronization of the tool with the device, causing imitations when answering the questions proposed in the lessons. It is difficult to say exactly the cause of the problem, but according to Turolo's study (2015), access limitations may occur due to internet service outages and failure in the synchronization of the tools. In other words, as the introduction of this research states, technologies sometimes are deemed beneficial, while in other cases, they are considered to be excluding tools.

4 FINAL THOUGHTS

In summary, it is apparent that the research participants revealed several affordances for developing their English language reading skills. These

affordances referred to both the pedagogical nature of digital tools and their design. These findings are in accordance with the ecological perspective, which considers the interaction between the subject and the environment as something that can promote learning. Therefore, in several moments, the students' learning moment was possible.

For the students of the instrumental reading course, the use of websites, apps and platforms allowed the classes to be more dynamic and playful, enabled them to review the content, develop their reading skills, and identify their own difficulties in the content. These affordances identified by the students are considered opportunities for action to enable the learning process. Thus, based on the data obtained and the analysis, the use of technologies enabled learning.

However, there were restrictions in some students' learning. These restrictions occurred due to problems with the devices, the tools, or even a possible lack of access to the computer. In addition, the hypothesis of internet connection problems arose when, in one of the answers, it was mentioned that it was not possible to access the questions on the Quizizz platform. These restrictions showed that besides promoting learning, technologies are also excluding tools.

It is expected that future research will further investigate the affordances of digital tools in English language teaching. There is a great need to explore in depth the affordances of individual tools, especially quiz platforms, which were frequently mentioned by students in the questionnaire. Another need is to reveal and analyze the affordances of technologies, this time in the face-to-face teaching of instrumental reading. By continuing this research, it will be possible to have teachers and teachers-to-be with a better perspective on the importance of digital tools in the world of language teaching and learning.

Explorando *affordances* em ferramentas digitais: interação e tecnologia em um curso de leitura

RESUMO

O ensino da língua inglesa avançou rapidamente com o uso de ferramentas digitais. Durante a pandemia do COVID-19, muitos professores empregaram aplicativos, sites e plataformas para criar oportunidades de aprendizado para seus alunos. No entanto, há discussões sobre a real eficácia dessas tecnologias de ensino. Por isso, esta pesquisa busca revelar e analisar como os alunos de um curso de leitura instrumental online para o ensino médio interagiram com as plataformas digitais utilizadas ao longo das aulas. Esta pesquisa foi desenvolvida com base no conceito de affordances. Para Gibson (1986), essa teoria visa explicar o contato que um animal tem com seu ambiente. Mais tarde, na linguística aplicada, Van Lier (2002) afirmou que as affordances são a relação estabelecida entre o usuário e o objeto. Essa interação pode proporcionar oportunidades de ação e interação ao sujeito (TUROLO, 2020). Para a coleta de dados, foram aplicados dois questionários aos alunos do curso, a fim de descobrir as affordances percebidas por cada um deles durante sua interação com as plataformas. Os resultados revelaram categorias de oportunidades de ação percebidas: praticidade e ludicidade; revisão de conteúdo e desenvolvimento de linguagem; identificação das dificuldades dos alunos. Além disso, foram levantados alguns relatos de limitações com as plataformas. Os achados desta pesquisa mostram que as plataformas digitais podem trazer momentos favoráveis ao aprendizado, momentos de reflexão nos alunos sobre seu próprio desempenho estudantil e questionamentos sobre a exclusão do acesso à tecnologia.

Palavras-chave: ferramentas digitais; affordances; tecnologias; ensino de inglês; quizz.

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Correspondência:
Samantha Gonçalves Mancini Ramos
Rua José Roque Salton, 250
Terra Bonita, Londrina, Paraná, Brasil