

**Informal English learning activity systems mediated by online resources: a case study on the
perception of affordances by FL teachers in training at UNAD**

By

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Escuela Ciencias de la Educación - ECEDU

Maestría en Mediación Pedagógica en el Aprendizaje del Inglés

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Dedication

I dedicate this to my wonderful and loving mother who left an unrepairable hole in my life with her passing almost five years ago. She supported me in every step I took, and every decision I made until the day she died. I know this accomplishment would have filled her joy, pride, and happiness.

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Resumen Analítico de Estudio RAE

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2. Descripción	
<p>El desarrollo de tecnologías en línea no sólo ha influido en la forma en que las personas se comunican e interactúan entre sí, sino también en la forma en que adquieren nuevos conocimientos y desarrollan habilidades. Estas tecnologías han trascendido las dimensiones de entretenimiento y recreo transformando la mayoría de los sistemas de actividad en diversos entornos, incluido el aprendizaje informal de idiomas. Este estudio de caso utiliza las perspectivas de ‘Activity Theory’ en español <Teoría de la Actividad> (T.A) y la conceptualización del término ‘Affordance’ en español <asequibilidad> (traducción propia) para la investigación en ambientes mediados por la tecnología como referentes teóricos y analíticos para investigar los ‘affordances’ <asequibilidad> percibidos en las actividades informales mediadas por tecnologías en línea que 20 estudiantes de la licenciatura en Lenguas Extranjeras con Énfasis en Inglés en la UNAD llevan a cabo para complementar su instrucción formal de inglés. Este estudio utiliza un cuestionario cualitativo y una entrevista grupal semiestructurada para recoger datos relevantes en dos fases que permiten al investigador hacer un análisis usando un enfoque descriptivo basado en un procedimiento de codificación dinámico y fluido en dos ciclos, para finalmente extraer conclusiones.</p>	
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4. Contenidos

Este estudio de investigación se presenta en diferentes capítulos que dan cuenta de elementos importantes, y del proceso estructurado que se llevó a cabo para cumplir con sus objetivos. En el capítulo I se hace una descripción completa del problema y de la pregunta de investigación, y se exponen los objetivos, el alcance, las delimitaciones y la justificación del estudio. En el capítulo II se aborda la bibliografía que delinea el fundamento teórico y empírico del estudio dado su enfoque, así como algunos hallazgos en diferentes contextos relacionados con el planteamiento del problema, con la esperanza de proporcionar una validación teórica y una revisión profunda sobre los principios teóricos clave y los supuestos que sustentan la presente investigación. En este capítulo se examinan la relevancia y la pertinencia de la teoría sociocultural de Vygotsky, los modelos de teoría de la actividad de Leont'ev y Engeström, y el constructo de 'affordances' <asequibilidad> como referentes teóricos para el estudio.

En el capítulo III se presenta una descripción completa del diseño de la investigación, los procedimientos, los métodos de recogida de datos, la muestra que se estudió y las técnicas que se utilizaron para el análisis. El capítulo IV aborda los procedimientos de análisis de datos, la discusión de las categorías, los resultados y su fiabilidad y validez. Por último, en el capítulo V se presenta la importancia de los resultados, las implicaciones pedagógicas y de investigación, las limitaciones, las recomendaciones y las conclusiones del presente estudio.

5. Metodología

Como se ha mencionado anteriormente, este estudio se basó en la T.A. como marco analítico e interpretativo, lo que tuvo importantes implicaciones para el diseño metodológico del estudio. Este estudio de investigación utilizó métodos cualitativos para la recogida de datos que son de naturaleza flexible. Este estudio de caso adoptó un enfoque interpretativo naturalista que se ocupó de la comprensión directa del fenómeno por parte de los individuos dentro de un contexto específico. Este estudio de investigación se dirigió a 20 estudiantes de inglés del programa de licenciatura en enseñanza de lenguas extranjeras con énfasis en inglés (LILEI) de la Universidad Nacional Abierta y a Distancia - UNAD, en Colombia. La investigación obtuvo los datos a través de la aplicación de un cuestionario y una entrevista de grupo focal. El proceso de recolección de datos se dividió en dos fases, haciendo de éste un proceso secuencial en el que los datos recogidos de la aplicación del primer instrumento ayudaron al investigador a redefinir y ampliar el segundo.

Este enfoque secuencial de la recogida de datos permitió al investigador obtener datos ricos, comprensibles y complementarios. La información obtenida a través del cuestionario también se utilizó para complementar la información obtenida en la entrevista del grupo focal. El diseño de estos instrumentos se basó en los marcos de la T.A. y en el constructo de 'affordances' <asequibilidad> en el aprendizaje de lenguas mediado por tecnología.

6. Resultados

Los resultados de este estudio indican que los estudiantes del programa LILEI realizan con frecuencia actividades informales mediadas por tecnologías en línea para apoyar su instrucción formal de los cursos de inglés ofrecidos por el programa de licenciatura. Sin embargo, los resultados también parecen indicar que la capacidad de los alumnos para percibir los diferentes 'affordances' <asequibilidad> proporcionados por las tecnologías en línea que median esas actividades y las proporcionadas por las propias actividades es un factor decisivo que afecta directamente al nivel de éxito de los alumnos al realizar dichas actividades y, por tanto, al desarrollo de las habilidades comunicativas en Inglés.

Ser capaz de percibir los 'affordances' <asequibilidades> físicas (physical affordances), que son proporcionadas en su totalidad por el recurso en línea (artefacto mediador), es crucial en cualquier sistema de actividades mediadas por la tecnología, ya que esto es lo que parece permitir a los alumnos percibir los 'affordances' <asequibilidades> metacognitivas (metacognitive affordances), los 'affordances' <asequibilidad> sociales (social affordances) y los 'affordances'

<asequibilidades> para el aprendizaje de idiomas (language learning affordances). Del mismo modo, la incapacidad de percibir importantes asequibilidades físicas puede suponer importantes limitaciones para los alumnos, lo que les impide percibir asequibilidades educativas y sociales que esperan ser aprovechadas y que, de ser percibidas, podrían promover el aprendizaje de idiomas. Esto está en consonancia con las afirmaciones de Hammond (2016) que conceptualizan el término "affordances" como posibilidades de acciones que siempre son relativas a algo. Por lo tanto, se puede asumir que los 'affordances' <asequibilidades> de aprendizaje de idiomas son relativas a la capacidad de los alumnos de percibir otros 'affordances' <asequibilidades>, especialmente las tecnológicas.

Los 'affordances' <asequibilidades> tecnológicos también son relativos y parecen depender de las limitaciones de los artefactos, como el coste y la accesibilidad, pero también de la experiencia del alumno con el artefacto. Sin embargo, según los resultados de otros estudios (Morgan, 2007; Ibrahim y Rahimah, 2013; Nocchi, 2018), una interpretación más plausible y amplia es que las asequibilidades tecnológicas son relativas al contexto social, cultural e histórico de los alumnos. Por ejemplo, las pruebas mostraron que las plataformas de transmisión de vídeo ofrecían diferentes 'affordances' <asequibilidades> a los distintos participantes.

Como ya se ha dicho, los 'affordances' <asequibilidades> educativas, que en su mayoría son proporcionadas por el sistema de actividades en su conjunto, parecen depender del contexto social, cultural e histórico de los alumnos y, por tanto, de su capacidad para percibir las asequibilidades físicas fundamentales. Sin embargo, una vez que se perciben, se desbloquean las posibilidades de acciones que promueven el desarrollo de las habilidades metacognitivas, así como de las habilidades comunicativas en inglés. Estos resultados no parecen encajar con la definición inicial de asequibilidad de Gibson (1977, 1979) que sugiere que las asequibilidades son propiedades reales de un objeto, sino que se basan en investigaciones actuales (van Lier, 2004; Morgan, 2007; Hammond, 2010; Ibrahim y Rahimah, 2013; Nocchi, 2018) que sugieren que las asequibilidades pueden ser las propiedades reales de un objeto, así como acciones en potencia que solo se materializan o existen siempre que la capacidad del sujeto para percibir las y actuar sobre ellas se deba a su contexto social, y cultural, y a su compleja historia y experiencias personales.

En consecuencia, los resultados de esta investigación ponen de manifiesto los elementos sociales, culturales e históricos de T. A en relación con la percepción de los 'affordances'

<asequibilidades>, y la visión de van Lier (2004) de los ‘affordances’ <asequibilidades> en el aprendizaje de lenguas como acciones en potencia que suelen surgir a través de los intercambios entre usuarios basados en el contexto y las interacciones. No obstante, mientras que estudios anteriores (Ibrahim y Rahimah, 2013; Nocchi, 2018) han demostrado que la interacción social y la comunicación global representan la mayor parte de los ‘affordances’ <asequibilidades> percibidos por los estudiantes de idiomas, los resultados de este estudio demuestran que, aunque los estudiantes de LILEI reconocen la importancia de este tipo de ‘affordances’ <asequibilidades>, estos tienen dificultades para percibirlos y, cuando lo hacen, no siempre actúan en consecuencia.

7. Conclusiones

El impacto de las tecnologías recientes en el aprendizaje formal del inglés es innegable y se han realizado numerosas investigaciones sobre el tema. Sin embargo, este estudio forma parte de una tendencia relativamente pequeña pero creciente de investigación que se centra en el aprendizaje informal de idiomas mediado por la tecnología. Este estudio pone en evidencia la importancia de ampliar el conocimiento sobre el aprendizaje informal del inglés, especialmente para los modelos de educación a distancia en los que se espera que los alumnos tengan una alta capacidad de aprendizaje autónomo, y en los que la mayor parte del aprendizaje del idioma probablemente se produzca en el escenario informal. En estos escenarios, donde el inglés se aprende en una modalidad de educación a distancia, los alumnos realizan actividades de aprendizaje informal mediadas por la tecnología, y reconocen que sin este apoyo, el aprendizaje formal del inglés se vuelve insuficiente. En consecuencia, esto exige una investigación profunda y extensa que pueda contribuir a una comprensión más clara de cómo los individuos que participan en actividades informales de aprendizaje de idiomas mediadas por la tecnología adquieren competencias comunicativas.

Cuando se trata de aprender una lengua extranjera en los escenarios descritos anteriormente, el tipo y el número de ‘affordances’ <asequibilidades> que estos alumnos son capaces de percibir tienen un enorme impacto en su nivel de éxito. Este estudio ha identificado varios tipos de ‘affordances’ <asequibilidades> que, si se perciben y se actúa en consecuencia, pueden facilitar el aprendizaje de idiomas. Se trata de los ‘affordances’ <asequibilidades> físicos, los ‘affordances’ <asequibilidades> metacognitivos, los ‘affordances’ <asequibilidades> sociales y los ‘affordances’ <asequibilidades> para el aprendizaje de idiomas. Sin embargo, también se

han encontrado limitaciones importantes en cuanto al coste, la accesibilidad y la experiencia social, cultural e histórica de los alumnos. Estas posibilidades no suelen percibirse de forma aislada. Al contrario, funcionan como una red en la que la percepción de un ‘affordance’ <asequibilidad> puede llevar a descubrir otro. Por lo tanto, entender qué son estos ‘affordances’ <asequibilidades>, cómo funcionan, cómo se perciben y sus limitaciones puede tener un impacto significativo en el proceso de aprendizaje.

Aunque todas los ‘affordances’ <asequibilidades> percibidos por los alumnos son importantes, la capacidad de percibir ‘affordances’ <asequibilidades> físicos es de especial relevancia para el nivel de éxito en cualquier sistema de actividad de aprendizaje informal de inglés mediado por un artefacto tecnológico. La percepción de este tipo de ‘affordances’ <asequibilidades> o la incapacidad de percibirlos parece determinar la capacidad del alumno para percibir ‘affordances’ <asequibilidades> más complejos como los metacognitivos, los sociales o los ‘affordances’ <asequibilidades> de aprendizaje de idiomas. Los resultados de este estudio muestran que los alumnos que tienen dificultades para percibir los ‘affordances’ <asequibilidades> físicos simples, por ejemplo, la posibilidad de activar o desactivar los subtítulos en una plataforma de videos, probablemente tengan más dificultades para percibir los ‘affordances’ <asequibilidades> de aprendizaje de idiomas, entre otros.

Los resultados de estudios similares (Ibrahim y Rahimah, 2013; Nocchi, 2017) mostraron que los ‘affordances’ <asequibilidades> sociales se encontraban entre los más relevantes para los alumnos de Europa y Malasia porque permiten la interactividad, la transformación social, la conexión social, la co-construcción del conocimiento y más. Sin embargo, estos resultados no parecen coincidir con los hallazgos de este estudio. Aunque los estudiantes del programa LILEI reconocen y perciben estos ‘affordances’ <asequibilidades> y su importancia, ellos parecen tener algunas dificultades para actuar sobre ellos. Aprovechar las ventajas de los ‘affordances’ <asequibilidades> sociales e instruir a los estudiantes sobre cómo percibirlos y actuar sobre ellos puede tener un impacto positivo en el desarrollo de sus habilidades comunicativas, así como en el desarrollo social.

Elaborado por:	Juan Carlos Acosta		
Fecha de elaboración del Resumen:	29	5	2022

Abstract

This single-case qualitative study investigates the perceived affordances of informal activity systems mediated by online technologies that promote English learning. The purpose of the study was to analyze the affordances that FL teachers-in-training at UNAD perceive when engaging in such activities by identifying the online-technological resources that mediate them and by determining the types of perceived affordances and their influence. A qualitative word-based questionnaire was used to obtain broad data from 115 LILEI students, from which 20 participants were purposively selected to be interviewed in small focus groups. A descriptive approach based on a dynamic and fluid 2-cycle coding procedure was conducted to analyze and interpret the data. The results showed that being able to perceive and act on technological, social, metacognitive, and language learning affordances is a decisive factor for learners who engage in technology-mediated activities, which directly affects their level of success in learning a foreign language. Furthermore, being able to perceive physical affordances appears to be a prerequisite to perceiving more complex affordances such as educational and social ones. This study discusses the importance of expanding knowledge on informal English learning mediated by online technologies, especially for distance-education models, where learners are expected to have high autonomous learning skills, and where most of the language learning is likely to happen in the informal scenario.

Keywords: affordance, informal learning, online technology, activity system, activity

Theory

Table of Contents

List of Tables	22
List of Figures.....	23
Table of Appendices.....	24
Introduction.....	25
Introduction to the Research Study	27
Context of the Research Problem.....	27
Research Question and Objectives	29
General Objective	29
Specific Objectives	29
Rationale for the Study.....	29
Rationale for the Research Problem	30
Rationale for the Methodologies to Address the Problem.....	31
Literature Review	33
State of the Art	34
Social constructivism – a learning theory.....	34
Language Learning Autonomy and E-learning	35
Informal instruction as support of formal language instruction	37
Technology and informal language learning	38
Concept of affordance and its use in language learning.....	40

Theoretical Framework	43
Vygotsky’s sociocultural learning theory	44
Activity Theory: Vygotsky’s project – Leont’ev’s and Engeström’s models	47
Rationale of the research study on the literature	53
The concept of Affordance in Online Multimedia Technology-mediated Language Learning grounded on activity theory frameworks	53
Research Design	58
Methodological Design	58
Research Method	58
Research Approach.....	59
Context of the Research	60
Population and sampling procedure	60
Researcher’s impact.....	61
Ethical Protocol	62
Data collection Techniques	63
Description and rationale of the instruments.....	64
Validation procedures.....	66
Pedagogical Intervention and Application	68
Data Analysis and Findings.....	70
Data Management Procedures.....	70

First Cycle Coding Method	71
Second Cycle Coding Method.....	72
Categories.....	72
Discussion of Categories	74
Hypothesis Testing and Operationalization of Variables.....	91
Reliability and Validity of Analysis and Findings	95
Discussions and Conclusions	97
Significance of the Results	97
Pedagogical and Research Implications for the Field of Study	99
Research Limitations on the Present Study	101
Recommendations for Future Research	102
Conclusions	103
References	105

List of Tables

Table 1: <i>Operationalization of variables</i>	94
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List of Figures

Figure 1: <i>Leont'ev's hierarchical complexity-level of activity theory construct</i>	49
Figure 2: <i>Engeström's model</i>	51
Figure 3: <i>Activity system: Informal EFL learning mediated by online multimedia and communication technologies</i>	56
Figure 4: <i>Overall Category Mapping</i>	73
Figure 5: <i>Most Common Online Technological Resources</i>	79
Figure 6: <i>Perceived affordances in the activity systems mediated by online resources</i>	92

Table of Appendices

Appendix A: Informed consent	117
Appendix B: Data collection instrument 1 (open-ended questionnaire)	123
Appendix C: Data collection instrument 2 (Focus group script)	130
Appendix D: Instrument quality checklist	134
Appendix E: Expert validation instrument	136
Appendix F: Pilot test validation instrument	143
Appendix G: Coding matrix	146

Introduction

If authentic English use available on online multimedia sources and the one available in formal instruction are compared, it could be argued that the one provided inside the classrooms offers more possibilities for learning since it is carefully designed and selected for this purpose.

However, learners' exposure to authentic interactions beyond the classrooms has proven to be of great importance for successful English learning (Nunan, 2014; Richards, 2015). In Colombia, most of this type of exposure is only provided through online multimedia and communication technologies. Therefore, the purpose of this study is to analyze the perceived learning attributes, capabilities, or limitations (affordances) of informal activities mediated by these online technologies that English learners carry out to complement their formal instruction.

The use of online technologies seems to be a rapidly increasing, and far-reaching phenomenon that has permeated most areas in everyday life which determines how people interact with nearly all activity systems. According to Rückriem (2009), it is the basis of the globalized world, and there is nothing outside it since it has fundamentally changed reality itself. The applications of these technologies have been widely studied in different fields including that of language teaching and learning, but most of them focus on individual variables such as writing skills, motivation, autonomy, among others (Zeng, 2020).

Through the perspective of activity theory and the construct of affordance for research in technology-mediated environments, this study goes beyond individual elements of language learning and aims to analyze the perception of teachers in training from the Bachelor's Degree of Foreign Language Teaching with Emphasis on English from the UNAD (hereinafter referred to as LILEI for its acronym in Spanish) regarding the attributes, capabilities, or limitations of online technology-mediated activities that they carry out to complement their formal English learning.

This research study is presented in different chapters that give an account of important elements, and the structured process that were carried out to accomplish its objectives.

In chapter I, a complete description of the problem and research question is made, and the objectives, scope, delimitations, and rationale of the study are stated. Chapter II addresses the literature that delineates the theoretical and empirical foundation of the study given its focus as well as some findings in different contexts related to the problem statement in the hope of providing a theoretical validation and a deep review on key theoretical principles and assumptions that underpin the present research. In this chapter, the relevance, and the pertinence of Vygotsky's sociocultural theory, Leont'ev's and Engeström's models of activity theory, and the affordance construct as theoretical lenses for the study are examined. In Chapter III, a complete description of the research design, procedures, methods of data collection, the sample, and the techniques that were used for analysis is presented. After that, Chapter IV addresses the data analysis procedures, the discussion of categories, the findings, and their reliability and validity. Finally, the significance of the results, the pedagogical and research implications, the limitations, recommendations, and conclusions of the current study are presented in Chapter V.

Introduction to the Research Study

Language learners who see the need to engage in informal activities to complement their formal language instruction in academic settings are likely to use online multimedia and communication technologies as a means to carry out those activities. This seems to be especially true for students enrolled in distance learning programs given the characteristics of the e-learning model that they follow. However, there is little evidence of the perceptions that these learners may have regarding the learning affordances (attributes, capabilities, or limitations) of the online technology-mediated activities they perform. This chapter provides a complete description of this research problem and addresses relevant aspects such as the research question, and the general and specific objectives. In addition, the rationale of the study is also stated in the hope of structuring this as a solid and clear statement of the research problem.

Context of the Research Problem

Online multimedia and communication technologies have played a key role for many English learners in the country, especially for those studying in distance learning programs like the ones enrolled in the LILEI program at UNAD, which curricular guidelines indicate that its curricular model is based on e-learning, and the social constructivist approach (UNAD, 2016). Franklin and Van Harmelen (2007) acknowledge the contributions made by these online resources to the constructivist approach where knowledge is constructed by the students, in context, and through social interaction. Although learners at this program, especially learners in the last semesters, seem to freely engage in activities mediated by online technologies to complement their formal English learning instruction, there is little evidence on the learning attributes, capabilities, or limitations of the online technology-mediated activities they perform.

Contrary to “English use” in formal learning scenarios, the one outside the formal instruction dimension is unstructured and involves complex routines and rituals resulting in authentic English rather than a display of the language (McCarthy and Wash, 2003). Therefore, the informal tasks mediated by online technologies that are chosen by the learners from the LILEI program must contain learning attributes or affordances that facilitate informal language learning. In the field of education, there is an important number of studies that investigate the affordance of information and communication technologies (ICT), and their impact on learners’ learning experience (Arenas, 2015). In the field of language learning, Lantolf and Thorne (2006) describe the concept of affordance as the capacity of an online multimedia resource to facilitate language learning. Furthermore, Gibson (1979) suggests that analyzing and finding an affordance is to detect the meaning or value of the objects in relation to the individuals’ objectives, intentions, and influences.

Consequently, analyzing the affordances of the informal activities mediated by online technologies that these teachers in training carry out to complement their formal English instruction might have potential benefits for the LILEI students when choosing what to do to promote their informal language learning and how to do it. Similarly, the findings from this research can provide the tutors in the program and administrators with meaningful insights regarding the learning attributes, capabilities, or limitations of the resources, activities, and virtual learning objects they use when redesigning the courses. These findings will also have the potential to extend the existing knowledge about the different multimedia online resources that might support students’ informal language learning and their affordances. Finally, researching this problem could contribute to future research on related important issues such as technology-mediated and self-directed informal language learning in the national context.

Research Question and Objectives

What are the perceived affordances of students from the LILEI program at UNAD in the informal English learning activities mediated by online technologies that they perform to complement their formal English instruction?

General Objective

To analyze the perceived affordances in the informal English learning activities mediated by online technologies that the students from the LILEI program at UNAD perform to complement their formal English instruction.

Specific Objectives

To identify the online-technological resources involved in the informal English learning activities that the students from the LILEI program at UNAD perform to complement their formal instruction.

To determine the perceived affordances in informal English learning activities mediated by online-technological resources that the students from the LILEI program at UNAD perform to complement their formal instruction.

Rationale for the Study

Richards (2015) suggests that the affordance for language learning outside the classrooms or in informal settings is growing, which may pose new challenges as well as opportunities for language teachers and learners, especially in distance learning models. Therefore, this study might be a starting point toward a complete understanding of what those challenges and possibilities are in the Colombian context and language distance learning. Furthermore, advancing research on the affordance of activities mediated by online technologies that learners autonomously carry out to support their formal language instruction may contribute to the

development of a “theory of second language learning beyond the classroom similar to the theory of instructed second language acquisition put forward by Ellis (1995)” (Benson, 2011, p. 15).

The use of online multimedia and communication technologies as a resource for autonomous language learning outside the classrooms is likely to become a pressing issue in the language teaching field. Thus, Colombian schools and universities need to examine how their students learn through these technologies in out-of-class environments to design new and contemporary approaches to language learning.

Rationale for the Research Problem

The role of online technologies for language learning has been researched at large during the past decades, and ELT and technology have become an emerging trend in language teaching research (Pardede, 2018). Richards (2015) makes a personal reflection on the evolution that the field of teaching English as a foreign and second language has gone through over the past 30 years and suggests that multimedia centers and video and computer-based resources are now perceived as common teaching and learning resources. In his paper, Richards also states that the idea that language learning can occur inside and outside the classroom has also been widely accepted. Learners from the LILEI program at UNAD are expected to use different online and technological resources for learning given the e-learning and constructivist model that the university follows. However, there is no evidence of research about the affordances of the informal activities mediated by only technologies that these learners autonomously carry out to support their formal learning.

Therefore, researching this problem may have the potential to expand knowledge from current research about online and technological resources in formal language learning settings to language learning beyond the classrooms and in informal settings. Also, students and teachers

will benefit from this study by gaining a better understanding of possible learning affordances of online technological resources regarding language learning. Similarly, these findings will be of value to course designers and decision-makers subscribed to the LILEI program at UNAD since these results could serve as guidelines for designing strategies that use online authentic English resources that promote independent language learning.

Rationale for the Methodologies to Address the Problem

This study was to focus on analyzing the informal activities mediated by online technologies that students autonomously perform to complement their formal English instruction in terms of their capacities or limitations for language learning. As such, it made use of the different concepts and notions of technology and learning and learning strategies to determine what the learning attributes, capabilities, or limitations of those resources are.

This research was conducted with a group of students from the LILEI program at UNAD who were purposively chosen from different parts of the country to create a solid case study with defined boundaries. The results and findings were obtained from data collected through group interviews and questionnaires as well as theoretical references. This is a comprehensible study of the most common informal English learning activities mediated by online technologies used by these learners, and their affordances in a particular setting. Therefore, it is expected that the findings obtained in the study will provide learners and language instructors with a deeper understanding of different online and technological resources, and their capabilities and limitations for language learning. Given the size of the population, the research objectives, and the scope of the research, the following limitations need to be established:

-The Foreign Language Teaching Program at UNAD is the second biggest teaching program in the university and the biggest foreign language teaching training program in the

country with more than three thousand students each academic term. Therefore, the sample was limited to only a group of learners who are enrolled in the program. This group was big enough to make generalizations, but not so big that it interfered with the timetable and resources available.

The notion of the term affordance is also broad and varied. Gibson first used the concept in 1966 in the field of Biology, since then, the term has been used in different fields and for different purposes. This study regards the term “affordance” as the different attributes, capabilities, or limitations that online technological resources have to facilitate language learning (Lantolf & Thorne, 2006) in relation to their use, and what the learner does and wants (Van Lier, 2000)

Literature Review

This chapter aims to address and analyze the current literature that delineates the theoretical and conceptual foundation for this research. The literature here reviewed also provides directions for comprehending and interpreting the connection that exists between distance learning, language learning beyond formal settings, technology, and the affordances they provide. Firstly, this chapter presents a critical and thorough review of the state of the art in five different areas in the field of language learning that intersect with each other given the focus of the research. These areas are 1) social constructivism – learning theory; 2) language learning autonomy and E-learning; 3) informal instruction as support of formal instruction; 4) technology and informal language learning; 5) the concept of affordance and affordance in language learning. Then some findings in the international, Latin American and Colombian contexts related to the problem statement of this research are listed in the hope of providing a theoretical validation for the study.

Secondly, a deep review is carried out on key theoretical principles and assumptions that underpin and best inform the present research study. The theoretical lens that frames this study is articulated from Vygotsky's, Leont'ev's, and Engeström's characterization of Activity Theory (A.T.), an overview of sociocultural theory, and the ecological perspective of affordance and its adaptation as a construct for research in technology-mediated environments. These constructs are first individually explained, and then their theoretical appropriateness and justification for their use in the study are detailed. And finally, an explication of how they are interconnected in the study is provided.

State of the Art

Social constructivism – a learning theory

Constructivism was born in response to traditional behaviorist approaches put forward by Skinner, who believed that the behavior of individuals could be explained as a set of philosophical answers conditioned by their surroundings (Skinner, 1958). In contrast to this traditional learning theory, constructivism perceives the act of learning as a self-regulated process in which knowledge is constructed by the learners through concrete experiences, discussion, and reflection (Brooks and Brooks, 1993; Holzer, 1994). Constructivism is a philosophical perspective shared by different stands in psychology and education research. The most prominent of these are the theories of Piaget (1952), Vygotsky (1978), Ausubel (1963), and Bruner (1960), and even though, neither of them called themselves a constructivist, their beliefs clearly illustrate the core idea of this educational current.

According to Liew and Matthews (2005), constructivism is often divided into two major variants. The first one is the cognitive constructivism variant based mainly on Piaget's work. In this theory, knowledge is constructed in a dynamic process during the active engagement of the learners who are the ones responsible for the learning (Gilakjani, Leong, and Ismail, 2013). This line of constructivism sees the construction of knowledge as an "interpersonal process." This means that knowledge is not transmitted, but rather self-constructed or discovered (Liew and Matthews, 2005). The second variant is social or realist constructivism, which is believed to stem mainly from Vygotsky's ideas about the central role of the social environment in learning. In Social Constructivism, knowledge is not created by the individual alone, but rather in context, and as the result of social interactions (Franklin and Van Harmelen (2007).

Dale (2010) argues that meaning is derived from social interactions and therefore through social life. Consequently, curricular models that use social constructivist approaches as their main educational current are particularly aided by online multimedia and communication technologies since they allow students to engage in sociocultural exchanges. Thus, the growing role of new online multimedia and communication technologies in education, especially in distance learning where students are expected to acquire preparation, execution, and evaluation abilities to conduct their own learning (Moor, 1972).

Language Learning Autonomy and E-learning

As observed in the previous section, social constructivism learning theory seems to be the most appropriate model for e-learning since it ensures that the construction of new knowledge is based on prior experiences and that learning occurs among learners and through social interactions (Koohang et al., 2009). Koohang and Harman (2005) define E-learning or Distance Education as the “delivery of education (all activities related to learning) through different electronic media.” E-learning can also be defined as the intentional use of multimedia online resources and communication and network technologies in teaching and learning (Naidu, 2006). For Bates (1997), E-learning has offered opportunities for new learning environments that have not only improved the means of learning but have also reshaped our perception of the nature of learning. Anderson and Dron (2011) argue that this shift of the learning paradigm has evolved through at least three generations of pedagogy, and it has now moved towards a concept in which “learning is continuous, lifelong and connectivist, and where learner autonomy is emphasized.”

Autonomous learning is an essential competency that every learner must acquire in distance education since, according to Andrade (2014), learners are expected to obtain gains from the environment, materials, and different tools available with their self-control and free

will. In the field of foreign language learning, the notion of learner autonomy was first articulated in 1979 by Holec in his report for the Council of Europe and since then, autonomy in language learning has been widely studied. However, the term “autonomy” seems to be easily confused in the literature, and it is sometimes referred to as independent learning, self-instruction, or self-teaching, and it is often viewed from different perspectives. Benson and Voller (2014) and Benson (2001) defined learner autonomy as the ability to take self-regulated responsibility for one’s learning. Loyens, Madga, and Rikers (2008) believe that learner autonomy is self-regulating and self-directing one’s learning along with the ability to function autonomously. For Little (1991), learner autonomy is when learners have control over the learning goals and the content to be learned. In its broadest definition, learner autonomy is a construct of the ability that a learner has for making informed interventions and decisions in his or her own learning.

All these definitions evidence the benefits and contributions that learner autonomy brings to E-learning environments where learners take control and responsibility for their own learning (Zimmerman, 2002), and are actively involved in the process while connecting their beliefs, thoughts, and ideas with the world beyond formal instruction. In the case of foreign language learning, this means taking the language out of the classroom and to use it autonomously. Nunan (2014), argues that learner autonomy is always present when learners engage in language learning activities beyond the classroom or in informal settings. Therefore, engaging in informal language learning out-of-class tasks to complement formal instruction might be a sign of autonomous learning.

Informal instruction as support of formal language instruction

Richards (2015) makes a distinction between two dimensions where language learning occurs. He distinguishes between what happens inside the classrooms (formal instruction) and what happens beyond the classrooms (informal instruction). He argues that, in the past, this distinction was mainly perceived from the notion that language learning in the classroom was the preparation for the out-of-class use of the language. This led to an enormous difference in the amount of research carried out in the two dimensions. Consequently, most of the research in language learning in the last century was focused on methods, techniques, learning strategies, syllabus design, curriculum, and all the other elements that were related to formal instruction, and the opportunities and conditions that could be created inside the classrooms for language learning to occur.

The concept of language learning beyond the classroom, however, has been gaining momentum in the last decades due to the increasing evidence that suggests that high levels of proficiency and language learning success are attributed not only to what happens in the classrooms but also to the learners' engagements out of the classrooms (Benson, 2011; Dincer, 2020; Nunan, 2014; Nunan & Richards, 2015; Richards, 2015). According to De Oliveira (2008), classroom-based language learning has many limitations, and the resources and conditions in these formal scenarios are not always sufficient for students to succeed in language learning. Richards (2015) also refers to these limitations by arguing that opportunities for learning in the classrooms are limited to a variety of discourse and literacy unrealistic practices resulting in restricted "affordances" in formal instruction. Therefore, learners must look for affordances out of the classrooms.

Nunan and Richards (2014, 2015) believe that these two dimensions are not opposed to one another, but rather support each other, and that language learning beyond the classroom complements formal curricula. This idea is based on the principles of learner autonomy that suggest that there is a link between personalized and autonomous learning with successful language learning outcomes (Kettle, 2015). Out-of-class language learning engagements and activities are described in detail by Nunan and Richards (2015), and by Benson and Reinders (2017) among other important authors who emphasize the role of online multimedia and communication technologies in autonomous language learning in informal settings (Dincer, 2020)

Technology and informal language learning

During the past decades, there has been an important growth in the literature in the field that indicates that language learning also occurs outside the classrooms and beyond formal settings through several types of interactions with native speakers and constant exposure to authentic use of the language. (Bentley, 2012; Chen, 2013; Dincer, 2020; Benson, 2011; Benson & Reinders, 2017; Nunan and Richards 2014; Richards, 2015). Although language learning in an informal setting does not follow any particular structure, and it is a process with no particular purpose, it is the most important part of the learning that most people do every day (Rogers, 2004). Kuure (2011) exemplifies this by making an interesting observation about the role of English in Finland and argues that Finnish young people voluntarily expose themselves to the English language outside the classroom to accomplish personal goals. Consequently, Finnish young people seem to be more fluent in English compared to learners from south Europe and South America (Richards, 2015).

Although this is true in many European countries due to their particular contexts where English is learned as a second language, the so-called pop culture, and the different multimedia platforms in English (as cited in Richards, 2015), this is arguably the case for most learners in Latin American countries like Colombia. In these countries, English is learned as a foreign language, and the primary language input still seems to come from formal English learning settings where opportunities for authentic interaction are often scarce. However, the rapid advancements in online multimedia and communication technologies in the region have provided learners with new opportunities for interaction and authentic use of the target language out of the classroom. In fact, Mayya (2007) suggests that these advancements in technology do not only provide students with new opportunities for language learners but are changing the process of learning and education in general.

Online multimedia and communication technologies possess unique properties that might benefit language learning (Garrison & Anderson, 2003), and there is evidence that engaging in digital practices might also support formal instruction (Chick & Ho, 2017; Chick, 2018; Lai et al., 2018; Nunan & Richards, 2015). Reinders, Nunan, and Zou (2017), state that learners who use technological means to communicate with other people in the target language for intrinsic motivations such as meeting new people on online random chat sites, negotiating for meaning while playing online games, or completing tasks that require the use of the target language do not only report significant progress on their learning, but also a decrease in anxiety, and an increase in confidence, motivation, and autonomy as well as the desire to continue their formal studies of the language.

As it can be observed in this section of the literature review, there is important theoretical evidence that suggests that online multimedia and communication technologies do potentially

facilitate language learning beyond the classrooms, however, there are also indications that this is not always the case (Reinders & White, 2016). According to Benson and Reinders (2017), the learning attributes, capabilities, or limitations that these technological environments offer learners are not completely understood yet, neither are the reasons why learners use these technologies, nor their impact on the amount of learning. Thus, the pertinence of looking at the specific affordances of the different technologies that learners use beyond the classroom as a support for their formal instruction.

Concept of affordance and its use in language learning

The American psychologist James Gibson first articulated the concept of “affordance” in 1977, and then explained the term in detail in his book *The Ecological Approach to Visual Perception* (1979). In his book, Gibson approached psychology from an ecological perspective; he believed that the accomplishment of practical and cognitive tasks of an animal is critically connected to the ecosystem where it is placed. The idea of affordance is related to the direct perception of the animal, and the properties or qualities provided by the environment with respect to the animal.

When affordances (properties) are recognized by the organism, actions are executed. In this way, actions and perceptions are linked through objects that afford possibilities for action. For instance, an organism perceives water (the object) in its niche, then it recognizes the affordances water offers such as drinking, swimming, etc. (perception), and then it acts on them (action) (Nocchi, 2017). According to Gibson (2015), affordances are what the environment provides to the individual, “either good or ill”. A knife, for example, may offer positive and negative affordances depending on the individual’s perception and intentions.

The concept of “affordance” has increasingly been used in different fields due to its applications. In technology, Gaver (1991), defines the concept as the capabilities and limitations technologies have to offer in relation to the dynamic relationship between the object (technologies) and the actor (the people who use the technologies). In the field of language learning, the concept of affordance is often referred to as the capacities and qualities of technology to promote various types of language learning in an individual (Lantolf & Thorne, 2006; van Lier, 2000, 2004).

As observed so far, this literature review clearly shows the connection between language learning, informal learning environments, and technology and its different affordances. This connection is analyzed in a study similar to this carried out by Ibrahim and Rahimah. The study is titled “Perceived Affordances and Learning Strategies of Malaysian University Students in Web 2.0 - Based Informal Learning of English as a Second Language” it was conducted in 2013 at La Trobe University in Australia. The objective of this study was to examine the perceived affordances of Web 2.0 and its effects on informal ESL practices of Malaysian students. The researchers applied a mixed-method approach in which more than four hundred learners participated in surveys and 20 learners in focus-group interviews. The results of this study showed that most of the participants perceived the affordances of Web 2.0 tools for sociocultural interactions that motivated and improved their informal ESL learning.

In 2017, Susanna Nocchi also studied the affordances of a technological tool for language learning. In her study called “The Affordances of Virtual Worlds for Language Learning” at the University of Pisa in Italy, the researcher attempted to identify what affordances virtual worlds environments can offer for FL teaching and learning. In this study, several learners of Italian as a second language participated in in-world sessions in which video recordings were later analyzed

by the researcher. The findings in this study provided insight into the role of the participants, their use of the medium, and its social affordances indicating that the emergence of social and technical affordances may support foreign language learning.

In Latin America, some studies concerning the affordances of technological tools have also been carried out. One of these is the one conducted by Veronica Yopez at the Universidad Catolica de Ecuador in 2018. The purpose of her study “Facilidades y Posibilidades de uso (affordances) del Aprendizaje Móvil en la Educación Superior” or “Affordances of M-Learning in Higher Education” in English was to determine the affordances of M-Learning for its application in higher education in Ecuador. At the end of the study, the researcher concluded that connecting formal learning environments with informal learning environments such as M-learning environments promotes cooperation, accessibility, and mobility which can emerge as affordances for meaningful learning in any area of knowledge.

In Colombia, the role of online and digital communication technologies in language learning in formal and informal settings has also been studied. However, it seems that the affordances that these technologies might provide have not been paid much attention to. Nevertheless, some studies indicate more research on the topic in the region is needed. Among these studies is the one carried out by J.S McDougald at Universidad de la Sabana in 2013. His study “The use of new technologies among in-service Colombian ELT teachers” sought to determine the extent to which former students from the master’s Program in English Language Teaching in Autonomous Environments used ICT/Web 2.0 tools to foster autonomous informal learning in their students, and to identify what tools were been used. The results from this study, suggest that teachers are becoming more comfortable in assessing these technological tools in

accordance with their teaching context and the opportunities and possibilities that they offer to autonomous language learning.

Another interesting study carried out in the Colombian context is the one conducted by Lorena Rojas at the Universidad Pedagógica y Tecnológica de Colombia in 2020. The study was named “Autonomous Learning of English as a Foreign Language in a Culturally integrated B-Learning Ecosystem”. In her study, the researcher intended to determine the possibilities and opportunities a B-learning ecosystem could offer learners to improve their oral skills in English. The results obtained after the study was concluded, suggest that B-learning ecosystems do offer opportunities for improvement, or in other words affordances. This study uses an ecologist perspective, and it highlights the concept of affordances in language learning. However, the idea of affordances in the study is seen as the potential for learning linguistic elements.

As indicated earlier, this chapter provides a strong groundwork that contextualizes the study and provides important references from current literature. The subsequent segment of the chapter attempts to establish a strong and solid theoretical framework that can provide a guide on which to construct and support the study by presenting sound theoretical underpinnings from the socio-constructivist theory, activity theory, and affordance theory.

Theoretical Framework

So far, current and relevant literature has been reviewed in order to lay the contextual foundations for this study. Now, a deep review is carried out on key theoretical principles and assumptions that underpin and best inform the present research study. The purpose of this study is to analyze the perceived affordances of the most common informal English learning activities mediated by online technologies carried out outside formal instructional settings. Consequently, a case has been put forward for analyzing the learning attributes, capabilities, or limitations of

those informal activities mediated by online resulting in information that can be later interpreted and conceptualized, using the ecological perspective of the affordance theory (Gibson, 1979), and activity theory frameworks, to contribute meaningfully to practical applications for second and foreign language learning beyond the classrooms through online multimedia technologies.

Vygotsky's sociocultural learning theory

The sociocultural theory is a theory that originated in the field of Russian/Soviet psychology (Vygotsky, 1978, 1986). In this theory, learning and the development of the individual, in general, are conceived through social interactions and collaboration. Engeström (2001) notes that this development occurs at a bifold level. The first one is inter-psychological which refers to the social level, and the interactions between people. The second one refers to the individual level or also known as the intra-psychological level, and neither of them could be understood without the other.

The interrelation of these two levels can be perceived in the current literature that evidence the emergence of four principles related to the sociocultural theory of learning (Gedera & Williams, 2016). The first principle is that of “the human mind is mediated” (Lantolf and Pavlenko, 2001). The second principle is related to the context in which learning occurs and its role in learning (Barab & Duffy, 2000) whereas the third principle has to do with the role of goals of the individual when undertaking an activity and how they promote development and learning. Finally, the last principle of the sociocultural theory of learning concerns the benefits that participating in the practices of a community has on learning and development.

The advent of technology and online multimedia and communication resources has led researchers and academics to recognize the role and value of Vygotsky's sociocultural frameworks for understanding learning within socio-cultural contexts (Rückriem, 2009).

Similarly, the potential relevance of the sociocultural theory has also been vastly explored in the field of second and foreign language learning (Lantolf, 2000; Lantolf & Pavlenko, 1995). For Lantolf and Pavlenko(2001), the first principle of the “human mind is mediated” is one of the most fundamental concepts of sociocultural theory since individuals use “tools” that mediate their relationship with the world. Along with mediation, the concept of activity is also an important concept in the sociocultural theory which was used by Vygotsky to express the integration of mind and act, and individual and society (Swain et al., 2015)

Mediation and Activity in the Sociocultural Theory. Lantolf and Thorne (2006) identify three central factors that organize the human psychological process. The first one is “activities” that may involve education, medical systems, work, esthetic creations, play, and entertainment, among others. The second one is “artifacts” which refers to the use of physical tools such as utensils, books, computers, and technological and multimedia resources as well as symbolic tools such as language, music, sounds, numeric systems, etc. The last factor is that of “concepts” which refers to the understanding of social constructs of mental, physical, and personal worlds. Similarly, Ratner (2002) states that sociocultural theory concerns psychological phenomena (in terms of content, interrelationships, and mode of process) that are constructed and shared in society, and that are engrained in social artifacts.

Vygotsky first introduced the concept of artifacts when he developed his idea of mediation. In the sociocultural theory, all the physical objects, as well as the symbolic ones, are considered artifacts (Vygotsky, 1978, 1987). Consequently, goal-driven actions through the usage of an artifact whether it is physical or symbolic constitute an activity. Lantolf and Thorne (2006) argue that these activities are always goal-driven, and they always take form through artifacts that can be both material and symbolic at the same time. According to Swain et al.

(2015), Vygotsky's most profound contribution to this construct is that "all forms of human mental activity are mediated by material and/or symbolic means that are constructed within and through cultural activity" (p. 2).

As observed above, the relationships between the individual with other people, with the material world, and with his or her inner world are mediated by artifacts (a chair, a hammer, clothes, computers, the internet, concepts, belief systems, etc.) However, not all artifacts mediate people's interactions with the world. Artifacts, physical or symbolic, have the potential of becoming mediating means if and when they are perceived as such. If an individual uses an artifact as a mediational tool, he or she has to consider the artifact itself and has to know how, when, why, and where he or she uses it (Swain et al., 2015). This claim indicates certain compatibility with the concept of affordance which may contribute to the concept of mediation in the sociocultural theory in the sense that an artifact offers learning attributes that are ready to be used if they are perceived by the individual.

In the current study, this construct of the theoretical framework underpins and validates online multimedia and communication technologies as socially constructed artifacts that mediate between the learners and the potential knowledge to be gained in a broad sociocultural context. Language learners who use online multimedia and communication technologies within informal settings engage in artifact-mediated activities that occur in a historical and sociocultural context. These goal-driven activities have been mostly analyzed by activity theory studies of learning that focus on social mediation processes (Ibrahim and Rahimah, 2013).

Vygotsky's activity theory attempts to conceptualize the relationship between human activities that are motivated by physical or social aspects and human cognition. Swain et al (2015) describe it as a socially mediated action, which is all activities people do to satisfy their

physical and psychological needs. Activity theory provides a framework that allows the researcher to establish a threefold relation system between the subject (the individual or group of individuals), the sociocultural artifact (physical or symbolic tool), and the object (the goal, purpose, or intention) (Vygotsky, 1978). However, Vygotsky only provided the basic idea of activity and did not have the opportunity to construct a coherent and sound theory. Therefore, the analytical and theoretical principles that frame this study come from the contributions to the activity theory made by his colleague Leont'ev (1978), and Engeström, (1999).

Activity Theory: Vygotsky's project – Leont'ev's and Engeström's models

Activity theory started with Vygotsky's attempts to theorize the dynamic interactions between human cognition and socially and physically motivated and mediated activities (Swain, et al., 2015). As observed in the previous section, Vygotsky's early version of activity theory focused on mediation and activity and the relation between the subject, the object, the tool, and the outcome. However, this construct was never fully developed due to his death. Nevertheless, Vygotsky's powerful ideas inspired numerous concepts, models, and theories drawn from this construct. Stetsenko and Arieviditch (2010) refer to this as the Vygotsky project. With this in mind, this section will focus mainly on Leont'ev's (1978), and Engeström's (1987, 1999) models of activity theory. Leont'ev's model of the theory attempted to make Vygotsky's concepts more explicit and based his theory on three layers of an activity (motive, actions, and conditions) while Engeström's model highlights cultural mediation and the community elements of activity, and the relations between the human mind and the collective (Ramanair, 2016).

This emphasis on mediated artifacts or tools, including online multimedia and communication technologies, does not only focus on the activity itself but also on the interactions between the learners and the online multimedia and communication technologies.

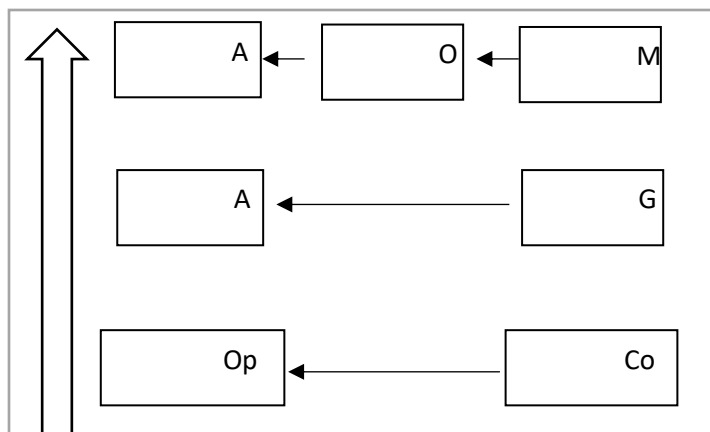
Consequently, when learners engage in online technological activities, they are seemed to be doing something else rather than using the tool. For example, if a learner watches a video online, he or she is achieving an objective, and the online multimedia platform on which the video is being steamed is the mediational tool that allowed the achievement of said goal. According to this perspective, the analysis and assessment of the affordances of the online technological artifacts should not focus only on identifying their useability and learning potential, but also on how well the mediation artifact supports the learners' informal language learning activities as well as their own objectives and goals.

Activity Theory: Leont'ev's Model. Leont'ev (1978, 1981) extended Vygotsky's initial model by making more explicit the relation between the individual and society by redefining the concept of activity as a meaningful sociocultural activity that enables individuals to fulfill their basic biological, psychological, and social needs (Swain et al., 2015). Leont'ev also developed the concepts of activity and action to explore mediation in situated contexts. These are part of his analysis that functions through his three-layer structure-activity, action, and operation, and its variables – object, goal, and condition (Kaptelinin & Nardi, 2006).

Swain et al. (2015) explain that in Leont've's activity theory, the activity is related to the motivation and the object since all activities are driven by a motive. The motive is the desire or drive to fulfill a cognitive or emotional need. In the same way, these biological, psychological, or socially driven activities (motive-driven activities) are instantiated by actions and/or goals, and these actions and goals might be specific to each subject, time, and place. Furthermore, all actions occur under specific circumstances or conditions that expose operations. Operations are the familiar mental procedures that the individual uses automatically and unconsciously. Leont'ev's hierarchical complexity-level construct is represented in figure 1.

Figure 1

Leont'ev's hierarchical complexity-level of activity theory construct



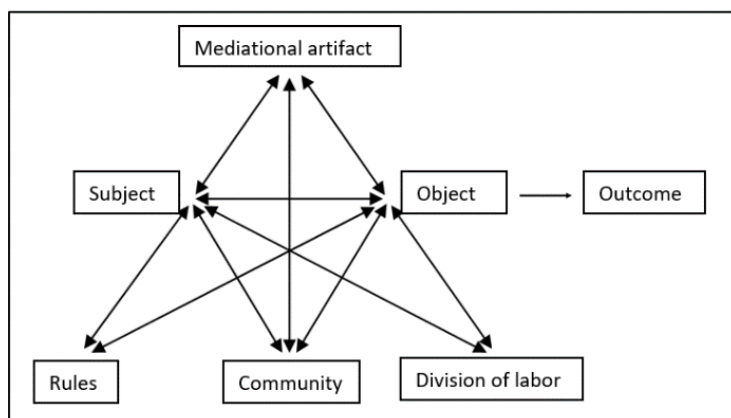
In the present study, the activity (using online multimedia and communication technologies) is identified through the object and driven by the motive (support formal English instruction). This motive is instantiated by the goal-driven action (i.e., watch a Ted Talk on YouTube to improve listening skills) and under specific conditions (whether the video had captions on or the number of times the individual went back to specific parts of the video) which expose the learner's automatic and unconscious operations. Thus, the learner has to make active adaptations to his actions and environment for successful informal language learning activities. Therefore, the individuals' goals and intentions within informal FL learning through online multimedia and communication technologies will be uncovered in this study as well as their learning conditions in order to comprehend their level of operation, and consequently the possible learning attributes, capabilities, or limitations of the mediation artifacts for each learner.

Activity theory has been used as a theoretical lens in many research studies and in different disciplines given its nature (Blunden, 2010). Consequently, the principles of activity theory have been expanded and modified over time. In the following section of this chapter, the

theoretical framework draws on Engeström's model of activity theory since it provides a conceptual framework for understanding informal FL learning mediated by online multimedia and communication technologies as a complex system, and it provides a broader understanding of the relationships between the learners, the resources available online, and informal learning.

Activity Theory: Engeström's Model. Engeström (1987, 2015) further developed and expanded on Vygotsky's initial model, and on Leont'ev's extended model and concepts into a conceptual structure that emphasizes the socio-cultural context of activity and the role of cultural mediation, and that represents artifact-mediated social activities of social and collaborative nature. According to Issroff and Scanlon (2002), rather than focusing on individual actions and processes, Engeström's model emphasizes the sociocultural-constructed context. In order to make all these dynamic elements (the subject, the subject's histories, sociocultural contexts mediational objects, and goals) explicit, Engeström (1999) extended Leont'ev's conceptual triangle by including three more mediators - community, rules, and division of labor.

Rules are the conventions that might outline the actions of the individual, and how they interact with the activity system. Engeström (1987) suggests that these rules can be classified into informal or explicit conduct when doing things. The concept of community in the activity system triangle represents cognition and learning as a social construct since the subjects are part of a community (Ibrahim and Rahimah, 2013). Division of labor is a concept also known as "role" (Mwalongo, 2016), and it describes the distribution of roles, power, and responsibilities of the individual. This triangle seems to be the most common representation of the action within the activity system (Swain et al., 2015). A diagram of Engeström's extended triangle is illustrated in figure 2.

Figure 2*Engeström's model*

As illustrated in figure 2, in Engeström's model, all activities undertaken by individuals are goal-driven actions towards objects, and these object-orientated actions are mediated by mediational artifacts, rules, community, and division of labor. This deployment of concepts suggests that the entire collective activity system is a unit of analysis (Nocchi, 2017). Engeström (2009) notes that these activity systems are orientated toward the object, which is a “generator and focus of attention, motivation, effort and meaning”, and that are motivated by a need (p. 304).

In the context of activity systems where online multimedia and communication technologies are used to complement formal foreign language learning, the rules refer to the loose conventions that guide the actions of the learner, like only using authentic input, or not using certain dictionaries, etc. Community refers to the learner's niche as well as the group of learners or users that engage in online technological activities systems who are driven by the same motivation (learning a foreign language beyond formal settings). Finally, the concept of role is linked to the different roles that learners make have while using the mediation artifact i.e.,

as a gamer/payer, editor, listener, creator, etc. as well as a good or bad language learner (Ibrahim and Rahimah, 2013).

Two important aspects are fundamental in Engeström's extended model (Engeström, 1987, 1999, 2001). The first one is that of "the dynamic nature of the mediational artifact" which refers to the internal representations and the external implements that are interconnected in the activity system. A representation that is internal is externalized through oral or written production, gestures, and the physical manipulation of the surroundings, while external processes are internalized. The second aspect is the notion of contradictions that put in evidence the interactions between the different elements in the activity system. Activities need to be holistically understood since they are open systems that allow new elements from the outside to freely enter into their systems (Arnseth, 2008), for example, criticism, and contradictory feedback or new rules entering into the activity system. Engeström, (2001) suggests that although these contradictions are inherent to activity systems, and that they can constitute disturbances, they can be used as a catalyst for growth. These fundamental notions in activity theory have important analytical and methodological implications in the study that provide guidance on the analyses of technological affordances.

Many studies that involve technological and online resources as mediational tools for learning have used activity theory as their main theoretical framework (Gutiérrez, 2009; Rückriem, 2016; Roebuck, 2000; Lantolf & Pavlenko, 2001; Issroff & Scanlon, 2002; Blin, 2010, 2012; Basharina, 2007; Guldberg, 2010) as well as some others involving online technological affordances for language learning (Ibrahim and Rahimah, 2013; Nocchi, 2017). Activity theory has provided these studies not only with theoretical foundations, but also methodological ones from which to explore and examine the relations between different

dimensions of human development including societal, personal, and institutional ones (Hedegaard, 2012). In the field of language learning, this theory has also provided a theoretical perspective of second and foreign language learning as a process inextricably connected to “social, institutional and discursive forces” (Lantolf & Thorne, 2006, p.260).

So far, activity theory has provided important guidelines for the holistic understanding of activity systems as a unit of analysis, and the complex interactions between their elements including the subject (the learner), the mediating artifact (online multimedia and communication technologies), and the object as well as the sociocultural dimensions embedded in the community where the activity takes place. In the following segment, the ecological perspective of affordance of online multimedia and communication technologies is incorporated into the theoretical lens grounded on activity theory that frames this study.

Rationale of the research study on the literature

The concept of Affordance in Online Multimedia Technology-mediated Language Learning grounded on activity theory frameworks

As explained in the previous chapter, the term “Affordance” was first coined by James Gibson (1977, 1979) in the article “The theory of affordances”. The idea of affordance is based on the organisms’ direct perception of the properties of an object in their environments that, when and if perceived, can lead to actions fulfilling their needs. From this ecological perspective, language learners can be seen as information detectors who modify their behaviors in relation to what they perceive in the environment through dynamic interactions with the same environment, and affordances are the possibility for action (Nocchi, 2017). However, these affordances are not perceptible to all learners, since this perception depends on the learner’s abilities and skills to act on the affordances (Young, 2001). This belief is shared by Van Lier (2004) who also defines

affordances as “potential actions” full of possibilities and opportunities ready to emerge as learners actively interact with the environment physically and socially. Gaver (1996), argues that affordances are ready to emerge not only for individual actions but also for social interactions. Social interactions and social behaviors are connected and modified by the material context in which they occur. In this sense, and from an ecological perspective, language learning takes place through interactions, and it is perceived as a contextualized process concerning the learners’ perceptions, concerns, and attitudes (Tudor, 2003)

Richards (2015), points out that the “face of language learning” is changing due to the potential affordances that online multimedia and communication technologies have for language learning since they provide greater opportunity for meaningful and real language use, which is not only multimodal but also more interactive and more social. In education, the concept of affordance is mostly connected to information and communication technologies (ICT) and their benefits for learning (Nocchi, 2017). Ibrahim and Rahimah (2013) studied the perceived affordances in Web 2.0 by Malaysian students and identified social transformation affordances, personal learning affordances, and some limitations.

Language learners who engage in linguistic events through online technological resources are exposed to a large number of qualities and opportunities, like the ones mentioned above, which provide learners with “semiotic resources” that might stimulate further “actions” and therefore the emergence of language. According to Van Lier (2004), those “actions” are triggered by the learners’ ability to perceive the qualities and opportunities provided by the technological resource. This relation between the qualities and opportunities provided by the object or medium, the learners’ perception, and the actions taken by the learners are the true affordances of the technological resources being used, which according to the author, have the

following defining features (1) they provide learners with the opportunity for action, (2) They are immersed and specified in the language. Consequently, the linguistic affordances are only materialized if and when learners consider them relevant at a particular moment, and (3) when these affordances are materialized, they promote further action which leads to more successful interaction levels.

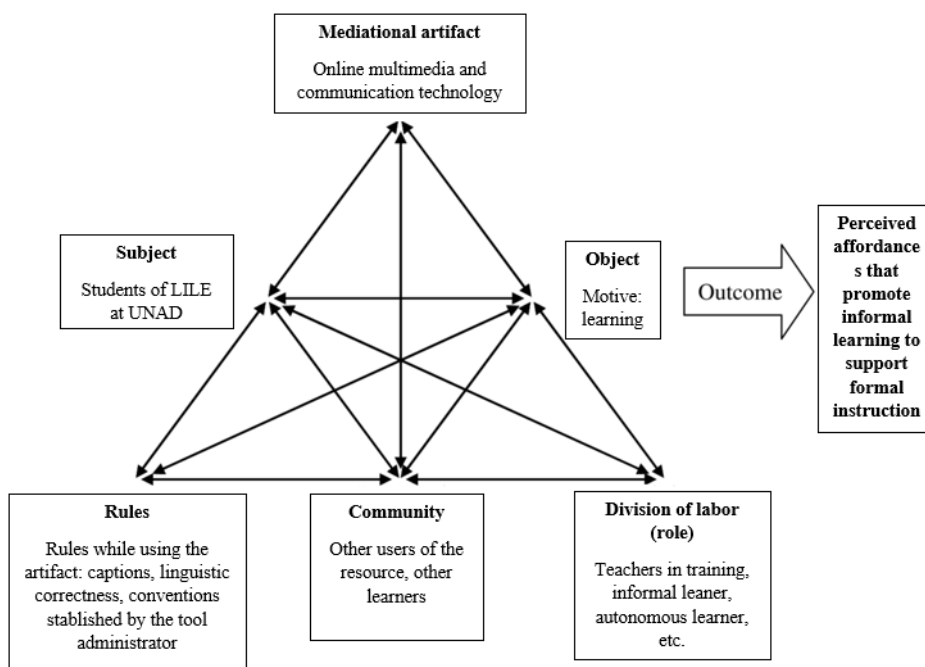
The concept of affordances has been widely used in the field of human-computer interaction (HCI) and many studies involving ICT in education (Rambush and Susi, 2008) including language learning (van Lier, 2004). However, Albrechtsen et al. (2001) argue that Gibson's concept of affordance provides exclusive emphasis on the relationship between the individual's perspective and its ecosystem ignoring human high levels of cognition including sociocultural constructed context and cognitive motivation. This strong criticism of the original concept of affordance in the field of HCI and education led to a reconceptualization of the term from the activity theory perspective (Nocchi, 2018). Bærentsen and Trettvik (2002) introduced the term learning affordances and suggested that perceiving affordances or learning to perceive affordances of an artifact occurs in social contexts. Therefore, affordances are materialized in historically sociocultural-constructed settings.

This sociocultural educational dimension of the term affordance fits the principles of activity theory exposed earlier. Consequently, the current study uses activity theory as a theoretical and methodological lens to analyze the affordances perceived by EFL learners of the online multimedia and communication technologies they use to complement their formal instruction at UNAD. This holistic perspective centers on the concept of learning affordances and activity as a dynamic unit system involving a subject, mediational artifacts, objects, goals,

purpose, roles, and communities. This theoretical and analytical construct that frames this study is illustrated in figure 3.

Figure 3

Activity system: Informal EFL learning mediated by online multimedia and communication technologies



Note: Figure 3 is adapted from Engeström's Activity System model. The triangle represents an informal English learning activity system mediated by a multimedia artifact where the subject performing the activity is a learner from the LILEI program at UNAD.

In this chapter, the relevance, and the pertinence of Vygotsky's sociocultural theory, Leont'ev's and Engeström's models of activity theory, and the affordance theory as theoretical lenses for the study have been examined. The constructs of this theoretical framework did not only underpin this study but also provided the analytical tools that enabled the researcher to understand the complexity involved in the technology-mediated English learning activities that the students from UNAD informally use to support their formal instruction as well as the

learning attributes, capabilities, or limitations that those online technologies offer them to accomplish their learning objectives. In the following chapter, these theoretical lenses are taken into consideration to determine the methodological framework of the study.

The literature that has been reviewed so far in the chapter synthesizes the most relevant and appropriate findings that provide context and serve as the empirical and theoretical foundations for this study. The state of the art and the theoretical framework here reviewed offer context for the research, and provide five main observations: (1) Learner autonomy is an essential characteristic for learners, especially in E-learning environments due to the social constructivist educational model and curricular guidelines that are often associated with distance learning; (2) Engaging in tasks where there is authentic language use does not only contribute to language learning success, but also supports formal instruction, and promotes autonomy; (3) In the Colombian context, where English is learned as a foreign language, opportunities for authentic language exchange and exposure is mostly provided by online multimedia and communication technologies; (4) Although learners who use online multimedia and communication technologies to complement their formal English instruction are constantly being exposed to the affordances they provide, these do not always promote learning since this depends on their ability to perceive them in the first place. (5) Analyzing the affordances of the informal activities mediated by online technologies containing authentic English is not only pertinent in the Colombian setting, but also necessary given that the literature suggests that there is a need to look at specific learning attributes, capabilities, or limitations provided by technology in informal settings.

Research Design

The present chapter discusses the research methods used in the study. It provides a complete description of the research design, procedures, methods of data collection, the sample, and the techniques that were used for the data analysis. This chapter outlines important methodological considerations that were essential to pursue the objectives of the research as well as theoretical argumentation to justify the use of the chosen design, framed in A.T., and the concept of learning affordance. Through a qualitative research method, this case study attempted to obtain and analyze qualitative data that account for the nature of the study and its objectives.

Methodological Design

Research Method

As mentioned earlier, this study drew on A.T. as an analytical and interpretive framework resulting in important implications for the methodological design of the study. According to Ramanair (2016), these implications are related to the importance of studying human activities within a real context, and the application of qualitative methods for the collection of data which enabled the researcher to obtain various perspectives on the learning activity. This research study used qualitative methods for data collection that are flexible in nature, which allowed the researcher to investigate real-life and complex phenomena within a real context providing rich data (Nimehchisalem, 2008).

These qualitative research methods focused on the collection of none-standardized data, and their objective was to obtain the participants' real perceptions of the affordances in informal English learning activities based on their direct experience of the phenomenon. Patton (2014) defines qualitative data as detailed descriptions of the situations, events, or phenomena as they are perceived or experienced by individuals. Hence, this study employed two qualitative

techniques, a word-based questionnaire, and a focus group interview, to obtain an interpretative perspective centered on the understanding and analysis of the phenomenon being studied (Hernandez-Sampieri, et al., 2014).

Research Approach

This is a single-case study that presents an interpretive framework that used A.T. and the construct of affordance for research in technology-mediated environments as the theoretical and analytical lenses to investigate informal language learning activities mediated by online technologies. This study falls into the interpretive paradigm since it explores the attributes, capabilities, and/or limitations of such technologies that learners autonomically use to complement their formal English instruction. Therefore, a qualitative approach to data collection was used which responded to the nature of the research question, the objectives, and the design of the study. According to Li (2016), interpretive research studies that employ A.T. for theoretical and analytical purposes are best carried out from naturalistic approaches.

This case study adopted a naturalistic interpretative approach that dealt with the individuals' direct understanding of the phenomenon within a specific context. Gagnon (2010) argues that case studies are typically used for practical phenomena in which the raw experiences and perceptions of the individuals are crucial, and the context of those experiences and perceptions is decisive. Consequently, the focus of this interpretative case study was not to manipulate or control the behavior of the individuals as this could have altered the phenomenon, which could have never been studied outside its natural context (Yin, 2018). This approach resonates with the emphasis that A.T. places on researching human activities in real-life bounded contexts, and from the participants' point of view and experience (Fleer, 2016).

According to (Yin, 2018), a case study is only possible if the case and its boundaries are well defined. This issue is firmly addressed by A.T. as it enables people's engagements in goal-driven activities mediated by objects to be studied in a sociocultural bounded context (Engeström, 2001). Furthermore, A.T. provides a strong and clear interpretive framework for describing real-life mediated activities as activity systems which can be defined as the unit of analysis in the study. That is, A.T. provides well-defined boundaries, and guidelines in the study because it specifies seven important components in the activity system (subject, object, artifacts, rules, roles or division of labor, community, and goals/outcomes) (Gedera. & Williams, 2016).

Context of the Research

Population and sampling procedure

This research study targeted English students in the bachelor's degree program in foreign language teaching with emphasis in English (LILEI for its initials in Spanish) at the Universidad Nacional Abierta y a Distancia - UNAD, in Colombia. This is the largest foreign language teacher training program in the country, with more than 3,000 students per semester, and offers seven required courses which provide its students with formal instruction in English. These courses are English I, English II, English III, English IV, English V, English VI, and English VII: English Conversation. The students enrolled in the last three courses have already passed the previous courses and are about to complete their formal English training in the program. This made these learners the most appropriate population for the study. According to the last report by the Registration and Control Office of the university, there were 158 students enrolled in these courses. The targeted population is quite diverse in terms of age, socioeconomic level, gender, culture, race, background, and characteristics.

The current research used a purposive sampling method due to the size of the population, the methodological characteristics of the study, and the need to set the boundaries of the case. Purposive sample methods are often used in small-scale research such as case studies where no attempt to generalize is desired, and where the sample needs to meet certain requirements (Cohen et al. 2018). By using this purposive method, it was possible to select a sample containing subjects who have truly experienced the phenomenon being studied. This means learners from the LILEI program at UNAD who have engaged in informal English learning activities mediated by online technologies to complement their formal English instruction. Twenty learners were selected based on the seven components of an activity system described earlier in this chapter.

Researcher's impact

According to (Hernandez-Sampieri, et al., 2014), the researcher must be sensitive, genuine, and open, and never forget why he or she is in the context. In this study, the researcher took a reflective stance and tried to minimize the influence that his beliefs, foundations, or life experiences related to the problem may have had on the participants and the environment. Therefore, the researcher did not interfere with the data collection so that the information provided by the individuals could be obtained as they had revealed it. Consequently, the role of the researcher during the process of data collection was only to administer the instruments and to carry out their application.

However, Hernandez-Sampieri and his colleagues also suggest that in a qualitative study such as this, the researchers introduce themselves into the experiences of the participants and construct knowledge with them. Therefore, the researcher understands that he was part of the phenomenon being studied, always aware that, at the center of the research, was situated the

diversity of ideologies and the unique qualities of the individuals. Furthermore, the researcher was fully committed to respecting and upholding the procedures and ethical considerations established in the ethical protocol. The researcher guaranteed the completion of this ethics during the conduct of the study by thoroughly obeying all the institutional requirements and procedures established by the university and/or research committees.

Ethical Protocol

This research study investigated a real-human activity that causes no harm or negative consequences to those who engage in it. In fact, second and foreign language learning research is known for not only causing minimal risk and discomfort to participants but also for often providing added benefits to them such as communication practice and learning new language learning strategies or concepts (Mackey and Gass, 2015). Nevertheless, it was of paramount importance for the researcher to protect participants from any harm, and not to expose them to any unnecessary risk. Therefore, some measures were taken to minimize these risks.

First, participants were only admitted if they signed an informed consent (see appendix A) that provided sufficient information about the research including its purpose, their role in the study, and when and how the data was going to be collected, and for what end. This form was provided in English and Spanish to ensure that there was no coercion and that participants were able to make informed decisions about their involvement or withdrawal from the investigation. Second, participants' integrity, anonymity, and confidentiality were not and will not be compromised since all the data collected during the study was and will be kept private. Finally, the questions included in the instruments for data collection did not ask questions related to personal or sensitive issues. These only concerned essential aspects related to the problem being studied.

The application of the data collection process was framed by the above-mentioned measures, which were established by the researcher and validated by the thesis advisor. To get access to the population, it was first necessary to get permission from the director of LILEI program at UNAD. For this purpose, a letter was emailed to the director in which the characteristics, objectives, and data collection process of the research study were described. In the letter, permission to access the population with the help of the course directors was requested. Once this permission was granted, the course directors were contacted and valuable information about the research study was given to them. The course directors were asked to send an invitation letter with the link to the informed consent to the students through the internal course mailing system.

The population was also accessed through institutional e-mail, but no information was sent to personal e-mails or cell phones. The invitation letter gave precise information about the research and advised the population to read the informed consent carefully so that they could decide whether to participate in the study or not. To comply with the ethical considerations of the research, it was emphasized in this invitation letter and the informed consent that the participation of the students was completely voluntary; and that if they agreed, they could be asked to participate not only in the application of the questionnaire but also in a group interview. The students were reminded that they could decide to withdraw from the study at any point and that their decision would not have any repercussions for them.

Data collection Techniques

This research study obtained the data through the application of a questionnaire and a focus group interview. The data gathering process was divided into two phases making this a sequential process in which the data gathered from the application of the first instrument helped

the researcher redefine and extend the second one. Furthermore, this first stage allowed the researcher to identify and select the sample for the next phase. In the first phase, data concerning the type of online-technological resources that the students from the LILEI program at the UNAD use to carry out informal English learning activities, and how they are used was collected through a questionnaire containing open-ended questions (see appendix B).

As soon as this data was available, all the information was organized, categorized, and coded in a matrix designed in a word processor software. The information was organized following two criteria: a) participants, and b) topics. Then the information was coded and categorized using Saldaña's (2016) coding cycles (see chapter 4). Important components regarding the elements of the activity system and the construct of affordance allowed the researcher to group the initial codes and form core data categories.

The data reduction process in the first phase provided a broader understanding of the topic which called for a small modification in the script of the focus group interview (see appendix C). After this, the second phase of the data gathering process was conducted. The twenty selected participants were divided into four focus groups. During these interviews, essential information about the participants' perceived learning affordances of activities mediated by only-technology resources regarding informal language learning was collected. After the two phases of data collection were finished, all the gathered information was revised, organized, categorized, and readied for the data analysis process.

Description and rationale of the instruments

To get rich and comprehensible data from real-life contexts, research based on A.T. requires qualitative approaches for data collection such as interviews, participant observations, qualitative surveys, focus group discussions, etc. (Li, 2016). Given the nature and the objectives

of this research, a qualitative survey, and a focus group discussion were used to collect the needed data. Although questionnaires are common research tools to collect quantitative data, they can also be used to obtain qualitative data in the form of qualitative surveys (Walliman, 2011). These word-based questionnaires are suitable when rich and personal data about complex issues are required (Cohen, et al., 2007).

Cohen et al. (2007) also make a description of focus group discussions and explain that they allow the researcher to collect information that is generated between individuals and through their experiences instead of collecting data that is external to them. Furthermore, focus groups allow participants (the interviewees) to discuss their interpretations of the world, and to express how they perceive different situations from their point of view using social dynamics. A semi-structured group interview was selected since this method is more compatible with the naturalistic interpretative approach of the study. Hernandez-Sampieri, et al. (2014) acknowledge focus groups as a growing data collection method in qualitative research in which the unit of analysis is the group, and which takes place in a relaxed atmosphere where the participants can express themselves without inhibitions.

This sequential approach to data collection allowed the researcher to obtain rich, comprehensible, and complementary data. The information obtained through the questionnaire was also used to complement the information obtained in the focus group interview. According to Ary et al. (2018), and Creswell (2005), complementary data provide opportunities for elaborating, illustrating, enhancing, or clarifying the results obtained from another method. The design of these instruments was based on A.T. frameworks and the construct of affordance in technology-mediated language learning.

Validation procedures

This is a qualitative-case study that analyzed data obtained through two qualitative instruments applied in different phases, a word-based questionnaire, and a focus group discussion respectively. These data-collection instruments were designed in accordance with the research objectives, the characteristics of the methodological design, and the constructs of the theoretical framework that underpin this study. It was of paramount importance for the researcher that these instruments truly measured what they were intended to measure; therefore, some procedures and instruments for validation were implemented. Firstly, the qualitative questionnaire and the focus group interview script were analyzed with the help of a checklist that assessed the quality of the instruments (see appendix D). Secondly, the questionnaire was validated by an expert in the field, and thirdly, the focus group interview script was piloted with a group of learners with similar characteristics to the target population.

Hernandez-Sampieri, et al. (2014) address the concept of validity, which they describe as the degree to which an instrument measures what it was designed to measure. According to the authors, one way to gain validity of an instrument is through face validity or the evaluation of an expert. Furthermore, face validity is intricately linked to content and construct validity, which makes expert assessment a highly suggested technique for validating an instrument, especially questionnaires and surveys (Taherdoost, 2016).

Another mechanism to ensure that an instrument measures what it is intended to measure is by carrying out a pilot test (Sajjad, 2016). Morgan and Hoffman (2018) suggest that a moderator guide must be pilot tested with a small group of no more than four individuals that will not be included in the sample of the study but show resemble in characteristics. This allows the researcher to evaluate the structure and the questions of the interview.

Validation Process. The validation process was divided into four stages. In the first stage, the validation instruments were designed. Then the expert in the field and the students for the pilot test were contacted in the second stage. In the third stage, the instruments were applied. Finally, in the fourth stage, the results of the validation process were analyzed, and improvements were made in the data-collection instruments.

Expert validation process. For the expert validation instrument (see appendix E), four criteria were considered based on Cohen et al.'s (2007), Habib et al.'s (2014), and Hernandez-Sampieri, et al.'s (2014) conceptualization of questionnaires as data collection instruments. These criteria are appropriateness, clarity, relevance, and adequacy in terms of the unit of analysis. After the instrument was drafted, a professor from the UNAD was selected as the expert to evaluate the instrument. This selection was based on their professional experience calculated in years, their level of education, their involvement in research, and their availability. Once the decision was made, the expert was contacted and then the validation instrument was applied. Finally, the results obtained by this assessment were analyzed, and some changes were made to the questionnaire.

Focus group Pilot test. The process for the pilot test of the focus group followed the same steps as the previous validation technique. The purpose of the pilot test was to assess the procedure of the interview and the moderator guide as well as the appropriateness, clarity, relevance, and adequacy of the questions. Therefore, the instrument designed (see appendix F) for this validation technique included criteria concerning the abilities of the moderator, appropriateness of time, question order, and the same criteria from the expert validation instrument.

After this instrument was created, four students from the undergraduate program in English as a foreign language were asked to participate in the pilot test. The students who voluntarily accepted to participate in this pilot interview shared similar characteristics with the population of the study since the two undergraduate programs (LILEI-LILE for their acronyms in Spanish) share fundamental similarities. At the end of the interview, the students were asked to comment on the procedure and give some feedback on how to improve it.

Pedagogical Intervention and Application

The implementation and development of the different stages of the research study were carried out according to the timetable proposed in the research proposal, the ethical protocol, the methodological design, and the schedule set with the thesis advisor. However, the nature and objectives of the study did not require that the researcher conducted a pedagogical intervention or design pedagogical materials or resources. Nevertheless, it was contemplated by the researcher and the thesis advisor that during the implementation of the data collection instruments, learners needed to be contextualized, and that some terms had to be clarified to achieve the objectives. Therefore, it was necessary to make a pedagogical intervention by describing important terminology in the questionnaire such as “informal and formal instruction” and “online and technological resources”. The same was done for the focus group interview, in which the term “learning affordances” had to be clarified.

Considering that the data gathering process was divided into two phases and the number of people that needed to be involved for the correct development of the process, different steps and procedures had to be designed. The steps were related to the procedures carried out to access the population such as the writing up of the invitation letters, the informed consent, the contextualization of the course directors, the access of the sample for the second phase of the

data gathering process, and ethical tracking procedures. All these steps and procedures were first presented to the thesis advisor for validation as well as the slight changes in the timetable that occurred due to external factors. Additionally, different meetings with the thesis advisor were scheduled during the academic period to ensure that the different steps and procedures were being applied correctly.

This chapter has addressed crucial elements that make up the methodological design of the study. First, the research method and research approach were established and justified. Then the complete context of the research was provided in terms of population and sample procedures, the researcher's impact, and the ethical protocol that guided the study. After this, the data collection techniques were described while providing the rationale behind their use and explaining how they were validated. Finally, the pedagogical intervention was presented. The following chapter builds upon the elements that have already been presented in the previous ones to provide a complete report on the techniques, strategies, approaches or methodological tools that were executed during the process of data analysis; as well as to establish the instruments and procedures for the management of the gathered data and the findings drawn from these, considering the theoretical framework, the literature review, the research questions, and objectives of the study.

Data Analysis and Findings

The elements and issues discussed in this chapter are related to the analysis of the data and the findings of the research. Therefore, this section addresses fundamental aspects of the study that enabled the researcher to search for meanings and conclude results through direct interpretation of what was reported by the subjects. Cohen et al. (2007) describe qualitative data analysis not only as a process for organizing and explaining data, but also as a process that makes sense of the information obtained in terms of individuals' definitions of the situation, as well as noticing patterns, themes, categories, and regularities. Therefore, this chapter explores the tools, techniques, strategies, and approaches that account for this process and the resulting categories of analysis.

Data Management Procedures

This study sought to obtain and analyze the participants' perceptions of affordances by exploring, describing, and comprehending what they had in common based on their experiences with informal English learning activities mediated by online technologies. Therefore, this phenomenon was analyzed from the point of view of each participant and from a collectively constructed perspective (Hernandez-Sampieri et al., 2014). In addressing the research questions of this study, data were collected from two qualitative methods, a word-based questionnaire and four group interviews (see chapter III). A descriptive hybrid approach based on a dynamic and fluid coding procedure was used to analyze and interpret the data from these two sources (Saldaña, 2016). According to Xu and Zammit (2020), this hybrid approach allows researchers to create both data-driven and theory-driven codes to assist in the definition of core categories or main themes.

This analysis technique is of a hybrid nature since both top-down and bottom-up approaches were used with Saldaña's (2016) suggested first and second-cycle coding methods. By doing this, the researcher was not only able to address the online mediating artifacts and the learners' perceived affordances aspects of the research question but also to identify core categories strongly related to the data themselves, the theoretical framework that underpins the study, and the research objectives.

First Cycle Coding Method

According to Saldaña (2016), data “are not coded – they are recoded”, and coding refers to creating and assigning words or phrases to qualitative data that symbolically represents a “summative, silence, essence-capturing attribute”, or that translates the data for the detection of patterns and categorization. Given that coding is a cyclical process in which data, codes, and categories must be compared and re-compared to one another, this author suggests that this process must be divided into first and second-cycle coding methods. In this study, the first cycle had to do with the breaking down of the data, and it was a fairly direct process in which the “initial coding” method was used.

First, the interviews were transcribed verbatim, then the data from these interviews and the questionnaire were organized in coding matrices (see appendix G) created in a word processor, and finally, the initial codes were devised (line-by-line coding). The purpose of this first cycle was to serve as a starting point, which remained open to different possible theoretical pathways regarding the researcher's interpretations of the data (Charmaz, 2014). During this cycle, many tentative and provisional codes were created both inductively and deductively, which offered analytical leads for the following cycle.

Second Cycle Coding Method

Second cycle coding is used when some reorganizing and reanalyzing of the already-coded data is needed (Saldaña, 2016). For this study, the purpose of the second coding cycle was to aid the researcher to develop a sense of categorical and theoretical organization from the codes and themes created during the first cycle; and to reconfigure these codes and data corpora into broader, more logical, and well-defined categories. During this data management procedure, codes from the first cycle and their associated data were recoded (rearranged, merged, re-named and some eliminated) resulting in twenty-five codes. Then these codes and their data were grouped into the final categories and subcategories of analysis with the help of axial coding, which describes and synthesizes the dimensions and properties of the different categories while exploring how they and their subcategories relate to each other (Saldaña, 2016).

Categories

The data analysis process of the study was carried out through a dynamic and fluid coding procedure focused on the interpretation of the human experiences that shaped the nature of the phenomenon, and the description of the phenomenon through the different meanings provided by the participants (Creswell et al., 2007). This approach to data analysis did not only allow the researcher to describe the phenomenon but also analyze it by making a textual interpretation of the meaning of the participants' lived experiences with informal English learning activities mediated by online resources while maintaining a strong relation to the topic of inquiry which is perceived affordances.

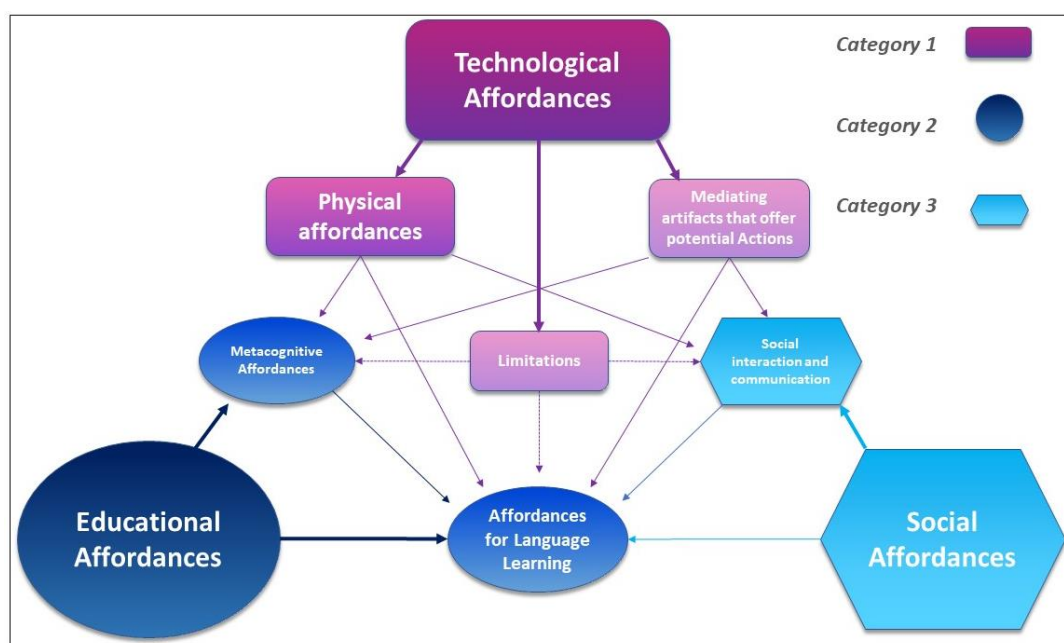
The process of data analysis presented in this study guided by the research question and objectives involved a high degree of systematization, organization, and interpretation which led to the formulation of six categories which were later rearranged into 3 core categories and 6

subcategories using a superordinate-subordinate and network arrangement (Saldaña, 2016).

Through the data analysis process, technological affordances, educational affordances, and social affordances emerged as the core categories, whereas physical affordances, mediational artifacts that offer potential actions, limitations, metacognitive affordances, social interaction and communication, and affordances for language learning as subcategories.

Figure 4

Overall Category Mapping



Note. The figure shows how the categories and the sub-categories interact and interplay in a network that evidence interrelationship. Adapted from Saldaña, 2016, *The Coding Manual for Qualitative Research*, SAGE.

It is important to highlight that these categories and subcategories are not connected in a linear manner, but on the contrary, it was found that there were active and varied relationships between them. Urquhart (2013) argues that if one has the intention to develop assertions, propositions, and possible hypotheses and theories, categories must hold relations between them.

Figure 4 shows the core categories, their subcategories, their degree of relevance, and their relationships. These categories and subcategories are discussed and analyzed in the following segment.

Discussion of Categories

Technological Affordances. The first emergent category was technological affordances. This category refers to the learners' perceived potential actions offered by the online resources and technologies that mediate the informal activities that they carry out in English concerning their technical and physical characteristics or features. That is the perceived affordances of the online technological resources' designed features that provide learners with opportunities to carry out physical actions (Nocchi, 2018). The participants provided significant evidence that suggested that actions in potential offered by the different online resources were one of the first things they considered before choosing a mediating artifact to carry any activity, and as it will be observed later, these technological affordances seem to have a significant impact on the degree in which educational affordances, social affordances, and limitations are perceived by them. Furthermore, it was observed that the level of perception of these technological affordances was greatly affected by the individuals' previous knowledge and experience with the online resources. This is an excerpt from one of the participants in its original language, Spanish. The direct translation into English is provided by the research underneath:

“Hay algunas herramientas que (los tutores) nos habían recomendado en algunos semestres, que no me ha funcionado ya que siempre encuentro alguna dificultad, o hay algún problema con la herramienta... ¡tal vez es porque no la se manejar!” (Excerpt from Focus Group # 1, S-3)

“There are some tools that (the tutors) had recommended in previous semesters, but they have not worked because there is always some sort of difficulty, or there is a problem with the resource... Maybe, this is because I don’t know how to use it!” (Excerpt from Focus Group # 1, S-3)

Consequently, data from this study suggest that being able to perceive specific technological affordances is a prerequisite for the selection of mediational artifacts (online technological resources), and that it contributes to the eventual perception of educational and social affordances. Three subcategories emerged from these data and the previous assertion that give account for the actual properties of the online technological resources used by the participants to carry out informal English learning activities, the type of online technological resources that are commonly selected by them, and their perceived limitations.

Physical Affordances. These types of affordances are related to the physical qualities or actual properties that a mediating artifact offers to its user. This might be, for example, the function of an online technological resource that allows the learner to turn on and off the captions in a video, or to be accessed at any time from anywhere (Hartson, 2003). However, the data provided by the participants showed that there is much more to this type of affordance than just the physical properties. As mentioned earlier, it was suggested that perceiving physical affordances allows the learner to make better decisions regarding the type of online resources they use to mediate informal English learning activities. The participants provided detailed descriptions of the criteria they usually use when choosing mediational artifacts, two of them expressed the following:

“...yo debo ser muy objetivo en tanto a la productividad de lo que estoy realizando, porque en internet podemos encontrar muchas cosas, plataformas, y herramientas que

nos dejan trabajar de mil maneras, pero si nosotros en el momento en el que vamos a desarrollar un recurso, actividad, o aplicación, no tenemos claro cómo funciona la herramienta, como lo vamos a hacer, y que tan productiva ésta es, nos vamos a perder...” (Excerpt from Focus Group # 2, S-7)

“...I must be very objective regarding the productivity of what I am doing, because we can find a lot of things, platforms, and tools on the internet that allow us to work in a thousand ways, but if we, in the moment when we are going to use the resource, application or carry out the activity, have no clarity about how the tool works, how we are going to do it, and its productivity, we are going to be lost...” (Excerpt from Focus Group # 2, S-7)

“... que no sea ni larga, ni muy corto, o que el recurso o herramienta no sea difícil de utilizar, a veces por eso también me demoro en encontrar un buen recurso tecnológico, porque hay muchas herramientas que no sé utilizar, o no conozco cómo funcionan o cuáles son sus utilidades...” (Excerpt from Focus Group # 2, S-6)

“... that they are not long or too short, or that the resource or tool is easy to use. Sometimes, that is the reason I take so long to find a good technological resource, because there are many tools that I cannot use, or that I do not know how they function or what their usefulness is...” (Excerpt from Focus Group # 2, S-6)

It can be suggested that perceiving physical affordances seems to be useful for learners since this enables them to acknowledge whether an online technological artifact is appropriate or not for their activity. Some other important physical affordances that are mostly perceived by the participants have to do with accessibility and the resources' actual properties and functionalities regarding language output (audio, video, or text). Most participants reported that accessibility

was a major attribute of any online technological resource since this allowed them to carry out an informal English learning activity at any time from anywhere as long as they had internet access. They also suggested that these physical affordances allowed them to maximize their time and productivity since time, that otherwise would be wasted, could be used to carry out these informal activities. Examples of the above-mentioned physical affordances can be observed in the next excerpts:

“...Netflix, por ejemplo, le permite poner la película en inglés con subtítulos en inglés, o desactivar los subtítulos. También es importante que el audio o imagen sea de calidad...” (Excerpt from Focus Group # 2, S-9)

“...Netflix, for example, allows you to put the movie in English with English subtitles, or disable subtitles. It is also important that the audio or image is of quality...” (Excerpt from Focus Group # 2, S-9)

“...se aprovecha el tiempo en mi caso. Me permite aprovechar al máximo mi tiempo sin dejar de hacer otras actividades. Mientras uno está en el transporte o está esperando en una fila, en cuestiones así, aprovecha uno bastante...” (Excerpt from Focus Group # 1, S3)

“...time is used to the best advantage in my case. It allows me to make the most of my time without leaving other activities aside. While I'm on the bus or waiting in line, in such matters, I make the most of my time....” (Excerpt from Focus Group # 1, S3)

Physical affordances appear to probably be the most obvious for the learners since their perception seems to depend on the learners' past knowledge and experiences with the artifact. This aligns with Nocchi's (2018) idea that the perception of affordances is grounded in the users' cultural, social and historical context, and with the principles of A.T. As suggested from the data,

perceiving physical affordances accounts for the first step in perceiving affordances of online technology-mediated informal English learning activities and is an important criterion for the selection of the online artifacts that mediate such activities. Therefore, a second subcategory regarding mediating artifacts arose during the data analysis process which emerged due to the research questions and data provided by the participants.

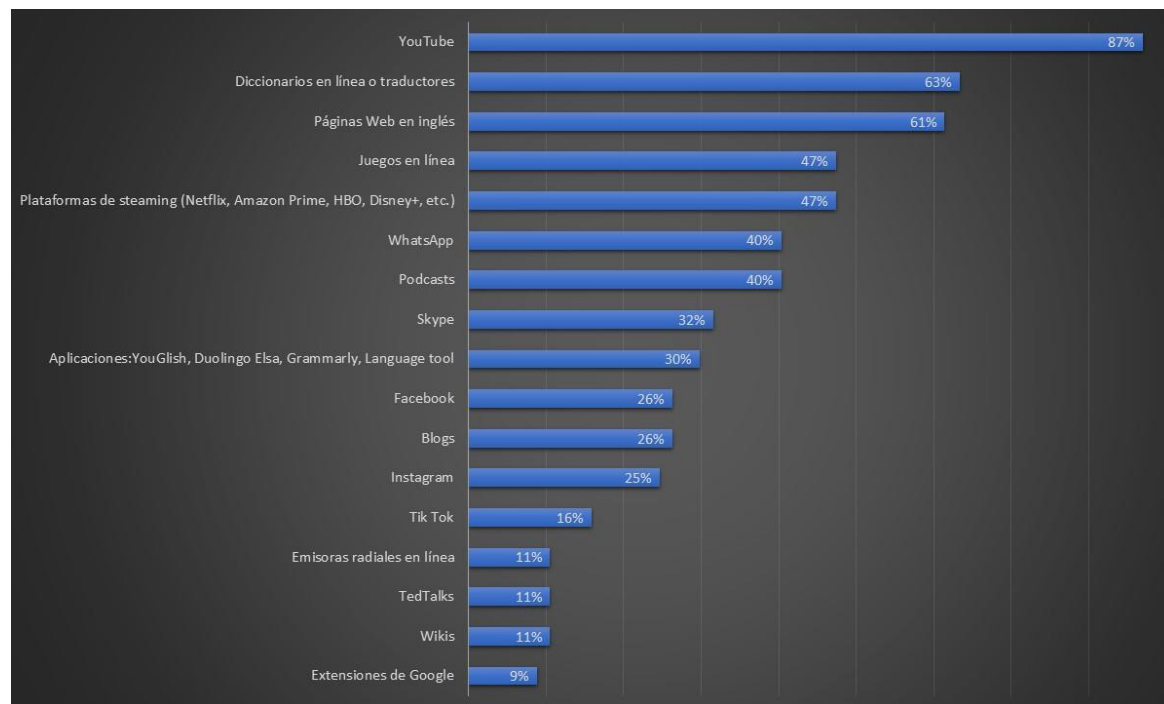
Mediating Artifacts that Offer Potential Actions. Mediating artifacts are fundamental elements in any activity system, and they might be physical (books, software, technological resources) or symbolic (music, sounds, numeric symbols) tools (Lantolf, 2006). This subcategory reports the physical mediating artifacts that the participants use the most due to their physical affordances, therefore it addresses the first specific objective – to identify the online-technological resources involved in the informal English learning activities that the students from the LILEI program at UNAD carry out to complement their formal instruction. It was observed during the first and second coding cycles that some specific online resources increasingly started to appear in the data, which led to the creating of new codes and eventually the subcategory.

However, this subcategory emerged mainly from two different sources of data. The first was the information obtained from the application of the questionnaire, especially the question – “Which of the following online-technological resources do you use the most for informal activities to help you improve your English? If there are other resource(s) that are not listed, please specify them, and then justify your answer. – Since one of the purposes of the questionnaire was to aid the researcher to identify the most appropriate sample for the case study, it was applied to the entire population, which provided rich and broad information about the topic that could not be neglected. The second source was the focus-group interviews with the participants of the case study, which also provided rich and more descriptive information

concerning the type of mediating artifacts that offer potential actions. Figure 5 shows the most common online-technological resources that 115 students from the LILEI program at UNAD use to carry out informal English learning activities.

Figure 5

Most Common Online Technological Resources



Note. The figure shows that from 115 participants, around 100 (87%) students use YouTube to mediate informal English learning activities and only 10 (9%) use Google extensions.

It can be observed that YouTube is by far the most common mediating artifact, followed by online dictionaries, web pages, and streaming platforms such as Netflix. These results are corroborated by data obtained from the focus-group participants, which indicated that YouTube, Netflix, online newspapers, language learning apps, and online radio stations were the most used by the learners. Although many mediating artifacts were mentioned and described, YouTube was the predominant online resource among the participants of the case study and the questionnaire

respondents. The following excerpts from focus group 3 evidence the most important perceived physical affordances of the streaming platform.

“...los potenciales que estas herramientas como YouTube ofrecen es que la puedo usar en cualquier momento de forma gratuita y allí puedo encontrar diversos temas de mi interés, de lo que yo necesite como música, películas, historias, documentales, todo a lo que yo necesito esta allí.” (Excerpt from Focus Group # 3, S-11)

“...The potentials that these tools like YouTube offer are that I can use it at any time for free and there I can find various topics of my interest, whatever I need such as music, movies, stories, documentaries, everything I need is there” (Excerpt from Focus Group # 3, S-11)

“...mi profesor ha sido YouTube, he avanzado muchísimo con esta plataforma (...) una de las cosas que más me gustan sobre YouTube es que puedo colocar subtítulos, buscar los Youtubers que a mí me gustan, y que pudo pausar, adelantar y retroceder los videos cuando quiera...” (Excerpt from Focus Group # 2, S-9)

“...my teacher has been YouTube, I have advanced a lot with this platform (...) one of the things I like the most about YouTube is that I can put (turn on) subtitles, search for the Youtubers I like, and I can pause, fast forward and rewind the videos whenever I want to....” (Excerpt from Focus Group # 2, S-9)

Limitations. This subcategory refers to the limitations perceived by the participants that the artifacts provide. Although most of the affordances perceived by the participants were positive, there were some specific limitations that kept appearing in the data that did not fall into any of the other categories or subcategories. These limitations are directed related to physical and/or functional features of the mediating resources. In other words, these could be considered

as perceived negative affordances (Gaver, 1991; Lantolf and Thorne, 2006; Ibrahim and Rahimah, 2013) of the online technological resources' design features that prevent learners from carrying out physical actions, and therefore perceiving educational and social affordances. The data showed that cost constrains, technical constrains and security factors account for most of the limitations that these online resources provide. Out of the three types of limitations, cost constrains were the most prominent. For instance, two of the interviewees reported:

“...una de las debilidades más grandes de usar estas herramientas online es el costo. En ocasiones, uno quisiera poder avanzar más, poder acceder a todo, pero pues la situación económica no permite que uno pueda acceder a los contenidos premium...” (Excerpt from Focus Group # 3, S-14)

“...One of the biggest weaknesses of using these online tools is the cost. Sometimes, I would like to be able to go further, to have access to everything, but the economic situation does not allow me to have access to premium content...” (Excerpt from Focus Group # 3, S-14)

“...Lo que encuentro con dificultad es que la mayoría de las herramientas que encuentro tiene luego un costo... digamos que esto ha cortado un poco mi proceso, entonces lo que uno hace es ya cerrar esa aplicación, como el caso de BrainLand, y buscar otra que me permita seguir subiendo el nivel de inglés...” (Excerpt from Focus Group # 1, S-1)

“...What I find difficult is that most of the tools I find have a cost... let's say that this has cut my process a little bit, so what I do is to close that application, as in the case of BrainLand, and look for another one that allows me to continue improving my English level...” (Excerpt from Focus Group # 1, S-1)

The data also showed that these limitations do not only prevent the learners from carrying out the activities, but also contribute to a decrease in motivation, opportunities for social interaction, and the practice of authentic language with other learners or speakers. Consequently, the limitations of the technological resources described by the participants seem to have a direct impact on the learners' perceptions of educational and social affordances. The following is an example of how technical limitations seem to affect one of the participant's motivations and self-esteem:

"...no obstante el internet también limita las capacidades de los estudiante ya que no todos somos muy buenos con la tecnología y no todos interpretamos bien eso o no tenemos la disposición de practicar el inglés por medio del internet (...) a veces me cuesta un poco practicar el inglés mediante la tecnología ya que estoy acostumbrado a estar en un salón de clase y que la profesora me explique y cambiar de la noche a la mañana de estar presencial a virtual y a usar recursos tecnológicos que son difíciles de usar me desanima mucho y aun no me adecuo..." (Excerpt from Focus Group # 4, S-1)

"...however, the Internet also limits the students' capabilities since not all of us are very good with technology and not all of us interpret it well or are not willing to practice English through the Internet (...) sometimes it is hard for me to practice English through technology since I am used to being in a classroom and having the teacher explain it to me and changing overnight from face-to-face to virtual and using technological resources that are difficult to use discourages me a lot and I still do not adapt..." (Excerpt from Focus Group # 4, S-1)

It has been observed that the perception of limitations differs for each participant depending on their personal abilities, concerns, and context. For some, technological resources

are not effective artifacts that can mediate most informal English learning activities due to high cost, technological skills needed, and the lack of security (Ibrahim and Rahimah, 2013). As shown in figure 4 earlier in this chapter, and as it will be seen in the next categories, technological limitations present in the mediating artifacts also affect the perception of the other affordances since they limit the learners' capability to perceive actions in potential that they provide regarding educational development, language learning, and social interaction. Student 10 commented during the interview about the difficulty to find an online resource with which she could improve her speaking.

"...No he encontrado algo que me permita mejor mi Speaking. No he encontrado ninguna herramienta online que sea gratis o que yo sepa cómo usar. Entonces ni siquiera sé si esto se pueda hacer usando recursos en línea porque para desarrollar esta habilidad, se necesita la interacción con otra persona..." (Excerpt from Focus Group # 10, S-2)

"...I have not found something that allows me to improve my Speaking. I haven't found any online tools that are free or that I know how to use. So, I don't even know if this can be done using online resources because to develop this skill, you need interaction with another person..." (Excerpt from Focus Group # 10, S-2)

Educational Affordances. The second category concerns the actions in potential (waiting to be acted on), and possibilities between the learners and mediating artifacts that allow the opportunity for the development of educational processes (Nocchi, 2018). The data analysis revealed that the perceived affordances of technology-mediated informal English learning activities not only go beyond the technological affordances of the mediating artifacts, but build on them to account for metacognitive, and language learning potentialities waiting to be

perceived and acted upon by the learners. The results derived from the data that make up this category helped the researcher answer the second specific research objective – to determine the perceived affordances of informal English learning activities mediated by online-technological resources that the students from the LILEI Program at UNAD carry out to complement their formal instruction.

This category emerged from the creation of theory-driven codes and their associated data based on Leont'ev's (1978, 1981) and Engeström's (1987, 2015) models of A.T., and Nocchi's (2018) construct of affordance for research in technology-mediated language learning. The participants provided sufficient data that suggested, along with the mentioned theoretical constructs, that the perception of affordances of an educational activity such as the one described in this case study depends on several factors concerning social, cultural, and historical aspects of the learning activity, the mediating tool, and the immersion of the subject. Therefore, all the data condensed into this core category are arranged into the two subcategories of metacognitive affordances, and language learning affordances.

Metacognitive Affordances. This subcategory refers to the potential possibilities or actions of an informal English learning activity mediated by online resources to develop metacognitive skills. Metacognition consists of being aware of our cognitive activities during our learning processes and how to regulate them (Brown, 1978; Flavell, 1979). These affordances provide an opportunity for personal development, which means that they are closely related to the “subject” element in the activity system. That is the learners themselves, the ones who perform the activity. According to Anderson (2002), metacognition can also be described simply as the ability to think about thinking. This means that metacognition is the meaningful and critical reflection and evaluation that someone can make of their thinking and that results in

positive changes in the management of their learning, including purpose, goals, and strategies. Anderson (2008) suggests a) preparing and planning for learning, b) selecting and using strategies, c) monitoring learning, d) orchestrating strategies, and e) evaluating as the most relevant metacognitive skills.

At the beginning of the research, metacognitive affordances were not taken into consideration as a category or subcategory since metacognition and language learning are interlocked, and they could also be considered language learning affordances. However, the data showed numerous instances of metacognitive affordances being perceived by the participants. Most learners reported that they could perceive the potentialities of an activity to develop some of Anderson's (2008) suggested metacognitive skills and act on them. For example, Student 1 described the following activity system.

"...herramientas como YouTube o videos en la BBC me permiten hacer shadowing, lo que hago es pausar los videos muchas veces, trato de aprender lo que dicen e imitarlo hasta que quede perfecto. Para hacer esto, también utilizo al mismo tiempo otras aplicaciones o páginas que me permiten corregir la pronunciación británica o americana y otra que me permiten grabarme para ver si lo hice bien, con YouTube es gratis y obviamente se encuentran todos los niveles..." (Excerpt from Focus Group # 1, S-1)

"...tools like YouTube or videos on the BBC allow me to do shadowing, what I do is pause the videos many times, I try to learn what they say and imitate it until it is perfect. To do this, I also use at the same time other applications or pages that allow me to correct British or American pronunciation and another that allow me to record myself to see if I

did it right, with YouTube it is free and obviously you can find all levels..." (Excerpt from Focus Group # 1, S-1)

In this example, student 1 was able to perceive the actions in potential provided by YouTube and two other online technologies and acted on them to carry out an informal English learning activity that afforded the selection of the strategy “shadowing”, and its orchestration. Other participants also provided evidence and examples of how the activities they were engaging in afforded the development of autonomous learning skills, monitor learning, and self-evaluation.

“...con algunas herramientas puedo interactuar con otras personas en inglés y esto me permite identificar mis logros, pero también mis falencias, las cuales debo mejorar (...) de allí radica la importancia de que las actividades que hagamos en la internet sean secuenciales e individuales para poder medir nuestro grado de avance...” (Excerpt from Focus Group # 4, S-16)

"...with some tools I can interact with other people in English, and this allows me to identify my achievements, but also my weaknesses, which I must improve (...) hence the importance that the activities we do on the Internet are sequential and individual to be able to measure our degree of progress..." (Excerpt from Focus Group # 4, S-16)

Language Learning Affordances. This subcategory refers to actions in potential relations or possibilities between users that allow the opportunity for language learning (Nocchi, 2018). The participants reported instances of one specific type of affordances resulting in this subcategory, which emphasizes the importance of potential actions that allow for language learning provided by the informal activities that they conduct with online-technology resources. Contrary to metacognitive affordances, affordances for language learning are more related to the “object” component of the activity system. That is the motives or objectives a learner has to

perform given technology-mediated activity. Some participants expressed that their main goal or motive that drove them to perform these types of activities was to improve their communicative skills; however, most participants stated that what drove them to perform such activities was to support or complement their formal English learning at UNAD. Students 1 and 2 stated:

"...y creo que, aunque en la universidad he aprendido mucho, siento que YouTube ha sido mi profesor, obviamente siendo autónomo en mi aprendizaje, pero he aprendido demasiado en YouTube sobre expresiones auténticas en inglés, modismo, formas de comunicación y el acento como tal, algo que no he aprendido en la universidad..."

(Excerpt from Focus Group # 1, S-1)

"...and I think that, although at university I have learned a lot, I feel that YouTube has been my teacher, obviously being autonomous in my learning, but I have learned a lot on YouTube about authentic English expressions, idioms, forms of communication and the accent as such, something I have not learned at university.... (Excerpt from Focus Group # 1, S-1)

"...el uso de las herramientas de internet es esencial, porque permite el aprendizaje autónomo (...) pero lo más importante es que me ayuda a reforzar los temas vistos en la universidad, y a despejar dudas... (Excerpt from Focus Group # 1, S-2)

"...the use of internet tools is essential, because it allows autonomous learning (...) but the most important thing is that it helps me to reinforce the topics seen at the university, and to clear up doubts... (Excerpt from Focus Group # 1, S-2)

Some participants also reported that these types of affordances were often perceived after they had started performing an activity, and sometimes they were only perceived after the learners had performed an activity several times. Therefore, the data suggests that some activity

systems may provide incredible actions in potential for language learning, but they can only be acted upon when and if they are perceived by the learners. Consequently, the perception of these affordances does not only seem to depend on the learner's experience and knowledge, but also on his or her ability to perceive more superficial affordances such as the physical affordances and limitations of the mediational artifact, metacognitive affordances, and even social affordances. According to Van Lier (2004), those actions in potential are only uncovered by the learners' ability to perceive the qualities and opportunities provided by the technological resource. The following excerpt from student 11 supports the previous statement.

"...desde el inicio de este semestre empecé a utilizar un diccionario monolingüe digital. Desde que lo vi la primera vez, me di cuenta de que podía hacer muchas cosas con él (...), pero no fue sino hace como dos semanas que me di cuenta de que también podía practicar mi pronunciación por un sistema de grabación que tiene y que también podía guardar listas para repasar vocabulario después, y ayer me di cuenta de que puedo compartir listas e interactuar con otros usuarios en inglés..." (Excerpt from Focus Group # 3, S-11)

"...since the beginning of this semester I started using a digital monolingual dictionary. Since I saw it the first time, I realized that I could do a lot of things with it (...), but it wasn't until about two weeks ago that I realized that I could also practice my pronunciation through a recording system it has and that I could also save lists to review vocabulary later, and yesterday I realized that I can share lists and interact with other users in English..." (Excerpt from Focus Group # 3, S-11)

Social Affordances. This category refers to actions in potential that can facilitate social interaction and culture development (Nocchi, 2018). This inductive category emphasizes the

importance of interaction and community in any activity system, in the construct of affordance for research in technology-mediated environments, and in language learning. (Lantolf and Thorne, 2006). English learning activities that provide social affordances such as potential interactions, possibilities between users, global communication, identity formation, and culture expansion are often sought by English learners since they are known to contribute to language learning (Ibrahim and Rahimah, 2013). However, the participants from this research only reported on affordances concerning social interactions and communication. Therefore, the information from this category is organized and presented in a single subcategory named social interaction and communication.

Social interaction and communication. The perception of this type of affordance is highly appreciated and sought after by learners, as real, authentic, and meaningful communication in English is the ultimate goal of every learner. Most participants reported that interacting with others and belonging to an English learning community was something that they expected to find when engaging in informal English learning activities mediated by online technologies. Therefore, the participants seemed to be able to perceive social affordances and acknowledge the relevance they could have in their English learning process, their social interactions and networking, and their opportunities to communicate in English through real interactions. Regarding the above, one participant commented:

“...Dado que tengo un gran interés en el acento británico, decidí trabajar en este por medio de herramientas y por YouTube. Luego, me dije a mi mismo – ¡no, no, no! lo que yo necesito es interactuar con alguien, necesito poder comunicarme con alguien real, pero como aun no tengo plata para ir a Londres, entonces voy a usar red social como Instagram o Facebook para mandar solicitudes a personas británicas y empezar a

saludarlos” – efectivamente hice dos amistades muy bonitas hace un año quienes me han ayudado demasiado con mi pronunciación y acento...” (Excerpt from Focus Group # 1, S-2)

“...Since I have a great interest in the British accent, I decided to work on it through tools and YouTube. Then, I said to myself - no, no, no! what I need is to interact with someone, I need to be able to communicate with someone real, but as I don't have money to go to London yet, so I'm going to use social network like Instagram or Facebook to send requests to British people and start greeting them" - indeed I made two very nice friends a year ago who have helped me a lot with my pronunciation and accent...”
(Excerpt from Focus Group # 1, S-2).

It can be observed that student 2 is not only able to perceive some potential social actions provided by the online resources, but also acts on them driven by a clear objective. The other participants also showed evidence concerning their acknowledgment of the importance to perceive social affordances and acting on them in a technology-mediated activity system. However, the data also showed that most participants are not always able to perceive important social affordances, and when they do, they hardly ever act on them due to the limitation they perceive in the mediating artifact, or their inability to perceive its technological affordances. The following are two related examples taken from the data. The excerpt from student 1 shows her inability to perceive technological affordances in an artifact that is commonly known to provide important social affordances. An excerpt from student 12 shows the limitations he perceives in the artifacts he normally uses that impede social potential actions to be acted on.

“...La verdad no he podido encontrar alguna herramienta que me permita comunicarme con genta que hable inglés, (...) por ejemplo, a me gusta mucho jugar en línea, uso los

juegos en inglés y he aprendido de ellos, pero no sé cómo hacer para poder conectarme con otra gente, gente que hable inglés...” (Excerpt from Focus Group # 3, S-14).

“...The truth is that I have not been able to find any tool that allows me to communicate with people who speak English, (...) for example, I really like to play online, I use games in English, and I have learned from them, but I don't know how to connect with other people, people who speak English....” (Excerpt from Focus Group # 3, S-14).

“...Precisamente por lo que dicen mis compañeros. Hay unas aplicaciones que te permiten hablar con otras personas, interactuar y aprender en contexto, pero no son gratuitas, o debes registrarte para acceder a ellas, o la gente que está ahí busca otras cosas...” (Excerpt from Focus Group # 3, S-12).

“...Precisely because of what my colleagues say. There are some applications that allow you to talk to other people, interact and learn in context, but they are not free, or you have to register to access them, or the people who are there are looking for other things...” (Excerpt from Focus Group # 3, S-12).

As the data and the theoretical framework suggest, affordances for technology-assisted language learning cannot be completely separated, as they are part of a whole, feeding into and contributing to one another. In the following segment of the chapter, an attempt will be made to operationalize these findings as contrasted with the research objectives and questions that guided the research, the data collection instruments, and the theoretical foundations of the study.

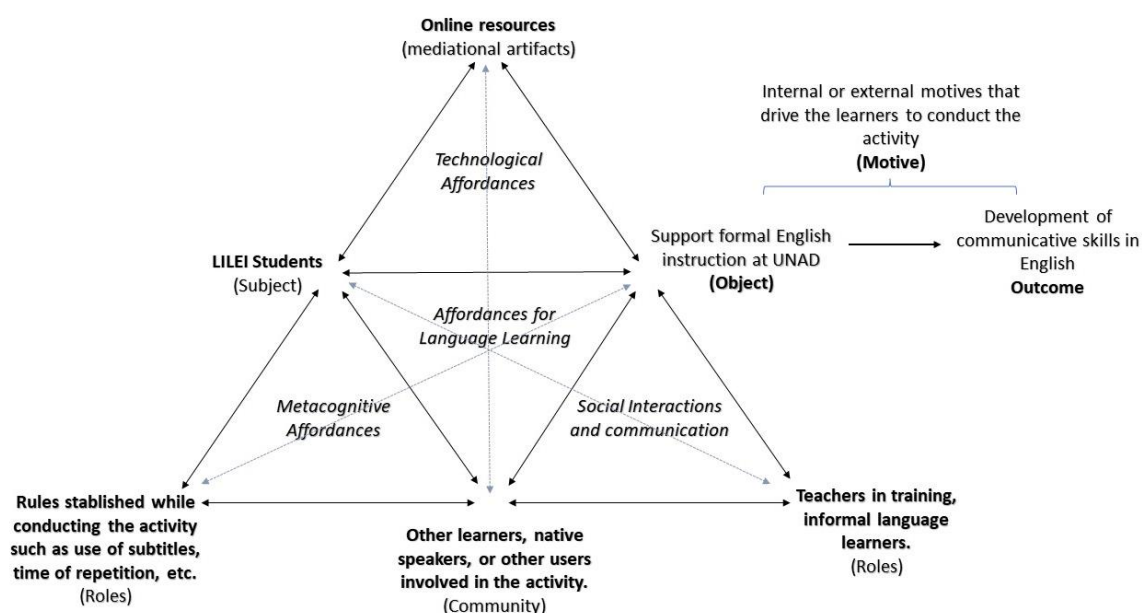
Hypothesis Testing and Operationalization of Variables

According to Hernandez-Sampieri, et al. (2014), in qualitative research, hypotheses take a different role from that of quantitative hypotheses. In this type of research, hypotheses emerge during the research process and are gradually formed as more data is collected and analyzed.

Hence, the data collected, and the results and findings drawn from them during the research process have prompted the following research hypothesis: Informal activity systems mediated by online resources provide physical, educational, and social affordances that, when and if perceived by the users, contribute to informal language learning that can support formal instruction. Leont'ev's (1978, 1981) and Engeström's (1987, 2015) models of A.T., and Nocchi's, (2018) and Van Lier's (2004) construct of affordance for research in technology-mediated language learning environments provide theoretical support that validates the hypothesis. Figure 6 shows the types of affordances that the students from the LILEI program perceive in the informal English learning activity systems mediated by only technology, and how these affordances are related to each element in the activity system.

Figure 6

Perceived affordances in the activity systems mediated by online resources



Note. This figure illustrates the perceived affordances in the activity system that learners from the LILEI program at UNAD carry out to complement their formal instruction. Adapted from Engeström's (1987, 2015) triangle model of Activity Theory.

Congruence between the theoretical foundations that guided the research, the qualitative instruments used to collect the data, the research question and objectives, and the findings obtained from the research process is evidenced through the operationalization of the categories described above. This is done in an attempt to hold unity and coherence between these elements to provide strong methodological support for the study. For the operationalization of the variables, the core variables of perceived affordances, and informal activity systems mediated by online resources to support formal language instruction were identified from the research questions and objectives. Table 1 shows the operationalization of these variables in the current research study.

Table 1*Operationalization of variables*

Variables	Conceptual Definition	Dimensions	Indicators	Instrument/Item
Perceived affordances	Actions in potential and relations of possibilities between users (Nocchi, 2018).	Physical Affordances	Accessibility, flexibility, physical features, design features, functionality	Q-4,8 I-1,8
		Metacognitive Affordances	Intrinsic motivation, learning styles/strategies, reflect on learning, monitor learning, self-directed learning/autonomy	Q-7,8 G.I-10-11
		Social Affordances	Potential interactions, possibilities between users, culture	Q-7,8 G.I-10-11
		Affordances for language learning	Development of communicative skills, lexicon, pronunciation, and linguistic skills, feedback and self-assessment, support for formal instruction	Q-1,2,3,8 G.I-10-11
Activity systems mediated by online resources to support formal language instruction	The conceptualization of the dynamic interactions between human cognition and socially and physically motivated and mediated activities. Leont'ev's (1978, 1981) and Engeström's (1987, 2015) models of Activity Theory	Mediating artifact	YouTube, Blogs, Wikis, Facebook, Instagram, Tik Tok, etc.	Q-1, 8 G.I-10-11
		Subject	The user	G.I-1
		Object	Motive	G.I-2,3,4
		Rules	Rules and conditions	G.I-5
		Roles or division of labor	LILEI Student	G.I-8,9
		Community	individuals involved in the activity	Q-6,7,8 G.I-6-7
Goals or outcomes	English language development	Q-6 G.I-4,3		

Note. This table shows the operationalization of the variables in relation to the conceptual definitions, the dimensions of the study, the indicators, and the data-collection instruments, where Q represents the qualitative questionnaire, and G.I represents the group interview.

Reliability and Validity of Analysis and Findings

Concerning the instruments' reliability, both the qualitative questionnaire and the group interview script were validated by different techniques and procedures (see Chapter 4), and their design was based on theoretical references. The data obtained from these instruments were organized and analyzed with coding matrixes created in word processors and Excel spreadsheets following Saldaña's guidelines. Furthermore, the interpretation of data and its analysis is warranted by the theories and evidence described in the study (Cohen, et al., 2007). These theoretical foundations helped the researcher make sense of the complex real-life data that were obtained reducing biases and untrustworthiness. A.T. and the construct of affordance assisted the process of data analysis in three main aspects.

The first one is concerned with the initial process of selection of information. In this stage, key components associated with the affordance construct, and the elements of the activity system allowed the researcher to group the initial codes that eventually formed core data categories. Secondly, Engeström's (1987, 2015) expanded models and triangles provided meaningful insights into the interconnected elements of the activity systems found through the application of the instruments. This facilitated the examination of codes and recurrences in core categories and subcategories to extract ascending conclusions. Finally, A.T. in conjunction with the construct of affordance for research in technology-mediated environments provided philosophical, theoretical, and analytical frameworks that outlined practical mechanisms to describe and understand the phenomenon being studied which made the integration of the concrete results of the fieldwork and the theory more manageable.

In this chapter, the results that emerged from the processed data were reported, and the categories and subcategories that resulted from the analysis were discussed and explained

through specific instances from the data and the theory on which the study is founded. This gave relevance to the significance of the findings concerning perceived affordances in informal English learning activity systems mediated by online resources. In the next chapter, the discussion section and the conclusions drawn from the study will be presented.

Discussions and Conclusions

Chapter 5 addresses the significance of the results, the pedagogical and research implications for the field of study, the research limitations, recommendations for future studies, and the conclusions drawn from the interpretation of the data and the whole research process to provide an answer to the main research question: What are the perceived affordances of students from the LILEI program at UNAD in the informal English learning activities mediated by online technologies that they carried out to complement their formal English instruction? Hence, after analyzing the data and describing the categories, which emerged from the theory and data themselves, this chapter aims to inform about the significance and importance of knowing and understanding what the LILEI students' perceived affordances are in regard to the technology-mediated activity systems they perform; and about the implications that this knowledge can have for future research conducted in the bachelor's degree program on distance language learning, and on the language teaching and learning field in general.

Significance of the Results

The results from this study indicate that the students from the LILEI program often engage in informal activities mediated by online technologies to support their formal instruction from the English courses offered by the bachelor's degree program. Furthermore, the results also seem to indicate that the learners' ability to perceive the different affordances provided by the online technologies that mediate those activities and the ones provided by the activities themselves is a decisive factor that directly affects the learners' level of success when performing such activities, and therefore the development of communicative skills in the target language.

Being able to perceive physical affordances, which are entirely provided by the online resource (mediating artifact), is crucial in any technology-mediated activity system since this is what seems to enable the learners to perceive metacognitive affordances, social affordances, and affordances for language learning. Similarly, the inability to perceive important physical affordances may pose significant constraints to the learners, which prevents them from perceiving educational and social affordances waiting to be acted upon and that, if perceived, could promote language learning.

This is in line with the claims of Hammond (2010) that conceptualize the term “affordances” as possibilities of actions that are always relative to something. Therefore, it can be assumed that language learning affordances are relative to the learners’ ability to perceive other affordances, especially the technological ones, which are also relative and seem to depend on the artifacts’ limitations such as cost and accessibility, but also on the learner’s experience with the artifact. However, based on the findings from other studies (Morgan, 2007; Ibrahim and Rahimah, 2013; Nocchi, 2018), a more plausible and broader interpretation is that technological affordances are relative to the learners’ socio-cultural context, as well as their past experiences, which Engeström (1987, 2015) called historical context.

As stated earlier, educational affordances, which are mostly provided by the activity, that is an activity system involving the seven elements suggested by Engeström’s (1987, 2015) A.T. model, seem to be dependent on the learners’ social, cultural, and historical context, and therefore their ability to perceive fundamental physical affordances. However, once they are perceived, possibilities of actions that promote the development of metacognitive skills as well as communicative skills in English are unlocked. These results build on current research (van Lier, 2004; Morgan, 2007; Hammond, 2010; Ibrahim and Rahimah, 2013; Nocchi, 2018) that

suggest that affordances can be the actual properties of an object as well as actions in potential that only materialized or exist provided the subject's ability to perceive them and act on them due to his or her social, and cultural context, and his or her complex personal history and experiences, expanding Gibson's (1977, 1979) initial definition of affordances which indicates that affordances are limited to the actual properties of an object.

Consequently, the findings from this research highlight A. T's social, cultural, and historical elements in relation to the perception of affordances, and van Lier's (2004) view of language learning affordances as actions in potential that usually emerge through exchanges between users grounded on context and inter-actions. Nevertheless, while previous studies (Ibrahim and Rahimah, 2013; Nocchi, 2018) have shown that social interaction and global communication account for most of the affordances perceived by language learners, the results from this study demonstrate that although LILEI students acknowledge the importance of these types of affordances, they have difficulties perceiving them, and when they do, they not always act on them.

Pedagogical and Research Implications for the Field of Study

The present research study has contributed to a better understanding of how students in the LILEI program at UNAD learn English, what the actual role of informal instruction is, how technologic is used to support formal English instruction in the different language courses, and the importance of training students in how to perceive affordances appropriately. Understanding how and why technological, metacognitive, social, and language learning affordances are perceived by learners has important pedagogical implications for course designers, students, and administrators in the LILEI program.

For the participants of this study, in particular, the pedagogical implications were positive and numerous. During the process, they were prompted to reflect on their learning process, the strategies that they were choosing, the types of informal activities they were performing, the technological artifacts they were using, and the different affordances that these activities can provide. Being aware of what affordances are and the importance of being able to perceive them allowed these learners to be more conscious about informal language learning, and to make more informed decisions about the type of technology-mediated activities they perform. Furthermore, the present study adds to the growing research on informal language learning and the evolving construct of “affordances” for research in technology-mediated language learning through a theoretical framework based on the Activity Theory. This case study found the articulation of this theoretical framework and methodological design useful for small-scale studies that investigate challenging phenomena such as informal English learning, and that can serve as the starting point for large-scale longitudinal studies.

A.T and Engeström’s (1987, 2015) activity-system triangles provided a holistic view of the phenomena being studied and provided an interpretative framework as well as some methodological implications considering the difficulty of studying human activity systems in real contexts. One important implication was the need to apply two data collection methods based on the seven elements that construct Engeström’s A.T model (subject, mediational artifacts, objects, goals, purpose, roles, and community). A second implication concerned the definition of the boundaries for the case study, which was essential for the development of the different stages of the research process. The design and methods used in the study provide a strong and coherent interpretive framework that can be used in different small-scale research studies in the Colombian context.

Research Limitations on the Present Study

It is important for the researcher to acknowledge the different challenges and limitations found during the study. The scope of the study was to analyze the affordances perceived by LILEI students in technology-mediated informal English learning activities, which posed significant challenges and limitations. The first one concerned the selection of the participants. In a case study such as this, having well-defined boundaries for the case is paramount. Although these boundaries had been strongly defined by A.T, it was difficult to find a sample that entirely matched the criteria. This put in evidence the fact that most students from the LILEI program have trouble choosing, designing, and performing sound activities that account for all the seven elements proposed by A.T.

A second limitation was linked to the nature of the study and the type of data collected. All the data collected in the study were based on the participants' perceptions and beliefs. This means that the researcher had to report the data as it was provided by the participants, but there is a slight possibility that what was reported and analyzed may not have been precisely what the participant intended to report. Nevertheless, this was taken into consideration and strict measures were taken to ensure reliability and validity considering their possible limitations including deploying two data collection methods and a pilot focus group interview.

Finally, it is acknowledged that such a small sample is not broad enough for providing results that are likely to be generalized, especially if the sample, 20 students from the LILEI program, is compared to the number of the population (around 3000 students enrolled in the program). However, it is worth noting that it is beyond the scope of this single-case study to make large generalizations but to gain a better understanding of the phenomena being studied

within a particular context. It is up to the reader to decide whether or not the findings here proposed can be extended to his or her context.

Recommendations for Future Research

Considering that this is a small-scale case study that attempted to investigate a complex phenomenon at UNAD, which is one of the largest universities in the country, and the limitations stated in the previous segment, more research is advised. This case study is expected to be the starting point for a larger longitudinal research study that can benefit academia and the educational community in general. In fact, research on various topics and areas from this study is advised.

Researching perceived learning affordances in distance education through a mix-methods design and with a larger population could not only build on the findings from the current study but also provide a broader scope and the possibility to expand on current theory. This investigation could be targeted not only at informal activities mediated by online technology but also at the formal English learning activities proposed in the different English courses offered by the LILEI program. It would be beneficial to compare the type of affordances in formal settings to the perceived affordances in informal settings.

Furthermore, it is recommended to advance research on the technological affordances of the VLOs and VIOs offered as curricular content for each course. Considering that these learning resources are now an integral element of the design of every course at UNAD, researching their affordances and how they are perceived by the learners can also provide enormous pedagogical implications while contributing to the construct of a theory regarding language learning affordances of virtual learning environments. Finally, future studies should be taken into account to gain a better understanding of the real role of informal English learning and how it is

connected to formal instruction in distance-learning educational models, especially in the LILEI program, and the Virtual Language Institute (INVIL for its initials in Spanish) at UNAD.

Conclusions

The impact of recent technologies on formal English learning is undeniable and extensive research has been done on the topic. However, this study is part of a relatively small but growing trend of research that focuses on informal language learning mediated by technology. This study puts in evidence the importance of expanding knowledge on informal English learning, especially for distance-education models where learners are expected to have high autonomous learning skills, and where most of the language learning is likely to happen in the informal scenario. In these scenarios, where English is learned in a distance-learning modality, learners engage in informal learning activities mediated by technology, and they acknowledge that without this support, formal English learning becomes insufficient. Consequently, this calls for deep and extensive research that can contribute to a clearer understanding of how individuals who engage in informal language learning activities mediated by technology acquire communicative competencies.

When it comes to learning a foreign language in the scenarios described above, the type and number of affordances that these learners are able to perceive have a tremendous impact on their level of success. This study identified several types of affordances that, if perceived and acted upon, can facilitate language learning. They are physical affordances, metacognitive affordances, social affordances, and affordances for language learning. Nevertheless, significant limitations regarding cost, accessibility, and the learners' social, cultural, and historical experience were also encountered. These affordances are not usually perceived in isolation. On the contrary, they work as a network, in which the perception of one affordance can lead to the

discovery of another. Therefore, understanding what these affordances are, how they work, how they are perceived, and their limitations can have a significant impact on the learners' process.

Although all the affordances perceived by the learners are important, the ability to perceive physical affordances is of particular relevance for the level of success in any informal English learning activity systems mediated by a technological artifact. The perception of these types of affordances or the inability to perceive them seems to determine the learner's capacity to perceive more complex affordances such as metacognitive affordances, social affordances, or language learning affordances. The findings from this study show that learners who have difficulties perceiving simple physical affordances, a caption function of a screening platform, for instance, are likely to have more difficulties perceiving language learning affordances, among others.

Findings from similar studies (Ibrahim and Rahimah, 2013; Nocchi, 2017) showed that social affordances were among the most relevant for learners in Europe and Malaysia because they allow interactivity, social transformation, social connection, co-construction of knowledge, and more. However, the evidence analyzed in the present study appears to suggest that this is not always the case for most students from the LILEI program. Although these students do acknowledge and perceive these affordances and their importance, they seem to have some difficulties acting upon them. Exploiting the advantages of social affordances and instructing students on how to perceive them and act on them can have a positive impact on the development of their communicative skills as well as social development.

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Appendix A: Informed Consent

UNIVERSIDAD NACIONAL ABIERTA Y A DISTANCIA INFORMED CONSENT

Introduction

In the field of education, there is an important number of studies that investigate the affordance of information and communication technologies (ICT), and their impact on learners' learning experience. In the field of language learning, the concept of affordance is often described as the capacities, potentialities, and/or limitations of an online multimedia resource or media technology to facilitate language learning. It is suggested that perceiving these affordances is to detect the meaning or value of the learning object or activity in relation to the individuals' objectives, intentions, and influences. Hence, the importance of analyzing how these affordances are been perceived by learners when they engage in informal technology-mediated activities in English.

What is the name of the study?

Perceived learning affordances of activities mediated by Online Communication Technologies used in informal English Learning by Advanced Students of the Language Teaching Training Program at UNAD.

What is the purpose of the study?

This study attempts to analyze the perceived affordances of informal language learning activities mediated by online multimedia and communication technologies carried out by advanced learners in the language teaching program at UNAD to complement their formal English learning.

Who are the members of the research team?

The research team is formed by the postgraduate student JUAN CARLOS ACOSTA, and the thesis advisor Ph.D. CENAIDA GÓMEZ SÁENZ.

Whom can the participants contact if they have questions about the research or their participation in the research?

The participants can contact the researcher via telephone or email.

Phone number: 3104454669

E-mail: juanc.acosta@unad.edu.co

What will the participants do if they choose to participate in the study?

This study will collect data in two phases. In the first phase, every student from the English VI, English VII: English Conversation, and English Composition courses is asked to complete a qualitative survey containing close and open-ended questions concerning the participants' perceptions of online multimedia and communication technologies available to them, the types of resources used, the frequency in which they use them, and their general attitude towards informal language learning. From all the students who complete this survey, only 30 participants will be randomly selected as the sample of the study.

Based on the data obtained in phase one, 8 students will be selected for the second phase of the data collection process. In this phase, an interview will be carried out which will contain semi-structured questions designed to gather information about the participants' perceptions of the learning affordances provided by the online technology-mediated activities they engage in to complement their formal English learning at UNAD.

NOTE: This means that most participants will only have to complete a survey. However, if the participant is selected for the second phase, he or she will be asked to participate in a semi-structured interview.

What discomfort or risks may be encountered by those who participate in the research?

Participation in this research study does NOT pose a significant risk to the well-being of participants, and participants will NOT have to endure any discomfort, other than spending some time in the process of data collection. The research team takes this aspect very seriously and has taken measures to minimize any risks to the participants. These include the preservation of the participants' anonymity, the protection of the data obtained, the use of ethical checklists, among others.

Who benefits from this research?

This study has the potential to expand knowledge from current research about online and technological resources in formal language learning settings to language learning beyond the classrooms and in informal settings. Therefore, students and teachers will benefit from this study by gaining a better understanding of possible learning affordances of online multimedia and communication technologies regarding language learning. Similarly, these findings will be of value to course designers and decision-makers subscribed to the language teaching program at UNAD

What happens if a student does not want to participate in the research?

NOTHING HAPPENS, the participation of students from UNAD is completely voluntary. It should be noted that if a participant wants to withdraw even after the research has started, he/she can do so at any time he/she wants. Furthermore, not participating in the research will NOT result in any kind of consequence for the student on the part of the university, tutors, or course director.

How will the data collected be managed?

First, the information collected will be ANONYMOUS. Second, the data collected will be handled only by the research team. Thirdly, a general report will be provided to the university, without EVER mentioning cases of specific individuals. Finally, the publications arising from this research will only discuss global data, and in no case will any of the participants be identified.

If your decision is NOT to PARTICIPATE in the research, please DO NOT SIGN the attached FORM sheet. But if your decision is to PARTICIPATE, please fill it out and send it back to the research team.

THANK YOU!

UNIVERSIDAD NATIONAL ABIERTA Y A DISTANCIA**Consent to Participate in the Research**

I, _____, understand that I am being asked to participate, if I choose, in a research study that investigates perceived affordances of informal language learning activities mediated by online multimedia and communication technologies carried by learners at UNAD to support their formal English instruction.

I declare that I have read this information and understand it. I have had my questions answered and I know that I can ask questions later if I have them.

I know that I can choose to participate in the research or not. I know that I can withdraw whenever my participation at any time if I want to. I know that my answers will only be known by the research team. And I know that the information I provide will remain anonymous and that if there is important information, those responsible for the research will make it known to me.

Therefore, I DO WANT TO PARTICIPATE in the study.

For the record, this is signed at _____, on the _____ day of the month of _____, of the year 2021.

Name:
e-mail:
phone number:

UNIVERSIDAD NACIONAL ABIERTA Y A DISTANCIA CONSENTIMIENTO INFORMADO VERSION EN ESPAÑOL

Introducción

En el ámbito de la educación, existe un importante número de estudios que investigan el “*affordance*” de las tecnologías de la información y la comunicación (TIC), y su impacto en la experiencia de aprendizaje de los alumnos. En el ámbito del aprendizaje de idiomas, el concepto de *affordance* se describe a menudo como las capacidades, potencialidades y/o limitaciones de un recurso multimedia o de una tecnología mediática en línea para facilitar el aprendizaje de idiomas. Se sugiere que percibir estos *affordances* es detectar el significado o valor de la actividad u objeto de aprendizaje en relación con los objetivos, intenciones e influencias de los individuos. De ahí la importancia de analizar cómo los alumnos perciben estos *affordances* cuando participan en actividades informales mediadas por la tecnología en inglés.

¿Cuál es el nombre del estudio?

Perceived affordances of informal activities mediated by online-technological resources carried out by students from the Foreign Language Teaching Program at UNAD to complement their formal English instruction

¿Cuál es el objetivo del estudio?

Este estudio pretende analizar la percepción de las *potencialidades* de las actividades informales mediadas por tecnologías multimedia y de comunicación en línea que realizan los alumnos avanzados para aprender un segundo idioma de la Licenciatura en Lenguas Extranjeras con Énfasis en Inglés de la UNAD para complementar su aprendizaje formal.

¿Quiénes son los miembros del equipo de investigación?

El equipo de investigación está formado por el estudiante de postgrado JUAN CARLOS ACOSTA, y la directora de tesis la doctora CENAIDA GÓMEZ SÁENZ.

¿Con quién pueden ponerse en contacto los participantes si tienen preguntas sobre la investigación o su participación en ella?

Los participantes pueden ponerse en contacto con el investigador por teléfono o por correo electrónico.

Teléfono: 3104454669

Correo electrónico: juanc.acosta@unad.edu.co

¿Qué harán los participantes si deciden participar en el estudio?

Este estudio recogerá datos en dos fases. En la primera fase, se pedirá a todos los estudiantes de los cursos de English VI, English VII: English Conversation, y English Composition que completen una encuesta cualitativa que contiene preguntas cerradas y abiertas sobre la percepción de los participantes de las tecnologías multimedia y de comunicación en línea que tienen a su disposición, los tipos de recursos que utilizan, la frecuencia con la que los usan y su actitud general hacia el aprendizaje informal de idiomas. De todos los estudiantes que completen esta encuesta, sólo 30 participantes serán seleccionados al azar como muestra del estudio.

A partir de los datos obtenidos en la primera fase, se seleccionarán 8 estudiantes para la segunda fase del proceso de recolección de datos. En esta fase se llevará a cabo una entrevista que contendrá preguntas semiestructuradas diseñadas para recoger información sobre las percepciones de los participantes acerca de las *potencialidades* de aprendizaje proporcionadas por las actividades en línea mediadas por la tecnología que realizan para complementar su aprendizaje formal del inglés en la UNAD.

NOTA: Esto significa que la mayoría de los participantes sólo tendrán que completar una encuesta. Sin embargo, si el participante es seleccionado para la segunda fase, se le pedirá que participe en una entrevista semiestructurada.

¿Qué molestias o riesgos pueden encontrar quienes participen en la investigación?

La participación en este estudio de investigación NO supone un riesgo significativo para el bienestar de los participantes, y éstos NO tendrán que soportar ninguna molestia, aparte de pasar algún tiempo en el proceso de recogida de datos. El equipo de investigación se toma muy en serio este aspecto y ha tomado medidas para minimizar cualquier riesgo para los participantes. Estas incluyen la preservación del anonimato de los participantes, la protección de los datos obtenidos, el uso de listas de control ético, entre otras.

¿Quién se beneficia de esta investigación?

Este estudio tiene el potencial de ampliar los conocimientos de la investigación actual sobre los recursos tecnológicos y en línea en los entornos formales de aprendizaje de idiomas al aprendizaje de idiomas más allá de las aulas y en entornos informales. Por lo tanto, los estudiantes y los profesores se beneficiarán de este estudio al obtener una mejor comprensión de las posibles *potencialidades* de aprendizaje de las tecnologías multimedia y de comunicación en línea en relación con el aprendizaje de idiomas. Del mismo modo, estos hallazgos serán valiosos para los diseñadores de cursos y los responsables de la toma de decisiones suscritos al programa de enseñanza de idiomas en la UNAD

¿Qué ocurre si un estudiante no quiere participar en la investigación?

NO PASA NADA, la participación de los estudiantes de la UNAD es totalmente voluntaria. Hay que tener en cuenta que, si un participante quiere retirarse incluso después de iniciada la investigación, puede hacerlo en el momento que quiera. Si el participante lo desea, incluso puede solicitar el no usar su información en la investigación incluso después de su recolección. Sin embargo, esta solicitud deberá ser realizada durante los siguientes 10 días de haber realizado la encuesta u entrevista. Además, no participar en la investigación NO supondrá ningún tipo de consecuencia para el estudiante por parte de la universidad, los tutores o el director del curso.

¿Cómo se gestionarán los datos recogidos?

En primer lugar, la información recogida será ANÓNIMA. En segundo lugar, los datos recogidos serán manejados únicamente por el equipo de investigación. En tercer lugar, se entregará un informe general a la universidad, sin mencionar nunca los casos de personas concretas. Por

último, en las publicaciones derivadas de esta investigación sólo se tratarán datos globales, y en ningún caso se identificará a ninguno de los participantes.

Si su decisión es NO PARTICIPAR en la investigación, por favor, NO FIRME la hoja adjunta. Pero si su decisión es PARTICIPAR, por favor, diligencie el documento y envíelo al equipo de investigación.

Appendix B: Data Collection Instrument 1 (open-ended questionnaire)

UNIVERSIDAD NACIONAL ABIERTA Y A DISTANCIA – UNAD

INSTRUMENTO DE COLLECTION DE DATOS

Tipo de instrumento: Cuestionario con preguntas abiertas

Modo de implementación: En línea a través de Google Forms

<https://forms.gle/96suXxqb9aMwGEJC8>

CUESTIONARIO

Cordial saludo,

Amablemente le invito a diligenciar el presente cuestionario, el cual es creado como parte de la investigación denominada “perceived affordances of informal activities mediated by online-technological resources carried out by students from the Foreign Language Teaching Program at UNAD to complement their formal English instruction” dentro de la Maestría en Mediación Pedagógica en la Enseñanza del Inglés, de la Universidad Nacional Abierta y a Distancia. El responsable directo de este cuestionario es el maestrante Juan Carlos Acosta, con la asesoría de la doctora Cenaida Gómez Sáenz.

Los objetivos del cuestionario son:

1. Identificar los recursos tecnológicos en línea involucrados en las actividades informales que usted realiza de forma autónoma para complementar la instrucción formal en el idioma extranjero inglés que recibe en los diferentes cursos del programa.

2. Describir las actividades informales mediadas por recursos tecnológicos online que usted utiliza para complementar la instrucción formal en el idioma extranjero inglés.

Su opinión real y honesta es altamente valorada. Por favor responda a todas las preguntas y recuerde que no hay respuesta errónea o correcta y que la información derivada del diligenciamiento de este formulario es confidencial, es decir, que solo se le dará uso dentro de la investigación y que no representará ninguna afectación para usted. El tiempo estimado para el diligenciamiento del cuestionario de aproximadamente 15 a 20 minutos.

En caso de presentar dudas, inquietudes o sugerencias con relación al desarrollo de este cuestionario, o el desarrollo de este estudio en general, lo invito a comunicarse al número 3104454669, o al correo electrónico juanc.acosta@unad.edu.co

Información personal

Nombre: _____

Correo electrónico: _____

Teléfono: _____

Aprendizaje informal del inglés

Richards (2015) distingue dos dimensiones en las que se produce el aprendizaje de idiomas. Distingue entre lo que ocurre dentro de las aulas (instrucción formal) y lo que ocurre más allá de las aulas (instrucción informal). Por lo tanto, el aprendizaje informal de inglés hace referencia a todas las actividades que un individuo realiza de forma autónoma, y por fuera de un salón de clase o de un contexto formal, para aprender, mejorar o practicar sus habilidades comunicativas en el idioma.

Teniendo en cuenta la información anterior, por favor responda las siguientes preguntas

1. ¿Cree usted que las actividades formales propuestas en los cursos de inglés (English I, II, III, IV, V, VI y VII: English conversation) del programa de licenciatura en lenguas extranjeras con énfasis en inglés de la UNAD son suficientes para que los estudiantes adquieran el nivel C1 necesario para graduarse?

Si: ____

No: ____

Justifique su respuesta

2. ¿Cree usted que el internet es útil para realizar actividades que apoyen o complementen la formación formal que los estudiantes del programa de LILEI reciben a través de los diferentes cursos de lengua extranjera?

Si: ____

No: ____

Justifique su respuesta

3. ¿Cómo cree usted que su aprendizaje informal ha influenciado su nivel actual de inglés?

Preguntas-Recursos tecnológicos en línea

4. ¿Usa usted recursos tecnológicos en línea para la realización de actividades informales que le ayuden a mejorar sus ingles?

Si: ____

No: ____

Si su respuesta es “si” ¿Qué tan a menudo?

5. En caso de que su respuesta anterior haya sido afirmativa, marque los recursos tecnológicos en línea que usted más utiliza para la realización de actividades informales que le ayuden a mejorar su inglés.

Si existe otro u otros recursos que no estén en la lista, por favor especifíquelo(s) en “otros”

YouTube: ____

Blogs: ____

Wikis: ____

Facebook: ____

Instagram: ____

Tik Tok: ____

Plataformas de steaming (Netflix, Amazon Prime, HBO, Disney+, etc.): ____

TedTalks: ____

Podcasts: ____

Emisoras radiales en línea: ____

Skype: ____

WhatsApp: ____

Juegos en línea: ____

Páginas Web en inglés: ____

Diccionarios en línea o traductores: ____

Aplicaciones: ____ ¿Cuáles?: _____

Extensiones de Google: ____ ¿Cuáles?: _____

Otros (por favor

especifique): _____

Actividades informales mediadas por recursos tecnológicos en línea

6. ¿Cuál es el propósito o motivo que lo lleva a realizar actividades informales en inglés mediadas por recursos tecnológicos en línea? Puede seleccionar elementos de la lista, o agregar otros. Después de hacerlo, por favor justifique su respuesta.

Mejorar o desarrollar una habilidad específica: ___ ¿cuál?: _____

Practicar de forma general: ___

Repasar o complementar lo aprendido en los cursos formales de inglés: ___

Motivos personales (hablar con personas que no hablan español, trabajo, etc.): ___

Acceder a la información en su idioma original (por ejemplo: aprender más sobre un tema de interés): ___

Otro: _____

Justifique su respuesta

7. ¿Qué tipo de actividades mediadas por recursos tecnológicos en línea usted realiza para complementar su aprendizaje formal del inglés? Puede seleccionar elementos de la lista, o agregar otros. Después de hacerlo, por favor justifique su respuesta.

Actividades que requieren interacción con otros estudiantes del programa: ___

Actividades que requieren la interacción con otras personas que están aprendiendo inglés: ___

Actividades que requieren la interacción con hablantes nativos: ___

Actividades que no requieren la comunicación directa con otros. (ejemplo: hacer comentarios en un post): ___

Actividades que no requieren la interacción con otros: ___

Otros: _____

Justifique su respuesta

8. Por favor responda las siguientes preguntas para describir la actividad informal mediada por recursos tecnológicos en línea que usted realiza más a menudo para complementar la instrucción formal en el idioma extranjero inglés.

¿Cuál es la actividad?

¿Con qué frecuencia realiza la actividad?

¿Cuál es el objetivo o motivo que lo lleva a realizar la actividad?

¿Cuál es el (los) recurso(s) tecnológico(s) online que median la actividad?

¿Cuál es el papel de estos recursos y cómo los emplea dentro de la actividad?

Appendix C: Data Collection Instrument 2 (Focus group script)

Universidad Nacional Abierta y a Distancia – UNAD

Guion para el desarrollo del Grupo Focal

Fecha: _____

Tiempo estimado: una hora

Participantes:

1. Presentación del moderador del grupo focal y breve explicación introductoria.

Cordial saludo,

Mi nombre es Juan Carlos Acosta y agradezco enormemente su presencia el día de hoy. Este espacio se crea como parte de la investigación denominada “perceived affordances of informal activities mediated by online-technological resources carried out by students from the Foreign Language Teaching Program at UNAD to complement their formal English instruction” dentro de la Maestría en Mediación Pedagógica en la Enseñanza del Inglés, de la Universidad Nacional Abierta y a Distancia. Yo seré el responsable y moderador de este encuentro como investigador principal del proyecto, el cual está siendo asesorado por la Doctora Cenaida Gómez Sáenz.

El objetivo del encuentro es:

Discutir sobre sus percepciones de los “affordances” de las actividades informales mediadas por recursos tecnológicos en línea que ustedes realizan para complementar su aprendizaje forma del inglés en el programa de LILEI de la UNAD.

Descripción del término “affordance”

En el ámbito de la educación, existe un importante número de estudios que investigan el “affordance” de las tecnologías de la información y la comunicación (TIC), y su impacto en la experiencia de aprendizaje de los alumnos. En el ámbito del aprendizaje de idiomas, el concepto de “affordance” se describe a menudo como las capacidades,

potencialidades y/o limitaciones de un recurso para facilitar el aprendizaje de idiomas. Se sugiere que percibir estos "affordances" es detectar el significado o valor de la actividad u objeto de aprendizaje en relación con los objetivos, intenciones e influencias de los individuos

Su opinión real y honesta es altamente valorada. Por favor responda a todas las preguntas con sinceridad y recuerde que no hay respuesta errónea o correcta y que la información derivada de este encuentro es confidencial, es decir, que solo se le dará uso dentro de la investigación y que no representará ninguna afectación para usted. El tiempo estimado para este encuentro es de 40 a 60 minutos aproximadamente.

Este encuentro debe ser grabado para que la información aquí recolectada pueda ser posteriormente analizada. Esta grabación solo reposará en mi computador personal y no será divulgada, subida a la internet o compartida a ninguna persona. Una vez esta investigación haya concluido en su totalidad y la información no se requiera más, esta será borrada permanentemente. ¿cuento con su permiso para grabar la sesión?

Finalmente quiero recordarles algunas indicaciones importantes para el buen desarrollo de esta actividad.

1. Se debe respetar el turno de participación. Si alguien levanta la mano, se le dará la palabra a esta persona.
2. No se debe interrumpir a un participante mientras este está desarrollando sus ideas.
3. Nos dirigiremos los unos a los otros de forma respetuosa y recordaremos que todos tiene derecho a tener su punto de vista.
4. Para evitar pasarnos del tiempo estimado, yo, como moderador, hare control del tiempo y les dejare saber si es hora de pasar a otra pregunta, o de darle la palabra a otro participante.

¿Tienen alguna duda antes de iniciar?

2. Desarrollo de la entrevista grupal

GUIÓN DE PREGUNTAS	
Categoría/sección	Preguntas guía
Ice-breaker -	¿Cómo se encuentran el día de hoy?

Preguntas de introducción	¿alguna vez han participado en el desarrollo de alguna investigación? ¿han participado en alguna entrevista?
Preguntas de transición	¿qué tan a menudo usan el internet? ¿Cuáles son sus páginas, apps, herramientas o plataformas favoritas?
Preguntas de contenido	
Subject-related affordances	1. Como estudiantes del programa de LILEI, ¿qué facilidades encuentran al utilizar recursos tecnológicos en línea para mejorar su inglés? ¿qué dificultades?
Object-related affordances	2. Cuando realizan una actividad mediada por algún recurso tecnológico en línea, ¿siempre tienen un objetivo en mente? ¿Es este objetivo siempre claro? 3. ¿La selección de una determinada actividad está siempre basada en un motivo/meta/objetivo particular? 4. ¿Qué los motiva a realizar este tipo de actividades?
Rules-related affordances	5. ¿Qué aspectos son importantes para ustedes al momento de seleccionar una actividad mediada por algún recurso tecnológico en línea? Por ejemplo, que el inglés sea autentico y no modificado, que los videos tengan subtítulos, etc..
Community-related affordances	6. ¿Qué potencialidades tienen las actividades que realizan para promover la interacción real en inglés con otras personas? 7. ¿Cómo estas actividades mediadas por recursos tecnológicos en línea contribuyen al desarrollo de su competencia comunicativa?
Role-related affordances	8. Desde su punto de vista como estudiantes del programa de LILEI y futuros profesores de inglés, ¿qué papel juega el aprendizaje informal del inglés mediado por recursos tecnológicos en línea? 9. ¿Creen ustedes que es importante conocer nuestras debilidades y fortalezas antes de realizar una actividad con recursos en línea? ¿Por qué?
Mediational artifact affordances	10. ¿Cuál es el rol de los recursos tecnológicos en línea que usted utilizan en su aprendizaje informal del inglés? 11. ¿Cuáles son las potencialidades, bondades, facilidades o dificultades que se presentan al realizar una actividad informal utilizando recursos tecnológicos? Aspectos físicos como: habilidades tecnológicas, accesibilidad, lugar en donde se puede utilizar, costos, etc, Aspectos sociales como: interacción con otros, culturales, colaboración, comunicación Aspectos de aprendizaje personal como: el desarrollo de habilidades de speaking, Reading, writing y listening, aprendizaje de estrategias de estudio, motivación y autonomía.

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3. Despedida y agradecimientos

Agradezco enormemente su participación en este encuentro.

Fin de la entrevista grupal.

Appendix D: Instrument Quality Checklist




Dear researcher,

Use this checklist as an evaluation tool to assess the quality of your informed consent (IC). If some of the items do not apply to your study and there are important observations, please write down in the Remarks case.

Items	Yes	No	Remarks
➤ Does the IC document explain the general procedure of the research?	X		
➤ Does the IC explain the purpose of the study?	X		
➤ Does the IC include information about the risks to which participants may be exposed, as well as the steps you will take to minimize any risks?	X		
➤ Does the IC provide information about how the participants' identities will be kept anonymous and confidential as much as possible?	X		
➤ Does the IC provide contact information so that the participants can contact the researchers if they have questions or concerns?	X		
➤ Does the IC make it clear that participation is purely voluntary and that the participants have the right to withdraw at any time?	X		
➤ The IC does not contain any language suggesting that the participants are giving up any rights or are releasing the investigators from any liability?	X		
➤ Have you considered that multiple consents may need to be obtained for one study? For example, from parents, teachers, child learners, school administrators, and so on?	X		There is only need of one informed consent form
➤ If the potential participants do agree to participate, have you checked to make sure	x		

the documents are dated on the same day they are signed?			
➤ Have you considered how you will provide the participants with ample time to review the document before making their decision?	x		
➤ Have you given a copy of the signed consent form to all those who agreed to participate and kept an original signed copy for your own records?	x		

Evaluation of the Informed Consent			
Is the Informed Consent approved by the thesis advisor?	Yes	<input checked="" type="checkbox"/>	No
Name of the advisor:	Cenaida Gómez		
Signature of the advisor:			

Appendix E: Expert Validation Instrument

UNIVERSIDAD NACIONAL ABIERTA Y A DISTANCIA

Protocolo De Validación Por Experto

Nombre del estudio: Perceived affordances of informal activities mediated by online-technological resources carried out by students from the Foreign Language Teaching Program at UNAD to complement their formal English instruction

Objetivos de cuestionario:

1. Identificar los recursos tecnológicos en línea involucrados en las actividades informales que los estudiantes del programa de LILEI de la UNAD realizan de forma autónoma para complementar su instrucción formal en el idioma extranjero inglés que recibe en los diferentes cursos del programa.
2. Describir las actividades informales mediadas por recursos tecnológicos online que los estudiantes del programa LILEI de la UNAD utilizan para complementar la instrucción formal en el idioma extranjero inglés.

Tipo de instrumento: Cuestionario con preguntas abiertas

Modo de implementación: En línea a través de Google Forms

<https://forms.gle/96suXxqb9aMwGEJC8>

Instrucciones

Por favor evalúe cada uno de los segmentos del cuestionario de acuerdo con los siguientes criterios e indicaciones:

Pertinencia: el criterio se cumple de manera satisfactoria si las preguntas permiten generar respuestas en los participantes que suministren información sobre las categorías que enmarcan cada una de ellas.

Claridad: Se refiere a la manera como se estructuran y se presentan las preguntas y enunciados del cuestionario. Este criterio se cumple si no existe ambigüedad en las preguntas, y si éstas son entendibles y de fácil comprensión para los participantes.

Relevancia: El criterio se cumple si las preguntas formuladas o enunciados están en consonancia con el alcance del estudio de investigación, si las preguntas solo recogen información necesaria para resolver el problema y si no se desvían del tema principal del estudio.

Adecuación en función de la unidad de análisis: Este criterio se cumple de manera satisfactoria si las preguntas o enunciados son apropiados para que sean respondidos por los estudiantes del programa de licenciatura en lenguas extranjeras con énfasis en inglés de la UNAD.

marqué **1** si el criterio evaluado no se cumple, **2** si el criterio evaluado se cumple, pero debe atender algunas observaciones y **3** si el criterio se cumple de manera satisfactoria.

QUESTIONARIO

Cordial saludo,

Amablemente le invito a diligenciar el presente cuestionario, el cual es creado como parte de la investigación denominada “perceived affordances of informal activities mediated by online-technological resources carried out by students from the Foreign Language Teaching Program at UNAD to complement their formal English instruction” dentro de la Maestría en Mediación Pedagógica en la Enseñanza del Inglés, de la Universidad Nacional Abierta y a Distancia. El responsable directo de este cuestionario es el maestrante Juan Carlos Acosta, con la asesoría de la doctora Cenaida Gómez Sáenz.

Los objetivos del cuestionario son:

1. Identificar los recursos tecnológicos en línea involucrados en las actividades informales que usted realiza de forma autónoma para complementar la instrucción formal en el idioma extranjero inglés que recibe en los diferentes cursos del programa.
2. Describir las actividades informales mediadas por recursos tecnológicos online que usted utiliza para complementar la instrucción formal en el idioma extranjero inglés.

Su opinión real y honesta es altamente valorada. Por favor responda a todas las preguntas y recuerde que no hay respuesta errónea o correcta y que la información derivada del diligenciamiento de este formulario es confidencial, es decir, que solo se le dará uso dentro de la investigación y que no representará ninguna afectación para usted. El tiempo estimado para el diligenciamiento del cuestionario de aproximadamente 15 a 20 minutos.

En caso de presentar dudas, inquietudes o sugerencias con relación al desarrollo de este cuestionario, o el desarrollo de este estudio en general, lo invito a comunicarse al número 3104454669, o al correo electrónico juanc.acosta@unad.edu.co

Segmento o categoría	Pregunta o enunciado	Criterio				Observaciones
		Pertinencia	Claridad	Relevancia	Adecuación en función de la unidad de análisis	
Segmento inicial	Introducción					
	Objetivos					
	Instrucciones					

1. Información personal

1.1 Nombre: _____

1.2 Correo electrónico: _____

1.3 Teléfono: _____

Segmento o categoría	Pregunta o enunciado	Criterio				Observaciones
		Pertinencia	Claridad	Relevancia	Adecuación en función de la unidad de análisis	
1. Información personal	1.1					
	1.2					
	1.3					

2. Aprendizaje informal del inglés

Richards (2015) distingue dos dimensiones en las que se produce el aprendizaje de idiomas. Distingue entre lo que ocurre dentro de las aulas (instrucción formal) y lo que ocurre más allá de las aulas (instrucción informal). Por lo tanto, el aprendizaje informal de inglés hace referencia a todas las actividades que un individuo realiza de forma autónoma, y por fuera de un salón de clase o de un contexto formal, para aprender, mejorar o practicar sus habilidades comunicativas en el idioma.

Teniendo en cuenta la información anterior, por favor responda las siguientes preguntas

2.1 ¿Cree usted que las actividades formales propuestas en los cursos de inglés (English I, II, III, IV, V, VI y VII: English conversation) del programa de licenciatura en lenguas extranjeras con énfasis en inglés de la UNAD son suficientes para que los estudiantes adquieran el nivel C1 necesario para graduarse?

Si: ____

No: ____

Justifique su respuesta

2.2 ¿Cree usted que los diferentes recursos tecnológicos en línea son útiles para realizar actividades que apoyen o complementen la formación formal que los estudiantes del programa de LILEI reciben a través de los diferentes cursos de lengua extranjera?

Si: ____

No: ____

Justifique su respuesta

2.3. ¿Cómo cree usted que su aprendizaje informal ha influenciado su nivel actual de inglés?

Segmento o categoría	Pregunta o enunciado	Criterio				Observaciones
		Pertinencia	Claridad	Relevancia	Adecuación en función de la unidad de análisis	
2. Aprendizaje informal del inglés	Contextualización					
	2.1					
	2.2					
	2.3					

3. Recursos tecnológicos en línea

3.1. ¿Usa usted recursos tecnológicos en línea para la realización de actividades informales que le ayuden a mejorar sus ingles?

Si: ____

No: ____

Si su respuesta es “si” ¿Qué tan a menudo?

3.2. En caso de que su respuesta anterior haya sido afirmativa, marque los recursos tecnológicos en línea que usted más utiliza para la realización de actividades informales que le ayuden a mejorar su inglés. Si existe otro u otros recursos que no estén en la lista, por favor especifíquelo(s) en “otros”

YouTube: ____

Blogs: ____

Wikis: ____

Facebook: ____

Instagram: ____

Tik Tok: ____

Plataformas de steaming (Netflix, Amazon Prime, HBO, Disney+, etc.): ____

TedTalks: ____

Podcasts: ____

Emisoras radiales en línea: ____

Skype: ____

WhatsApp: ____

Juegos en línea: ____

Páginas Web en inglés: ____

Diccionarios en línea o traductores: ____

Aplicaciones: ____ ¿Cuáles?: _____

Extensiones de Google: ____ ¿Cuáles?: _____

Otros (por favor especifique): _____

3. Recursos tecnológicos en línea	Pregunta o enunciado	Criterio				Observaciones
		Pertinencia	Claridad	Relevancia	Adecuación en función de la unidad de análisis	
	3.1					
	3.2					

4. Actividades informales mediadas por recursos tecnológicos en línea

4.1. ¿Cuál es el propósito o motivo que lo lleva a realizar actividades informales en inglés mediadas por recursos tecnológicos en línea?

Mejorar o desarrollar una habilidad específica: ____ ¿cuál?: _____

Practicar de forma general: ____

Repasar o complementar lo aprendido en los cursos formales de inglés: ____

Motivos personales (hablar con personas que no hablan español, trabajo, etc.): ____

Acceder a la información en su idioma original (por ejemplo: aprender más sobre un tema de interés): ____

Otro: _____

Justifique su respuesta

4.2. ¿Qué tipo de actividades mediadas por recursos tecnológicos en línea usted realiza para complementar su aprendizaje formal del inglés?

Actividades que requieren interacción con otros estudiantes del programa: ____

Actividades que requieren la interacción con otras personas que están aprendiendo inglés: ____

Actividades que requieren la interacción con hablantes nativos: ____

Actividades que no requieren la comunicación directa con otros. (ejemplo: hacer comentarios en un post): ____

Actividades que no requieren la interacción con otros: ____

Otros: _____

Justifique su respuesta

4.3. Por favor responda las siguientes preguntas para describir la actividad informal mediada por recursos tecnológicos en línea que usted realiza más a menudo para complementar la instrucción formal en el idioma extranjero inglés.

4.3.1 ¿Cuál es la actividad?

4.3.2 ¿Con qué frecuencia realiza la actividad?

4.3.3 ¿Cuál es el objetivo o motivo que lo lleva a realizar la actividad?

4.3.4¿Cuál es el (los) recurso(s) tecnológico(s) online que median la actividad?

4.3.5¿Cuál es el papel de estos recursos y cómo los emplea dentro de la actividad?

Segmento o categoría	Pregunta o enunciado	Criterio				Observaciones
		Pertinencia	Claridad	Relevancia	Adecuación en función de la unidad de análisis	
4. Actividades informales mediadas por recursos tecnológicos en línea	4.1					
	4.2					
	4.3					
	4.3.1					
	4.3.2					
	4.3.3					
	4.3.4					
	4.3.5					

Appendix F: Pilot-Test Validation Instrument

Universidad Nacional Abierta y a Distancia – UNAD

Protocolo De Validación – Prueba piloto

Guion para el desarrollo del Grupo Focal – prueba piloto

Fecha: _____

Participantes _____

1. Presentación del moderador del grupo focal y breve explicación introductoria.

Ítem a evaluar	Si	No	comentarios
¿es la introducción clara?			
¿los participantes comprenden los objetivos?			
¿La descripción del término "affordance" fue suficiente?			
Elementos por mejor o incorporar			

2. Desarrollo de la entrevista grupal

GUIÓN DE PREGUNTAS	
Categoría	Preguntas guía
Subject-related affordances	1. Como estudiantes del programa de LILEI, ¿qué facilidades encuentran al utilizar recursos tecnológicos en línea para mejorar su inglés? ¿qué dificultades?
Object-related affordances	2. Cuándo realizan una actividad mediada por algún recurso tecnológico en línea, ¿siempre tienen un objetivo en mente? ¿Es este objetivo siempre claro? 3. ¿La selección de una determinada actividad está siempre basada en un motivo/meta/objetivo particular? 4. ¿Qué los motiva a realizar este tipo de actividades?
Rules-related affordances	5. ¿Qué aspectos son importantes para ustedes al momento de seleccionar una actividad mediada por algún recurso tecnológico en línea? Por ejemplo, que el inglés sea autentico y no modificado, que los videos tengan subtítulos, etc..

Community-related affordances	<p>6. ¿Qué potencialidades tienen las actividades que realizan para promover la interacción real en inglés con otras personas?</p> <p>7. ¿Cómo estas actividades mediadas por recursos tecnológicos en línea contribuyen al desarrollo de su competencia comunicativa?</p>
Role-related affordances	<p>8. Desde su punto de vista como estudiantes del programa de LILEI y futuros profesores de inglés, ¿qué papel juega el aprendizaje informal del inglés mediado por recursos tecnológicos en línea?</p> <p>9. ¿qué tan importante es conocer nuestras debilidades y fortalezas antes de realizar una actividad?</p>
Mediational artifact affordances	<p>10. ¿Cuál es el rol de los recursos tecnológicos en línea que usted utilizan en su aprendizaje informal del inglés?</p> <p>11. ¿Qué potencialidades específicas tienen (enlistar los recursos más utilizados por los estudiantes según los resultados del cuestionario) para el aprendizaje del inglés? ¿qué limitaciones?</p>

Segmento o categoría	Pregunta o enunciado	Criterio				Observaciones
		Pertinencia	Claridad	Relevancia	Adecuación en función de la unidad de análisis	
	Ice-breaker					
	Pregunta de introducción					
	Pregunta de transición					
Segmento de preguntas guiadas – discusión	1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					

Ítem a evaluar	Si	No	comentarios
¿Es el "ice-breaker" natural?			

¿La transición entre la introducción, el ice-breaker y las preguntas de contenido se sintió natural?			
¿Tiene la ruta de preguntas y su orden lógico sentido en tal forma que los participantes sean llevados gradualmente a desarrollar el contenido?			
¿el formato actual de las preguntas es adecuado?			
¿la forma en como se presentan las preguntas hace que la interacción sea conversacional?			
¿la selección del vocabulario en las preguntas es de orden familiar y comprensible para los participantes?			
¿las preguntas indagan sobre una sola dimensión a la vez?			
¿El tamaño de las preguntas es el apropiado?			
¿se requiere más "prompts" que ayuden a guiar fluidamente la conversación?			
Elementos por mejor o incorporar			

Comentarios o sugerencias adicionales:

Appendix G: Coding Matrix

CODING MATRIX – CYCLE 1: INITIAL CODING

1. SELECTION OF INFORMATION (CODING AND CATEGORIZATION) – INSTRUMENT 1: QUALITATIVE QUESTIONNAIRE

CODING: Informal language learning to support formal instruction

code 1	Accessibility	code 7	Potential interactions	code 12	Intrinsic motivation	code 19	Support development of communicative skills
code 2	Flexibility	code 8	Possibilities between users	code 13	Learning styles	code 20	Support of lexicon improvement
code 3	Physical	code 9	Global communication	code 14	Reflect on learning	code 21	Support pronunciation improvement
code 4	Real time connection	code 10	Identity formation	code 15	Monitor learning	code 22	Linguistic affordances
code 5	Design features	code 11	culture	code 16	Motivation	code 23	feedback
code 6	functional			code 17	learning strategies	code 24	Support formal English learning
				code 18	self-directed learning	code 25	Practice language structures learned in formal contexts

Question	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
¿Cree usted que las actividades formales propuestas en los cursos de inglés (English I, II, III, IV, V, VI y VII: English Conversation) del programa de licenciatura en lenguas extranjeras con énfasis en inglés de la UNAD son suficientes para que los estudiantes adquieran el nivel C1 necesario para graduarse?	No En el programa que a medida de cada semestre la actividad de English, algunos estudiantes solo tienen hasta el B1 o B2 finalizando la carrera.	Yes Si, porque hay suficientes recursos bibliográficos, didácticos, sistemas de aprendizaje, y ambientes simulados que aportan a la adquisición de un hábito de aprendizaje de una segunda lengua. C. 17,18	No Considero que los cursos de inglés que ofrece la universidad cumplen un papel muy importante en la formación de nuestro proceso, sin embargo, pienso que se deberían implementar otras estrategias, como por ejemplo optar por profesores nativos. C. 24	Yes si, porque ya que las actividades en los cursos ayudan a reabrir, reformar un poco la práctica del inglés no obstante cada uno de las personas que estudia este idioma tendrá la oportunidad de conocer un nuevo mundo lingüístico como lo es el inglés, ya que esto ayuda a perfeccionar tanto su escucha, habla, lectura y escritura en inglés ya que hoy el mundo se ha visto dominado por el idioma inglés C.	Yes Considero que desde que se inicia English 1 son los temas interesantes. Todo depende de porque todos no tenemos las mismas habilidades o ritmo para aprender.	Yes Ayuda a fomentar la lingüística y ayuda al mejoramiento de la comunicación en otro idioma. C. 19	Yes	No Se requiere más acompañamiento y profundización y seguimiento por parte de los tutores, en realidad las temáticas abordadas son en sí cruciales, pero sin el debido acompañamiento no se logra alcanzar el objetivo proyectado. C. 24	No Es necesario tener más espacios en los que se practique el idioma C. 24	No Para adquirir un nivel de inglés tan alto se requiere de mucho esfuerzo y no solo por parte del estudiante, si no de las estrategias e intervención del docente. C. 24

Activate Windows

Go to Settings to activate Windows



<p>Category 1</p> <p>Technological affordances: Actions in potential offered by a technology, where the technology is seen as a culturally and historically developed tool, mediating a collective activity</p> <p>Physical Affordances</p> <p>L1 Con respecto pues al uso específico para le fortalecimiento de la lengua extranjera, encuentro mucha facilidad en el momento al ingresar a aplicaciones libres, de no costo, cuando yo ingreso a YouTube, la actividad estaba, la actividad yo la realizo, busco muchos youtubers nativos de inglés británico, ya tengo 3 seleccionados y con ellos trabajo todas las noches antes de acostarme.</p> <p>Lo que hago es hacer "30x20x10log", aparte de esto hay unas actividades de responder preguntas, interactuar con ellos al mismo tiempo, como que usted hace la pausa de YouTube, luego lo que ellos hacen es usted grabarse en el celular, mirar el nivel de pronunciación, hay unas aplicaciones en donde usted puede corregir la pronunciación británica o americana, y lo que yo hago es tener la mediación con esa plataforma, con YouTube, que es gratis obviamente y allí encuentro todos los niveles.</p> <p>Aspectos físicos: Lo que tiene que ver con la accesibilidad, cuando voy el bus, o cuando voy en la ruta, siempre trato de tener esa interacción con la herramienta física y buscar el factor que me permita construir la habilidad.</p> <p>L2> Es esencial el uso de la internet, ya que permite el aprendizaje autónomo C.18 ... el aprovechamiento de los espacios libres para estudiar en cualquier momento y lugar C.1 ... así como la búsqueda de material de apoyo y el uso de aplicaciones web que C.18 ... nos fortalecen las habilidades de comprensión, escucha, habla y escritura en inglés. C. 19</p> <p>FORTALECIMIENTO COMUNICATIVO, ESTÍMULO DEL CEREBRO, CREATIVIDAD, MOTIVACIÓN PERSONAL, AUTONOMÍA CONSTANTE, ENRIQUECIMIENTO DEL LENGUAJE, ACCESO FÁCIL DIFICULTAD A HERRAMIENTAS DE POTENCIALIZACIÓN POR EL COSTO.</p> <p>L3> El Internet es muy útil, y hacer uso de este para nuestra formación es necesario porque es una herramienta que nos permite estar en contacto con nuestros maestros C.7 ... además podemos aprender cómodamente desde nuestros hogares en tiempo de pandemia. C.1.2</p> <p>L6> Estos recursos son interactivos y gratis a todo público, ya que se menciona a las noticias al rededor del mundo, ayuda de cierto modo de que te nutres por su lectura, y te informas de lo que sucede en otro país.</p> <p>L7> son todo lo que utilizo, desde el internet puedo acceder a la información y guardarla en mis dispositivos</p>	<p>Activate Windows Go to Settings to activate Windows</p>
<p>Mediating artifacts that offer potential Actions</p>	