Instanarratives: Stories of foreign language learning on instagram

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A B S T R A C T

In a networked society, social media has become central to individuals' lives. It has enabled people to access information, interact with communities, share experiences, find entertainment, and learn. This paper explores an online community on Instagram where members connect by sharing narratives, stories, memories, and other accounts of foreign language learning. The research seeks to assess the ways an online community on Instagram can be a learning network. It also investigates the affordances perceived by the community members in their language learning histories (LLHs). The analysis revealed that the community matches the network principles proposed by Downes (2012): autonomy, diversity, openness, and interactivity. Also, LLHs reveal that, in their personal learning networks, narrators have perceived affordances to interact with foreign language speakers; explore multimodality; make connections between native and foreign language; interact with technologies and cultural artifacts; practise repetition; find personal connections with the foreign language; participate in fandoms; and pay attention to foreign language speakers. The stories shared in the learning network indicate that the actions upon affordances perceived in informal environments seem to have a positive impact on learners' linguistic repertoires, identities, and emotions.

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1. Introduction

From an ecological point of view, environments provide meaningful opportunities to learners. Therefore, it is by interacting with and within the environments that meanings become available, and affordances are perceived. As well as Connectivism, the Ecological Perspective does not see learning as a head-to-head meaning transfer, but rather as emergence of actionable knowledge, possibilities for dealing with the world, a networked world.

This paper reports on a study whose main objective was to investigate foreign Language Learning Histories (LLHs) in an online community (Rheingold, 1994). Based on Connectivism and Learning Ecology, this study explores an online community on Instagram as a learning network. The analysis also considers the elements, characteristics, and parameters of networks (Siemens, 2005, 2006, 2008; Downes, 2010, 2012), as well as the affordances (Gibson, 1986; van Lier, 2000, 2002, 2004) perceived in personal learning networks (Richardson & Mancabelli, 2011).

2. Literature review

2.1. Connectivism: understanding learning in contemporary times

Connectivism is a learning theory which conceives knowledge as constructed through the establishment of networks and connections. From this perspective, learning is the ability to build knowledge within networks. Knowledge is available in the world and emerges from connections and interactions with humans and non-human appliances.

This theory is proposed by Siemens (2005) who argues that the development of learning theories, such as behaviorism, cognitivism, and constructivism happened before technology played an essential role in people's lives and learning experiences. According to Siemens and Tittemberger (2009: 11), "connectivism is the view that knowledge and cognition are distributed across networks of people and technology and learning is the process of connecting, growing, and navigating those networks. This view seems to be much more plausible and trustworthy in contemporary ways of learning."

Connectivism sees learning as the creation of connections and the amplification of networks. In this conceptual perspective, technology and socialization are crucial concepts. It differs from other views in that it acknowledges that learning is within networks of people and technologies, which could be knowledge-rich environments (Goldie, 2016; Siemens, 2005).

Siemens and Tittemberger (2009: 11) claim that "[n]ew information (a node) creates a ripple effect altering the meaning of other nodes within a network. A new node of information results in new connections, which in turn results in new knowledge, and thereby increased understanding on the part of the learner." Thus, learning involves actions - connections with people and technologies that upgrade networks - which allow individuals to learn and know more than the current state of knowing (Siemens, 2005).

According to Siemens (2005), the principles of connectivism are:

- Learning and knowledge rest in diversity of opinions;
- Learning is a process of connecting specialized nodes or information sources;
- Learning may reside in non-human appliances;
- Capacity to know more is more critical than what is currently known;
- Nurturing and maintaining connections is needed to facilitate continual learning;
- Ability to see connections between fields, ideas, and concepts is a core skill;
- Currency (accurate, up-to-date knowledge) is the intent of all connectivist learning activities;
- Decision-making is itself a learning process. Choosing what to learn and the meaning of incoming information is seen through the lens of a shifting reality. While there is a right answer now, it may be wrong tomorrow due to alterations in the information climate affecting the decision.

The Connectivist model claims that a learning community is a node, always part of an individual's more extensive network. According to Downes (2012: 71), networks comprise four principles:

- autonomy - each entity in a network governs itself;
- diversity - entities in a network can have distinct, unique states;
- openness - membership in the network is fluid; the network receives external input;
- interactivity - 'knowledge' in the network is derived through a process of interactivity, rather than through a process of propagating the properties of one entity to other entities.

The author claims that these four network principles are learning processes and crucial elements to create reliable and real networks.

Connectivism provides insights into how people learn and what they can do in order to learn. Thus, in this non-causal theory (Downes, 2010), knowledge is dynamic, chaotic, and distributed, that is, it is not confined to an entity, nor to a specific place and emerges from connections with people, communities, and technologies.

2.2. Learning ecology: affordances to learn

Learning ecology has its roots in the ecological psychology theory (Gibson, 1986), which suggests, among other things, that individuals should be considered embedded in their biological worlds and environments, and those of ecology. This theory has been used to understand several phenomena, including language learning. van Lier (2000, 2002, 2004), one of the pioneers in foreign language learning ecology, suggests that an ecological approach can unite a large number of views on language learning, especially when this approach considers an ecological worldview.

In Gibson's psychology theory, environments comprise a medium, substances, and the surfaces that separate them. Environments also provide land, shelter, water, fire, objects, tools, among other things, to the animals. For these Gibson coined the term affordances: "what it 'offers' the animal, what it 'provides' or 'furnishes', 'either for good or ill' (Gibson, 1986: 127). Affordance refers both to the environment and the animal in a way that no other term conceives, as it embraces a relationship of complementarity. As an example, he mentions the surfaces. The terrestrial surface offers different supports because it is

horizontal (and not sloping), flat (and not concave or convex), extensive enough (concerning the size of animals), and rigid (concerning animal weight). Therefore, the different possibilities the terrestrial surface offer can be considered as affordances. It is worth highlighting that affordances are different for different animals. In water surfaces, massive animals like humans sink, since water support is not an affordance for them as it is for aquatic insects, for example.

According to Jenkins (2008), many advances have been achieved concerning Gibson's ecological theory and concepts. Nevertheless, according to the author, there seems to be a consensus that the most remarkable aspect of affordance theory is the attempt to operationalize principles of Darwinian ecology: "an organism and its environs are reciprocally shaped; perceptual features are adaptively molded in response to specific environmental features; both simple and complex organisms exhibit patterns of response to stimuli that are innate (p. 44)." By pointing out the importance of the relationship between an organism to its specific environment inserted in a particular context, Gibson sees an adaptive value also afforded by the environment and its objects.

As stated by Atkinson (2014), as ecological organisms, humans' survival depends on continuous and dynamic adaptation to environments. Hence, "[c]ognition plays a central role in this endeavor by promoting intelligent, adaptive action-in-the-world, and to do so, it must be intimately aligned with its environment" (Atkinson, 2014: 467). Thus, interacting with and within environments involves social and also cognitive processes. For this reason, understanding foreign language learning in sociocognitive and ecological terms requires an approach integrating environments, materials, technologies, and learner cognition.

By understanding Connectivism and Learning Ecology in a dynamic and dialogic relationship, one can assume that interaction with environments stimulates the creation and reinforcement of networks. Our Personal Learning Networks (Richardson & Mancabelli, 2011) - a set of connections to people and resources both offline and online - emerge through the connection among elements and agents of the environments (nodes), which offer several affordances; including affordances to learn foreign languages.

According to Neubauer et al. (2011), a Personal Learning Network (PLN) refers to the convergence of resources and media that enable individuals to assimilate knowledge. Elliott (2009: 48) defines a PLN as "a set of resources, both physical and digital […] that is always available and can be used for the growth of the personal knowledge and skills required to thrive in the emerging information environment". In their Personal Learning Networks, learners are in a central position, once they are free to express themselves, share ideas, opinions, and beliefs. Thus, a PLN affords self-directed learning, after all connections are established according to learners' interests, routines, and motivations. Hence, as a core component of one's learning ecology, a PLN is also a "community that is always available, not restricted by geography or time" (Elliot, 2009: 49).

2.3. Research questions

This study sought to explore the ecology of a virtual learning network. The following are the research questions that guided this inquiry:

1. How can an online community of foreign language learners on Instagram be considered a learning network?
2. What affordances for foreign language learning are mentioned in their learning histories?

3. Methods

As stated by Dörnyei (2007), qualitative research involves procedures that result in primarily open and non-numerical data that are subsequently analyzed by non-statistical methods. Denzin and Lincoln (2006) claim that qualitative research offers a field of investigation characterized by crossing disciplines, fields, and subjects. In their perspective, the qualitative approach emphasizes the qualities of entities, processes, and meanings that cannot be quantified or measured experimentally. Some characteristics of this approach are (a) emphasis on the social construction of reality; (b) close relationship between participants and context; (c) consideration of the limitations that arise during the investigation process. In short, qualitative approaches "seek solutions to the issues that highlight how social experience is created and acquires meaning." (Denzin & Lincoln, 2005: 23).

3.1. Context

As defined by Rheingold (1994: 57), online communities are "cultural aggregations that emerge when enough people bump into each other enough in cyberspace." From Connectivist and Ecological perspectives, these environments afford fertile grounds for searching, generating, and sharing stories. Instanarratives seeks to be a virtual repository of foreign LLHs on Instagram. It is a learning network where members connect by sharing and interacting with narratives, memories, and other foreign language learning accounts.

Instagram is a social network created in 2010. Initially, users could just share, like and comment on pictures, but, as its popularity increased, more features were created and added, such as recording and sending videos, creating virtual shops, advertising products, sharing "stories" (15-s videos), exchanging direct messages, creating broadcasting channels, among others.

After signing up, users can create a profile and start following others. On Instagram, individuals are followers and are followed by others, according to their profiles' privacy settings. Instagram has more than one billion monthly active members, and more than 500 million stories are shared daily (Instagram, 2019).

As in other social media, users tend to find more affordances that go beyond the original design and features of the applications (Paiva, 2018). For instance, as individuals around the world started sharing videos, they perceived the affordance to produce their own series and movies; this ended up influencing the industry and generating new digital genres, such as micro-movies. There are now companies and startups specialized in creating short documentaries and fiction movies for social media, such as "Smarty" - a Brazilian company specialized in creating micro-movies (Smarty, 2019).

Similarly, the affordance to tell and share language learning stories was perceived on Instagram, which motivated the creation of instanarratives. Its main goals are: (a) to connect foreign language learners from different parts of the world; (b) to inspire Internet users to engage in learning, enabling them to recognize methods, strategies, technologies, and language learning paths; and (c) to develop an open and free space where researchers can analyze LLHs of individuals from different contexts under different theoretical perspectives and frameworks. The project was launched in March of 2018 as an extension initiative of the School of Languages of the Federal University of Minas Gerais, where a research group (which includes the author of this paper) conducts studies on narratives of foreign language learning. The first participants were the group members, who later invited their friends and colleagues to send their stories and shared them on social media. This process expanded the network and attracted more participants to the online community (which is now composed of people from different countries, backgrounds and social groups).

As stated by Barkhuizen (2013: 4), "stories re-shape our experiences so that we can make meaning from them. Stories bring coherence to these experiences so we are better to understand them". When accessing the online community interface, one can read the following introduction: "Our goal is to stimulate reflection on language learning through stories. Share your narrative via email or direct message." (INSTANARRATIVES, 2019). The LLHs are shared in two different formats: (a) instant stories: pictures with textual messages that provide a snapshot of learners' memories and remarkable learning stories (Fig. 1), and (b) video stories: short videos where members record themselves telling the stories (Fig. 2). No advertising is promoted on Instagram. Both types of LLHs are shared by users of their own free will and only the stories which have learners' explicit and textual consent are published. The project does not focus on specific foreign languages but rather on learners who have engaged in different foreign language learning processes.

This research focuses on the analysis of the "instant stories" generated in the project. They are constituted by learners' pictures, written stories, followed by their names and occupations (Fig. 1). Although members gave consent to have their LLH published on Instagram, their pictures, names, and usernames were pixelated for ethical reasons.

3.2. Participants

In order to provide an overview of the online community, it is worth referring to Instagram analytics software. There are several free applications on the web that enable the evaluation of the range, reach, and engagement of an online community. From them, Iconosquare was chosen as it was the only one (at the time the research was conducted) that presented data visually in forms of charts and graphs (Iconosquare, 2019).

Up to June of 2019, instanarratives had 360 followers - 226 women and 134 men. Most of the members are between the ages of 25–34 (51 men and 77 women); followed by members between the ages of 34–44 (41 men and 60 women), 18–24 (25 men and 42 women), 55–64 (2 men and 12 women), and 65+ (9 women) (Fig. 3). Of this total, 89 followers had sent their stories (48 instant stories and 41 video stories).

Analytics also revealed that follower growth can be considered continuous (Fig. 4) and, as time goes by, more and more Instagram users are discovering and following the profile. Its average engagement rate per post[1] is 3,73%, which shows a high engagement rate[2] (Scrunch, 2019). Up to June of 2019, the project had 1.3k likes and 51 comments. The impression and reach rates[3] are respectively 22.4k and 7.2k.

3.3. Data analysis

Barkhuizen et al. (2014) claim that LLHs differ from other sorts of narratives because of three reasons: i) they typically report personal experiences; ii) they portray experiences of language teaching and learning in a situated perspective, focusing on the tellers' real or imagined lives; and iii) they reveal characteristics of the narrators' identities. As reported by Gomes Junior (2016), narratives enable researchers to understand how learners' metaphorized identities are projected in

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[1] According to Iconosquare, the average engagement rate per post across all posts is calculated by taking the likes, comments, and saves received, divided by the number of followers.

[2] As stated by the website Scrunch, the engagement metrics are classified as: low engagement rate (less than 1%); average/good engagement rate (between 1% and 3.5%); high engagement rare (between 3.5% and 6%); and very high engagement rate (above 6%) (Scrunch, 2019).

[3] Reach refers to the number of people who have seen the community's content. Impressions are the number of times the content has been displayed on the followers' timelines and not necessarily liked.

discourse, since their conceptualizations emerge in language. Barcelos (2006) also claims that narratives are the references through which we reflect on our experiences and reconstruct them based on new perceptions and experiences.

Accordingly, data analysis followed the parameters and procedures of qualitative research (Dörnyei, 2007). In order to answer the research questions, first, the Instagram community was analyzed according to principles and fundamentals proposed by Downes (2012) and Siemens (2005); highlighting salient traits of the learning network. Then, there was the search for meaningful units (Holliday, 2002), that is, statements that revealed the perception of affordances in participants' narratives. Next, these statements were coded based on affordances regularity and grouped into categories. Finally, the categories were explained and interpreted contextually and theoretically.

4. Results and discussion

4.1. Understanding the learning network

By analyzing the 48 instant stories, the messages sent by the followers, as well as their comments, several aspects related to the network principles proposed by Downes (2012) were identified. They will be presented in the following subsections.

4.1.1. Autonomy

In a network, entities should be autonomous, free to make connections with others and exchange information (Downes, 2012). As previously mentioned, the stories posted on the online community are shared by the followers of their own free will. The following excerpt illustrates a follower's desire to share her learning story and be part of the network.

The direct message sent by the follower (Fig. 5) expresses her interest to learn more about the project. She said, "Hi, I found this initiative very cool! How does it work?" The administrator responded: "Hi S.[4] The idea is that this space gathers LLHs. Brief stories of what was most remarkable in people's learning journeys. We hope our followers identify themselves and get inspired. Send us your story!! Send your short story (with the translation in English) and a picture to us. Take a look at examples that are already posted!" She replied by saying: "I liked a lot! Tomorrow after work I will write a text, my story is cool, I think kk". Some days after that message, she sent her story.

As mentioned by one of the administrators in the previous direct message, in order to participate, narrators have to translate their narratives, which makes the process of sharing a story also a language exercise (the translation aims at
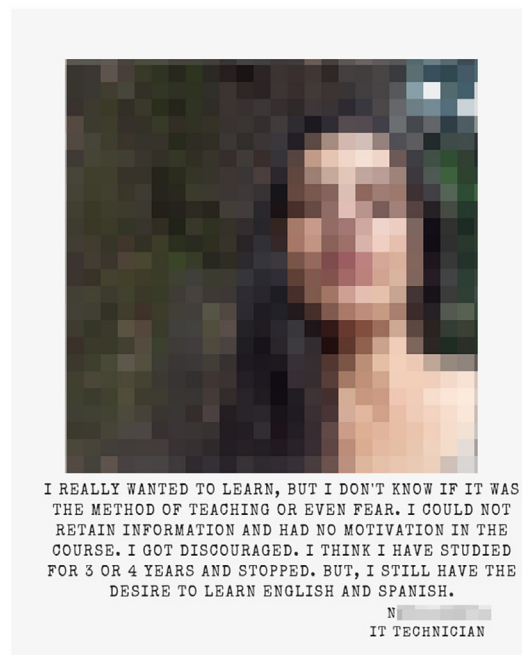

I REALLY WANTED TO LEARN, BUT I DON'T KNOW IF IT WAS
THE METHOD OF TEACHING OR EVEN FEAR. I COULD NOT
RETAIN INFORMATION AND HAD NO MOTIVATION IN THE
COURSE. I GOT DISCOURAGED. I THINK I HAVE STUDIED
FOR 3 OR 4 YEARS AND STOPPED. BUT, I STILL HAVE THE
DESIRE TO LEARN ENGLISH AND SPANISH.
N
IT TECHNICIAN

Fig. 1. Example of an instant visual story.

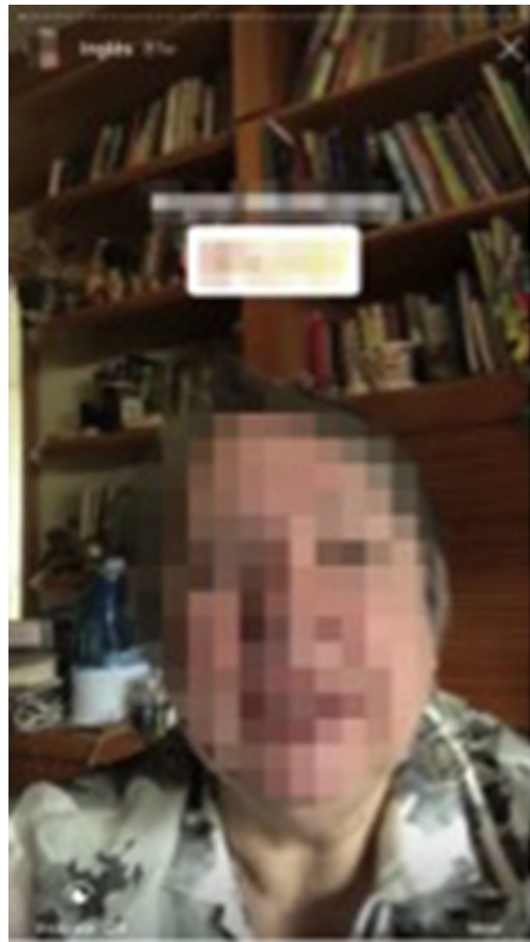[4] The follower's name was substituted by its first letter.

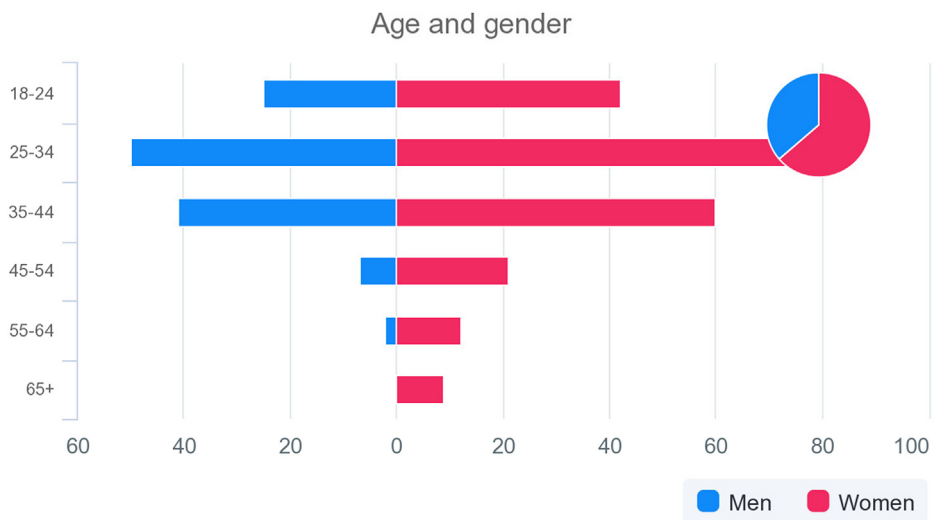**Fig. 2.** Example of an instant video story.
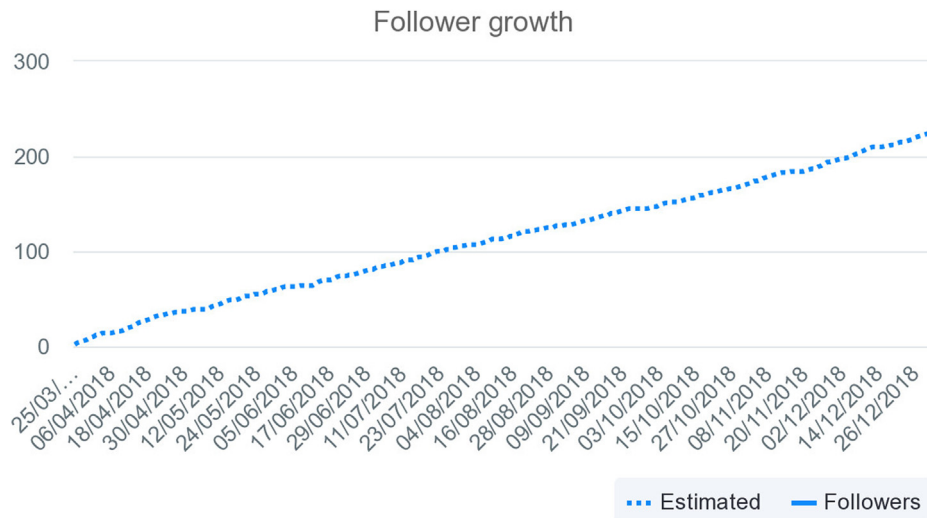

Fig. 3. Age and gender.

Fig. 4. Follower growth.

expanding the reach of the narratives, as well as allowing narrators to select their own words, preserving the meanings they want to convey). Beyond language awareness, the participation in the network provides real opportunities to autonomously use and practice English, what can somehow contribute to members' language knowledge. The following excerpts show interactions in which the followers took the opportunity of participating in the community to practice the English language.

Fig. 6 shows another interaction where E. indicates her interest in sharing her learning story. She said: "Teacher, very cool!!! I will send my *short video very soon*". It is relevant to highlight the code switch in the follower's message. She starts her message in Portuguese and suddenly switches to English, signaling the emergence of her English speaker identity.

Some followers used the opportunity to post exclusively in English. They did so in order to interact with other followers (Fig. 7), and also to ask for more information about the learning stories (Fig. 8).[5]

4.1.2. Diversity

As shown by Instagram analytics, members are diverse in gender, age, language, and location. The project can be conceived as a learning network constituted by members of different professions and fields. The following posts illustrate how diverse the network is; a virtual space where a designer and drag queen, a chef and professor, and an architect coexist (Figs. 9, 10 and 11).

Most of the learning stories are positive, and followers generally mention successful strategies and achievements. However, diversity also rests in learners' experiences, and a few unsuccessful experiences were shared, as in a story where a learner narrates an experience of fear, demotivation, and withdrawal (Fig. 1).
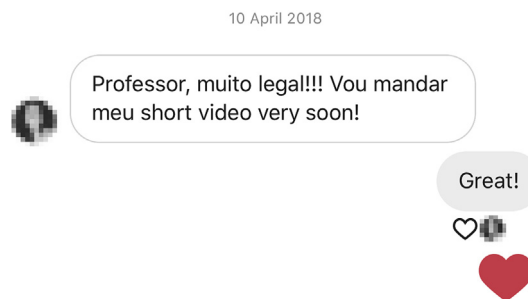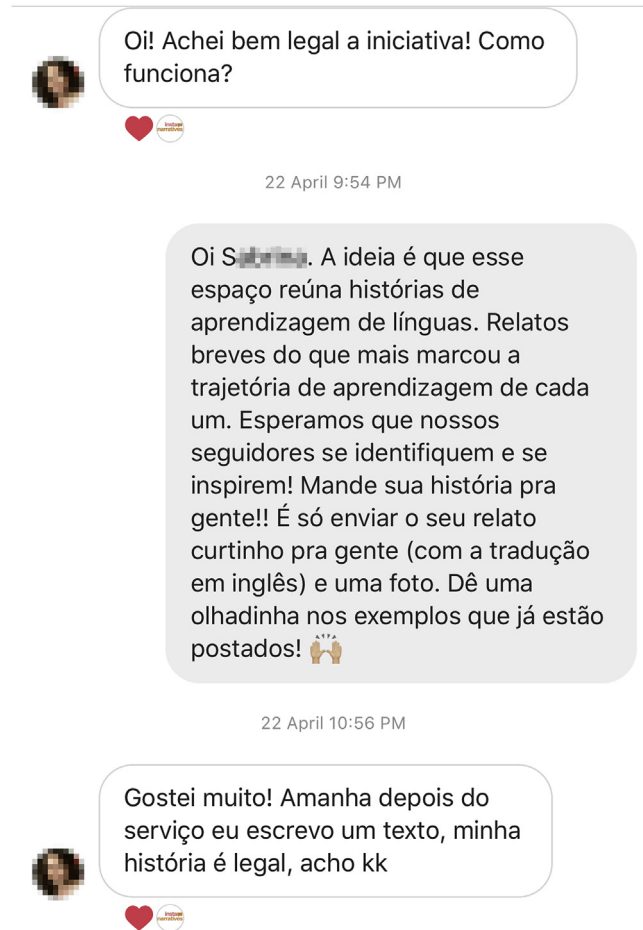
4.1.3. Openness

The online community is open, which means that all Internet users can see the LLHs and the comments posted on them. Because of the privacy setting, Instagram users do not need to follow the project's profile in order to interact with the stories and their narrators.

An Internet user who was not an Instagram member and got to know about the project suggested (via email) the project's integration with Facebook. Since Instagram afforded this option, a page on Facebook was created to enable access for more people. On Facebook the "instant stories" are shared with the text reproduced in the captions followed by hashtags (#históriaemportuguês, #storyinenglish). This also responded to a suggestion from a member to enable the participation of blind members, who could not use text-to-speech applications on Instagram.[6]

Thus, it is possible to perceive openness in the project's conception, functionalities, and design, which has been co-adapted as a result of members' input and feedback.

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[5] This comment was posted on a story in which the follower narrates that when she was a teenager, she had a crush on a singer and wanted to know all his lyrics and how to talk to him.

[6] At the time the suggestion was made, it was not possible to use text-to-speech applications on Instagram. In December of 2018, Instagram made this resource available to Android and iOS screen readers.

Oi! Achei bem legal a iniciativa! Como funciona?

22 April 9:54 PM

Oi S▮▮▮▮. A ideia é que esse espaço reúna histórias de aprendizagem de línguas. Relatos breves do que mais marcou a trajetória de aprendizagem de cada um. Esperamos que nossos seguidores se identifiquem e se inspirem! Mande sua história pra gente!! É só enviar o seu relato curtinho pra gente (com a tradução em inglês) e uma foto. Dê uma olhadinha nos exemplos que já estão postados! 🙌

22 April 10:56 PM

Gostei muito! Amanha depois do serviço eu escrevo um texto, minha história é legal, acho kk

Fig. 5. Interaction in the learning network.

10 April 2018

Professor, muito legal!!! Vou mandar meu short video very soon!

Great!

Fig. 6. Direct message in the learning network.

4.1.4. Interactivity

Instagram's interface and functions make it possible to foster different forms of interaction: (a) members and administrators,[7] through direct messages (Fig. 6); (b) among learners, through user tagging, when members invite others to see the stories (Fig. 7); and (c) with the LLH itself, through likes and comments on each other's stories. The following comment thread illustrates how interaction happens in different ways among members (Fig. 12).

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[7] Administrators are the participants of the university's research group on narratives of foreign language learning, including the author of this paper.

Fig. 7. Comments in the learning network.

In this comment thread, interactivity takes place through the use of (text messages with) affection emojis (heart and heart eyes); messages of encouragement and compliments, such as "Amazing" (5), "Amazing woman" (7), "Wonderful" (11); and mentions performed by the use of "@" (1, 2, 4, and 10), which sends a notification to users (followers or not), directing them to the original post. The eighth comment was posted by the narrator of the story, who responded to the followers' comments by saying "Gracinha gente!" followed by a heart eyes emoji (something equivalent in English to "How cute, guys!").

In the previous example, members were interacting with the narrator. However, it is also possible to see another type of interaction, when they tag friends who are not followers, inviting them to see and share a story. In the following interaction (Fig. 13), T tags A - who was not a follower - and invites him to tell a story. T says "Vamos fazer uma *instant narrative?*" (Let's make an instant story? in English). A replies by saying "Vamos!!" (Let's do it!! in English). Although none of them sent their stories, they became followers, liked several stories, and posted more comments in other narratives. In the 51 comments, 36 users were tagged.

It is essential to highlight that all four learning principles are interconnected and correlated in several ways: autonomy fosters interaction; openness triggers diversity; interaction strengthens openness; diversity enhances autonomy, among other connections (Fig. 14). Hence, by considering the learning principles suggested by Downes (2012), it could be concluded that the online community appears to be a learning network. As it was illustrated in this section, by being members, individuals can engage in interconnected practices and interact in different (but connected) forms.

4.2. Personal learning networks

The learners' narratives reveal networks and elements that were remarkable throughout their histories; nodes of their personal learning networks. It is expected that by being part of the online community, members can discover new strategies, find solutions to overcome difficulties, identify their learning styles, and learn other elements and environments that offer learning opportunities. Apart from acknowledging the affordances they perceived in these elements and environments, they also expressed the impact of acting upon them. Thus, by reading the learners' stories, the connection between perception and action becomes clear.

Most of the stories posted up to June of 2019 refer to learning in informal contexts (52 out of 58). Only six stories focused on learning in formal contexts, such as regular schools, language institutes, and university. Since the LLHs are short and "instantaneous," they provide a snapshot of what was most remarkable to learners, a brief summary of their learning journeys. As such, an emerging theme in this study is the importance that the learners assigned to learning informally outside of the classroom.

In a connectivist perspective, a network is a set of connected nodes; which can be individuals, activities, devices, areas, communities (Siemens, 2005, 2006, 2008). In this view, a learning community is a node, which is always part of an individual's more extensive network. Furthermore, the learning network on Instagram can be considered a node in learners' networks. In their LLHs, members mentioned other nodes of their personal learning networks, enriching the complexity of the community, making it interconnected.

Several technologies, environments, activities, and cultural artifacts were mentioned in the learners' stories. They can be seen as nodes where followers could find affordances to learn foreign languages, that is, elements that somehow connected learners to their personal learning networks. The following chart presents the nodes found in the LLHs posted on instanarratives.

In the LLHs, members pointed out several elements that somehow fostered their autonomy and engaged them to their personal learning networks (Richardson & Mancabelli, 2011). As previously stated, few stories mentioned formal elements, such as teachers, textbooks, and dictionaries. The most salient nodes in the learning network derive from informal contexts (Fig. 15). Songs emerged as the most common element perceived by the students as a link to foreign language learning (19 occurrences). The music universe seems to afford important nodes for these community members, given the mention of other elements from this scenario: CDs (2), Video clips (1), and music instruments (1).

Learners also mentioned nodes which refer to other cultural artifacts responsible for providing authentic input. They mentioned movies (6 occurrences), books (4), series (4), TV (2), magazines (2), and fanfics (1). Additionally, learners also pointed out nodes that afford opportunities for social practice, such as trips (6), video games (4), online forums (2), and

a▓▓▓▓▓ I'm dying to know who that teen idol was!
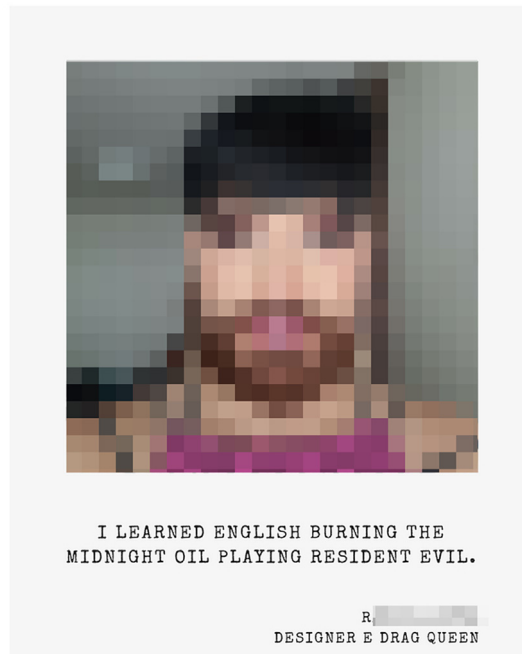
4w   Reply

Fig. 8. Comment in the learning network.

I LEARNED ENGLISH BURNING THE
MIDNIGHT OIL PLAYING RESIDENT EVIL.

R.▓▓▓▓▓▓
DESIGNER E DRAG QUEEN

Fig. 9. Story of a designer and drag queen.

SPEAKING ANOTHER LANGUAGE HAS OPENED
ME UNIMAGINABLE DOORS. IT ALLOWED ME TO
KNOW THE WORLD AND HAVE THE COURAGE TO
GIVE UP EVERYTHING TO PURSUE MY DREAM
OF BEING A NEW PERSON.

S▓▓▓▓▓▓▓▓
CHEF AND PROFESSOR AT ▓▓
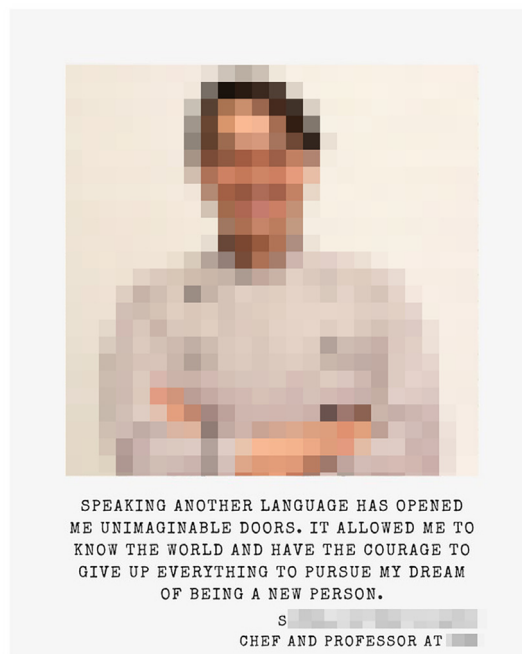
Fig. 10. Story of a chef and professor.

BEFORE GOING TO CROATIA, I DOWNLOADED A BASIC
COURSE OF CROATIAN, BUT I COULD LEARN NO MORE
THAN A FEW QUESTIONS. EVEN SO, I LANDED IN THE
COUNTRY PROUD OF GETTING TO KNOW HOW TO
RESPOND TO THE GOOD MORNING GREETING.

S███████ ████████
ARCHITECT
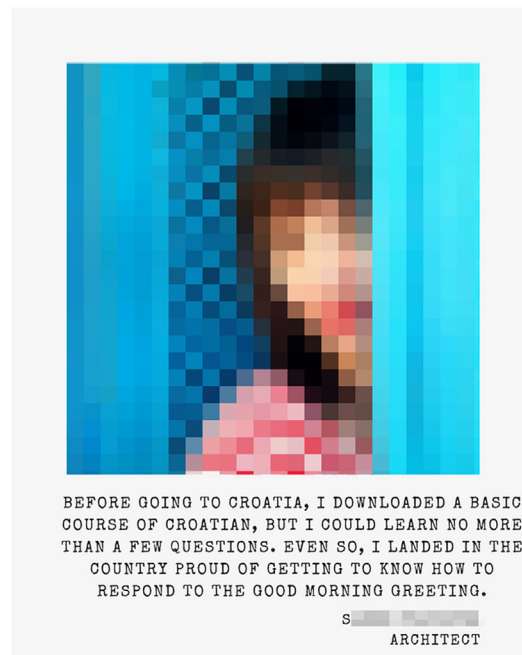
Fig. 11. Story of an architect.

mobile applications (2). There was also one mention to a tape recorder, seen by the follower as a technology that motivated him to learn since he could record dialogues in English and listen to his voice.

In order to better understand how the nodes operate in learners' personal learning networks, it is imperative to explore their stories more in-depth to see how they took advantage of the elements they highlighted to learn a foreign language, that is, how they acted upon the affordances perceived in the environments, activities, technologies and cultural artifacts.

4.3. Affordances to learn foreign languages

After reading the LLHs repeatedly, learners' statements that contained opportunities to learn foreign languages were highlighted and 21 statements were selected. Then, they were grouped into categories according to their regularities. As for learning processes, affordances are also interconnected and interdependent. However, in order to illustrate all the learning opportunities perceived by learners, the affordances will be presented and exemplified separately.

The first category, which had five occurrences in the LLHs, is "Interact with foreign language speakers." This affordance reflects the social turn in foreign language learning, which assumes that learning takes place through the use of language and interaction with others (Block, 2003; Duff, 2017). In this study, this perception concerns members' interactions with native speakers (Excerpts 1 and 2) and their acknowledgment (Excerpt 3) of this opportunity to improve as a language learner. Furthermore, socializing with foreign language speakers is perceived as an affordance to motivate engagement in foreign language social practices (Excerpt 4). Interaction is conceptualized as a tool to get access to the foreign language, as if without meaning negotiation, it would be "locked" (Excerpt 5).

I just discovered that I knew English when I talked to a salesman on my first trip to the United States.

Excerpt 1. Affordance to interact with foreign language speakers

I traveled to Mexico with hardly any knowledge of Spanish. I learned the basics in my day by day and with the patience and understanding of Mexicans, who are incredible!

Excerpt 2. Affordance to interact with foreign language speakers

At first, I had a hard time with English, I used to believe I would never learn. Later, I had to travel alone. During the journey, people said I speak well. Amazingly, I decided to become a teacher and it was the best decision ever.

Excerpt 3. Affordance to interact with foreign language speakers

Born in a multilingual family, since I was little I wanted to understand what was being said around me - I speak English, Spanish, and Italian in addition to Portuguese.
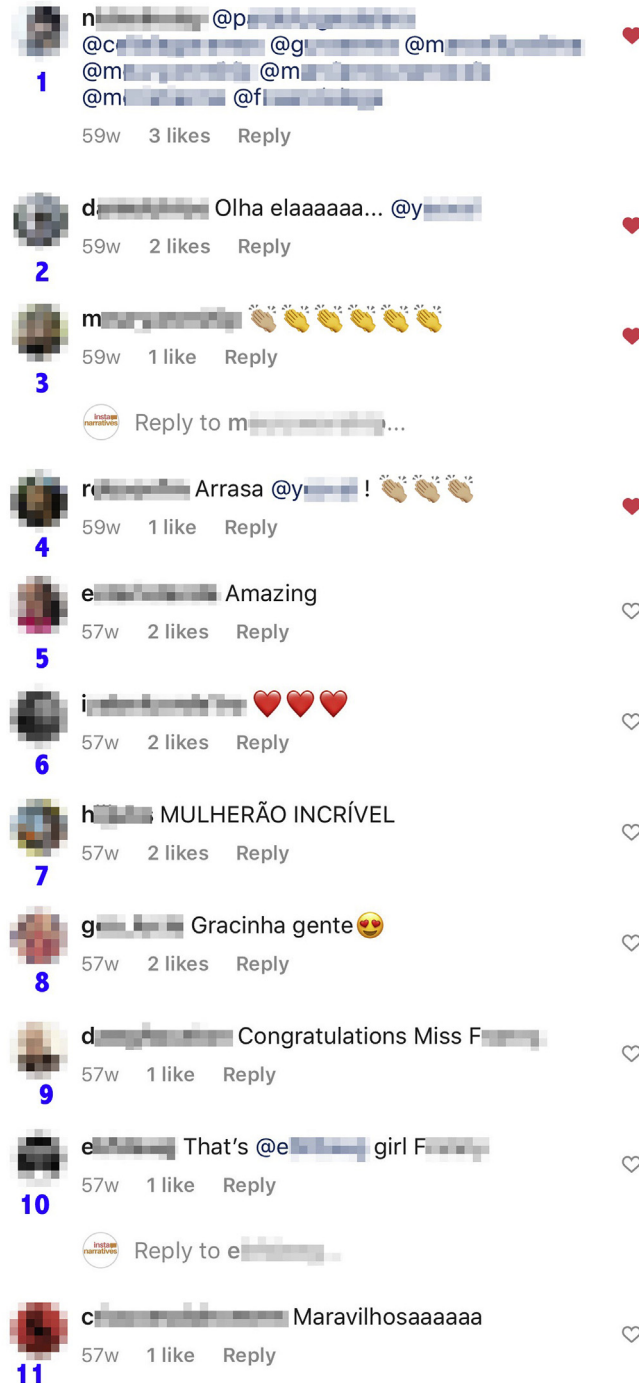
Fig. 12. Sequence of comments on a story.

Excerpt 4. Affordance to interact with foreign language speakers

I studied English throughout my childhood, but I only 'unlocked' the language (and learned a lot) when I worked for a North American company that used to make weekly Skype meetings with people from all over the world, always in English.

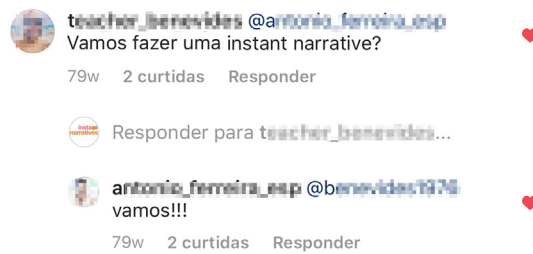Excerpt 5. Affordance to interact with foreign language speakers

Fig. 13. Interaction in the learning network.

Moreover, learners state that, when integrating input from different semiotic modes, they improve their foreign language learning; which can be seen in the category of affordances "Explore multimodality," with three occurrences. Learners perceive that listening to a song while following its lyrics (Excerpt 6) and watching movies and series while paying attention to the scene, audio, and subtitles (Excerpts 7 and 8) are beneficial to learning. In this view, the more semiotic modes learners have at their disposal (Hampel & Hauck, 2006), the better they will make sense of authentic pieces of language (Jewitt, 2012).

I learned Madonna's songs by reading the lyrics on the album back covers. I remember imagining the secret of 'Live to Tell'.

Excerpt 6. Affordance to explore multimodality

I used to watch my favorite movies and TV series using audio and subtitles in Spanish. Thus, I expanded my vocabulary and practiced pronunciation.

Excerpt 7. Affordance to explore multimodality

I have been studying English since childhood, but I think I really learned thanks to video games and subtitled films.

Excerpt 8. Affordance to explore multimodality

Another affordance perceived by the narrators is "Make connections between native and foreign language." The three following statements illustrate the learners' perception that finding equivalences between languages helped them to learn. The act of translating seems to be useful, whether in a systematic exercise like studying the dictionary (Excerpt 9); or in a more dynamic activity, like focusing on multimodal authentic materials, such as music videos (Excerpt 10) and movies (Excerpt 11), to target and translate words to the native language. This affordance seems to acknowledge the significant role of the first language and the language focused learning (Nation, 2003).

'English hungry,' I studied the dictionary to learn new words.

Excerpt 9. Affordance to make connections between native and foreign language

My afternoons watching music videos on MTV led me to buy music magazines and translate everything. I needed to learn how to sing.

Excerpt 10. Affordance to make connections between native and foreign language

I've learned English through movies and video clips because I wanted to know everything that was written in the lyrics and the subtitles.

Excerpt 11. Affordance to make connections between native and foreign language

Interaction is a crucial factor in the LLHs analyzed in this study. As the connectivist perspective advocates, learning takes place through the creation and maintenance of networks, whether with people or technologies. Several learners who shared their stories on the learning network emphasized the importance of (digital) technologies to their learning, but three of them explicitly mentioned the affordance to "Interact with technologies and cultural artifacts." As in previous studies which investigated affordances for language learning in Brazil (Braga et al., 2017; Gomes Junior et al., 2018; Gomes Junior & Gutierrez, 2019), these narrators seem to have found opportunities for learning in technologies not designed for educational purposes, such as video games and computers (Excerpt 12), magazines (Excerpt 13), and also a guitar (Excerpt 14). These statements reinforce the connectivist premise that learning does not reside in individuals' minds, nor technologies and artifacts, but emerges from the interaction with them (Downes, 2012; Siemens, 2005).

I have also learned a lot of English by playing video games or accessing computers.

Excerpt 12. Affordance to interact with technologies and cultural artifacts

I learned English by reading the 'Speak Up' magazine, listening to rock music, and reading dictionaries.

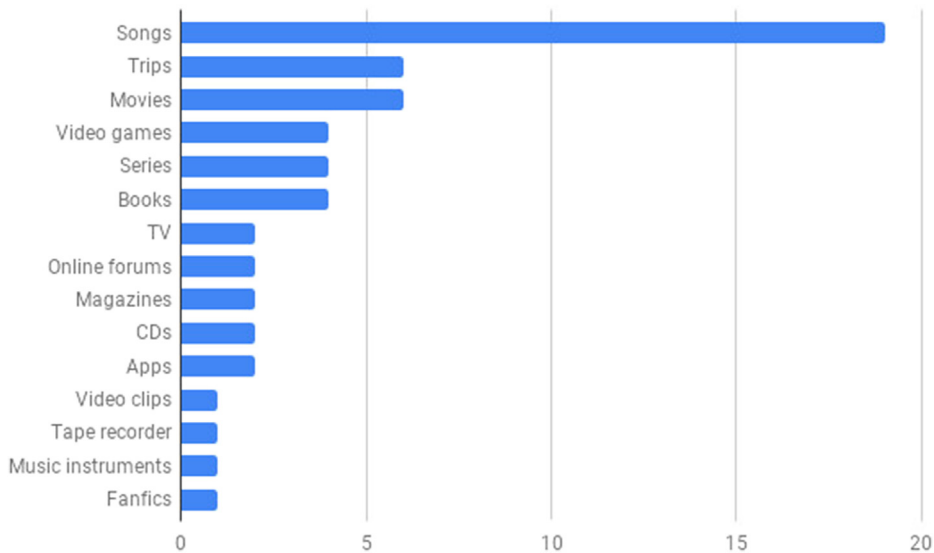**Fig. 14.** An interconnected learning network.

Fig. 15. Nodes of learners' personal learning networks.

Excerpt 13. Affordance to interact with technologies and cultural artifacts

I started studying English when I was 18 and my learning was enhanced when I decided to learn how to play the guitar, and later, I started teaching English.

Excerpt 14. Affordance to interact with technologies and cultural artifacts

Additionally, a traditional exercise in the language learning context was seen by the narrators as a valuable opportunity to learn foreign languages. The affordance "Practice repetition" is present in two occurrences of the narratives analyzed in this study. The perception of the effectiveness of repeating as a language learning action is salient in the following excerpts.

I learned a lot with the lyrics in the album booklets. I listened to each album a thousand times following the lyrics.

Excerpt 15. Affordance to practice repetition

I learned English by watching the sitcom Friends. I would watch the same episodes with English subtitles over and over until I felt that I had 'learned.'

Excerpt 16. Affordance to practice repetition

In their LLHs, learners associated repetition to comprehension, as if in order to fully understand they had to repeat actions ostensively. For instance, listening to songs while following the lyrics several times (Excerpt 15) and watching the same sitcom episode over and over (Excerpt 16). These excerpts show that although meaning negotiation and interaction are crucial to learning, memorization also seems to play an important role in this process.

As already stated, the analysis of LLHs reveals learners' perception that making connections is vital to learn. In some moments, this connection takes place in affective ways, when learners narrate that they connected with the foreign language itself. In the following two excerpts, learners demonstrate to perceive the affordance to "Find personal connections with the foreign language."

It all started back in 2003 when I had my first contact with American Hip-Hop. I still remember how happy I got when I could sing a song by one of my idols. That is how I fell in love with African American Vernacular English.

Excerpt 17. Affordance to find personal connections with the foreign language

I've always listened to Brazilian music, like Ana Carolina and Caetano Veloso. I love the language which was romantic and I had the chance of visiting Brazil. It helped tremendously.

Excerpt 18. Affordance to find personal connections with the foreign language

These statements indicate that learning a foreign language is also a matter of identification which can be intense to the point of personifying the language (Lakoff & Johnson, 1980). An English learner stated that he "fell in love" with the language given his affection and identification with American Hip-Hop (Excerpt 17). Something similar is expressed by a Portuguese learner who claimed that she "loves" the language due to her appreciation of Brazilian music (Excerpt 18). This affordance
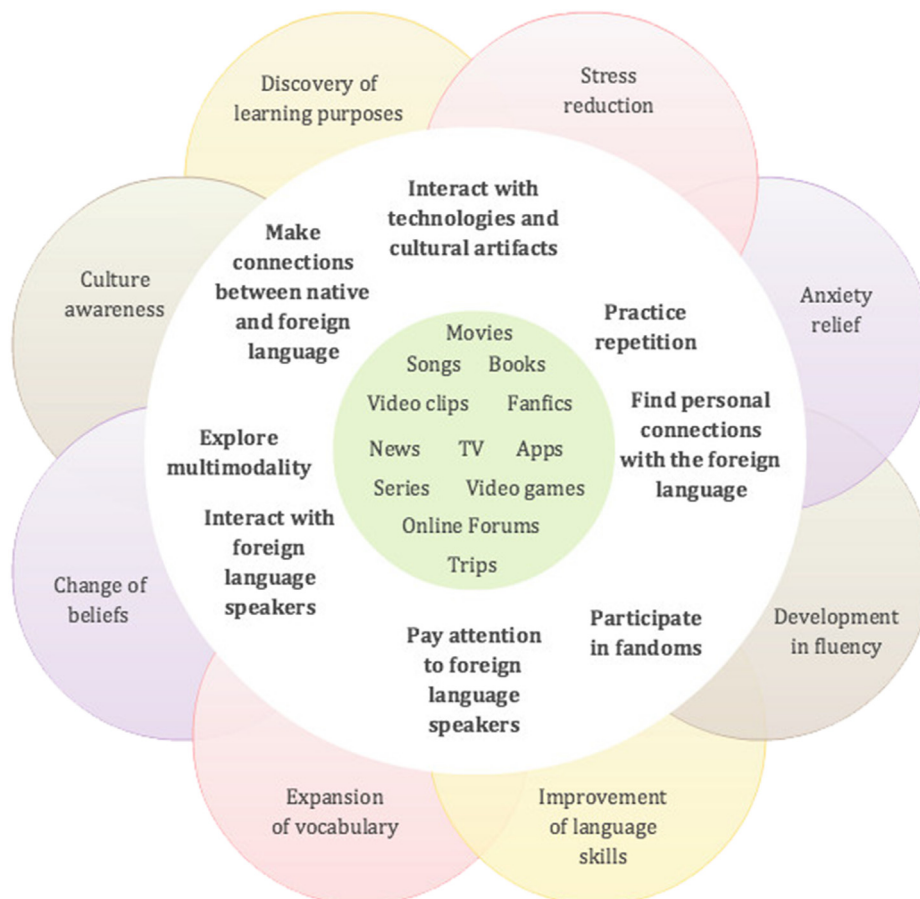

Fig. 16. Nodes, affordances and their impact on members.

shows the emergence of positive emotions when learners act upon the affordances they perceive (Aragão et al., 2017, pp. 557−566).

Participation is another crucial concept to the members of this learning network. Besides narrating that they found active opportunities for using the language to interact socially, they also perceived the affordance to "Participate in fandoms." This affordance seems to be triggered by the learners' desire to make use of the language to connect with communities of fans (Black, 2011). Songs, books, CDs, and video clips are nodes mentioned in several LLHs, and being a fan seems to have fostered narrators' engagement in the learning process. In the following excerpts, learners attribute the English learning to their actions in order to be involved with the Harry Potter's (Excerpt 19) and with the Alanis Morissette's (Excerpt 20) universes.

> I started learning English to watch interviews of the Harry Potter cast and to get spoilers from the last book on the Internet.

> Excerpt 19. Affordance to participate in fandoms

> "I've loved Alanis since 95. At that time, translations were not so affordable and I started to translate the lyrics. As a result, I learned English.

> Excerpt 20. Affordance to participate in fandoms

Finally, another affordance perceived by a narrator is "Pay attention to foreign language speakers." In the following excerpt, the learner recognizes that she learned new words by paying attention to more proficient colleagues (Excerpt 21); which acknowledges that interaction in language learning is both social and cognitive (Duff, 2017). The silent act of listening with a focus on an interlocutor is also a way of interaction and an analytical learning opportunity.

> I expanded my vocabulary by paying attention to more proficient colleagues and watching movies.

> Excerpt 21. Affordance to pay attention to foreign language speakers.

As already stated at the beginning of this section, the affordances to learn foreign languages perceived by the members of this learning network are not separate and isolated; they are interconnected with each other, with the community, and with the nodes of the members' personal learning networks. The following diagram provides an overview of the elements which constitute the learning network analyzed here (Fig. 16).

The center of the diagram includes the nodes identified in the LLHs. The next layer includes the opportunities perceived by the members as affordances for learning foreign languages. Besides the nodes and the affordances, learners also mentioned the impacts of their actions in their foreign language learning. The outer layer contains the most regular impacts mentioned by the learners in all the narratives analyzed in this study.

As in previous studies (Gomes Junior et al., 2018; Gomes Junior & Gutierrez, 2019) data revealed a close relationship between perceiving and acting upon affordances and learners' identities and emotions. In a previous study, Gomes Junior et al. (2018: 75) claimed that "as students perceived and acted upon the opportunities they found, they became more certain, motivated, comfortable and confident; less embarrassed, frustrated, stressed and shy."

The perception-action relationship seems to have positively impacted those learners' experiences since they acknowledge that the actions upon the perceived affordances are associated to stress reduction, anxiety relief, development of fluency, improvement of language skills, expansion of vocabulary, change of beliefs, culture awareness, and discovery of learning purposes. Once again, these impacts are connected and coexist in learners' LLHs, corroborating an interconnected and ecological view of language learning.

5. Concluding remarks

By analyzing the instanarratives community under the theoretical perspectives addressed in this paper, it became evident that it is a learning network in expansion. Instagram analytics indicated continuous follower growth. Furthermore, the expressive likes, impressions, and reach rates indicate that the network is evolving, which suggests a strong possibility to constitute more nodes and stronger connections.

In their LLHs, members mention several elements they believe could offer benefits to learning a foreign language, contributing to the interconnection of the network. The members connected on the learning network are nodes which are also interconnected with several other nodes in their personal learning networks. Almost all the nodes perceived in the LLHs emerge from informal settings, suggesting that, as in Menezes (2011), members find more productive learning opportunities in this context.

The narratives reveal that members have perceived several affordances in their personal learning networks that point to intrapersonal and interpersonal dimensions since learning is seen as an activity fostered by both self-awareness and social practices. Also, it was possible to identify the positive impact the perception-action relationship had on learners' language awareness, linguistic repertoires, as well as in their identities and emotions.

As contemporary scholars have been claiming, trying to understand such a dynamic and complex phenomenon as learning only with the support of Connectivism is insufficient (Bell, 2011; Kop & Hill, 2008; Smidt et al.,2017) due mainly to its lack of research foundation. However, as Richardson & Mancabelli (2011) point out, the connective view of learning offers productive insights and orientations for creating, adapting, and transforming pedagogies. On the same path, agreeing with Menezes

(2011), an ecological view of language learning indicates that, in spite of problems in educational systems, learners should be encouraged to perceive affordances to learn in their niches, finding meaning in their worlds.

The combination of Learning Ecology and Connectivism proved to be valuable in this study. Both views reinforce the ideas of interaction and participation and meet participants' learning conceptions. Thus, it is by connecting with networks that knowledge emerges. It is by interacting with environments that affordances are perceived. This broader learning view corroborates a sociocognitive approach to learning, which, according to Atkinson (2014), emphasizes the functionality and integration of mind, body and world in a complex ecological system; softening the boundaries that separate human and non-human interactants.

It is worth mentioning that although instant messages, images, and videos are trending genres in our society, their small size and direct tone can somehow limit meaning construction in cyberspace, leading to misunderstandings and misinterpretations. Consequently, researchers should focus on what is told, as well as the context when and where it was told, and the semiotic modes that were used. Therefore, more studies should be carried on to better understand how learners conceptualize their language learning processes in their digital, multimodal and instant interactions.

The narratives shared in the community explored in this research endorse contemporary views that advocate that learning emerges in meaningful personal and social practices. In order to bring teaching and learning together, it is paramount to consider and value the learning stories individuals share. By orienting and encouraging learners to connect with networks and interact with and within their physical and virtual worlds, teaching can go beyond lecturing and instructing to meet the real needs of the students of a networked society.

CRediT authorship contribution statement

Ronaldo Corrêa Gomes Junior: Conceptualization, Investigation, Data curation, Writing - original draft, Visualization.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.system.2020.102330.

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