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Meme Up in the English Classroom

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Abstract

There is an increasing concern about memes on education and the expectation if memes bring right or erroneous results in teaching and learning English as a second language. Another aspect to consider is if memes help to improve students' critical thinking in the English classroom. The purposes of this study are to find out the pedagogical implications of adopting and exploring IPUMEC (Intervention Plan for the Use of Memes in the English Classroom) and to determine if memes can enhance or hinder students' critical thinking in third and fourth grades in two rural public schools in Huila, Colombia. Both qualitative and quantitative approaches were used in this study. Data were collected via a survey, interviews, a pre-test, and a post-test. This study aimed to contribute to the growing area of research on the use of memes in the English classroom and the IPUMEC proved to be a useful pedagogical tool in the teaching and learning of English.

Keywords: Memes, education, intervention plan, English classroom, critical thinking

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Introduction

In the new global world, memes have emerged as a central instrument for education. Social media has been thought of as a key factor in spreading memes. While social media is a platform for communication, memes express a culturally relevant idea (Blackmore, 1999; Dawkins, 2006; Shifman, 2014). Memes are of interest because, if used for educational purposes, they can generate positive results for teachers and students at schools and be one more little step toward the normalization of technology in education.

Educators and learners can find classes dreary because of the monotony of every day in the classroom. This situation does not lead to giving 100% in the class, which means that there are no positive or productive results on both sides, students and teachers. As a proposal for the classes to be humorous so that students can be motivated, engaged, give a better performance in the English language subject, and improve poor critical thinking skills, I want to incorporate memes as a pedagogical tool to solve this problem. Nevertheless, very little is currently known about memes as a strategy or pedagogical tool for learning English (Baysac, 2017; Purnama, 2017).

Baysac (2017) and Purnama's (2017) studies proved the use of memes to be reliable in the English classroom. However, they did not address students' critical thinking. To verify this, more work is urgently needed. That is why the purposes of this study are to explore the experiences of teachers regarding the use of memes in the English classroom and to know if students improve their critical thinking or not with the use of memes in the English classroom.

There are several important areas where this study makes an original contribution to the significance of knowledge. Firstly, the results will contribute to critical memetic literacy (Harvey and Palese, 2018), new literacies (Knobel and Lankshear, 2007), visual literacy (Metros, 2008), and critical inquiry (Valdez et al., 2019). Secondly, the study will provide new research insights to the few numbers of studies that already exist (Baysac, 2017; Purnama, 2017). Thirdly, the research will benefit educators and future researchers locally because it is carried out in our Colombian context (Granada, Trujillo Borrero, & Lucas, 2015; Vargas Álvarez & Ruiz Gallego, 2020; Ligarretto, 2020). Drawing upon the significance and potential for practice, this type of project is relevant because educators use topics of interest to learners and are culturally up to date, which makes students more perceptive about wanting to learn and practice English in the classroom. It will also be essential to know the limits a joke should carry and the limitations or necessary use of social media platforms so that educators can provide appropriate guidance.

The study follows a mixed-method approach with an exploratory sequential design (Cresswell, 2012). Data for this study were collected using a diagnostic survey for students and an interview for teachers, a pre-test for students, followed by an intervention plan in the form of lesson plans/worksheets, and finally, a post-test for students and a final interview for the teachers. This project provides a vital opportunity for the understanding of memes in education. However, it cannot encompass the entire types of Internet Memes, as it will only be focused on macro image memes (Harvey and Palese, 2018). The objectives of this study are (1) To find out the pedagogical implications of adopting and exploring IPUMEC (Intervention Plan for the Use of Memes in the English Classroom) in two rural public schools in Huila, Colombia. (2) To

determine if memes can enhance or hinder students' critical thinking in third and fourth grades in two rural public schools in Huila, Colombia.

The research questions of the study are the following: (1) Which are the pedagogical implications of adopting and exploring IPUMEC (Intervention Plan for the Use of Memes in the English Classroom) in two rural public schools in Huila, Colombia? (2) To what extent can memes enhance or hinder students' critical thinking in third and fourth grades in two rural public schools in Huila, Colombia? The main issues addressed in the following literature review are: a) Definition of memes, b) Memes and social media, c) Memes and education, and d) Memes and critical thinking.

Literature Review

Definition of Meme

Memes have emerged as a powerful instrument for society to connect people with each other. Memes have been an object of research since the late 1970s. The word meme (from the Ancient Greek mimeme, meaning to imitate) is coined by the ethologist, evolutionary biologist, and author Richard Dawkins (1976) in his book, *'The Selfish Gene'*, as an attempt to explain the way cultural information spreads (Shifman, 2014). As Dawkins (2006) denotes,

“The examples of memes are tunes, ideas, catch-phrases, clothes, fashions, ways of making pots or of building arches. Just as genes propagate themselves in the gene pool by leaping from body to body via sperms or eggs, so memes propagate themselves in the meme pool by leaping from brain to brain via a process which, in the broad sense, can be called imitation” (p. 192).

Susan Blackmore (1999), in her best-known book, *'The Meme Machine'*, concurs with Dawkins' definition, “As long as that information can be copied by a process we may broadly call 'imitation', then it counts as a meme” (p. 66). Knobel and Lankshear (2005) summarized agreeably, “Memes are contagious patterns of cultural information that are passed from mind to mind and that directly shape and generate key actions and mindsets of a social group” (p. 1). In addition, Brodie (2009) says that “A meme is a unit of information in a mind whose existence influences events such that more copies of it get created in other minds” (p. 11).

Times are changing and evolving. That is why Wiggins and Bowers (2015) offer a more contemporary definition, “Memes are a genre, not a medium, of online communication and are artifacts of a participatory digital culture characterized specifically by an agency of consumption production” (p. 1896). The meme, viewed as a genre, is not only to communicate but also to understand culture due to the recent development in the meaning of the term meme.

Memes and Social Media

Central to the full potential of memes is the concept of social media. *Social media* are collective computer-mediated technologies (websites or applications) that facilitate the creation or sharing of information. According to Foreman (2017), there are ten types of social media (for description and specific examples, see Table 1). Recently, a growing body of research recognizing the importance of social media to support educator professional learning is being available (e.g., Trust, Krutka, & Carpenter, 2016; Greenhalgh & Koehler, 2017; Xing & Gao, 2018).

Table 1

Social media types (based on Foreman, 2017).

Social media types	Description	Examples
1. Social networks	Connect with people	Facebook, Twitter, and Instagram
2. Media sharing networks	Share photos, videos, and other media	Pinterest, YouTube, and Vimeo
3. Discussion forums	Share news and ideas	Reddit, Quora, and Digg
4. Bookmarking and content curation networks	Discover, save, and share new content	StumbleUpon, Flipboard, and Digg
5. Consumer review networks	Find and review businesses	TripAdvisor, Yelp, FourSquare
6. Blogging and publishing networks	Publish content online	WordPress, Tumblr, and Medium
7. Interest-based networks	Share interests and hobbies	Goodreads, Houzz, and Last.fm
8. Social shopping networks	Shop online	Polyvore, Etsy, and Fancy
9. Sharing economy networks	Trade goods and services	Airbnb, Uber, and TaskRabbit

10. Anonymous social networks	Communicate anonymously	Whisper, Ask.fm, and After School
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On the other hand, educators have some challenges when implementing social media. First, communication is not ‘face to face’ which provokes a loss of physical connection (Lapadat, 2007). Second, social media can create issues with shared content quality (Hertel & Wessman-Enzinger, 2017). Finally, educators may confront ethical dilemmas (Thunman & Persson, 2018).

The concepts of Digital Natives and Digital Immigrants are also pivotal to understanding the relationship between memes and technology. Early in the 2000s, Prensky (2001) came upon the term of Digital Natives, stating that our students today are all “native speakers” of the digital language of computers, video games, and the Internet. Moreover, Prensky (2001) asserts that,

“Digital Immigrants learn – like all immigrants, some better than others – to adapt to their environment, they always retain, to some degree, their "accent," that is, their foot in the past. The “digital immigrant accent” can be seen in such things as turning to the Internet for information second rather than first, or in reading the manual for a program rather than assuming that the program itself will teach us to use it” (p. 2).

Due to rapid advances on the Internet, social media have been created, and memes found a mode to spread widely via social networks, blogs, or email. The interaction generates a new version of memes: Internet memes. The concept of the Internet meme is first proposed by Mike Godwin (1994). An *Internet meme* is an activity, concept, catchphrase, or piece of media which spreads, often as mimicry, from person to person via the Internet (Schubert, 2003). Later on, Dawkins (2006) characterizes an Internet meme as a meme that is being deliberately altered by human creativity. In 2022, the definition has been extensively defined and studied; just typing

the words, Internet memes, on Google search will show about 809,000,000 results, and on Microsoft Edge Bing search, 26.300.000 results.

There are three commonly created and shared Internet meme types: Image macros, exploitable, and memetic videos (Harvey & Palese, 2018). Image macros are images with written text (above or below) on them. Exploitable are images that can be added to other images to change the meaning. Lastly, memetic videos are videos that are taken and adapted by people who then become creators of the meme.

It has recently become common for educators to turn to social media platforms such as Twitter (Carpenter, Kimmons, Short, Clements, & Staples, 2019; Greenhalgh & Koehler, 2017), Facebook (Kelly & Antonio, 2016; Lantz-Andersson, Peterson, Hillman, Lundin, & Rensfeldt, 2017), and Instagram (Carpenter, Morrison, Craft, & Lee, 2019). However, to date, there has been little research on the use of memes in education (Baysac, 2017; Purnama, 2017).

Memes and Education

When memes originated, they were mostly written in the English language. Then they extended around the world. Kostadinovska-Stojchevska and Shalevska (2018) believe that “Memes use vernacular English, phrases from specific English dialects, puns and punning riddles, jargon, slang, shortenings, and neologisms as well as patterned way of incorrect spelling and multiple, intentional or unintentional grammar and syntax mistakes” (p. 159). In the educational field, educators can use internet memes as a material to teach English as a Second Language (ESL) because they enhance students’ creativity (Kariko, 2012), motivation (Purnama, Desiarti, Aflahah, & Ekaningrum, 2017), critical analysis (Harvey & Palese, 2018), and memorization of the English language (Kostadinovska-Stojchevska & Shalevska, 2018).

Thus far, a few studies (Baysac, 2017; Purnama, 2017) have demonstrated that memes can help educators to teach and learn a second language. In the Colombian context, we can find studies using memes to teach History and Spanish. However, there are very few studies focusing on teaching English (Granada, Trujillo Borrero, & Lucas, 2015; Vargas Álvarez & Ruiz Gallego, 2020; Ligarretto, 2020). A major problem with creating memes is the students' awareness of what they are creating and sharing with their classmates and friends. Knobel (2006) agrees that analyzing memes helps to concretize students' active role in hosting and spreading memes and underscores the importance of being consciously aware of which 'good' and 'not so good' memes they have been hosting and passing on. That is why critical memetic literacy, new literacies, visual literacy, and critical inquiry are suggested.

According to Harvey & Palese (2018), *critical memetic literacy* is the ability to engage with and question all parts of the meme. It is a combination of many different fields, including critical media literacy and all of its related fields, e.g., media literacy, digital literacy, critical literacy, (Beach, 2018; Hoechsmann & Poyntz, 2012; Kellner & Share, 2007; Silva, 2016) and memetics (Blackmore, 1999; Distin, 2005; Gunders & Brown, 2010; Shifman, 2014).

Knobel and Lankshear (2007) talk about *new literacies* and refer to Literacy, with a "big L" and literacy, with a "small l". The former is tied directly to life and to being in the world (Freire, 1972; Street, 1984). The latter describes reading, writing, viewing, listening, manipulating images and sound, etc. Following this line of thought, online memes can be seen as examples of new Literacies with a "big L" because it helps educators influence students in the use of memes, ethical decision-making, and social actions. Furthermore, literacies with a "small l" allow educators to give feedback on the four language skills (listening, speaking, reading, and writing).

Visual literacy was first seen as image interpretation, then as social practice. After that, the focus shifted to the importance of visual media in contemporary culture, especially in communication. Metros (2008) defined visual literacy as “the ability to encode and interpret visual messages and also to be able to encode and compose meaningful visual communications” (p. 103). Dominguez Romero and Bobkina (2017) focus on the teaching of visual literacy through memes in the language classroom, and their aims were (i) to share a meme-based visual proposal; and (ii) to give value to the teaching plans developed by their Master’s students while assessing the implementation results of both the workshop and the lesson plans at secondary and tertiary education levels.

To refer to *critical inquiry*, a study by Valdez et al. (2019) was carried out in the Philippines. The study’s objective was to use memes to teach crucial questions in the ESL classroom. The study concludes that memes’ critical examination manifested in two ways. First, generating memes sensitizes learners to the intended purpose, potential audience, and appropriate language resources of their message. Second, the use of memes recognizes multilingualism and multiculturalism to engage with cultural issues.

Research conducted by Baysac (2017) has shown that humorous memes in the classroom reduce anxiety and stress for both teachers and students alike and increase the student’s readiness to learn. However, Baysac’s (2017) study neither takes account of students’ critical thinking, nor proposes an intervention plan with the use of memes in the classroom.

Purnama’s (2017) research focused on incorporating memes and social media, more specifically, Instagram, as one of the strategies to develop an innovative teaching and learning process. Her research strengths were that: 1) She tried to prevent any emerging sensitive issue by

asking the participants to only use movie or cartoon pictures. 2) The theoretical framework was strong as she captured the essence of memes (meaning, related to language teaching, and its limitations) and Instagramming. However, the study's weakness was based on her diagnostic questionnaire, she asked if her participants knew about social media. According to their answers, only one person did not know. When asked if they had accounts, all participants answered they had Facebook, except for the one that did not know about social media. She decided to carry on her research by implementing Instagram, ignoring the participants' answers. She stated, "Researcher has her own consideration by choosing Instagram as a partnering social media for memes creation activity" (p.3). Then, she explained her reasons as to why she chose Instagram. The flaw in the study was that she took the time to implement an initial questionnaire asking about social media and the accounts they used when in reality, she was not going to consider their answers as she already had in mind only the use of Instagram.

While Baysac (2017) and Purnama's (2017) studies proved the use of memes to be reliable in the English classroom, they did not address students' critical thinking. To verify this, more work is urgently needed.

Memes and Critical Thinking

The Australian Curriculum (2021) explains that *critical and creative thinking* involves students thinking broadly and deeply using skills, behaviors, and dispositions such as reason, logic, resourcefulness, imagination, and innovation in all learning areas at school and their lives beyond school. When learning English through memes, it is relevant to consider critical thinking because the very definition of the word creative implies an essential component (e.g., having or showing imagination and artistic or intellectual inventiveness). Suseno's (2015) article entitled

“Building the Digital Learners’ Motivation and Critical Thinking by Using Internet Memes: A Practical Classroom Approach of English Language Learning”, identifies pointers for using memes:

“When coping with the critical thought of various students, teachers should treat the content of memes differently. It is proposed to use simple pictures and simple words for children or young learners. An important theme for children’s memes is how they feel, what they do every day, or about a good/bad habit. For adolescents, the message is best tailored for teenagers to reveal comedy, parody, or current lifestyles, or common issues. Meanwhile, for adult learners, the material may touch on society’s satires, social protest, cultural issues, political comedy, or other complex problems that happen” (p. 250).

So important is the influence of critical thinking in the use of memes for learning that Matias (2020) suggests a Meme-Based learning method in dealing with students’ cognitive development. Memes bring novelty, depth, humor, motivation, and digital skills to a lesson (Baysac, 2017; Purnama, 2017).

However, memes on education have not always brought good results, and some scholars believe they can hinder students’ critical thinking. According to Netanya (2019), memes can plant the seeds of destructive thought and behaviors in one’s psyches that should be paid attention to more closely. Yoon (2008) supports this conception. Her study’s results indicated that several social and conceptual mechanisms potentially affected how and why ideas were taken up in the learning system of the classroom. Tools included copying or memetic processes such as “do as the smart students do” and friendship selection.

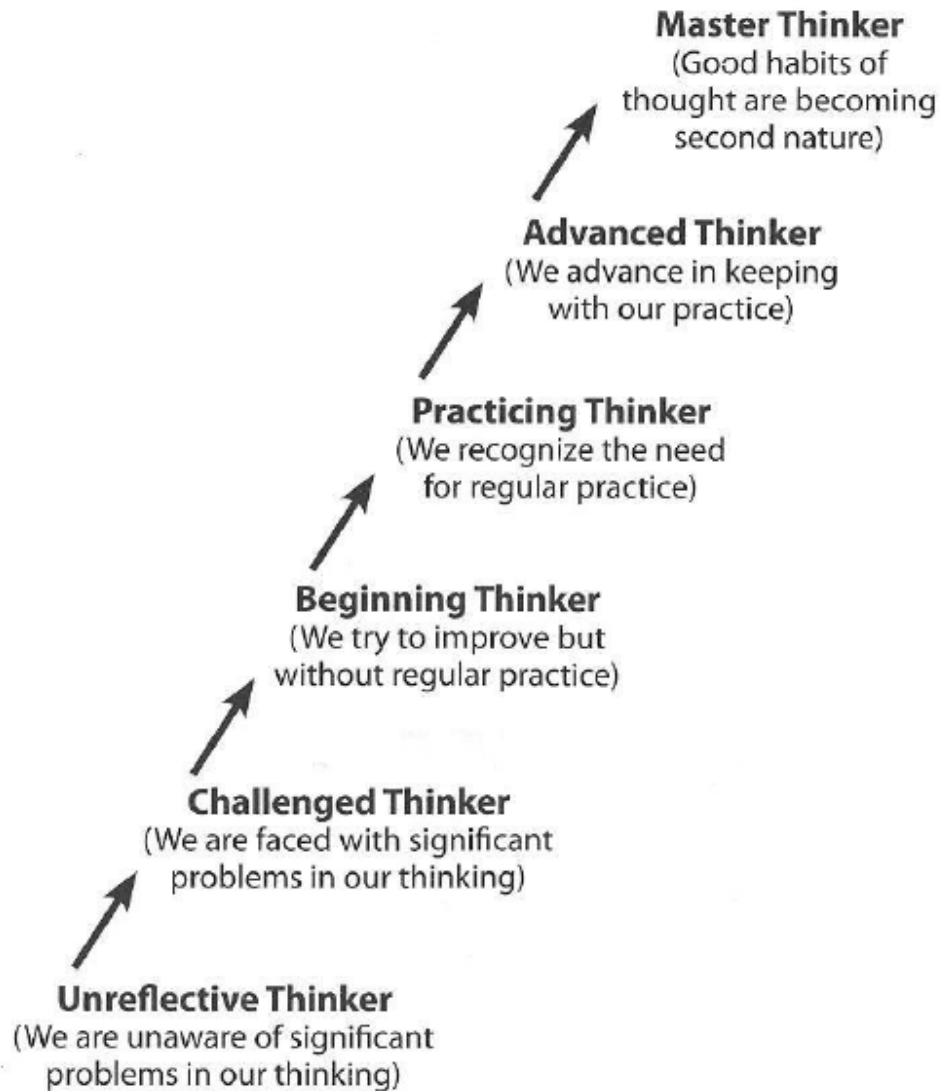
Another aspect important to mention is memes from the neurological standpoint to support the association of memes for teaching and learning. According to McNamara (2011), the term meme is synonymous with “assimilation, retention, expression, and transmission”.

Cognitive science already has a well-defined set of cognitive skills to match these terms, such as “learning, memory, action selection, and perception”. Learning and memory are cognitive functions, but they are not “the function” of cognition. The sole role of cognition is to reproduce/replicate biologically and to reproduce behaviors that support reproduction. Viewing cognitive skills as part of a whole evolving “memetic system” allows us a framework in which to examine how these processes interact together to enable humans to function as single and social cognitive units. When learning a new language, memes can be considered a recursive expansion of social learning because memes transmit a double message, which can be explicit or implicit, transmitted by written texts, images, or videos, which involve the teaching and learning of a language and at the same time develop critical thinking that includes the culture and the context of specific groups of people.

Before we can understand the connection between critical thinking and cognitive development, we need to know Piaget’s (2014) three stages of cognitive development. Piaget (2014) conducted studies through a series of tests that would ultimately show the difference between children and their cognitive abilities at different ages. The three main stages of Piaget’s theory of cognitive development are as follows: 1. Pre-operational (ages 2-7), 2. Concrete operational (ages 7-11), and 3. Formal operational (adolescence-adulthood). Related to the connection between critical thinking and cognitive development, Paul and Elder (2007) conducted studies through a series of tests that would show the stages of critical thinking development.

Figure 1

Stages of critical thinking development (based on Paul & Elder, 2007).

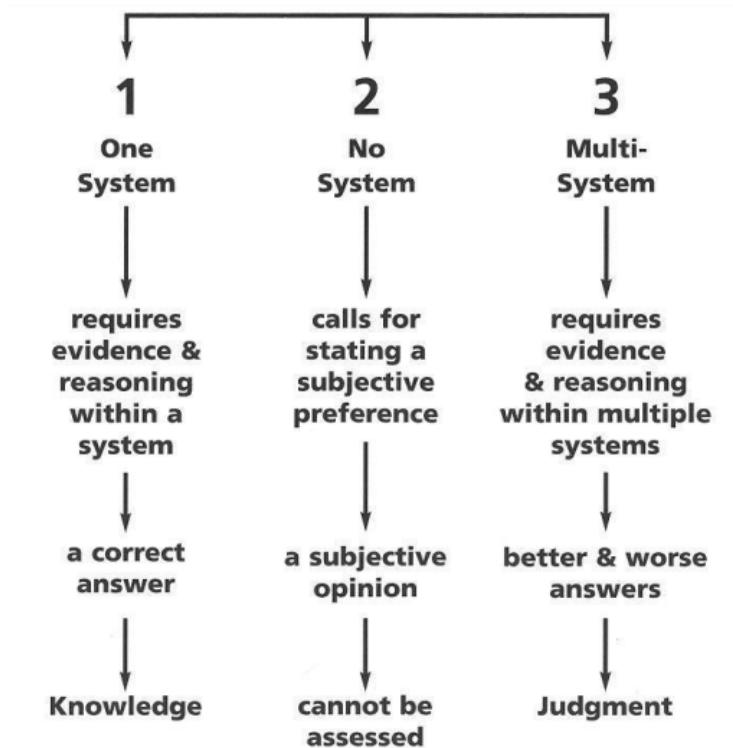


Teachers need to take students through stages of intellectual development. For example, an essential objective would be that students become "beginning" thinkers in elementary school. That is, they will be taught so that they discover that they are thinkers and that their thinking, like a house, can be well or poorly constructed. Elementary school children should be at the

“beginning” thinker level. Paul and Elder (2007) suggest three kinds of questions to know if they reach that level.

Figure 2

Three kinds of questions (based on Paul & Elder, 2007).



Middle school and High School, in these stages of critical thinking development, would aim to become, at least, "practicing" thinkers. Students discover thinking only by discovering that thinking has "parts."

Problem Statement

Being a student in 2022 is quite different from being one in 2012. As the world keeps facing new challenges, especially in education, the educational system has become more dynamic. One key element that has always been stressed to teachers is promoting critical thinking skills in students. I identified the need to work on critical thinking in students based on an informal conversation with the participant teachers, the first interview with them, and the national report 2012-2017 of the Saber test in third and fifth grades.

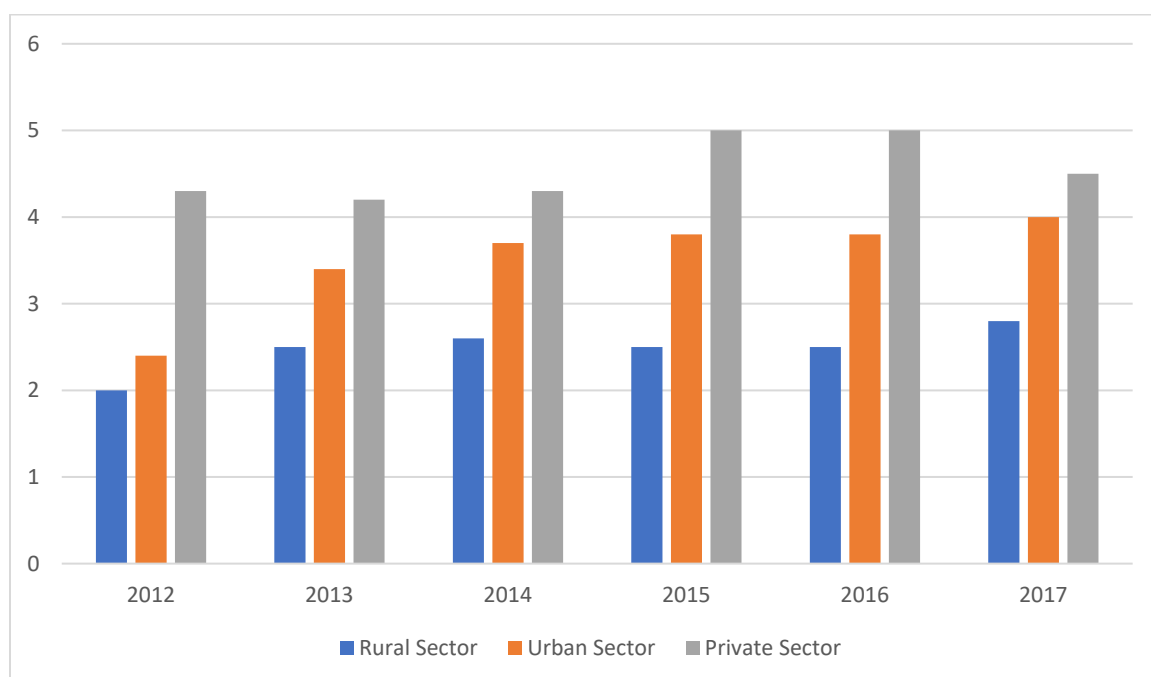
In the first informal conversation, I had with the participant teachers to find out if I could count on their collaboration in this project, we talked about how innovative it was to work with memes. They also brought out that it would help students improve their critical thinking in addition to the communicative skills. Once the first interview was carried out, in question number 7, I asked about which were the English skills they would like to improve. Teacher **A** mentioned that he had only been told that he has to improve vocabulary in the subject of English. Therefore, he focused on that and not much on the other skills. Teacher **B** suggested he wanted to improve reading comprehension skills. Based on these responses, I focused on students' poor critical thinking skills for this study rather than communicative competence.

In 2018, the Colombian government published a book called "National Results" of the Saber tests in the periods from 2012 to 2017 for third, fifth, and ninth grades in language and mathematics. The analysis is organized into four sections according to the reference group: the first section considers the national aggregates, and the following three ones analyze the results by

gender (boys and girls), average socioeconomic level of the establishments, and type of establishment (rural official, urban official, and private).

Figure 3

Official statistics of the National Results (2018) from 2012 to 2017.



In the national results by type of establishment in the Saber test in 3rd and 5th grade, in the area of language, *the rural sector* had the most unsatisfactory results, even though the average score of the official rural establishments in 2017 is considerably higher than that presented in 2012, 2013, 2014, 2015, and 2016. *The urban sector* had a majority of minimum and satisfactory results. The average score of urban official establishments in 2017 is considerably higher than that presented in 2012; and considerably lower than the one presented in 2016. And in *the*

private sector, the results were the most advanced, although the average score of private establishments in 2017 is considerably lower than the presented in 2013, 2014, and 2015.

Despite the fact that the analysis of the national results was in the areas of language and mathematics, and not specifically in the English subject, based on the area of language, the official rural sector had the lowest results. This shows the rural sector lacks more attention in investigating if students need better reading comprehension and/or critical thinking.

Of particular concern is the lack of research on the association between memes, social media, and education. A much-debated query is whether students will take memes seriously and learn a foreign language from them. I identified the need to explore the use of memes in the English classroom because mostly what has been researched, has been done elsewhere (Baysac, 2017; Purnama, 2017) and I wanted to find out the reliability of memes in education in our Colombian context. To achieve this, I developed IPUMEC, which helped me explore the use of memes in the English classroom and helped me enable teachers to overcome the students' poor thinking skills. The creation of each lesson plan took into account several important aspects, such as the school's curriculum, the student's level of English, the rural sector, all the English skills (Listening, speaking, reading, writing) plus grammar and vocabulary, and the activities were not only about the analysis or creation of memes but there was a balance in the activities. Thanks to IPUMEC's planning and implementation, I was able to identify that students' critical thinking improved.

Design and Methodology

The study follows a mixed-method approach with an exploratory sequential design (Cresswell, 2012). A mixed-method approach includes qualitative and quantitative research. According to Rossman and Rallis (2017), qualitative research is enacted in naturalistic settings, draws on multiple methods that respect the humanity of the participants in the study, focuses on context, is emergent and evolving, and is fundamentally interpretive. When it comes to quantitative research, Cresswell (2012) conveys it as impersonal and objective. Quantitative studies do not bring either their biases or their personal opinions into the study. They use proven instruments to measure variables, and they employ multiple statistical procedures to build objectivity in the study. Because both types of research are being used in this study, it follows an exploratory sequential design (for description, see Figure 4). The purpose of an exploratory sequential mixed methods design involves the procedure of first gathering qualitative data to explore a phenomenon, and then collecting quantitative data to explain relationships found in the qualitative data.

Figure 4

Exploratory Sequential Design (based on Creswell, 2012).



I decided to implement the mixed-method approach because I am interested in hearing the experiences of teachers and I would like to know if students improve their critical thinking or not with the use of memes in the English classroom. Data for this study were collected using a

diagnostic survey for students and an initial interview for teachers. A pre-test for students, followed by an Intervention Plan for the Use of Memes in the English Classroom (IPUMEC) that took the form of lesson plans/worksheets, and finally, a post-test for students and a final interview for the teachers. I am using an exploratory sequential design because, based on the teacher's experiences and reflections and the result of students' pre-test and post-test, I was able to answer my research questions. In general, the schools and all the participants are different, therefore, the results vary since each teacher applied their lessons in their own manner, and at the times that they felt appropriate. That kind of interaction and dedication makes the study emergent, evolving, and very local. My role as a researcher is as a non-participant observer and I aim to facilitate information for action.

Context

This project was carried out in 2 different rural public schools in Huila, Colombia. I will be calling them school **A** and **B**. School **A** is 45 minutes from the nearest town. It is a small elementary school with ten students from first to fourth grades, students only have one teacher, and he teaches all subjects. School **B** has ten students too, from first to fifth grades and the teacher motivates students to do and be part of research projects. I decided to choose these two schools because the context, the level of English, and the availability of the teachers are very similar, which is why the two schools fit perfectly in my study. The goal for teachers in the schools is to focus on teaching Spanish and Mathematics. In their training, they are advised to only teach vocabulary when teaching English. The relevance of the schools in the region is not high, mainly, because they are only one of several headquarters of a larger school, and secondly, because they are located in the countryside.

Population

In order to choose my participants, I had a group of teachers who volunteered after listening to my proposal and another group I called and asked them to be part of the project. Then, I used stratified sampling because I divided them into four categories: teachers belonging to the rural area, urban area, public school, and private school. The participants teachers from my project were chosen from the categories of rural areas and public schools. The participating teachers have voluntarily accepted to be part of the project.

The participants are two male teachers and students from third and fourth grades. Due to the small number of students, I decided to consider them all. In school **A**, there is 1 student in third grade and 3 students in fourth grade. In school **B**, there are 2 students in third grade and 4 students in fourth grade. Moreover, the background of the students is very similar to each school because they have parents who work in the countryside—farmers and butlers. Students are children who must walk to get to school. They like to participate in classroom activities, are very active, and love technology. Students' ages are between 8 to 10 years old, and their English level is supposed to be A1, based on the Common European Framework of Reference for Languages (CEFR). Nevertheless, the reality is that they still lack knowledge to get to that level.

I decided to have teachers and their students as participants because I am not currently working in the educational field. Moreover, I chose to work with third and fourth grade students because they are at an age where their critical thinking should be exercised (Piaget, 2014). After all, children are very intelligent, and we have to start guiding them to learn English. They are children from the countryside, and the government and the community do not pay much attention to them because they are stereotyped as children who will not be much in life. I consider that research with them contributes a lot to education as well. In terms of the positionality, I situate

myself as a non-participant observer because the participant teachers are the ones who use memes in the English classroom and react to this new strategy since my focus is on the study of both parties.

Ethical Issues

To get permission, I implemented a consent form for participation in research for the teachers and the students' parents. The document contains important information about the study and what to expect if they decide to participate. Participants were free to ask questions before deciding whether they wanted to participate or not. Participation was completely voluntary, and they had the right to withdraw or inhibit themselves from participating in the study at any time, without any penalty (for more details, see Appendix A).

Data Collection and Instruments

Data for this study were collected, firstly, by diagnostics instruments. For students, I used a cross-sectional survey. These are surveys designed to collect data about current attitudes, opinions, or beliefs. The researcher collects data at one point in time (Creswell, 2012). The purposes of this survey were a) to recognize the availability of technology, Internet access, and use of social media by students, and b) to identify existing students' interests in conventional topics (for more details, see Appendix B). For teachers, I used a structured interview. These are interviews that strictly adhere to the use of an interview protocol to guide the researcher (Stuckey, 2013). The purposes of this interview were (a) to carry out an initial profile of the teacher and (b) to know how the intervention plan should be developed (for more details, see Appendix C).

Secondly, in order to answer my first research question about the pedagogical implications of adopting and exploring IPUMEC in two rural public schools in Huila, Colombia.

I designed five lesson plans/worksheets based on the students' diagnostic survey, the initial interview for the participating teachers, and the school's curriculum that the teachers shared with me for the Third and Fourth Term of the 2021 calendar year. During the implementation of each intervention, the participant teachers also completed a reflective chart, where they shared their thoughts and experiences. By reflecting, teachers can evaluate the lesson plans, decide if aspects of their own teaching could be changed, develop strategies for changing, and monitor the effects of implementing these strategies (Richards & Lockhart, 1994). At last, I did a final structured interview for the participating teachers (Stuckey, 2013). The purposes of this interview were (a) to hear the experiences of teachers about the intervention plan and (b) to get to know suggestions for further research (for more details, see Appendix G).

Thirdly, to answer my second research question about the extent of memes enhancing or hindering students' critical thinking in third and fourth grades in two rural public schools in Huila, Colombia. I developed a pre-test and post-test based on Paul & Elder's (2007) theory on critical thinking. The main purpose was to assess students' critical thinking before and after the interventions of the use of memes in the English classroom. The pre-test consists of a short paragraph and 3 questions, and the post-test consists of a meme and the same questions used in the pre-test.

Memes for teaching and learning English are considered innovative because well-implemented, they can contribute to students' learning in a fun and contextual form. Both the educator and the learner can have fun. That does not mean that it should be every day but that it should be used from time to time when the boredom of the daily routine overwhelms. Sometimes educators put too much pressure on themselves by having to follow the curriculum or standards

that make English classes dull. Still, one can make a small difference by providing strategies like memes as a pedagogical tool in the classroom.

Pedagogical Intervention

I developed IPUMEC (Intervention Plan for the use of memes in the English classroom) to know the pedagogical implications of using memes in the English classroom in two rural elementary schools. IPUMEC was based on the students' diagnostic survey, the first interview with the participating teachers, and the curriculum of each school.

Based on the student's answers to the diagnostic survey, I could confirm and not just assume the students' topics of interest. Moreover, it was also a direct source to verify that they do not use social networks but that they do have internet and the availability of either a cell phone, computer, or tablet.

Based on the initial interview with the teachers, they told me that the students did not have a good level of English. Therefore, I could not work almost an hour focused only on the use of memes but also had to figure out how to include warm-up activities where teachers introduce vocabulary or the topic of the class. Then, they could work with memes in a worksheet, following the most important aspect of my project that is the use of memes and that lasted 20 to 25 minutes, giving it a chance at the end of the lesson plan to have post activities or homework. In addition, based on this interview, I used the four English skills in the IPUMEC, but I gave priority to reading, writing, and vocabulary.

Since the project had the support of two different schools, there were two curricula on which I could base myself to bring up the topics of the interventions in the IPUMEC. I was not only using the themes that the students liked but also focusing on what the schools wanted the students to learn, some topics did coincide with the two schools and others did not. I made sure

that I was equitable with both schools when choosing the main themes of the classes. For third grade, the topics I used were: 1) family, 2) time, 3) seasons, weather, and clothes, 4) fruits, and 5) numbers. For fourth grade, the topics I used were the following: 1) free-time activities, 2) adjectives, 3) help the planet! 4) present continuous, and 5) numbers. It is worth mentioning that they were chosen only from the Third and Fourth Term of the 2021 calendar year.

Five interventions were carried out in the IPUMEC, the first intervention was a little more different than the others because in this one the students were just being introduced about the meaning of a meme and how to distinguish between an image and a meme (for more details, see Appendix D). As the interventions were implemented, the recommendations that the teachers wrote in their reflecting charts were taken into account, and by the time the fifth intervention's lesson plan and worksheet was made, it was much better than the previous ones (for more details, see Appendix E).

Findings

The context in which this research was carried out was in two rural schools in the department of Huila. My project focuses on two aspects: the first is to know the experiences of the teachers in the implementation of memes in the English classroom, and the second is to know if the students improved or not their critical thinking based on the interventions implemented.

Both qualitative and quantitative methods were used in this investigation (Cresswell, 2012; Rossman & Rallis, 2017). Data for this study were collected using a diagnostic survey for students and an initial interview for teachers—both instruments and the schools' curriculum, helped me design an Intervention Plan for the Use of Memes in the English Classroom (IPUMEC) with the form of lesson plans/worksheets. Teachers were also asked to complete a reflective chart. The interventions, the reflective charts, and a final interview for teachers answered the first research question: Which are the pedagogical implications of adopting and exploring the IPUMEC in two rural public schools in Huila, Colombia?

In addition, a pre-test and a post-test for students answered the second research question: To what extent can memes enhance or hinder students' critical thinking in third and fourth grades in two rural public schools in Huila, Colombia? (for more details, see Appendix H and I).

I used an exploratory sequential design because, based on the teacher's experiences and reflections and the result of students' pre-test and post-test, I was able to answer my research questions.

In this project, I worked with two teachers, **A** and **B**, therefore, I mention, schools **A** and **B**. I employed Atlas.ti—a computer program used mostly, but not exclusively, in qualitative research, with the purpose of decoding the initial and final interviews. During the initial interview, I gathered mostly diagnosis data to base myself on the pedagogical design of the

lesson plans/worksheets in the IPUMEC. First, I uploaded the transcripts into the program, then I highlighted two important aspects, code for “Explanation of how they usually implement their English classes” and “Explanation of what they want to improve in their English classes”. I also commented on the codes about ideas I would use for the worksheets. For the final interview, firstly, I uploaded the transcripts into the program, then I highlighted three important aspects, code for “Good experiences”, “Bad experiences”, and “Recommendations”.

Additionally, I used Google Forms—a survey administration software, for the students’ diagnostic survey, pre-test, and post-test. During the survey, I gathered mostly diagnosis data to prepare the pedagogical design for the IPUMEC. Furthermore, I designed and implemented a pre-test and a post-test to collect data from students regarding their critical thinking (Paul & Elder, 2007).

Based on the results of the interviews and the survey, I was able to plan five interventions (Dominguez Romero & Bobkina, 2017) that are updated after every implementation, according to the teachers’ suggestions and reflections. The findings have been divided into three parts. The first part deals with the diagnostic instruments: the students’ survey and the teachers’ interview. The second part deals with the first research question, divided into 5 interventions, and the final interview for teachers. Finally, the third part deals with the second research question: the pre-test and post-test for students.

Diagnostic Instruments

Students’ survey

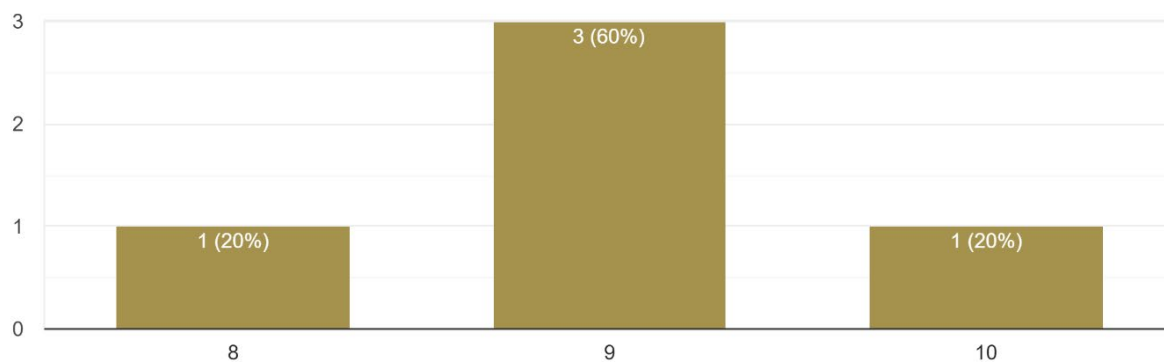
The purposes of the survey were a) to recognize the availability of technology, Internet access, and use of social media by students, and b) to identify existing students’ interests in

conventional topics. The survey had 10 questions, they were in Spanish, and from the 10 participants, only 5 of them volunteered to answer the questions.

The first two questions were about demographic information. Related to their age, 20% of the students were 8 years old, 60% of the students were 9 years old, and 20% of the students were 10 years old. Regarding the genre, 80% of the students were males and 20% of the students were females.

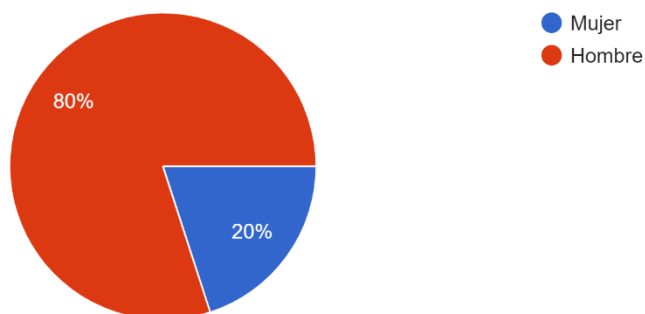
1. Edad

5 responses



2. Género

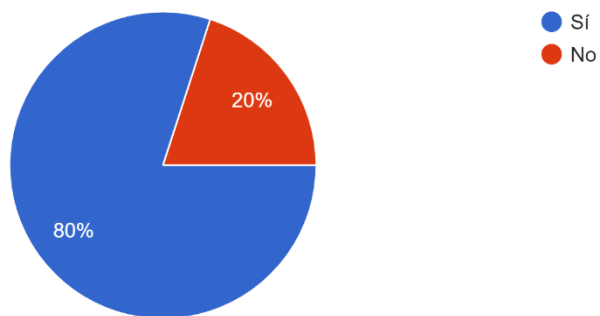
5 responses



The third question was about accessibility to a computer, cell phone, or tablet. The 80% of students answered YES and 20% answered NO. The following question was about access to the internet, and a 100% of the students answered YES. The fifth and sixth questions were about social networks, a 100% answered NO. Therefore, they did not write which are the social networks that they usually use.

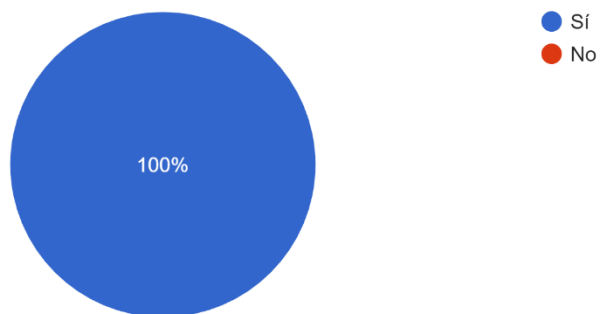
3. ¿Tiene acceso a un computador, celular, o tableta?

5 responses



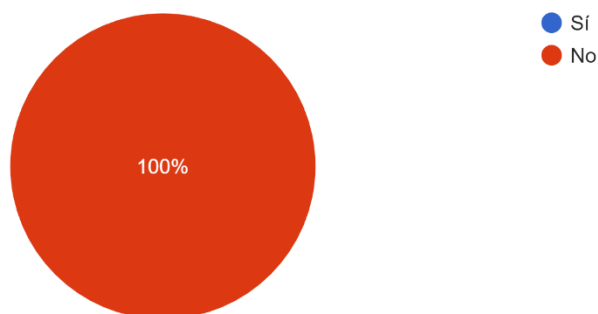
4. ¿Tiene acceso a Internet?

5 responses



5. ¿Tiene cuentas en las redes sociales?

5 responses



Based on the student's answers to the first part of the survey, I could confirm and not just assume that students have availability of technology and internet, however, they do not use social media, and that was a large determinant in the single and reduced use of WhatsApp in this project.

From the seventh question and on, the questions were open about topics of interest of the students. I wanted to know which were the students' favorite movies or TV shows, songs, jokes, and what they like to talk to their friends about.

Table 2

Students' answers taken from the survey's results.

Movies or TV shows	Songs	Jokes	What students like to talk to their friends about
<ul style="list-style-type: none"> - Spider-Man - PJ Masks - Miraculous - We bare bears - One piece 	<ul style="list-style-type: none"> - Cupid failed - Cry - I learned from them - The chocolate song - One student answered he/she did not have a favorite song 	<ul style="list-style-type: none"> - The Pepito - What is at the end of it all? the O - What does the sea say to the wave? Hello - Two students did not know a joke 	<ul style="list-style-type: none"> - Games - Soccer - Spinning clip art - Cartoons - Movies

Based on the student's answers to the second part of the survey, I can confirm and not just assume the students' topics of interest. In the lesson plans, I used most of what they answered in the survey.

Teachers' Initial Interview

To design the lesson plans using memes in the English classroom as the main strategy, different aspects had to be taken into account, for example, what students like, what students need, and what the curriculum required in each school. The initial interview for teachers, helped me get into context because I gathered information regarding their professionalism, their level of English, and their knowledge about memes in education. It was also relevant to know how much or to what extent they use social networks because I had to consider that the memes are usually shared on social media (Godwin, 1994; Schubert, 2003; Dawkins, 2006) but due to the children's age, I wanted to know how comfortable they were with the use of social media. Teachers commented in the interview, how they usually developed their classes and what aspects of English they wanted to improve—I used the program Atlas.ti for the data analysis in this part because I consider that was very important for the design of the IPUMEC and I took verbatim the responses provided by the teachers in the interviews in the designation of the codes.

Regarding the part of professionalism, they are not graduated specifically as a teacher of English, but they have between 5 and 11 years of experience teaching the subject of English. The level of English is A1 and A2, teacher **B** confirmed that his students did not have a very good level because he focuses on Math and Spanish. The teachers have never worked with memes in the classroom—for both teachers, it was the first time.

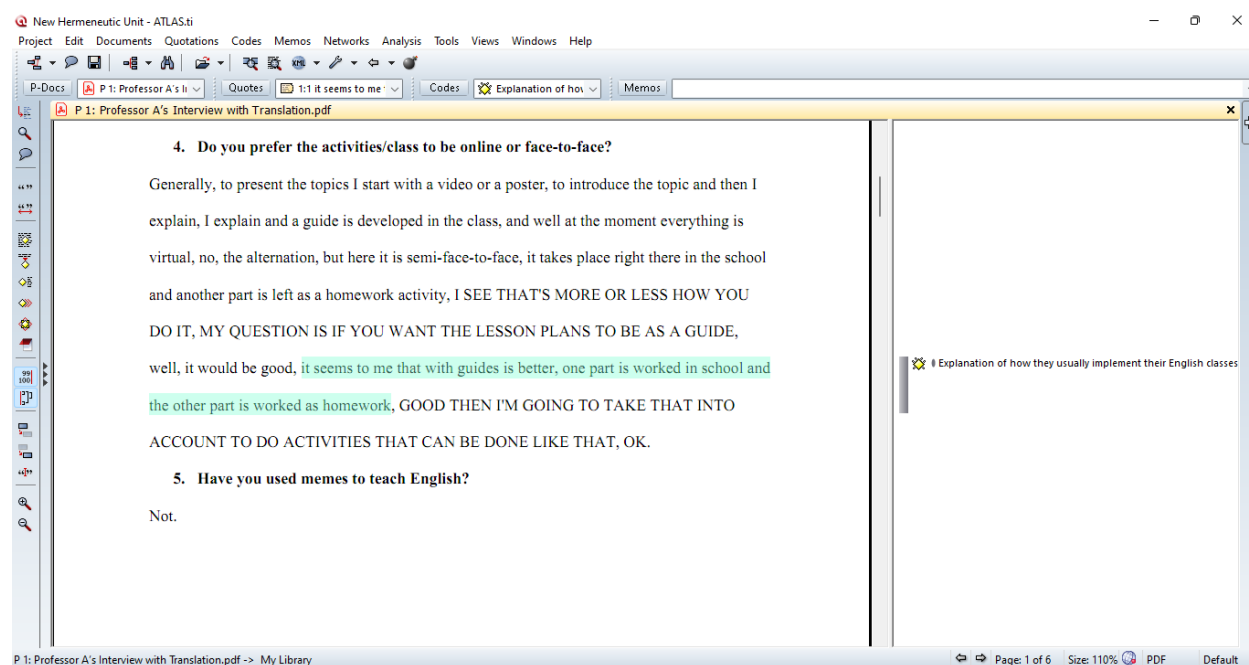
I wanted to know how interested they were in the use of social networks. Teacher **A** said that he would not feel very comfortable that the only platform he had was a group on WhatsApp

of the children's parents. On the other hand, teacher **B** said that he felt very comfortable using social networks and that WhatsApp was also used the most. Based on their answers, I could only recommend in the lesson plans to use WhatsApp mostly for the post-activities or homework. I wrote the online links and teachers were allowed to decide how to share them with the students.

Finally, after using Atlas.ti in the code for “Explanation of how they usually implement their English classes” I highlighted that Teacher **A** said, “It seems to me that with guides is better, one part is worked in school and the other part is worked as homework.” Teacher **B** added, “They should be well-explained guides, and if possible, with videos, or with a link where they can integrate and see the video. But the preference is directly with the guides because not everyone has a computer, so they can have it.”

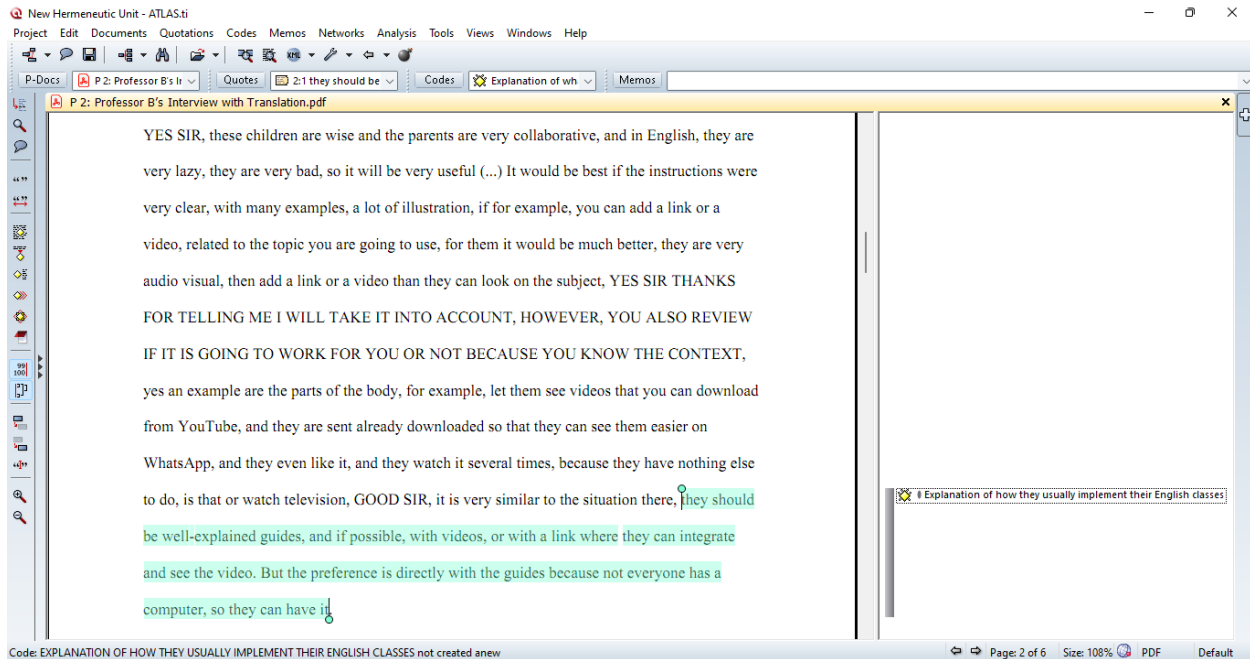
Screenshot 1

Code for “Explanation of how they usually implement their English classes” for teacher **A**.



Screenshot 2

Code for “Explanation of how they usually implement their English classes” for teacher **B**.



In the code for “Explanation of what they want to improve in their English classes”, Teacher **A** admitted he wanted students to improve their *writing* because he did not work much on writing, while teacher **B** wanted to improve *reading*. They both agreed that vocabulary is also a must with little children. Teacher **A** shared, “I was in a training session and what they asked us to do mostly was vocabulary, rather than writing.” Teacher **B** remarked, “Reading. Yes, reading comprehension. Considering vocabulary recognition.”

Screenshot 3

Code for “Explanation of what they want to improve in their English classes” for teacher A.

The screenshot shows the ATLAS.ti interface with a PDF document open. The document text includes:

causes more attention in children.

7. What English skills should be improved/implemented?

Well, what I have always worked with the students is like the vocabulary part, that they learn to identify, let's say the parts of school supplies, the parts of the house, that they learn to name the parts of the house, that they identify 'This is a door', 'This is a window', but in English, obviously. **With them almost that, with writing is not much work, I hardly ever work on it. I was in a training session and what they asked us to do mostly was vocabulary, rather than writing.**

8. Have you used social networks? If the answer is yes, which ones?

Do not see that almost no, not in this school because it is different from the city where I taught before, internet access is very difficult. With the students, the only thing is that they worked in a virtual library on tablets or laptops, so there were many elementary topics, such as the alphabet, means of transport, vowels, colors, numbers, so it was a library that apart from having the writing of each one because it also had audio, that was the only thing that was handled as the visualization part.

9. If the answer is no, how sure do you feel about using social media?

The right-hand pane shows a code window with the text: **Explanation of what they want to improve in their English classes**. The status bar at the bottom indicates "Page: 2 of 6".

Screenshot 4

Code for “Explanation of what they want to improve in their English classes” for teacher B.

The screenshot shows the ATLAS.ti interface with a PDF document open. The document text includes:

THAT..., so they can associate names with pictures, because they like this activity, they learn by association, by relationship.

7. What English skills should be improved/implemented?

Reading. READING. Yes, reading comprehension. OKAY. Take into account vocabulary recognition. Make short sentences so that they consider the structures of simple sentences. Small translations. Ways to put together simple sentences in English and simple translations. While they get used to it, they adapt, and it may be possible to increase a little difficulty. YES SIR. They use the English dictionary or the cell phone translator those are the means they use the most.

8. Have you used social networks? If the answer is yes, which ones?

Yes, only WhatsApp, because they lack connectivity, for example, the school here is more behind than the one there, and just in this headquarters as I said they are going to place the digital kiosk, but they have not done it yet.

The right-hand pane shows a code window with the text: **Explanation of what they want to improve in their English classes**. The status bar at the bottom indicates "Page: 3 of 6".

Based on their answers, I commented on the codes that the worksheets/guides should be focused on memes. Moreover, the lesson plans should have the four skills of English (listening, speaking, reading, and writing) plus vocabulary, I followed what they said and gave special attention to reading, writing, and vocabulary.

Research question 1:

Which are the pedagogical implications of adopting and exploring IPUMEC (Intervention Plan for the Use of Memes in the English Classroom) in two rural public schools in Huila, Colombia?

Based on the initial instruments, I did 5 interventions that last 45 or 50 minutes each. The first part that is the pre-activities, begins with an activity to be only about vocabulary and another one only about grammar. In the while-activities, students have to analyze a meme (only during the first three lessons) and in the second part to promote the making of a meme, specifically, it is handled as a guide or a worksheet. In the post-activities, I always included a link to practice vocabulary of the topic seen in the class and a link where students could make a meme. However, in intervention number one, teachers had to introduce the topic of what a meme was, and it was not necessary to make the students produce a meme because they were just starting.

The interventions were carried out at the end of the third period and the beginning of the fourth of the school year. Additionally, the teachers had to write two relevant aspects on the class report: the first part was about reflections of how they did or how they implemented the classes, and the second part was about the aspects to improve. Next, I am going to give more details from the data collected in each intervention.

Intervention Number 1

In the first intervention, the aspects to improve for the next one were: 1) examples should be placed and not directly told to a certain activity, especially in the worksheet that covers the use of memes, 2) if videos are to be included, they must be videos that not only contain the image and the written part but also the pronunciation, and 3) not to include activities in pairs or in groups for third grade because of the number of students. The class topic for third grade was about the family and for fourth grade was about free-time activities.

Teacher **B** implemented the first lesson plan on August 17, 2021. For third grade, the class was at 9:00 AM. In the reflection on activities, he said: “I sent them the initial video via WhatsApp, in class I asked them if they liked and understood the video and everyone answered that yes, I liked it because the children could hear the pronunciation and also that it was not overloaded with vocabulary, I could not present the slides for lack of video beam, but I explained what a meme was. When starting the guide, it was difficult for them to analyze the image but that helped them to answer the other activities. At the end, I had printed the Wordsearch for them and we did it in class.” In the feedback for improvement, he commented: “I would recommend putting examples in the guide in that way I do not have to be on top of them because they do not understand.”

For fourth grade, the class was at 11:00 AM. In the reflection on activities, he said: “I did the same for the fourth grade and sent them the video on WhatsApp, they did not like it very much, because there were many words in English, I could not present the slides to them either, but since I had already had the previous class, I knew how best to explain the topic and we moved faster.” In the feedback for improvement, he commented: “I really liked the third grade’s video, but I would recommend that for fourth grade students also watch videos where they could

listen to the pronunciation. In addition to the same previous comment, more examples in the guide.”

Teacher A implemented the first lesson plan on August 20, 2021. For third grade, the class was at 8:00 AM. In the reflection on activities, he said: “The activities seemed good to me. I only have one girl in third grade, and she is good at English, so we finish quickly.” In the feedback for improvement, he commented: “Activities that are not in groups or pairs.” For fourth grade, the class was at 9:00 AM. In the reflection on activities, he said: “The activities seemed good to me, the children liked them.” In the feedback for improvement, he commented: “I have 3 children in the group who get distracted very quickly. I would recommend more activities in the guide.”

During this intervention, I discovered that because it was the first time teachers were working with memes in the classroom, they were likely to run into some obstacles, but thanks to those difficulties they were able to provide some basic recommendations for improving future interventions. Nevertheless, they did not make positive or negative comments about the use of memes but were more about how the lesson plan and worksheet should be improved. They generally had a good experience, but Teacher B was more specific and felt a little more excited and overwhelmed in this first intervention.

Intervention Number 2

In the second intervention, the aspects to improve were: 1) to have more activities because the children were finishing very quickly, 2) to add more images or make it more visual, and 3) to include a song to work on in class. The class topic for third grade was about time and for fourth grade was about adjectives.

The teachers, **A** and **B**, implemented the second lesson plan on August 31, 2021. For teacher **A** in third grade, the class started at 10:30 AM. In the reflection on activities, he said: “She worked very judiciously, and the instructions were very clear.” In the feedback for improvement, he commented: “Maybe more activities because she finished soon. I left her for homework the crossword puzzle and making a meme.” For fourth grade, the class was at 8:30 AM. In the reflection on activities, he said: “The students had already seen the topic of feelings and that is why this class was much easier for them. I noticed that they already know that sometimes English classes are about memes. They were not very interested in analyzing them, but they were very interested in making one.” In the feedback for improvement, he commented: “The class seemed very good to me.”

For teacher **B** in third grade, the class started at 9:00 AM. In the reflection on activities, he said: “The children really liked the class, again I sent them the video via WhatsApp, and they were already prepared for the class. The video was also very good, and it was not that long. The instructions also improved, and the class flowed.” In the feedback for improvement, he commented: “I would recommend using more images because my children are very visual or even a song would also be nice to teach them English.”

For fourth grade, the class was at 11:00 AM. In the reflection on activities, he said: “I liked that this time there were no slides in the school where I teach, they plan to make a digital kiosk, but they have not finished it yet, and I have to adapt to the classroom or what can be sent via WhatsApp, there is not much technology yet in the classroom.” In the feedback for improvement, he commented: “I would like that classes like these could be taught to all grades because the children have been attracted a lot to this type of classes, the youngest always want to

see what the others do in the English subject, and I feel that especially the fourth graders think is funny to work with memes.”

During this intervention, I found that the students were already aware that they were going to work with memes according to Teacher **A**, and they were less interested in analyzing them and wanted to make their own instead. Students were motivated and thought it was fun to work with memes which was good because they already wanted to produce short sentences in English. The recommendations made by the teachers during this intervention were also to improve the lesson plans and did not mention anything negative but only good comments in the use of memes.

Intervention Number 3

In the third intervention, the only aspect to improve was that they wanted more activities because what I recommended as homework they were doing right there in the class, they wanted more activities specifically in the worksheet, students do not want to analyze memes anymore they would rather make them. Additionally, they both had been recommending me about this before, and then for the next intervention, I consider it a priority. The class topic for third grade was about seasons, weather, and clothes and for fourth grade was about the environment.

The teachers, **A** and **B**, implemented the third lesson plan on September 17, 2021. For teacher **A** in third grade, the class started at 8:00 AM. In the reflection on activities, he said: “It can be seen that the lesson plans have improved, in terms of images and instructions. I have had a very good experience so far.” In the feedback for improvement, he commented: “I have no suggestions so far, the classes have been very good. But it is also because I only work with a girl in third grade, so it is more personalized.”

For fourth grade, the class was at 9:00 AM. In the reflection on activities, he said: “The students have been very aware of the classes, and they ask me when we are going to work with the photocopies again. They are always very aware.” In the feedback for improvement, he commented: “Students do not like to analyze memes very much, they prefer to make them. So, one aspect to improve would be for them in the class to do more.”

For teacher **B** in third grade, the class started at 10:00 AM. In the reflection on activities, he said: “The children have been attracted a lot to the classes, and they have already got used to the work dynamics. Also, they liked the song.” In the feedback for improvement, he commented: “I would recommend that you put different and more activities in the worksheet because I always do in class the activities that you suggest as homework, so that way I could leave homework activities for them.”

For fourth grade, the class was at 11:00 AM. In the reflection on activities, he said: “The class was very interesting because of the song, the children liked it very much.” In the feedback for improvement, he commented: “I would recommend the same again that you put different and more activities in the worksheet. But in general, the classes flow very well, thanks to the fact that you have always taken my comments into account.”

During this intervention, I found out that the students look forward to class and kept asking when they were going to have English class with memes, they are very visual because they liked the song and the pictures. They are still highly motivated for them to make their own memes. The only comment to highlight was the number of activities, the teachers were saying that the students like the memes so much that they want to do more and have more activities related to memes.

Intervention Number 4

In the fourth intervention, there were no aspects to improve. The class topic for third grade was about fruits and for fourth grade was about the present continuous.

The teachers, **A** and **B**, implemented the second lesson plan on September 28, 2021. For teacher **A** in third grade, the class started at 10:30 AM. In the reflection on activities, he said: “The class with my student always goes smoothly.” In the feedback for improvement, he commented: “I do not have anything to recommend because this time we had plenty of activities and the instructions were clear.” For fourth grade, the class was at 8:30 AM. In the reflection on activities, he said: “Students considered the video to be boring, but I think that was ok because of the topic. They loved the guide and were enchanted with the Minions, they also worked as a group to do the first page of the guide and they noticed that they did not have to analyze a meme.” In the feedback for improvement, he commented: “The classes have been great, I do not have anything to comment on.”

For teacher **B** in third grade, the class started at 9:00 AM. In the reflection on activities, he said: “The children already knew some words but there were also new words. They liked the activities of matching the image of the meme with the fruit in the guide because that is something that I do a lot in class.” In the feedback for improvement, he commented: “As we have already done several classes, they have improved a lot and I would not have anything to recommend.”

For fourth grade, the class was at 11:00 AM. In the reflection on activities, he said: “I feel like this class had a lot of new vocabulary, but to get to the guide they were all judicious and paying attention. They liked the images of the memes a lot and they began to think of other memes, and then I let them make their own memes but in English with stickers that I had, and

despite their motivation, because it was in English there were very few memes made, but this is the first time that I do not follow everything to the letter but I added that to make them have fun.” In the feedback for improvement, he commented: “I added the stickers not because what you did had to be improved but as something extra that I found appropriate, then there would be nothing to recommend.”

During this intervention, it can be confirmed that the motivation in the teachers and the students is imminent, and memes helped students to learn English, for this intervention there were no recommendations for the class in general or for the guide/worksheet.

Intervention Number 5

In the fifth intervention, there were no aspects to improve. The class topic for third grade was about numbers from 1 to 20 and for fourth grade was about numbers from 100 to 200.

The teachers, **A** and **B**, implemented the second lesson plan on October 12, 2021. For teacher **A** in third grade, the class started at 10:30 AM. In the reflection on activities, he said: “She loved this lesson because she already knew some of the numbers and the chocolate song.” He did not suggest any feedback for improvement. For fourth grade, the class was at 8:30 AM. In the reflection on activities, he said: “Despite the fact that there were a lot of numbers, the class flowed, although I felt that I had to review the numbers from 1-100 first quickly, and then those of the lesson plan.” He did not suggest any feedback for improvement.

For teacher **B** in third grade, the class started at 9:00 AM. In the reflection on activities, he said: “Both the video and the guide were engaging for the children.” He did not suggest any feedback for improvement. For fourth grade, the class was at 11:00 AM. In the reflection on activities, he said: “As usual, I sent them the video first via WhatsApp for the class, however, this time I am sure they did not look at it completely, because in the class I asked and they did

not answer me, but I think it is because I always emphasize smaller numbers but in a way, I liked it because that way they get more content to what their level should be, and I was thinking 'now they won't like the guide' and yes, they were definitely confused, but at least they were not bored by the images in the memes and did all the activities in the class." In the feedback for improvement, he commented: "The class was well planned, it was just the topic of numbers that hardly appealed to the children."

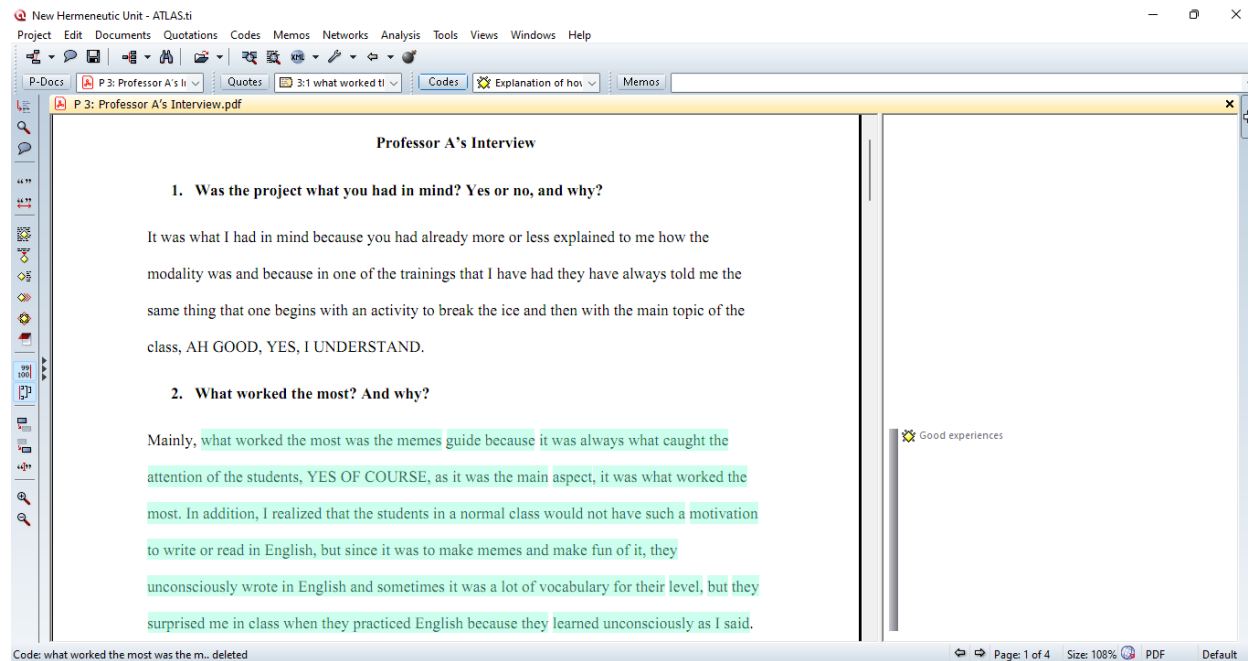
During this intervention, the only comment that stood out was that the numbers from 100 to 200 were very boring for them. But regarding the guide, they told me nothing, not even more recommendations to improve the lesson plan.

Teacher's Final Interview

For the final interview, I used Atlas.ti for the data analysis process, I highlighted three important aspects, code for "Good experiences", "Bad experiences", and "Recommendations". Regarding the good experiences or what worked the most, teacher A said, "What worked the most was the memes guide because it was always what caught the attention of the students (...) I realized that the students in a normal class would not have such a motivation to write or read in English, but since it was to make memes and make fun of it, they unconsciously wrote in English, and sometimes it was a lot of vocabulary for their level, but they surprised me in class when they practiced English because they learned unconsciously as I said."

Screenshot 5

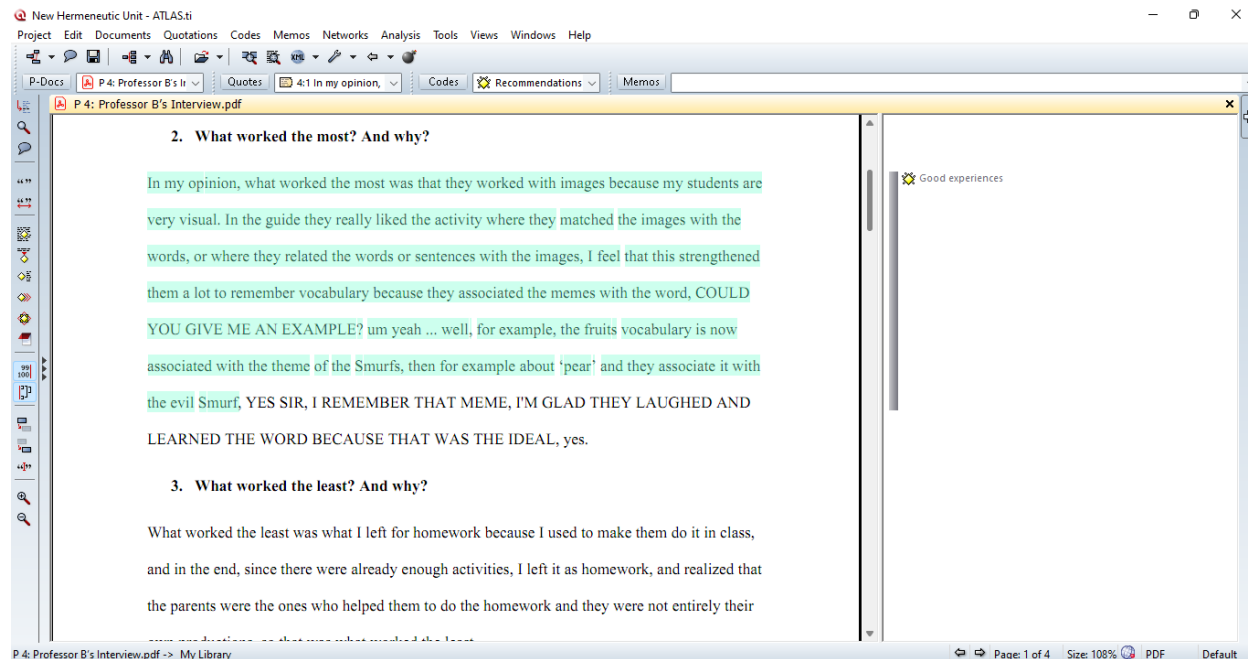
Code for “Good experiences” for teacher A.



Teacher **B** said, “In my opinion, what worked the most was that they worked with images because my students are very visual. In the guide they really liked the activity where they matched the images with the words, or where they related the words or sentences with the images, I feel that this strengthened them a lot to remember vocabulary because they associated the memes with the word. (...) well, for example, the fruits vocabulary is now associated with the theme of the Smurfs, then for example about ‘pear’ and they associate it with the evil Smurf.”

Screenshot 6

Code for “Good experiences” for teacher B.

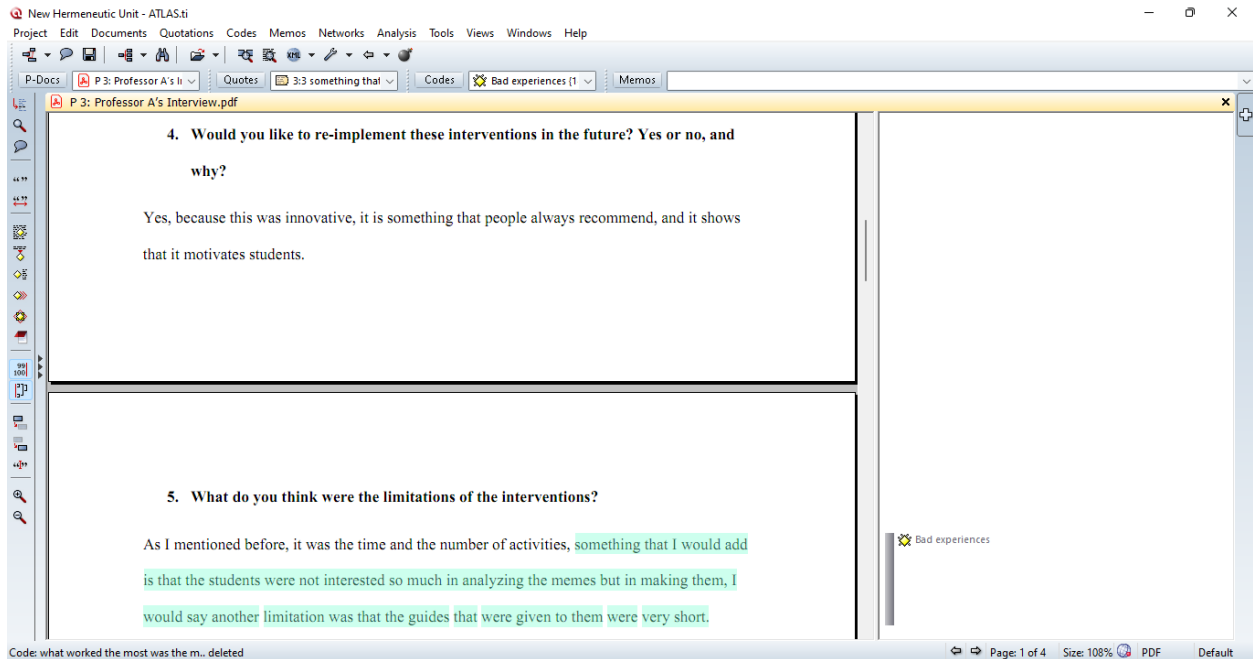


With these good experiences, I can conclude two things about the use of memes in the English classroom. The first one, that the students unconsciously practice English for the desire to be able to make memes and to make fun of the memes, and the second one, that the images that were implemented in the memes helped them associate the words in English, which makes them easily remember English words for a test or any other activity.

In regard to the bad experiences or what worked the least, teacher A said, “What worked the least was ... the time. (...) Something that I would add is that the students were not interested so much in analyzing the memes but in making them, I would say another limitation was that the guides that were given to them were very short.”

Screenshot 7

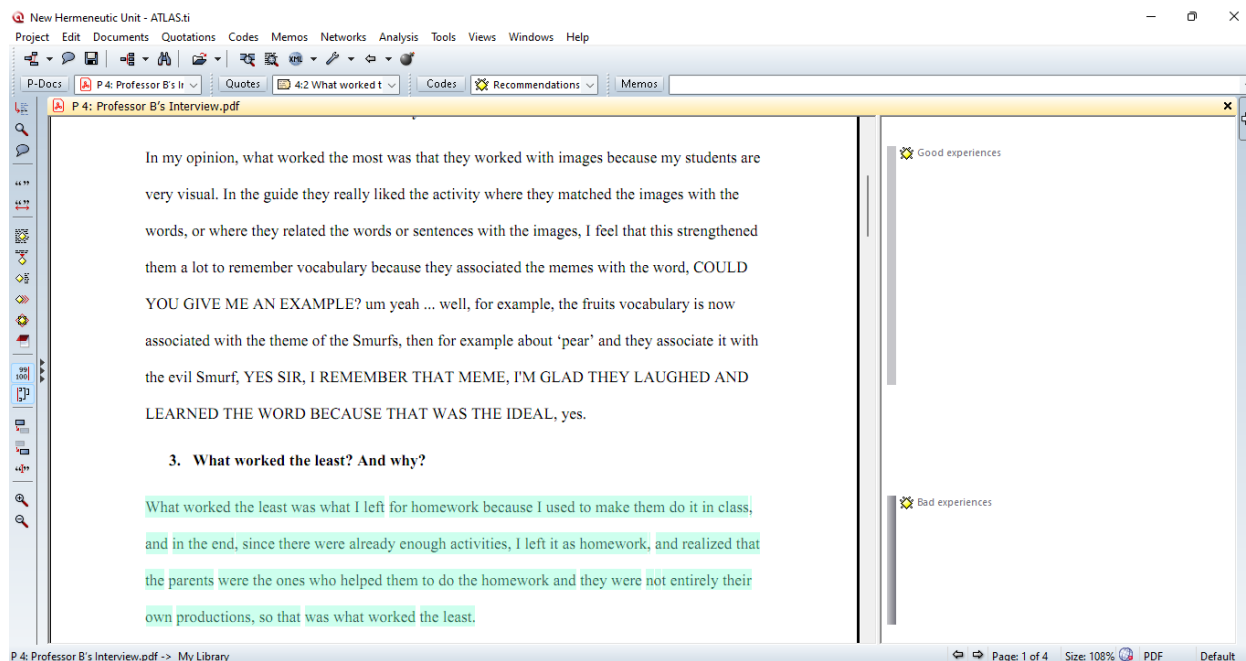
Code for “Bad experiences” for Teacher A.



And teacher **B** said, “What worked the least was what I left for homework because I used to make them do it in class, and in the end, since there were already enough activities, I left it as homework and realized that the parents were the ones who helped them to do the homework and they were not entirely their own productions, so that was what worked the least.”

Screenshot 8

Code for “Bad experiences” for Teacher B.

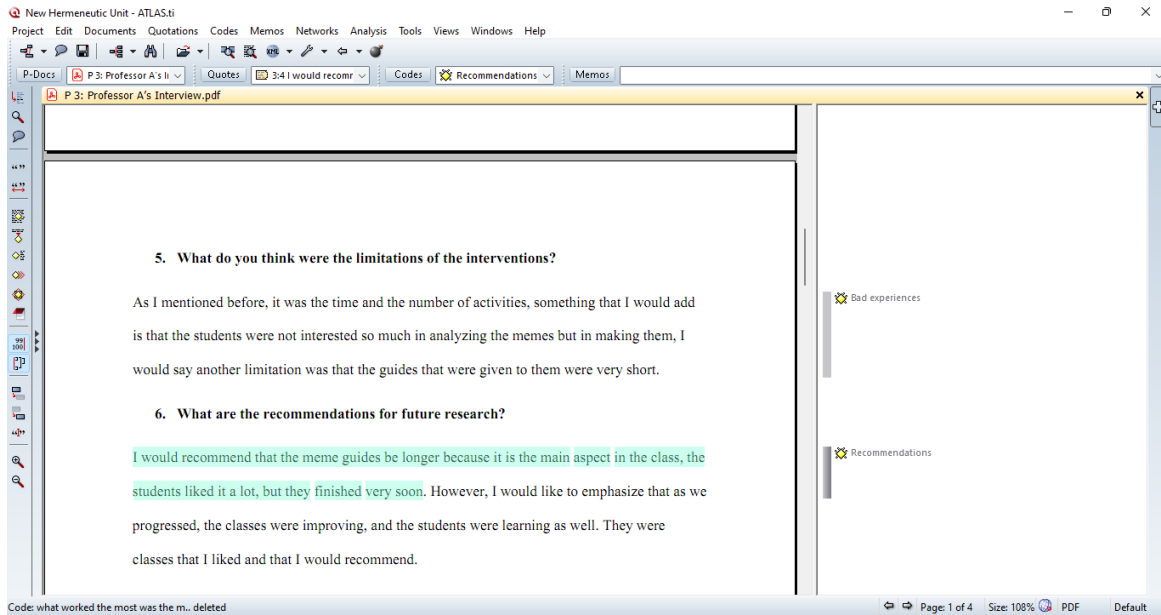


From the bad experiences, I can conclude that the students were interested in making memes rather than analyzing them and they were very excited to work on them in class that the guides were very short. Another finding is that everything should be done in class because if they were left as homework, the parents were the ones who helped them or ended up doing the homework.

Finally, in the recommendations both teachers, **A** and **B**, recommended that the guides should be longer and with more activities, teacher **A** said, “I would recommend that the meme guides be longer because it is the main aspect in the class, the students liked it a lot, but they finished very soon.”

Screenshot 9

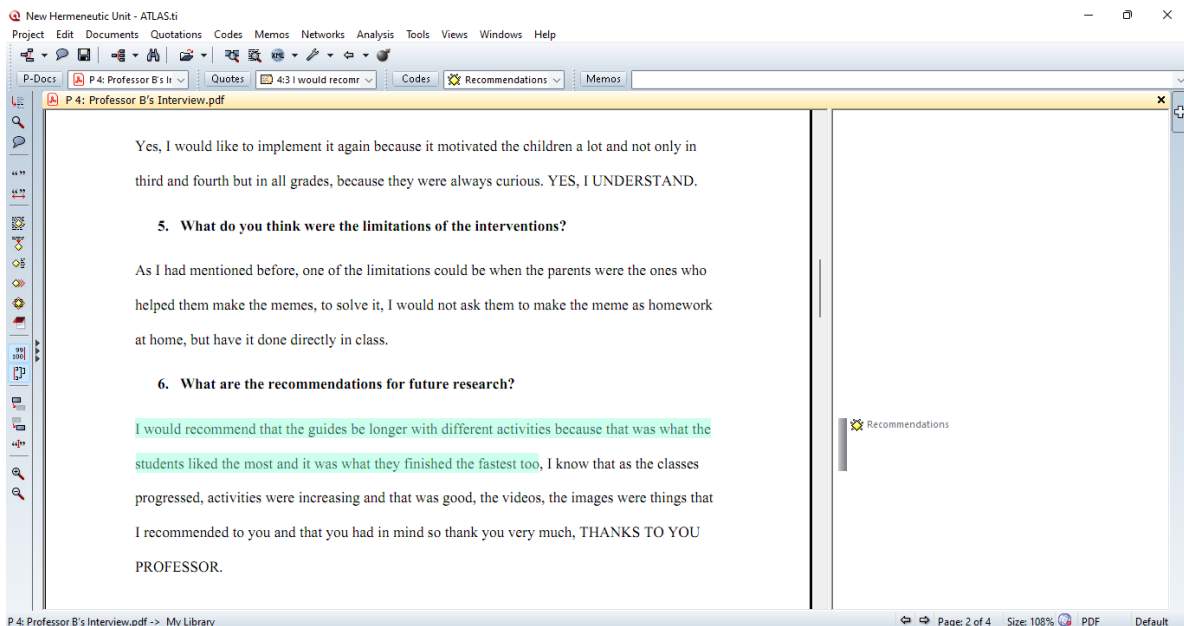
Code for “Recommendations” for Teacher A.



And teacher **B** agreed, “I would recommend that the guides be longer with different activities because that was what the students liked the most and it was what they finished the fastest too.”

Screenshot 10

Code for “Recommendations” for Teacher B.



Research question 2:

To what extent can memes enhance or hinder students' critical thinking in third and fourth grades in two rural public schools in Huila, Colombia?

To answer the second question of my research I did a pre-test and a post-test. I use Google Forms to implement them and from there collect and analyze the information. All tests were based on Paul and Elder's (2007) studies regarding critical thinking development. They mentioned six stages, 1) unreflective thinker, 2) challenged thinker, 3) beginning thinker, 4) practicing thinker, 5) advanced thinker, and 6) master thinker. Elementary school children should be at the "beginning" thinker level that is why they proposed three kinds of questions to know if students reach the level, 1) one system: knowledge, 2) no system: cannot be assessed, and 3) multi-system: judgment. Based on what they proposed I created the questions for the tests.

In the instructions for the pre-test, the students had to read a short paragraph in English, then read each question in Spanish and mark the best answer. In the instructions for the post-test, the students had to look at a meme, then read each question in Spanish and mark the best answer. In the tests, the answers in question 2 are all correct.

- If students answer (c) to question 1 and 3: they are beginning thinkers.
- If students answer (b) to question 1 and 3: they are challenged thinkers.
- If students answer (a) to question 1 and 3: they are unreflective thinkers.

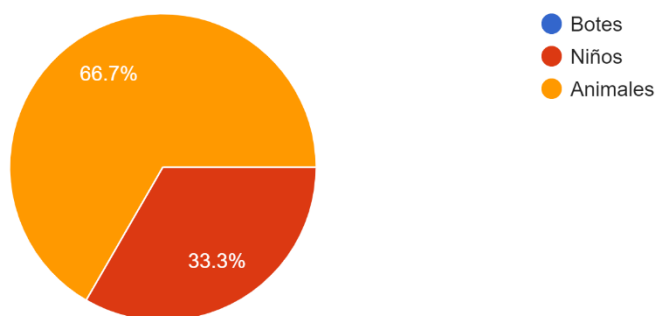
In addition, when creating the answers to each question, I considered that they had a level of correctness from lowest to highest—(a) being the lowest and (c) the highest, being answer (c) always the right option.

Pre-Test

For third grade, in the first question regarding one system, 66.7% answered (c) and 33.3% answered (b).

¿Qué es una amenaza seria para las tortugas recién nacidas?

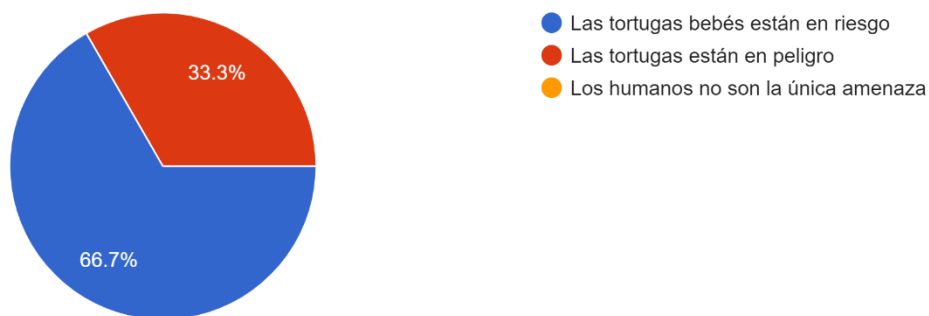
3 responses



In the second question, regarding no system, all answers were correct, 66.7% answered (a) and 33.3% answered (b).

¿Qué es lo más probable que sea cierto?

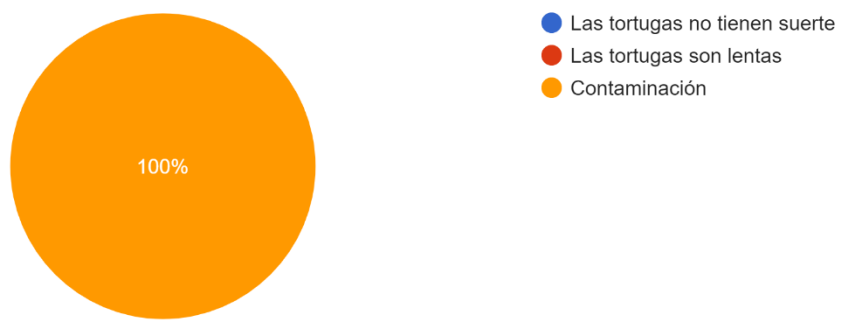
3 responses



In the third question, regarding multi-system, a 100% answered (c).

¿Por qué las tortugas enfrentan tantas amenazas?

3 responses

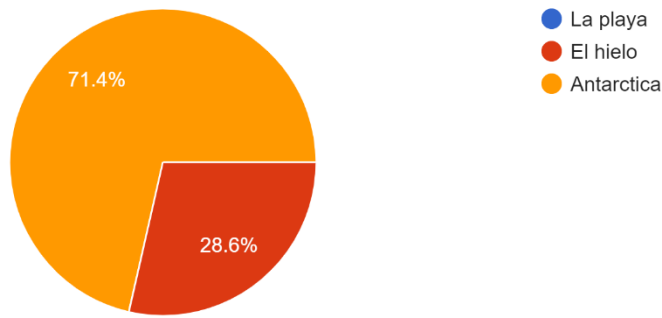


I could conclude that students in third grade were challenged thinkers.

For fourth grade, in the first question regarding one system, 71.4% answered (c) and 28.6% answered (b).

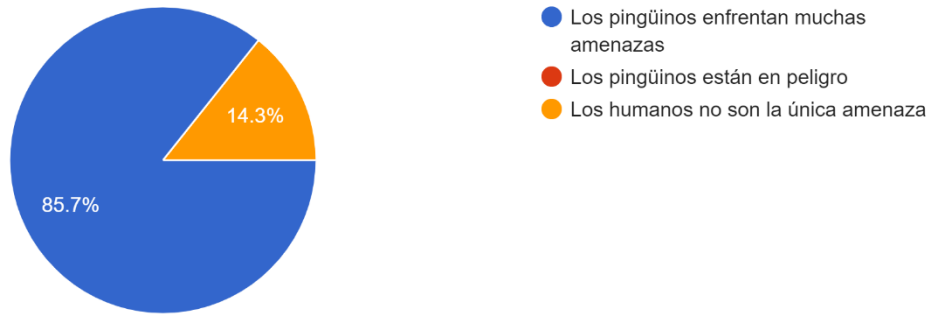
¿Dónde viven los pingüinos?

7 responses



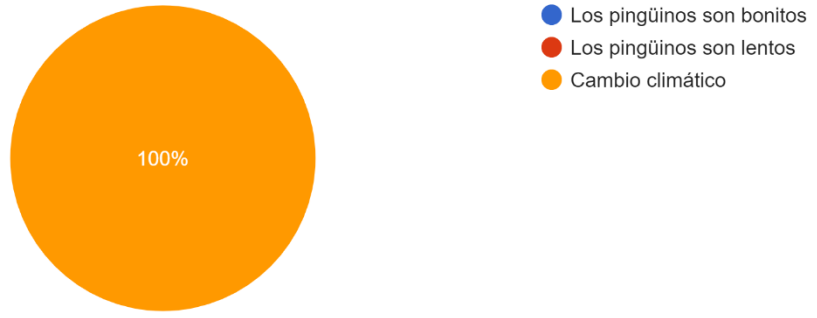
In the second question, regarding no system, all answers were correct, 85.7% answered (a) and 14.3% answered (c).

¿Qué es lo más probable que sea cierto?
7 responses



In the third question, regarding multi-system, a 100% answered (c).

¿Por qué los pingüinos enfrentan tantas amenazas?
7 responses



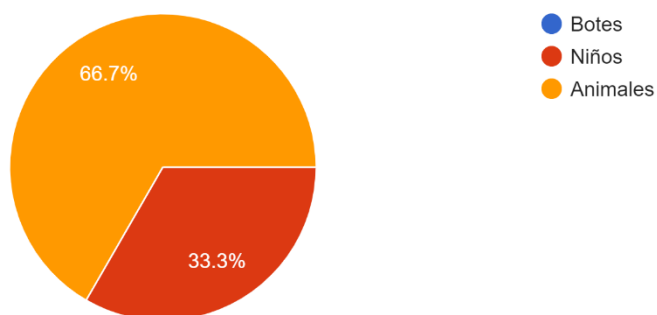
I could conclude that students in fourth grade were between challenged thinkers and beginning thinkers.

Post-Test

For third grade, in the first question regarding one system, 66.7% answered (c) and 33.3% answered (b).

¿Qué es una amenaza seria para las tortugas recién nacidas?

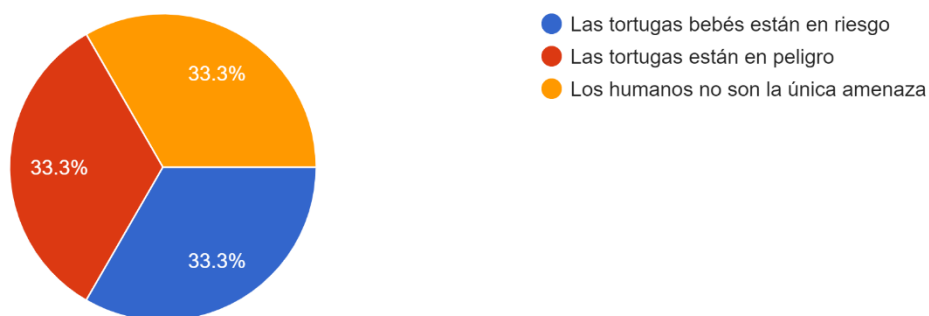
3 responses



In the second question, regarding no system, all answers were correct, 33.3% answered (a), 33.3% answered (b), and 33.3% answered (c).

¿Qué es lo más probable que sea cierto?

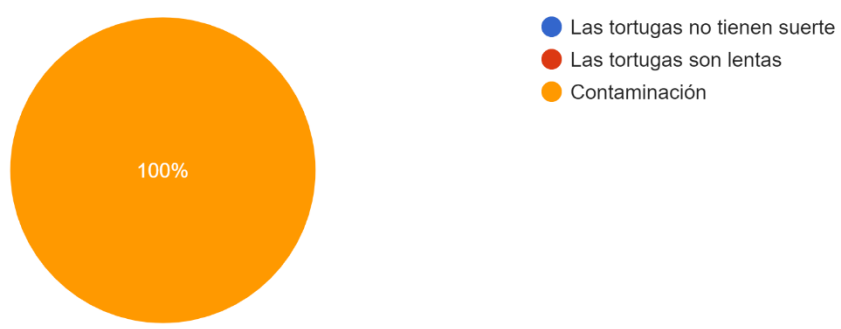
3 responses



In the third question, regarding multi-system, a 100% answered (c).

¿Por qué las tortugas enfrentan tantas amenazas?

3 responses

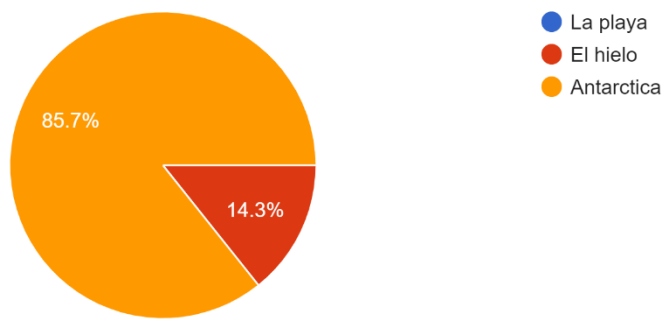


I could conclude that students in third grade were challenged thinkers.

For fourth grade, in the first question regarding one system, 85.7% answered (c) and 14.3% answered (b).

¿Dónde viven los pingüinos?

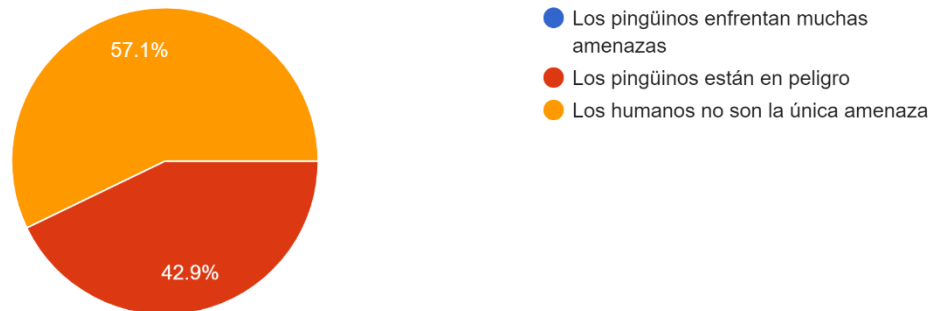
7 responses



In the second question, regarding no system, all answers were correct, 57.1% answered (c) and 42.9% answered (b).

¿Qué es lo más probable que sea cierto?

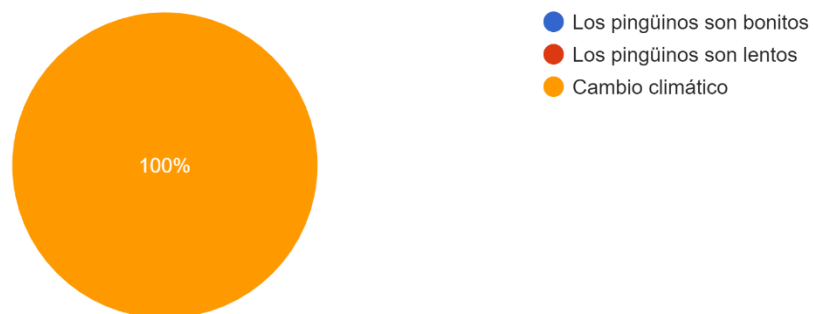
7 responses



In the third question, regarding multi-system, a 100% answered (c).

¿Por qué los pingüinos enfrentan tantas amenazas?

7 responses



I could conclude that students in fourth grade were beginning thinkers.

As already explained, IPUMEC consisted of five interventions, the first three focused on the analysis of memes and the last two on their creation, especially in fourth grade, IPUMEC helped improve students' critical thinking.

There are several explanations for these results. To start with third grade in the pre-test results, students were at a level of challenged thinkers and after the IPUMEC in the post-test, the results were the same in the first and third questions. The second question was the only one that changed, however, all the options in the second question were correct and they cannot be assessed. The interventions did not help to increase their critical thinking and they were still at the challenged thinker level because the answers per se were almost the same. This finding is rather disappointing.

To continue with fourth grade in the pre-test results, students were at a level between challenged thinkers and beginning thinkers and after the IPUMEC in the post-test results, they positioned themselves to just beginning thinkers because in the three questions option (c) was the most answered. In the post-test, the first and second questions were the ones that showed the most variation to determine that the interventions helped to increase their critical thinking. This finding is very encouraging.

Another finding is that students after the IPUMEC stayed in the same level or advanced through the levels, but they did not regress to the level of unreflective thinkers. This finding is intriguing as it has important implications for further work. Finally, the tests applied were successful as they were able to identify students' critical thinking before and after the implementation of IPUMEC.

Discussion

A major problem is the lack of research on the association between memes, social media, and education (Baysac, 2017; Purnama, 2017), especially for children or young learners. Debate continues about memes on education and if memes bring good or bad results in learning English as a second language. Another aspect to consider is that educators and learners find classes dreary because of the monotony of every day in the classroom (Purnama, Desiarti, Aflahah, & Ekaningrum, 2017). Therefore, I proposed memes as a pedagogical tool to bring novelty in the classroom and to contribute to research. The purposes of this study were to explore the experiences of teachers regarding the use of memes in the English classroom and to know if students improve their critical thinking or not with the use of memes in the English classroom. The following discussion will be divided into 2 parts and its subheadings, the first part will discuss the findings that answered the first research question, and the second part will discuss the findings in the second research question.

Research question 1:

Which are the pedagogical implications of adopting and exploring IPUMEC (Intervention Plan for the Use of Memes in the English Classroom) in two rural public schools in Huila, Colombia?

As mentioned in the literature review, memes originally come from the English language but have spread throughout the world. My study follows image macros memes (Harvey & Palese, 2018) that are images with written text (above or below) on them. Kostadinovska-Stojchevska and Shalevska's (2018) study also focused on memes that are a blend of an image and a piece of written text, as the main and most popular type of memes for teaching and learning. As has already been established, there is not much research regarding memes in the use

of education, more specific to the teaching of English, the little research carried out is displayed on many factors that the subject entails and it is usually focused on teenagers and young adults (Baysac, 2017; Purnama, 2017). This is due to the connection that it has with the critical, satirical, burlesque, and political thought that characterized memes, and very important the use of social media (Godwin, 1994; Schubert, 2003; Dawkins, 2006). However, this study was carried out in two rural schools with elementary school children, specifically third and fourth grades. Except for the use of WhatsApp, there was no implementation of social media due to the children's age. From the interventions that the participating teachers implemented, I discovered four pedagogical implications in the adaptation and exploration of IPUMEC. Therefore, in this section, I am going to discuss the resulting implications, such as (1) memes enhanced students' motivation, (2) memes enhanced students' creativity, (3) memes increased students' readiness to practice English, (4) memes increased students' association of images and words in English, and end with a couple of recommendations that the participant teachers highlighted.

Memes Enhanced Students' Motivation

To begin with the first pedagogical implication, I found out that memes enhanced students' motivation. Since intervention 1 students were motivated to work with memes and look forward to the English class. In the following interventions, teachers, **A** and **B**, confirmed motivation was always present. Teacher **A** stated,

“The activities seemed good to me, the children liked them” (Intervention 1).

Teacher **B** agreed,

“The children really liked the class, again I sent them the video via WhatsApp, and they were already prepared for the class” (Intervention 2).

A strong relationship between memes and motivation in education has been reported by Purnama et al (2017). The authors found out that memes in learning activities were proven to be reliable to promote students' motivation in learning English. Moreover, motivation played an important role in determining success and/or failure in learning. Their study result demonstrates a correlation with my study due to the fact that the students were always motivated, and it helped to determine the students' success in learning English.

Memes Enhanced Students' Creativity

To continue with the second pedagogical implication, I found out that students' creativity enhanced because they were less interested in analyzing memes and wanted to make their own instead and this was evidenced since intervention 2. By giving students the freedom to create their own memes, I was primarily exercising their creativity, although it was not one of my objectives. Teacher A confirmed,

“They -students- were not very interested in analyzing them, but they were very interested in making one” (Intervention 2).

One of the strengths of Baysac's (2017) study was that he took into account that what can be funny for the teacher will not be for the students. Something definitely important. Even if in my study students implicitly improved their creativity, I take it as a positive result. To support this, Kariko's (2012) study examined how students use their creativity in employing memes. The study revealed that humor and creativity in using internet memes are related to the students' achievement in their studies and that it brings positive outcomes.

Memes Increased Students' Readiness to Practice English

The third and fourth pedagogical implications were based on the good experiences from the final interview for the teachers. The third pedagogical implication was that students

unconsciously practiced English for the desire to make memes and laugh at them (Baysac, 2017).

When students make a meme, they just do not produce short sentences in English, but they give it a meaning to make fun of. Teacher **A** explained,

“I realized that the students in a normal class would not have such a motivation to write or read in English, but since it was to make memes and make fun of it, they unconsciously wrote in English and sometimes it was a lot of vocabulary for their level, but they surprised me in class when they practiced English because they learned unconsciously as I said.”

In this case, students followed Harvey & Palese’s (2018) critical memetic literacy and Knobel and Lankshear's (2007) new literacies. Knobel and Lankshear's (2007) referred to Literacy, with a “big L” and literacy, with a “small l”. The former is tied directly to life. The latter describes the actual processes of reading, writing, viewing, listening, manipulating images and sound, etc.

Memes Increased Students’ Association of Images and Words in English

The fourth pedagogical implication is that the images in the memes helped students associate the words in English. Teacher **B** emphasized the visual part a lot and this is because at that age children are very visual. He exemplified,

“For example, the vocabulary about fruits is now associated with the theme of the Smurfs, then for example about ‘pear’ and they associate it with the evil Smurf.”

Therefore, the theories of visual literacy are closely related to my results as well. Dominguez Romero and Bobkina (2017) focused their study on the teaching of visual literacy through memes in the language classroom. They also carried out a workshop/pedagogical proposal that they launched in one of their Master’s courses for EFL/ESL and their meme-based visual proposal also helped their students to learn through memes where the student could

associate the image with a word or a phrase not only at the time of the class but in any other activity or exam.

Recommendations from the Participant Teachers

To end with the recommendations, teachers, **A** and **B**, highlighted that

- (i) the memes' guides/worksheets should be longer because according to the teachers, the students were motivated, finished very quickly, and wanted more activities with memes, and
- (ii) when it comes to students producing the memes it should be done in class because if they were left as homework, then the parents were the ones who ended up helping the children and it was not seen as if they were the ones who made the meme.

Research question 2:

To what extent can memes enhance or hinder students' critical thinking in third and fourth grades in two rural public schools in Huila, Colombia?

The second question in this study sought to determine the extent that memes can have when learning English as a foreign language in third and fourth grades. Suseno's (2015) article, proposed that to develop critical thought, the content of memes should be treated differently. Specifically, for children or young adults the use of simple pictures and simple words, to ask about how they feel, what they do every day, or about a good/bad habit.

Knowing how to think critically is not that simple, in order to achieve the objective that teachers want in the classroom, for example, we must first understand the cognitive development of students and then how to develop critical thinking, this connection between cognitive development and critical thinking makes easier for teachers to implement classes. Firstly, Piaget

(2014) in his three stages of cognitive development explains that children between the ages of 7 and 11—Concrete Operational Stage, begin to acquire the ability to have logical thought.

However, it is not that it happens overnight but that it has to be exercised. During this stage, the younger children are still learning to use their logical thought process with physical objects, and the older children have the ability to think logically and critically about more than one part of the problem at a time.

Piaget's (2014) stages are important and relate with the results I have for the second research question because for Piaget, children between the ages of 7 and 8 are just beginning to develop logic, whereas children who are already 9 and 10 years old can already be said to advance a little more in that logic and that is why my study had better results with the fourth graders and not with the third graders because their ages had a great influence.

My results are also supported by Paul and Elder's (2007) stages of intellectual development. They believe that most teachers aspire to make critical thinking a primary objective of their instruction, however, most teachers are unaware of the levels of intellectual development that people go through as they improve as thinkers. Paul and Elder (2007) suggest six stages of critical thinkers in the educational setting—The unreflective, the challenged, the beginning, the practicing, the advanced, and the master thinker. In elementary school, children should be at the “beginning” thinker level and since my project is based on the third and fourth grades, then I focused on the first three stages and based myself on the questions that they suggested for the creation of the test before and after the IPUMEC.

The Unreflective Thinker

According to Paul and Elder (2007), we are all born as unreflective thinkers, all students think, most students are largely unaware of how their thinking is structured or how to assess or improve it. The defining feature is that

“Unreflective thinkers are largely unaware of the determining role that thinking is playing in their lives and of the many ways that problems in thinking are causing problems in their lives. Unreflective thinkers lack the ability to explicitly assess their thinking and improve it thereby” (p. 2).

As mentioned in the findings, I considered that the questions in the tests had a level of correctness from lowest to highest—(a) being the lowest and (c) the highest, being answer (c) always the right option. None of the students who participated in my study were in this stage because in the pre-test in both third and fourth grades, most of the students answered question number 3 correctly, where the judgment was taken into account. Although many students can reach high school, or even college, and still be in this category, the students participating in my study already had not only some knowledge but were critical enough not to be in this stage.

The Challenged Thinker

As noted by Paul and Elder (2007), most challenged thinkers have very limited skills in thinking. Challenged thinkers, unlike unreflective thinkers, are becoming aware of thinking as such. The defining feature is that

“Thinkers move to the “challenged” stage when they become initially aware of the determining role that thinking is playing in their lives, and of the fact that problems in their thinking are causing them serious and significant problems” (p. 3).

As teachers, we must explicitly model students’ thinking. We must design classroom activities that explicitly require students to think about their thinking. Let us be reminded that

Paul and Elder (2007) proposed three kinds of questions to know if students reach the beginning thinker level, 1) one system: knowledge, 2) no system: cannot be assessed, and 3) multi-system: judgment. Therefore, I have three questions for each test. In my results, in third grade in the pre-test, students were at a level of challenged thinkers (second stage) because in question number 1 a 66.7% of students answered option (c) and in the third question, all students answered (c). The percentages surpass the 50%.

After the IPUMEC, in the post-test, the results were the same. The interventions did not help to increase their critical thinking and they were still at the challenged thinker level. The only question with a variation in the answers was question number 2 but that one belongs to ‘no system’, thus, it could not be assessed.

The Beginning Thinker

Paul and Elder (2007) point out that we must recognize that students are not only creatures of habit, but like the rest of us, they are largely unaware of the habits they are developing. They are largely unaware of what it is to develop good habits (in general), let alone good habits of thinking. In this stage, students are actively taking up the challenge to begin to take explicit command of their thinking across multiple domains of their lives. The defining feature is that

“Beginning thinkers have enough skill in thinking to begin to monitor their own thoughts, though as “beginners” they are sporadic in that monitoring. They are beginning to recognize egocentric thinking in themselves and others” (p. 5).

In fourth grade in the pre-test results, students were at a level between challenged thinkers and beginning thinkers because, in question number 1, a 71.4% of students answered (c) and 28.6% answered (b), and in question number 3, a 100% of students answered (c).

After the IPUMEC, in the post-test results, they positioned themselves to just beginning thinkers (third stage) because, in question number 1, a 85.7% of students answered (c) and 14.3% answered (b), and in question number 3, a 100% of students answered (c).

Thanks to Piaget's (2014) theory of cognitive development and the stages of intellectual development of Paul and Elder (2007), I can say that third graders are just beginning to enter this stage of critical thinking, but it is already in fourth grade that the results begin to be seen because the child already acquires the cognitive development to logically process content such as that of a meme. This does not mean that the student in third grade has not learned, but rather that in third grade critical thinking is exercised, which will surely leave better results if these interventions continue to be applied. Conclusively, one last finding is that after the interventions of the use of the Meme in the English classroom students stayed in the same stage or moved to the next one, but they did not regress to the level of unreflective thinkers.

Conclusions

The present research aimed to explore the teachers' experiences regarding the use of memes in the English classroom and to know if students improve their critical thinking or not with the help of memes in the English classroom. Data for this study were collected using a diagnostic survey for students and an interview for teachers, a pre-test for students, followed by an intervention plan in the form of lesson plans/worksheets (IPUMEC), and finally, a post-test for students and a final interview for the teachers.

For the first research question, this study has identified that memes enhanced students' motivation, memes enhanced students' creativity, students unconsciously practiced English for the desire to make memes and laugh at them, and the images in the memes helped students associate words in English. To reach these conclusions, the creation of IPUMEC and its implementation were the basis and helped confirm that the use of memes as a pedagogical tool is very reliable.

For the second research question, this study has shown that in third grade students did not increase their critical thinking but maintained the same level with the use of memes in the English classroom. In fourth grade, students increased their critical thinking with the help of memes in the English classroom. One of the most significant findings to emerge from this study is that memes did not diminish their critical thinking, but it was maintained and even augmented.

Taken together, these results suggest that the use of memes in the classroom can be trustworthy as a strategy or pedagogical tool to teach English, however, not as the main focus of the class but as one part of it. This study will prove useful in expanding our understanding of how to implement memes in the English classroom. The use of memes as a pedagogical strategy can be highly recommended.

A limitation of this study is that the memes used in the worksheets/guide were image macro that consisted of an image and a small written text, and I did not use or encourage the other types of memes. A second limitation is that I did not focus on analyzing the memes that the students produced. Still, I focused on the experiences that the teachers had in the class and in knowing if the students develop their critical thinking or not through the tests. A third limitation is that social networks were not used—except for WhatsApp in the interventions, but it was not used to spread the memes due to the age of the children and the grades at which the project was implemented, and in addition to the context because, in the rural area, social networks are not used very frequently. A fourth limitation worth mentioning is that critical thinking assessment entails a more longitudinal approach rather than a cross-sectional one.

Notwithstanding these limitations, this study offers valuable insights into the reliability of the use of memes in the elementary school setting because the topic lends itself to higher grades, but it is good to know that it can be implemented with elementary school children, furthermore, with children who are from the countryside because usually they are not given much attention.

This type of project would be a fruitful area for further work. The potential of using memes as a pedagogical strategy can be deeply propounded. Further research might include communicative competence in the lesson plans for the interventions, might explore creative thinking in students, might focus on the narrative approach in the interviews with the teachers, might implement GIFs and short videos that are the other types of memes, might examine the memes production from the students, might be carried out with higher grades, might undertake more participants in the research, might go in-depth with the psychological and the neurological standpoint, might increase the number of interventions and the time length in the worksheets/guides, might emphasize between memes and cultural considerations, might add the

use of social media in the spread of memes, and might be developed in different settings such as the city or private schools/institutes.

The findings of this study have many important implications for future practice in the Colombian context because as there is not much research regarding the use of memes in the English classroom, there is a lot to work on, collaborate, and contribute to for the future references.

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Appendix A
Surcolombiana University
Faculty of Education

Informed consent for Parents

You have been invited to be part of the study, Meme Up in the English classroom. This project is carried out by the researcher Dannilly Rivera Cuellar but implemented by the classroom teacher.

The main objective is to determine to what extent memes can improve or hinder the critical thinking of third and fourth grades in rural public schools in Huila, Colombia. If you agree to be a member of this project, we request that the participating student answer a survey at the beginning of the investigation that will take no more than 10 minutes, followed by a short test to determine their level of critical thinking (at the beginning and at the end of the project).

The identity of the child will be protected by codes, and fictitious names will be used for the handling, analysis, and interpretation of the data. Only the children who participate in the research and the teachers who direct it will have access to the data or who can directly or indirectly identify a participant, including this consent form.

If you have read this document and have decided to be a member of this project, please understand that the participation of the child is completely voluntary and that he/she has the right to withdraw or inhibit himself/herself from participating in the study at any time, without any penalty. Also, you have the right not to answer any particular question, as well as to receive a copy of this document.

For questions, concerns, or complaints about the study, you can contact the project advisor, Dr. Edgar Alirio Insuasty; email edalin@usco.edu.co

Participating Parent / Guardian Name: _____

Signature: _____

Full name of the minor participant: _____

I, Dannilly Rivera Cuellar, hereby certify that the above is an accurate translation of the original document from its original Spanish to English and that I am competent to make such a translation.

Dannilly Rivera

Signature

Date: 06/26/2021

Universidad Surcolombiana

Facultad de Educación

Consentimiento informado para Padres

Ha sido invitad@ a ser parte del estudio, Meme Up en el aula de inglés. Este proyecto es realizado por la investigadora Dannilly Rivera Cuellar, pero implementado por el docente de clase.

El objetivo principal es determinar hasta qué punto los memes pueden mejorar u obstaculizar el pensamiento crítico de los estudiantes de tercer y cuarto grado en escuelas públicas rurales en Huila, Colombia. Si acepta ser miembro de este proyecto, solicitamos que el estudiante participante conteste una encuesta al iniciar la investigación no tomará más de 10 minutos, seguido de una corta prueba para determinar su nivel de pensamiento crítico (al iniciar y al finalizar el proyecto).

La identidad del niño será protegida por lo que se usarán códigos y nombres ficticios para el manejo, análisis e interpretación de los datos. Solamente los niños que participan en la investigación y los/as profesores/as que la dirigen tendrán acceso a los datos o que puedan identificar directa o indirectamente a un participante, incluyendo esta hoja de consentimiento. Si ha leído este documento y ha decidido ser miembro de este proyecto, por favor entienda que la participación del niño es completamente voluntaria y que tiene derecho a retirarse o inhibirse de participar en el estudio en cualquier momento, sin ninguna penalidad. También, tiene derecho a no contestar alguna pregunta en particular, así como recibir una copia de este documento.

Para preguntas, preocupaciones o quejas sobre el estudio, usted puede ponerse en contacto con el asesor del proyecto, Dr. Edgar Alirio Insuasty; correo electrónico edalin@usco.edu.co

Nombre del Padre/Madre/Tutor participante: _____

Firma: _____

Nombre completo del menor participante: _____

Surcolombiana University

Consent Form to Participate in the Research Project

Study Title: Meme Up in the English classroom

Researcher: Dannilly Rivera Cuellar

Dear Teacher,

This is a consent form for participation in research. The form contains important information about this study and what to expect if you decide to participate. Please consider the information carefully. Feel free to ask questions before deciding whether or not you want to participate.

1. What is being investigated, why, and for what?

The project investigates the use of memes in the English classroom. The objectives are

- (1) To know the pedagogical implications of the adoption and exploration of the IPUMEC (Intervention Plan for the use of memes in the English classroom) in two rural public schools in Huila, Colombia.
- (2) To determine if memes can improve or hinder the critical thinking of third and fourth grades in two rural public schools in Huila, Colombia.

2. Who participates in the research?

The participants are elementary school teachers from public schools in Huila, Colombia.

3. What will happen if you participate in this study?

Giving consent to participate in this study will allow the researcher to:

- Conduct an interview for the teachers
- Conduct a survey when starting research for students

- Take a short test for students to determine their critical thinking at the beginning of the project
- Provide an intervention plan for English classes
- Conduct a short test for students to determine their critical thinking at the end of the project
- Conduct an interview for the teachers to find out their perception at the end of the project
- Once consent has been given and according to your availability, you are expected to provide the necessary spaces for interaction with the researcher

3. How long will you be in the study?

This study will require data collection for 2 months.

4. Is participation in this study voluntary?

Your participation is voluntary. You can refuse to participate in this study. If you decide to participate, you can leave the study at any time. No matter what decision you make, there will be no penalty or penalty.

5. Will the participants incur expenses?

No. Under no circumstances will participants be asked to pay money or incur expenses related to the project.

6. What risks or benefits can I expect if I participate in the study?

The study does not represent any risk to its integrity. Participation in the research does not contemplate compensation.

7. Will your study-related information be kept confidential?

Yes, the information you provide will be confidential. Pseudonyms will be used to identify you when information is shared that involves the ideas or opinions that you gave. The above will allow your information to be grouped and privacy to be maintained. The only people who will know your answers will be the researcher.

All participants will be guaranteed:

1. The use of fictitious names to keep your identity anonymous.
2. Strict confidentiality with the information collected.
3. Access and verification of the information collected.
4. The use of the information collected will be used solely for academic purposes.

The research findings will be compiled in research reports that will be presented to the Vice-rector for Research at the University. In the same way, these results will be socialized in specialized conferences and in various publications that will come out later.

8. Who can answer the questions about the study?

For questions, concerns, or complaints about the study, you can contact the research advisor, Dr. Edgar Alirio Insuasty; email edalin@usco.edu.co

Sign the Consent Form

Your participation in this study is very important. We appreciate your kind attention and your authorization to collaborate in the development of this project.

I have read (or someone has read to me) this form, and I am aware that I am being asked to participate in a research study. I have had the opportunity to ask questions and am satisfied with the answers provided. I voluntarily consent to participate in this study.

Participant's name

Participant signature

Email

Cellphone number

Suggested name used in the investigation report

Date

I give authorization for the use of samples and data, in future studies:

YES ____ NO ____

Additional Note: The consent form was taken and based on that of Professor José Aldemar Álvarez Valencia, Ph.D. and co-researchers Alejandro Henao and Jorge Murcia.

I, Dannilly Rivera Cuellar, hereby certify that the above is an accurate translation of the original document from its original Spanish to English and that I am competent to make such a translation.

Dannilly Rivera

Signature

Date: 06/26/2021

Universidad Surcolombiana

Consentimiento para Participar en Investigación

Título de Estudio: Meme Up en el aula de inglés

Investigadora: Dannilly Rivera Cuellar

Estimado profesor,

Este es un formato de consentimiento para la participación en una investigación. El formato contiene información importante acerca de este estudio y qué se puede esperar si decide participar. Por favor considere la información con cuidado. Siéntase libre para hacer preguntas antes de decidir si desea o no participar.

1. ¿Qué se investiga, por qué y para qué?

El proyecto investiga el uso de memes en el aula de inglés. Los objetivos son (1) Conocer las implicaciones pedagógicas de la adopción y exploración del IPUMEC (Plan de intervención para el uso de memes en el aula de inglés) en dos escuelas públicas rurales del Huila, Colombia. (2) Determinar si los memes pueden mejorar u obstaculizar el pensamiento crítico de los estudiantes de tercer y cuarto grado en dos escuelas públicas rurales en Huila, Colombia.

2. ¿Quiénes participan en la investigación?

Los participantes son profesores de primaria de escuelas públicas en Huila, Colombia.

3. ¿Qué ocurrirá si participa en este estudio?

Dar su consentimiento para participar en este estudio permitirá que la investigadora pueda:

- Llevar acabo una entrevista para los profesores
- Llevar acabo una encuesta al iniciar la investigación para los estudiantes
- Realizar una corta prueba para los estudiantes para determinar su pensamiento crítico al iniciar el proyecto
- Proveer un plan de intervención para las clases de ingles
- Llevar acabo una corta prueba para los estudiantes para determinar su pensamiento crítico al finalizar el proyecto
- Llevar acabo una entrevista para los profesores para saber su percepción al finalizar el proyecto
- Una vez dado el consentimiento y de acuerdo con su disponibilidad, se espera que usted brinde los espacios necesarios para la interacción con la investigadora

3. ¿Durante cuánto tiempo estará en el estudio?

Este estudio requerirá recolección de datos durante 2 meses.

4. ¿Es voluntaria la participación en este estudio?

Su participación es voluntaria. Usted puede negarse a participar en este estudio. Si decide participar, usted puede dejar el estudio en cualquier momento. No importa qué decisión tome, no habrá ninguna sanción ni afectación.

5. ¿Los participantes incurrirán en gastos?

No. Bajo ninguna circunstancia se solicitará a los participantes el pago de dineros o que incurran en gastos relacionados con el proyecto.

6. ¿Qué riesgos o beneficios puedo esperar si participo en el estudio?

El estudio no representa ningún riesgo para su integridad. La participación en la investigación no contempla compensación.

7. ¿Será guardada su información relacionada con el estudio de forma confidencial?

Sí, la información que usted proporcione será confidencial. Se usarán seudónimos para identificarlo cuando se haga socialización de información que involucre las ideas u opiniones que usted dio. Lo anterior permitirá que su información esté agrupada y se mantenga la privacidad. Las únicas personas que conocerán sus respuestas será la investigadora.

A todos los participantes se les garantizará:

1. El uso de nombres ficticios para mantener su identidad en el anonimato.
2. Estricta confidencialidad con la información recolectada.
3. El acceso y la verificación de la información recolectada.
4. El uso de la información recolectada será usada únicamente con propósitos académicos.

Los hallazgos de la investigación se recopilarán en informes de investigación que se presentarán a la Vicerrectoría de Investigaciones de la Universidad. De igual manera, se

socializarán dichos resultados en conferencias especializadas y en varias publicaciones que saldrán posteriormente.

8. ¿Quién puede contestar las preguntas acerca del estudio?

Para preguntas, preocupaciones o quejas sobre el estudio, usted puede ponerse en contacto con el asesor de la investigación, Dr. Edgar Alirio Insuasty; correo electrónico edalin@usco.edu.co

Firmar el Formulario de Consentimiento

Su participación en este estudio es muy importante. Agradecemos su gentil atención y su autorización para colaborar en el desarrollo de este proyecto.

He leído (o alguien me ha leído) este formato y soy consciente que me piden participar en un estudio de investigación. He tenido la oportunidad de hacer preguntas y estoy satisfecho con las respuestas entregadas. Voluntariamente consiento en participar en este estudio.

Nombre del participante

Firma del participante

Correo electrónico

Teléfono de contacto

Nombre que sugiere se emplee en reporte de la investigación Fecha

Doy autorización para la utilización de muestras y datos, en futuros estudios:

SI ____ NO ____

Nota Adicional: El formato de consentimiento fue tomado y basado en el del: Profesor José Aldemar Álvarez Valencia, Ph.D. y co-investigadores Alejandro Henao y Jorge Murcia.

Appendix B

Analysis survey for students

The purposes of this survey are a) to recognize the availability of technology, Internet access, and use of social media by students, and b) to identify existing interests of students in conventional topics of interest. Please reply:

1. Age: _____
2. Gender: Female _____ Male _____
3. Do you have a computer, cell phone, or tablet available?
4. Do you have Internet access?
5. Do you have accounts on social networks?
6. If so, which ones?
7. What is your favorite movie or TV show?
8. What is your favorite song?
9. What is your favorite joke?
10. What do you like to talk to your friends about?

Thank you very much for your answer!

Link on Google Forms: <https://forms.gle/eUJ1ER6dBXiN4TXi6>

I, Dannilly Rivera Cuellar, hereby certify that the above is an accurate translation of the original document from its original Spanish to English and that I am competent to make such a translation.

Dannilly Rivera

Signature

Date: 06/26/2021

Encuesta de análisis para los estudiantes

Los propósitos de esta encuesta son a) reconocer la disponibilidad de tecnología, acceso a Internet y uso de las redes sociales por parte de los estudiantes, y b) identificar los intereses existentes de los estudiantes en temas de interés convencionales.

Por favor responda:

1. Edad: _____
2. Género: Mujer__ Hombre
3. ¿Tiene disponibilidad de un computador, celular, o tableta?

4. ¿Tiene acceso a Internet?

5. ¿Tiene cuentas en las redes sociales?

6. Si es así, ¿cuáles?



7. ¿Cuál es tu película o programa de televisión favorito?

8. ¿Cuál es tu canción favorita?

9. Cuál es tu chiste favorito?

10. ¿De qué te gusta hablar con tus amigos?

¡Muchas gracias por tu respuesta!

Enlace en Google Forms: <https://forms.gle/eUJ1ER6dBXiN4TXi6>



Appendix C

Initial interview for teachers

The purposes of this interview are (a) to carry out an initial profile of the teacher and (b) to know how the intervention plan should be developed.

(a) To know an initial profile of the teacher:

1. How long have you been teaching English?
2. What professional title do you have?
3. The last time you took an English test, what level did you have, for example, A1 A2 B1 B2?

(b) To know how to develop the classes/intervention plan:

4. Do you prefer the activities/class to be online or face-to-face?
5. Have you used memes to teach English?
6. How flexible/willing are you to use memes in class?
7. What English skills should be improved/implemented?
8. Have you used social networks? If the answer is yes, which ones?
9. If the answer is no, how safe do you feel about using social media?

I, Dannilly Rivera Cuellar, hereby certify that the above is an accurate translation of the original document from its original Spanish to English and that I am competent to make such a translation.

Dannilly Rivera

Signature

Date: 06/26/2021

Entrevista inicial para profesores

Los propósitos de esta entrevista son (a) Realizar un perfil inicial del profesor y (b) Conocer cómo se debe desarrollar el plan de intervención.

(a) Para saber un perfil inicial del profesor:

1. ¿Desde hace cuánto enseña inglés?
2. ¿Qué título profesional tiene usted?
3. ¿La última vez que hizo un examen de inglés qué nivel tuvo, por ejemplo, A1 A2 B1 B2?

(b) Para saber cómo desarrollar las clases/plan de intervención:

4. ¿Prefiere que las actividades/la clase sea online o presencial?
5. ¿Ha utilizado memes para la enseñanza de inglés?
6. ¿Qué tan flexible/hasta qué punto está dispuesto en utilizar memes en la clase?
7. ¿Qué habilidades del inglés se debe mejorar/implementar?
8. ¿Ha utilizado redes sociales?, si la respuesta es sí, ¿cuáles?
9. Si la respuesta es no, ¿qué tan seguro se siente de utilizar redes sociales?

Appendix D

Lesson Plan and Worksheet/Guide for Fourth Grade

Intervention 1

Clase/Grado: 4	Duración de la clase: 45 min
Logro: Utilizo el vocabulario adquirido en la elaboración de composiciones sencillas.	Estándar Nacional: <ul style="list-style-type: none"> ∅ Comprende la idea general y algunos detalles en un texto informativo corto y sencillo sobre temas conocidos y de interés.
Objetivos de la clase (al final de la clase los estudiantes podrán): <ul style="list-style-type: none"> ∅ Understand a few basic words and phrases. ∅ Recognize single, familiar everyday words if supported by pictures. ∅ Say single words related to familiar topics. ∅ Write simple phrases. 	Recursos y materiales: <ul style="list-style-type: none"> ∅ Tablero y marcador ∅ Cuaderno de los estudiantes ∅ Worksheet
Enfoque de habilidades: <ul style="list-style-type: none"> ∅ Escucha ∅ Lectura ∅ Habla ∅ Escritura 	Enfoque del lenguaje: <ul style="list-style-type: none"> ∅ Pronombres ∅ Verb to play + sport / game ∅ Verb to do + hobby / individual sport ∅ Verb to go + activity ∅ Vocabulario (Soccer, video games, exercises, karate, dancing, shopping)
Problemas previsibles: <ul style="list-style-type: none"> ∅ Un problema sería que se les dificulte entender las oraciones cortas de la utilización de los verbos. ∅ Un problema sería que no sepan lo que es un meme. ∅ Un problema sería el manejo del tiempo. 	Soluciones planificadas: <ul style="list-style-type: none"> ∅ La solución sería que se les explique explícitamente la utilización de los verbos, si se les facilita con más ejemplos de actividades que ellos digan que hagan en su vida diaria. ∅ La solución sería preguntar antes de empezar a solucionar el worksheet para que entren en contexto.

	<p>ð Si les falta tiempo, la solución sería dejar de tarea lo que les quedo faltando, si les sobro tiempo, la solución sería intentar realizar las actividades posteriores.</p>
--	---

Tiempo	Etapas de la clase	Procedimiento Actividades profesor y estudiante	Interacción
15 min	Actividades previas	<p>- Los estudiantes deben mirar un video corto acerca de actividades de tiempo libre (<i>Adjunto se encuentra el video</i>, lo pueden enviar a los estudiantes antes de la clase o si se les facilita colocarlo en el salon de clase)</p> <p>- Como el video no pronuncia las palabras, el profesor primero explica el verbo y que actividades van con cada verbo, luego deben pronunciar las palabras y hacer que los estudiantes repitan varias veces las palabras. Despues el profesor en el tablero en una columna escribe los verbos - play, do, go - y en la otra columna escriben en ingles las actividades. Los estudiantes deben unir el verbo con la actividad correcta y leerlas. No solo las palabras que unio, sino todas las que hayan hecho hasta el momento.</p> <p>- Los estudiantes deben hacer en una hoja de su cuaderno un cuadro y lo dividen en tres partes, en cada parte colocan como título una oración corta utilizando lo aprendido. Por ejemplo, I play soccer, you do karate, they go shopping. Luego debajo del título deben hacer el dibujo.</p>	Profesor-Estudiantes
15 min	Actividades	<p>- Los estudiantes veran unas diapositivas donde se explica lo que son los memes, luego tienen que adivinar y escoger entre imagen o meme (<i>Adjunto encuentra las diapositivas</i>)</p>	Estudiantes-Estudiantes

		- (Vea guía de actividades adjunta. además, en la parte de las preguntas para el análisis del meme pueden dejar que escriban en español porque lo que nos interesa es que aumenten su pensamiento crítico)	
15 min	Actividades posteriores	- Los estudiantes deben encontrar las palabras en la sopa de letras como recordatorio del vocabulario aprendido en clase. Sopa de letras link: https://puzzel.org/es/wordseeker/play?p=-MhF22ZC2VaXDILM_nnp	Estudiantes-Profesor

① Free-time activities.

1. Vea con atención.



2. Escribe las palabras clave.

3. Responde.

¿Cuál es su primera impresión?

¿Cuál podría ser el propósito de este meme?

¿Cómo se conectan las palabras y la ilustración?

¿Piensas que tiene humor?



① Free-time activities.

1. ¿Qué le escribirías a la imagen en inglés?



- a. _____
 b. _____
 c. _____

2. ¿Qué imagen escogerías para la frase "They play video games"?

a.

b.

c.



3. ¿Qué imagen escogerías para la frase "They do exercise"?

a.

b.

c.



Appendix E

Lesson Plan and Worksheet/Guide for Fourth Grade

Intervention 5

Clase/Grado: 4	Duración de la clase: 45 min
Logro: Practico inglés sencillo con el vocabulario adquirido.	Estándar Nacional: ∂ Intercambia opiniones sencillas sobre un tema de interés, a través de oraciones simples y conocidas.
Objetivos de la clase (al final de la clase los estudiantes podrán): ∂ Recognise cardinal numbers from 100 to 200 in short phrases and sentences spoken slowly and clearly. ∂ Read cardinal numbers written as words. ∂ Use cardinal numbers from 100 to 200. ∂ Label simple pictures related to familiar topics by copying single words.	Recursos y materiales: ∂ Tablero y marcador ∂ Cuaderno de los estudiantes ∂ Worksheet
Enfoque de habilidades: ∂ Escucha ∂ Lectura ∂ Habla ∂ Escritura	Enfoque del lenguaje: ∂ Numbers 100-200
Problemas previsibles: ∂ Un problema sería que no hayan suficientes actividades y les sobre tiempo. ∂ Un problema sería el manejo del tiempo.	Soluciones planificadas: ∂ La solución sería que les ponga el video varias veces antes de empezar o al finalizar si se da el caso. ∂ Si les falta tiempo, la solución sería dejar de tarea lo que les quedo faltando, si les sobro

	tiempo, la solución sería intentar realizar las actividades posteriores.
--	--

Tiempo	Etapa de la clase	Procedimiento Actividades profesor y estudiante	Interacción
15 min	Actividades previas	<p>- Los estudiantes deben mirar un video acerca de los números (<i>Adjunto se encuentra el video, lo pueden enviar a los estudiantes antes de la clase o si se les facilita colocárselo en el salón de clase</i>)</p> <p>- El profesor en el tablero escribe los números en letras en una columna, y en otra columna en números, pero en desorden, los estudiantes deben unirlas correctamente primero en sus cuadernos, y luego el profesor los pasa al frente a hacerlo.</p> <p>- El profesor ahora los escribe en orden, pero borra unas letras para que los estudiantes lo completen. Por ejemplo,</p> <p>100- ONE HUNDRED 121- ON_ HU_ R_ D T_ EN_ _ ON_ 102- ON_ HU_ R_ D T_ O 123- O_ E H_ _ D_ ED T_ EN_ _ THR_ 104- O_ E H_ _ D_ ED F_ U_ 125- ON_ HU_ R_ D T_ EN_ _ F_ V_ 106- ON_ HU_ R_ D SI_ 127- O_ E H_ _ D_ ED T_ EN_ _ S_ V_ N 108- O_ E H_ _ D_ ED E_ GH_ 129- ON_ HU_ R_ D T_ EN_ _ NI_ E 110- ON_ HU_ R_ D T_ _ 131- O_ E H_ _ D_ ED T_ IRT_ _ ON_ 112- O_ E H_ _ D_ ED TWE_ V_ 133- ON_ HU_ R_ D T_ IRT_ _ THR_ 114- ON_ HU_ R_ D F_ _ RTE_ _ 135- O_ E H_ _ D_ ED T_ IRT_ _ F_ V_ 116- O_ E H_ _ D_ ED S_ XTEE_ _ 137- ON_ HU_ R_ D T_ IRT_ _ S_ V_ N 118- ON_ HU_ R_ D E_ GH_ EE_ 139- O_ E H_ _ D_ ED T_ IRT_ _ NI_ E 120- O_ E H_ _ D_ ED T_ EN_ _ 141- ON_ HU_ R_ D FO_ _ Y ON_</p> <p>- El profesor escribe los números en una hoja y recorta los números y los pone en una bolsa, luego pasa a los estudiantes a sacar un papelito y pronunciar el número que sacaron, si no puede otro estudiante le puede ayudar, después lo deben escribir en el tablero.</p> <p>- Para la siguiente actividad el profesor puede utilizar una pelota, organiza a los estudiantes en círculo, luego les explica que se deben tirar la pelota de un estudiante a otro, no tiene que ser en orden, y que la persona que sostenga la</p>	Profesor- Estudiantes

		pelota debe decir el numero en inglés, pero esta vez siguiendo un orden el que se equivoque o se le olvide debe pagar penitencia.	
20 min	Actividades	- (<i>Vea guía de actividades adjunta</i>)	Estudiantes- Estudiantes
10 min	Actividades posteriores	<p>- Los estudiantes deberan hacer las actividades como recordatorio del vocabulario aprendido en clase.</p> <p>Game link:</p> <p>https://www.sheppardsoftware.com/math/early-math/number-words-fruit-splat-game/</p> <p>- Los estudiantes deben realizar su propio meme y son libres de escoger la imagen y la frase. Sin embargo, el profesor tiene que asegurarse de decirles que deben utilizar vocabulario aprendido de la clase.</p> <p>Creador de memes link:</p> <p>https://www.iloveimg.com/es/crear-meme</p>	Estudiantes- Profesor

⑤ Numbers.

1. ¿Qué le escribirías a la imagen en inglés utilizando vocabulario acerca de los números? Sigue el ejemplo:



- a. One hundred one!
 b. _____
 c. _____
 d. _____

e. 198 + 1 = One hundred ninety-nine

- f. _____
 g. _____
 h. _____



- i. Oh! Two hundred!
 j. _____
 k. _____
 l. _____



THE
EMOJI MOVIE

⑤ Numbers.

2. Encierra con un círculo *a*, *b*, *c*, o *d*, la imagen que escogerías para la frase "Numbers!". Por ejemplo:

a.

b.

c.



3. ¿Qué imagen escogerías para la frase "One hundred ninety-eight, one hundred ninety-nine, two hundred!"?

a.

b.

c.

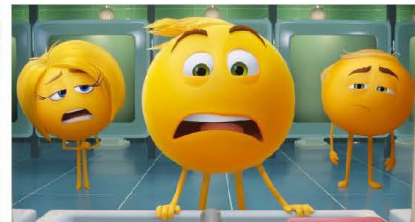


4. ¿Qué imagen escogerías para la frase "90 + 90 = One hundred eighty"?

a.

b.

c.



THE
EMOJI MOVIE

⑤ Numbers.

5. ¿Qué imagen escogerías para la frase “One hundred sixty-four!”?

a.

b.

c.



6. Une el número al que se refiere el meme con una flecha. Por ejemplo:



101 102 103 104 105 106 107 108 109 110

THE
EMOJI MOVIE

⑤ Numbers.



121 122 123 124 125 126 127 128 129 130

THE
EMOJI MOVIE

⑤ Numbers.



141 142 143 144 145 146 147 148 149 150

⑤ Numbers.



100 101 102 103 104 105 106 107 108 109

Appendix F
Project Report

Date:	Time:	Grade:
Professor:		
Topic of the Class:		
Reflection about the activities		
Comments for improvement		

I, Dannilly Rivera Cuellar, hereby certify that the above is an accurate translation of the original document from its original Spanish to English and that I am competent to make such a translation.

Dannilly Rivera

Signature

Date: 10/28/2021

Informe del Proyecto

Fecha:	Hora:	Grado:
Profesor:		
Tema de la Clase:		
Reflexión acerca de las actividades		
Comentarios para mejorar		

Appendix G

Final interview for teachers

The purposes of this interview are (a) to hear the experiences of teachers about the intervention plan and (b) to get to know suggestions for further research.

(a) To know the teacher's experiences regarding the intervention plan:

1. Was the project what you had in mind? Yes or no, and why?
2. What worked the most? And why?
3. What worked the least? And why?
4. Would you like to re-implement these interventions in the future? Yes or no, and why?

(b) To know suggestions from the teachers for further research:

5. What do you consider were the limitations for the interventions?
6. What are the recommendations for future research?

I, Dannilly Rivera Cuellar, hereby certify that the above is an accurate translation of the original document from its original Spanish to English and that I am competent to make such a translation.

Dannilly Rivera

Signature

Date: 10/28/2021

Entrevista final para profesores

Los propósitos de esta entrevista son (a) escuchar las experiencias de los maestros sobre el plan de intervención y (b) conocer sugerencias para futuras investigaciones.

(a) Conocer las experiencias del maestro con respecto al plan de intervención:

1. ¿El proyecto era lo que tenía en mente? Sí o no, ¿y por qué?
 2. ¿Qué funcionó más? ¿Y por qué?
 3. ¿Qué funcionó menos? ¿Y por qué?
 4. ¿Le gustaría volver a implementar estas intervenciones en el futuro? Sí o no, ¿y por qué?
- (b) Conocer sugerencias de los profesores para futuras investigaciones:
5. ¿Cuáles considera que fueron las limitaciones de las intervenciones?
 6. ¿Cuáles son las recomendaciones para futuras investigaciones?

Appendix H

Pre-Test for third grade

Purpose: This test aims to assess students' critical thinking before the use of memes in the English classroom/**Propósito:** Esta prueba tiene como objetivo evaluar el pensamiento crítico de los estudiantes antes del uso de memes en el aula de inglés.

Instructions: Students have to read a short paragraph, then read each question and mark the best answer/**Instrucciones:** Los estudiantes deben leer un párrafo corto, luego leer cada pregunta y marcar la mejor respuesta.

Google Form Link: <https://forms.gle/yGRkYQeAK4VDthqJ9>

Turtles face many threats, from humans, boats, and pollution. Newly hatched turtles are also at risk of being hunted by other animals.

Read each question and mark the BEST answer:/Lea cada pregunta y marque la MEJOR respuesta:

1. What is a serious threat to hatched turtles?/¿Qué es una amenaza seria para las tortugas recién nacidas?
 - a. Boats
 - b. Boys
 - c. Animals
2. What is the most likely to be true?/¿Qué es lo más probable que sea cierto?
 - a. Baby turtles are at risk
 - b. Turtles are endangered
 - c. Humans are not the only threat
3. Why do turtles face many threats?/¿Por qué las tortugas enfrentan tantas amenazas?

- a. Turtles have no luck
- b. Turtles are slow
- c. Pollution

Pre-Test for fourth grade

Purpose: This test aims to assess students' critical thinking before the use of memes in the English classroom/**Propósito:** Esta prueba tiene como objetivo evaluar el pensamiento crítico de los estudiantes antes del uso de memes en el aula de inglés.

Instructions: Students have to read a short paragraph, then read each question and mark the best answer/**Instrucciones:** Los estudiantes deben leer un párrafo corto, luego leer cada pregunta y marcar la mejor respuesta.

Google Form Link: <https://forms.gle/oQJPu1FZbqzNFU4x8>

Penguins live in Antarctica and are vulnerable to changes in climate. Penguins face many threats, from other animals and human activities.

Read each question and mark the BEST answer:/Lea cada pregunta y marque la MEJOR respuesta:

1. Where do penguins live?/¿Dónde viven los pingüinos?
 - a. Beach
 - b. Ice
 - c. Antarctica
2. What is the most likely to be true?/¿Qué es lo más probable que sea cierto?
 - a. Penguins face many threats
 - b. Penguins are endangered

c. Humans are not the only threat

3. Why do penguins face many threats?/¿Por qué los pingüinos enfrentan tantas amenazas?

a. Penguins are pretty

b. Penguins are slow

c. Climate change

Appendix I

Post-Test for third grade

Purpose: This test aims to assess students' critical thinking after the use of memes in the English classroom/**Propósito:** Esta prueba tiene como objetivo evaluar el pensamiento crítico de los estudiantes después del uso de memes en el aula de inglés.

Instructions: Students have to look at the picture, then read each question and mark the best answer/**Instrucciones:** Los estudiantes deben mirar la imagen, luego leer cada pregunta y marcar la mejor respuesta.

Google Form Link: <https://forms.gle/pVEYFvQro1JH5fmg9>



Read each question and mark the BEST answer:/Lea cada pregunta y marque la MEJOR respuesta:

1. What is a serious threat to hatched turtles?/¿Qué es una amenaza seria para las tortugas recién nacidas?
 - a. Boats
 - b. Boys
 - c. Animals
2. What is the most likely to be true?/¿Qué es lo más probable que sea cierto?
 - a. Baby turtles are at risk
 - b. Turtles are endangered
 - c. Humans are not the only threat
3. Why do turtles face many threats?/¿Por qué las tortugas enfrentan tantas amenazas?
 - a. Turtles have no luck
 - b. Turtles are slow
 - c. Pollution

Post-Test for fourth grade

Purpose: This test aims to assess students' critical thinking after the use of memes in the English classroom/**Propósito:** Esta prueba tiene como objetivo evaluar el pensamiento crítico de los estudiantes después del uso de memes en el aula de inglés.

Instructions: Students have to look at the picture, then read each question and mark the best answer/**Instrucciones:** Los estudiantes deben mirar la imagen, luego leer cada pregunta y marcar la mejor respuesta.

Google Form Link: <https://forms.gle/iuXfhK7kNBS5Uua29>

Smile and wave, boys. Smile and wave...



Read each question and mark the BEST answer:/Lea cada pregunta y marque la MEJOR

respuesta:

1. Where do penguins live?/¿Dónde viven los pingüinos?

- a. Beach
- b. Ice
- c. Antarctica

2. What is the most likely to be true?/¿Qué es lo más probable que sea cierto?

- a. Penguins face many threats
- b. Penguins are endangered
- c. Humans are not the only threat

3. Why do penguins face many threats?/¿Por qué los pingüinos enfrentan tantas amenazas?

a. Penguins are pretty

b. Penguins are slow

c. Climate change