***TikTok and YouTube Videos in the Flipped Classroom Model to
Improve the Learning Process and Motivate Students***

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Abstract

Social media has become a very useful tool for learning in recent years. Millions of people access *YouTube*, *TikTok*, *Instagram* and other social media every day to learn. At the same time, more and more teachers are using these platforms to share their knowledge with the general public and bring it into the classroom. Materials of this type offer the advantage of supplementing various didactic techniques; one of them is the Flipped Classroom. This article presents the use of videos deployed in the *TikTok* and *YouTube* platforms with the Flipped Classroom model to develop grammatical competency in Spanish. The results showed a considerable score improvement among high school students attending the Tecnologico de Monterrey Mexico City campus. The entire sample, 140 students, increased their scores between 12 and 56 points out of 100 in the results of grammatical performance in Spanish. Additionally, the student satisfaction survey showed that 98% felt that the Flipped classroom methodology with *TikTok* and *YouTube* videos motivated them to learn grammar in Spanish. This study demonstrates the potential of the *TikTok* and *YouTube* platform resources to benefit the development of the grammatical competency in Spanish with this population. This study's methodology employing these resources could be replicated in various educational scenarios and different areas of knowledge. Moreover, it could be used for promoting complex thinking.

Keywords: Educational Innovation, Higher Education, Fipped Classroom, TikTok Videos, YouTube Videos

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Introduction

Several teaching methods have emerged because teachers continuously seek better ways to support their students. To help each student achieve successful learning, diverse methods such as Collaborative Learning, Project-Based Learning, Gamification, Blended Learning, Flipped Classroom, and many more have emerged, and, of course, the traditional teaching method (de Medeiros et al., 2018).

To implement these models, teachers have also resorted to various tools of all kinds. As technology increasingly permeates social development, teachers have adopted these resources to enhance the teaching-learning process. Thus, technology has become a primary element in the education sector, facilitating teaching that combines traditional and virtual teaching modalities and spaces (Abad-Segura et al., 2020).

Within this context, we aimed to find a methodology to boost Spanish grammatical competency in high school students at PrepaTec Mexico City. Our research focused on the Flipped Classroom model created by Jonathan Bergmann and Aaron Sams (2012) and the use of digital resources designed for the social media *TikTok* and *YouTube*.

The Flipped Classroom is a methodology where the teacher abandons classroom lessons and independent homework assignments for students to complete outside of class to reinforce what they have learned. On the contrary, the students take the central role, working independently outside the class to study the lesson through a resource provided by the teacher; subsequently, they present themselves to class prepared to perform activities that consolidate learning under the teacher's guidance (Bergmann & Sams, 2019). The following diagram by Sangermán et al. (2021) illustrates the teaching process of the Flipped Classroom model (Figure 1).
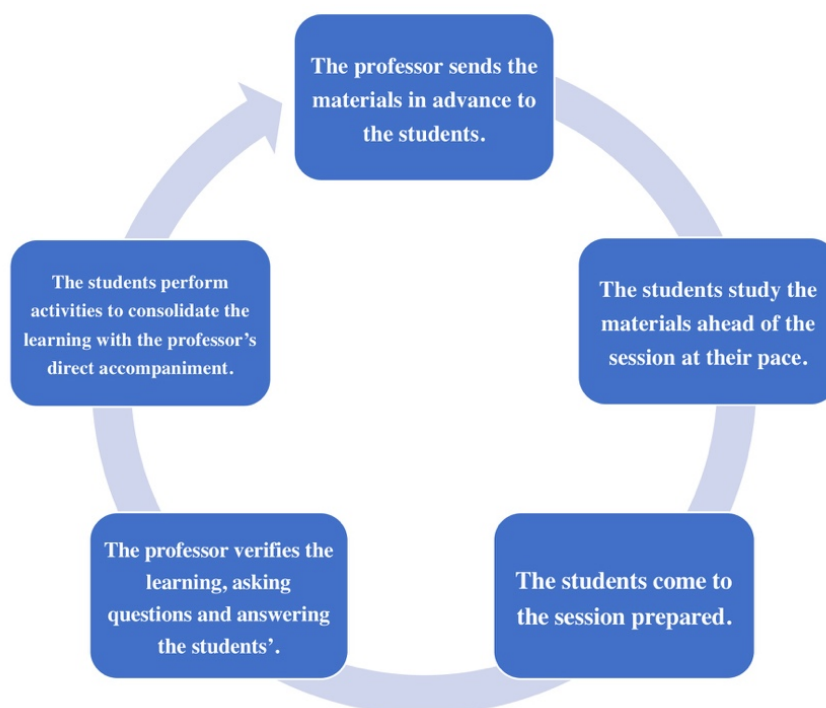

Figure 1. The Flipped Classroom Model.

According to Chen Hsieh et al. (2017), the Flipped Classroom model motivates students to learn, improves their ability, makes them more competent, keeps them more involved in learning tasks, and makes them more active. It is a model that transforms students' skills to become self-directed learners. Students learn more and better than in the traditional model.

TikTok and YouTube videos for education

YouTube is a social media booming in recent years for various purposes. The platform appeared in 2005 and quickly ranked as the second-highest trafficked network worldwide after Google (Vizcaíno et al., 2019). Approximately one-third of the world's Internet users use *YouTube*, generating more than two billion monthly accesses (YouTube, 2021). The primary users of this content are people between 18 and 34 years of age who are content creators or consumers. Most of its platform usage is passive (Bernal & Carvajal, 2020).

For several years, teachers from various areas of knowledge have ventured into *YouTube* for educational purposes to develop their content with two main objectives: a) training their current students in their school systems and b) instructing the diverse users of this social media.

The educational videos designed for this network have a high illustrative, informative, and formative potential for students. They facilitate teachers' guidance and allow delving into the topics beyond traditional face-to-face teaching (Gómez, 2014). *YouTube* users find these videos of great value because they can learn specific academic content quickly, attractively and without cost.

TikTok also has boomed in recent years. Created in 2016 for the Chinese market, this technology platform was first known as *Douyin*. In 2017 it launched internationally; by 2018, it was the most downloaded application in the United States. In 2020 it was already present in more than 150 countries with one billion monthly active users. Although its creators and audience are people of various ages, almost 50% are between 16 and 24 (Becerra-Chauca & Taype-Rondan, 2020). This platform allows creating and sharing short videos of 3 seconds up to 3 minutes, edited with visual and auditory backgrounds (voices or music), filters, effects, transitions, and other applications that comprise an attractive audiovisual product for the audience (Pantoja, 2020).

Like professionals in other areas (doctors, chefs, cosmetologists, many others), some educators in recent months have taken their teaching beyond the classroom and the customary platforms by disseminating their lessons in short videos that impact the younger generations of digital natives (Ibáñez, 2020). These resources are of great help not only to their students but also to all users accessing the platform, meaning the teachers' contributions transcend borders.

Table 1 shows the monthly active users and their ages of both social media: *YouTube* and *TikTok*.

Social media	Monthly active users	Main ages of users
YouTube	2.6 billion	18 - 34
TikTok	1.0 billion	16 - 24

Table 1. YouTube and TikTok monthly active users.

Regarding the format of the videos of both social media, this differs in both cases. In the case of *TikTok* videos, this platform offers the possibility of recording videos between 15 seconds and 3 minutes. Although it supports the use of images with voice over, content creators prefer to show their face and speak to the camera directly. Some add music and text. The format of the shot is vertical. *YouTube* videos, on the other hand, can be up to 12 hours long. The format of the shot is horizontal and it is more common to find videos with voice over on this social media than on *TikTok*. These can also be musicalized, include texts and effects in their transitions as they have a longer duration. Figure 2 shows an example of both formats. Table 2 shows some advantages and disadvantages of each of these platforms according to the experience in creating the videos for this study.

Figure 2. YouTube and TikTok video format.

	YouTube		TikTok	
	Advantages	Disadvantages	Advantages	Disadvantages
Time	Allowing 12-hour recordings makes it easy to present more content in a single video.	The teacher can make videos so long that they lose the attention of the students.	The 3-minute limitation forces the teacher to be concise and capture the students' attention better.	If a topic presentation takes just an extra second at 3 minutes, it forces the videos to be split or remade.
Design	It requires to use an additional tool to record and edit the video, which allows the use of a good one.	It does not offer recording and editing tools, another tool is required to create the videos.	It offers the necessary tools to record and edit the video.	It does not offer a wide variety of resources for video design: fonts, colors, images, transitions, etc.
Focus	Only interrupt videos of a certain length with commercials, not short ones. Ads can sometimes be skipped.	Sometimes it shows too many commercials.	The video is not interrupted.	It is very easy to slide the screen and be distracted by more and more videos.
Attraction	It is more attractive to a wider range of people.	For some young people it is considered a tool for adults.	It is very attractive to young people.	Many adults are not interested in it, some parents even consider it harmful to their children and do not allow it.

Table 2. Advantages and disadvantages of YouTube and TikTok social media for educational videos

The Flipped Classroom Model with TikTok and YouTube videos for teaching linguistics

The Flipped classroom model supported by videos from the *YouTube* and *TikTok* platforms has been tested and supported by various studies where implementation has occurred to develop language competencies. In Russia, for example, a study was carried out with this methodology (Chilingaryan & Zvereva, 2017) and concluded that the model increased motivation, concentration, independence, creativity, critical thinking and student participation. Suárez, Vélez and Londoño (2018) demonstrated that this methodology helps significantly improves students' performance and promotes greater motivation, even resulting in having fun while developing their competency. Nasution (2019) had similar results by also working on language proficiency through the videos of this platform. He concluded that these reduce students' cognitive loads, and they like the various learning styles.

More recently, Sangermán et al. (2021) highlighted that this methodology produces favorable student performance results and that they show greater satisfaction when studying Spanish grammar. Also, Mahasneh et al. (2021) concluded in their studies recently that the *YouTube* platform was an easy, innovative, attractive, and friendly tool for students in the same area of knowledge.

Regarding the *TikTok* platform, although not much has been written yet about its use for educational purposes since its function in this area is relatively new, more and more research confirms its relevance to support the teaching-learning process. Koniah et al. (2021) confirmed that learning grammar through this tool resulted in most participants feeling

motivated and interested in learning. The studies of Porcher (2021), who has also worked with the platform, report that students consider *TikTok* videos to help develop grammatical competence. Afidah et al. (2021) also showed in their studies that almost 90% of their participating population preferred to study with *TikTok* videos and that these are better for developing linguistic competence than other types of materials. Aziz and Sabella (2021) also conducted a study that showed more progress in students' grammatical competencies when using *TikTok* as a teaching tool.

Methodology

This study was carried out among students enrolled in the subject "Communication and Art" in the Department of Spanish and Literature at the private high school PrepaTec CCM in Mexico City. This subject is one of the five official courses in which the linguistic competency of the mother tongue is developed: Spanish. It is taught during the third semester of this preparatory school and mainly develops oral and written production and reading comprehension. Its duration is 16 weeks. The first five weeks include reviewing some fundamental grammatical aspects to develop students' skills properly. This course is often unattractive to students because of the topics' nature, and they have been constantly reviewed in previous courses. This means that students do not feel motivated to learn and their performance is low.

Therefore, this study aimed to help students improve their Spanish grammatical performance and competency. Specifically, the objective was to evaluate the relevance of using videos from the *TikTok* and *YouTube* social media in the Flipped classroom model to improve grammatical competency in Spanish.

The population participating in this research consisted of 140 students in the third semester of this educational institution. Their ages were between 16 and 17; 71 were women, and 69 were men. These students were divided into five classes, three with one teacher and two with another (Table 3).

SUBJECT	CLASS	STUDENTS	PROFESSOR
Communication and Art	1	27	Professor A
Communication and Art	2	28	Professor A
Communication and Art	3	29	Professor B
Communication and Art	4	30	Professor B
Communication and Art	5	26	Professor B

Table3 Participant population distribution.

A standardized test of 30 direct questions and multiple-choice items with four answer options was designed for the performance evaluation. All the grammatical topics that marked the official program of the subject were included: parts of speech (nouns, adjectives, articles, pronouns, verbs, adverbs, prepositions, conjunctions and interjections), types of simple sentences (enunciative, interrogative, exclamative, desiderative, imperative, exhortative,

probability, and doubtful) and syntactic analysis (nuclei, modifiers of the subject, and complements of the predicate). Table 4 shows examples of the test questions.

GRAMMAR TOPIC	QUESTION
Verbs	In which option is there a participle? A) Manifesting B) Entertain C) Assisting D) Demolished
Syntactic analysis	Select the sentence that has a direct object. A) Those tall girls are foreigners. B) Daniel thought a lot all day. C) Don't tell any more lies, Sonia! D) Were you with your friend in the afternoon?

Table 4. Sample of test questions.

The test was designed by two teachers with more than 15 years of experience teaching the subject who participated in its design and continuous updating. We applied the Hernández-Nieto Content Validity Coefficient (CVC) (2021) to confirm the instrument's validity. Five teachers who are experts in language teaching were summoned. They evaluated each test item according to clarity, adequacy of the language, correct writing, and precision, focusing on what was evaluated and not inducing the answer. The results showed that the validity of the test was excellent.

The Total Content Validity Coefficient was: 0.990. According to the CVC evaluation scale (see Table 5), this result indicates that the content validity of the test is excellent (Hernández-Nieto, 2011).

.00 a .40	Unacceptable
.41 a .60	Very low
.61 a .70	Low
.71 a .79	Moderately low
.80 a .90	Good
.91 a 1.00	Excellent

Tabla 5. Escala evaluativa del CVC según Hernández-Nieto (2011).

Subsequently, the instrument reliability test was conducted with the parallel testing method. From the first instrument designed (Test 1), another (Test 2) measured the same contents at the same cognitive level. The same model was followed, changing only a few words that did not alter the content. The tests were applied to a group of 15 students with an interval of three weeks. The equivalence coefficient was calculated (Sánchez, 2007). The result obtained was an equivalence coefficient of 0.983585. This indicated that the tests were equivalent and reliable.

To measure students' opinions on the use of *TikTok* and *YouTube* videos with the Flipped Classroom model, we designed a nine-item questionnaire. We considered the benefits that the creators of the Flipped classroom model (Bergmann & Sams, 2019) ensured. Some questions used in a previous study on this methodology to develop grammatical competence were also considered (Sangermán et al., 2021).

Before starting the course, the study's designer teacher trained the other professor involved in how to implement this methodology. The profile of both professors can be seen in Table 6. A meeting covered how to implement the Flipped Classroom model with *TikTok* and *YouTube videos*. It included these resources, the design requirements for the consolidation activities, the guidelines to direct the questions section, the recommendations to follow up on the learning and provide feedback to the students, the training that should be given to them and, finally, the logistics for applying the tests and the opinion survey.

Professor	Education	Teaching experience	Educational interests
Professor A	Bachelor's Degree in Communication Master's Degree in Education and Communication Doctorate in Education (in process)	25 years	Educational technology, innovation, student motivation, social networks for education, youth interests.
Professor B	Bachelor's Degree in Communication	29 years	Innovation, teaching techniques, student motivation, fun for students.

Table 6. Teachers' profiles.

At the beginning of the course, all students took Test 1, so we could diagnose their grammatical competence. The participating teachers applied it during the class hours in each class. The test was previously designed on the *Google Forms* platform, and the test results were entered into an Excel spreadsheet.

Subsequently, each teacher presented the course methodology to the students in their classes and trained them to work with the videos independently and responsibly. The training included establishing the appropriate time to watch to avoid interruptions, preparing the space to improve concentration, pausing to take notes, performing the exercises that some videos include, returning to review a topic, and, finally, taking a few minutes in the end to reflect on their learning. That same afternoon, the teachers sent the *WhatsApp* link to the first *TikTok* video to the students in their classes. Afterwards, every afternoon, the students received the link to the next video that they had to study to be prepared for the next day's class. During the following weeks of the course, the process of the Flipped classroom model described in the introduction of this article was carried out. Figure 3 shows the process followed in this study for the implementation of the methodology.
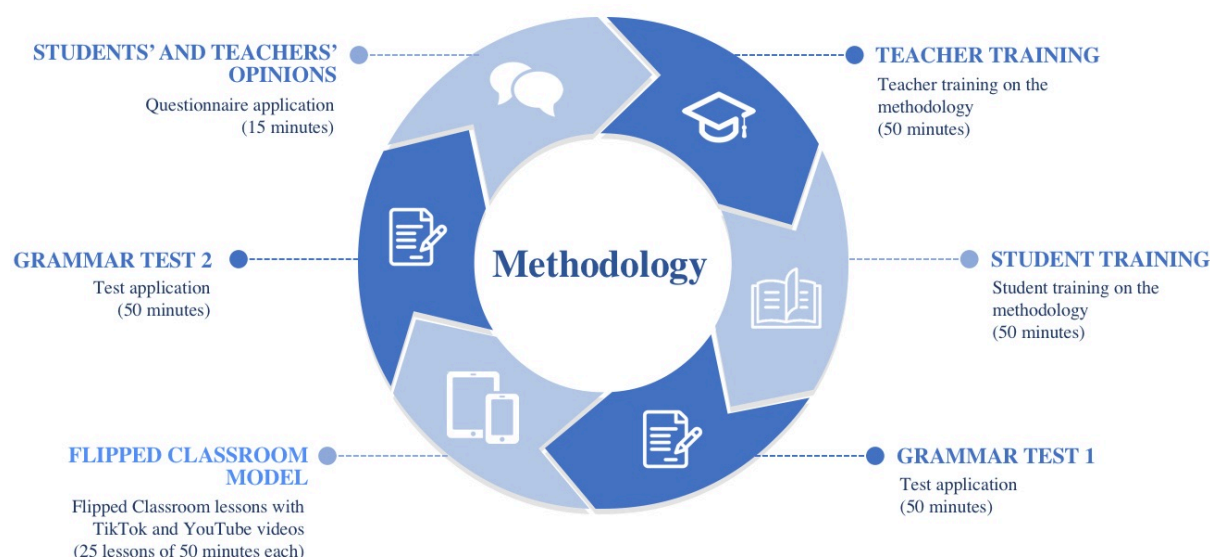
STUDENTS' AND TEACHERS' OPINIONS
Questionnaire application
(15 minutes)

TEACHER TRAINING
Teacher training on the methodology
(50 minutes)

GRAMMAR TEST 2
Test application
(50 minutes)

Methodology

STUDENT TRAINING
Student training on the methodology
(50 minutes)

FLIPPED CLASSROOM MODEL
Flipped Classroom lessons with TikTok and YouTube videos
(25 lessons of 50 minutes each)

GRAMMAR TEST 1
Test application
(50 minutes)

Figure 3. Process for the implementation of the methodology.

It is important to mention that each class was taught with the class structure shown in Table 7 (Sangermán et al., 2021).

Activity	Description	Time
Opening	Small warmup activity that integrates prior knowledge without addressing the latest topic.	5 mins.
Questions and answers	Space for student questions about the topic; also questions from the professor to validate the learning covered in the video.	5 mins.
Consolidation, production	Activity where the students demonstrate their mastery of the topic; development of products or execution of various activities assigned according to the learning style of each student.	30 mins.
Closing	Final clarification of questions, quick summary of topic learning and instructions for the next video (what to focus on, how to approach the new topic, how to do the exercise if there is one, etc.).	10 mins.

Table 7. Class Structure using the Flipped Classroom Model.

14 *TikTok* videos and 2 *YouTube* videos were used, all of them previously designed by the professor in charge of the study. The duration of the first was one minute, while those on *YouTube* ran about five minutes. It was decided to record all the videos of the parts of speech on *TikTok* due to the fact that they are shorter topics. The two larger topics (parsing and types of simple sentences) were made into longer videos, the ones on *YouTube*. It should be noted that *TikTok* videos were recorded directly on that application, while those of *YouTube* were designed on the *PowToon* platform and, subsequently, posted to the social media. The video design considered:

- **The duration**: In the case of *TikTok* videos, the application only allowed a maximum duration of one minute at that time. We intended *YouTube* videos to be not more than 5 minutes. Sangermán et al. (2021) point out that students' attention spans drop sharply after the first three minutes of watching an educational video.

- **The content and the script**: We followed formal design process phases for audiovisual works in making these videos: pre-production, production, and post-production. For each video, we developed a script with updated content information written considering the conciseness, clarity, and adequacy of the language for natural content exposition.

- **The practice:** In the case of *YouTube* videos designed through the *PowToon* platform, the voice was added to the different scenes. However, the *TikTok* videos required rehearsals before recording so the teacher would speak fluidly and naturally.

- **The image:** In both types of videos, we intended quality, attractive, dynamic, and stimulating images. For the *YouTube* videos, pre-default *PowToon* templates with these elements were selected. In addition, we sought to use a variety of colors, illustrations, animations, and visual effects. The *TikTok* videos used diverse and not visually oversaturated recording spaces. We varied the shots (American, medium, and medium-short), changed clothes and hairstyles, and even simulated characters.

- **The text**: The text was a support element for the oral explanation. We sought to present the essential content with concise information, straightforward typography, contrasting colors and a size large enough to be seen without difficulty. The topic name, content highlights, examples, and some exercises were the elements considered when composing the text.

- **The audio:** In both the *TikTok* and *YouTube* videos, we ensured that the voice was clear, enjoyable, simple, and as natural as possible. Diction, intonation, fluidity, rhythm, and volume were emphasized. It is also important to note that the recording space avoided ambient sounds that could affect the audio. Videos from both platforms were enlivened with background music. Care was taken to make it attractive and stimulating to the audience. The music could not obstruct the clarity of the exhibiting voice, so motivating instrumental music offered by the platforms for free was used.

It is important to mention that the study's designer teacher made all the videos used for this research from start to finish. However, the different activities that involve the creation of a video can be distributed among different teachers according to their skills.

Table 8 provides links to some examples of the videos, and Figures 4 and 5 show some screenshots. All the videos used in this study can be found on the *TikTok* account @artiesangerman and the Artemisa Sangerman *YouTube* channel.

Topic	Platform	Link
Adjectives	*TikTok*	https://www.tiktok.com/@artiesangerman/video/6971580272 202583301?lang=en&is_copy_url=1&is_from_webapp=v1
Prepositions	*TikTok*	https://www.tiktok.com/@artiesangerman/video/6987915486 050684165?lang=en&is_copy_url=1&is_from_webapp=v1
Active and passive voice	*TikTok*	https://www.tiktok.com/@artiesangerman/video/6979374819 330608389?lang=en&is_c
The simple sentence and its types	*YouTube*	https://www.youtube.com/watch?v=bzDFGEAw5w0

Table 8. Examples of videos used.

Figure 4. Screenshot of one of the YouTube videos.
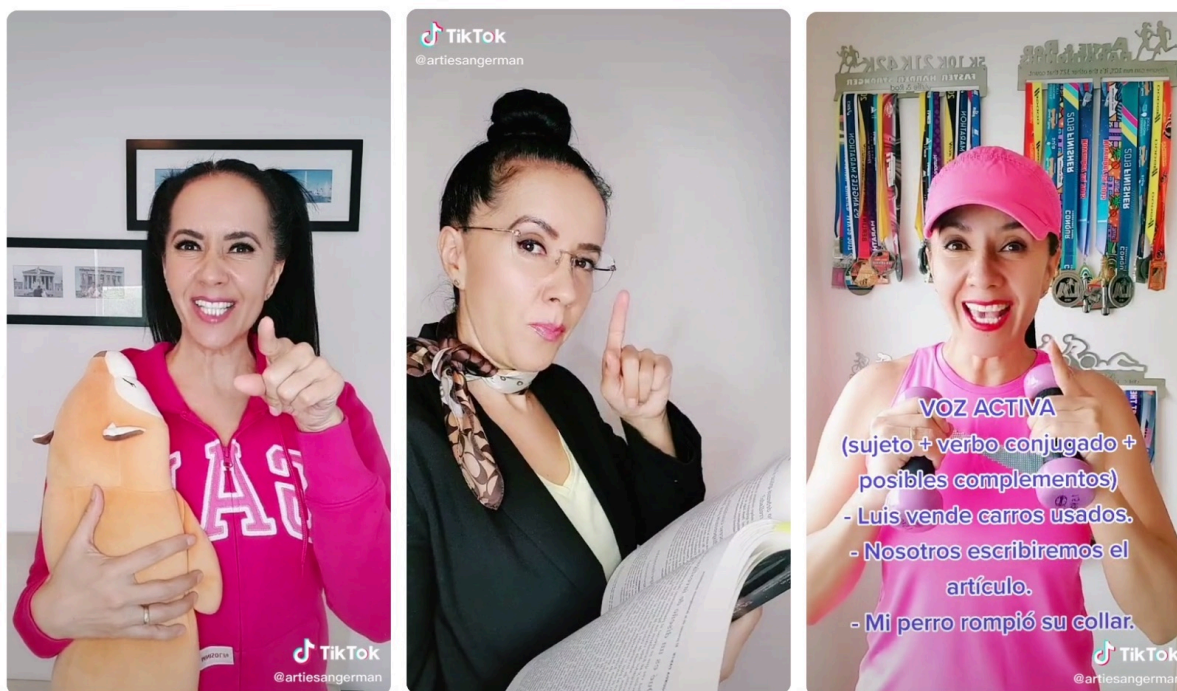
Figure 5. Screenshots of some of the TikTok videos.

Both teachers used the same videos to teach the contents, but each had the creative freedom to design the class consolidation activities following the guidelines.

At the end of the grammar period, we applied the final test (Test 2) through the *Google Forms* platform and compared the results with the diagnostic test applied at the beginning of the course (Test 1). Subsequently, we gave the opinion survey to the students to know their perspectives on the Flipped classroom model using *TikTok* and *YouTube* videos, also answered through *Google Forms*.

To know the teachers' perspectives on their experience with the processes of the Flipped classroom model and *TikTok* and *YouTube videos,* we applied a survey to them at the end through the *Google Forms* platform.

Results

The comparison of the tests showed a substantial difference between the scores in the diagnostic test (Test 1) and the final test (Test 2). The sum of points obtained in the diagnostic test was 5903, while in the final test, it was 9,950. Figure 6 shows the sum of points in both tests and their difference.
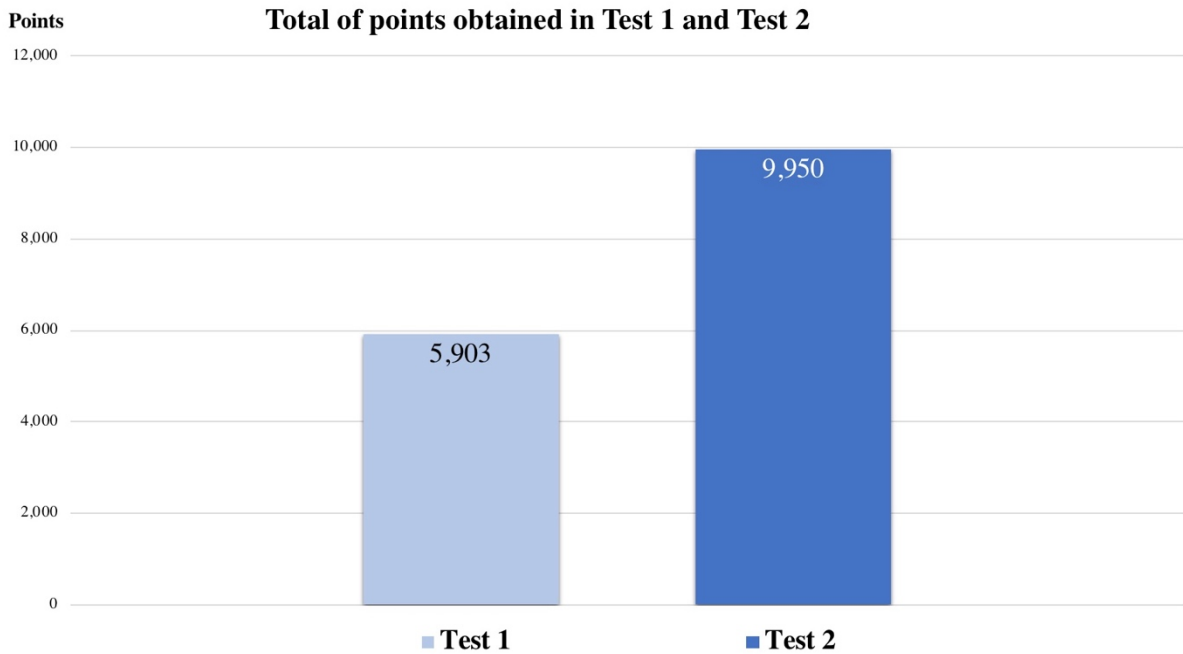
Figure 6. Total points earned by students in Test 1 and Test 2.

It is important to note that 100% of the students increased their point scores. Table 9 shows the distribution of the points difference between Tests 1 and 2. The smallest amount increase was 12, and the largest was 56 out of 100 total points.

This table shows that the most frequent recurrence is 23 points among 14 students; twelve students increased by 28 and 33 points. At the lower end were two students who increased the most in the second test, more than 50 points. Figure 7 graphically shows the distribution of the points difference between Test 1 (diagnostic) and Test 2 (final). It is also important to note that the average of increased points is 42, the mode is 23 points, and the median is 31.5.

Points Difference	Frequency
12	4
13	3
15	1
18	7
19	3
20	4
21	5
22	4
23	14
24	3
25	2
26	7
27	3
28	12

29	4
30	5
31	5
32	3
33	12
34	5
35	3
36	4
37	3
38	6
39	2
40	3
41	3
42	1
43	3
44	2
47	1
49	1
54	1
56	1

Table 9. Distribution of points difference between the diagnostic test and the final test.
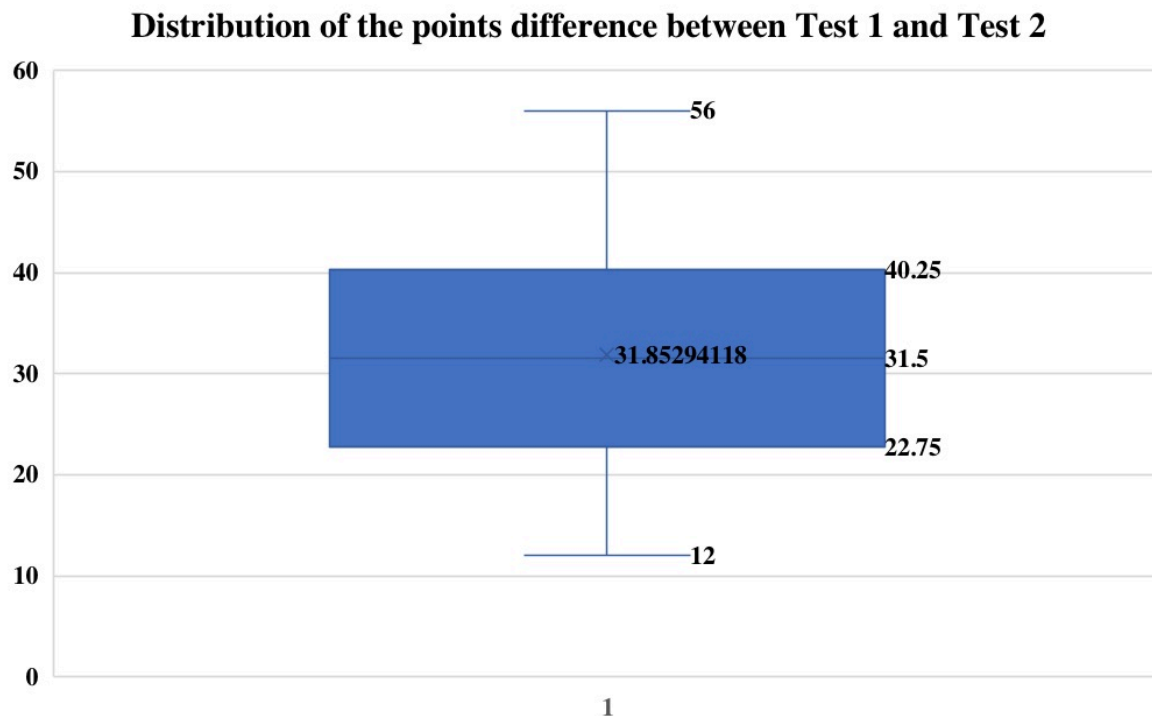
Figure 7. Distribution of points difference between Test 1 and Test 2.

Figure 8 shows the grades obtained in both tests and the difference in points obtained by each student. It is meaningful to observe the trend lines of the starting points (diagnostic test) and

endpoints (final test). The behavior of Test 1 with respect to Test 2 shows a growing difference; while in Test 1 the trend is negative with a value of -0.0795, in Test 2 the trend is positive with a value of 0.1283.
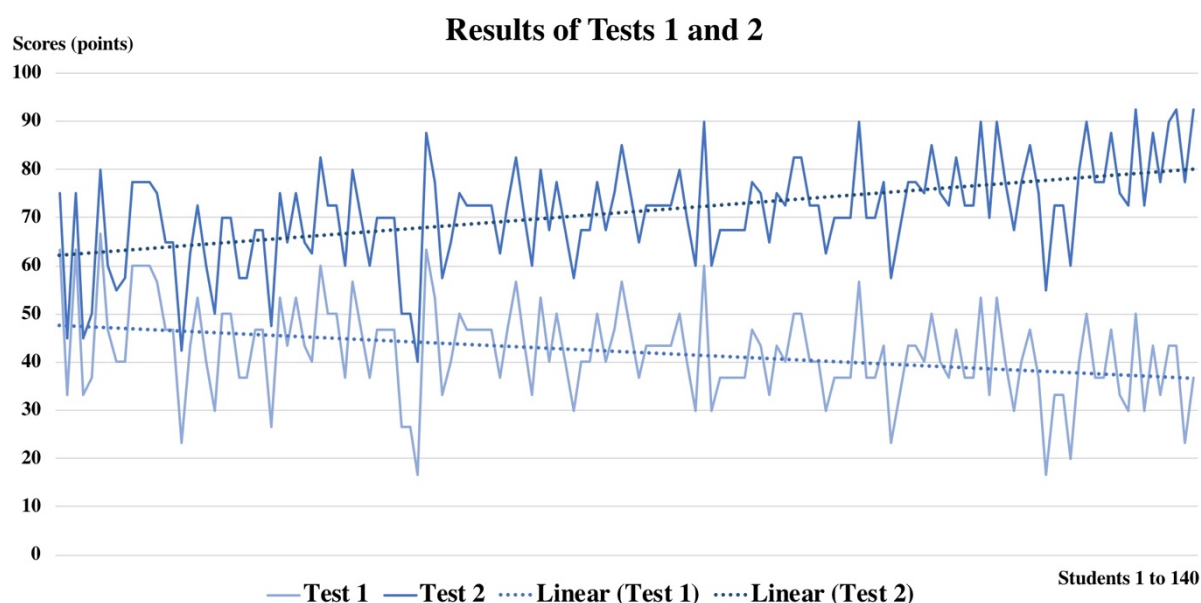
Figure 8. Grades obtained in Test 1 and Test 2.

Regarding the students' perception of using the Flipped Classroom model with *TikTok* and *YouTube* videos to develop their grammatical competency in Spanish, 137 of the 140 answered: 53 from teacher 1, and 84 from teacher 2. Below are the results of the responses (see Figures 9 to 17).

Question: The training I received working with the Flipped Classroom methodology was clear (how to study the videos, types of activities to do, ways to participate, etc.).
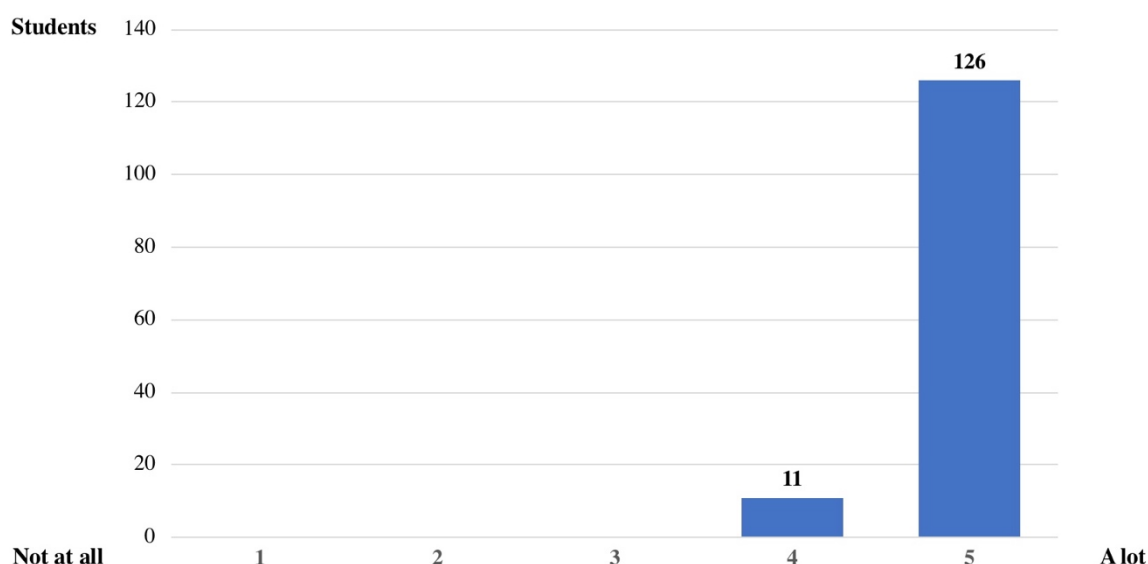
Figure 9. Students ' opinion on the training they received under the Flipped Classroom model.

Question: The percentage of course videos that I watched was approximately
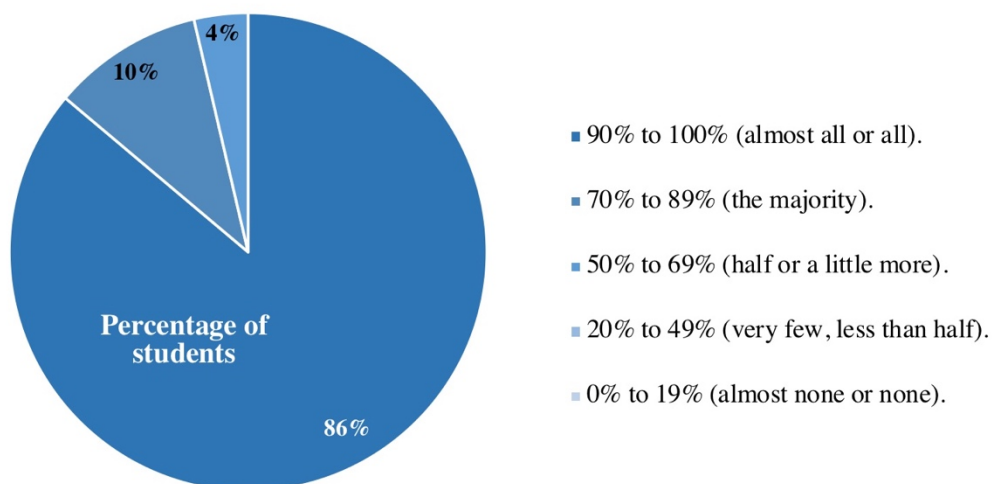
Figure 10. Percentage of videos viewed by students.

Question: The learning resources used for this methodology (TikTok and YouTube videos) were sufficient to develop my grammatical competency.
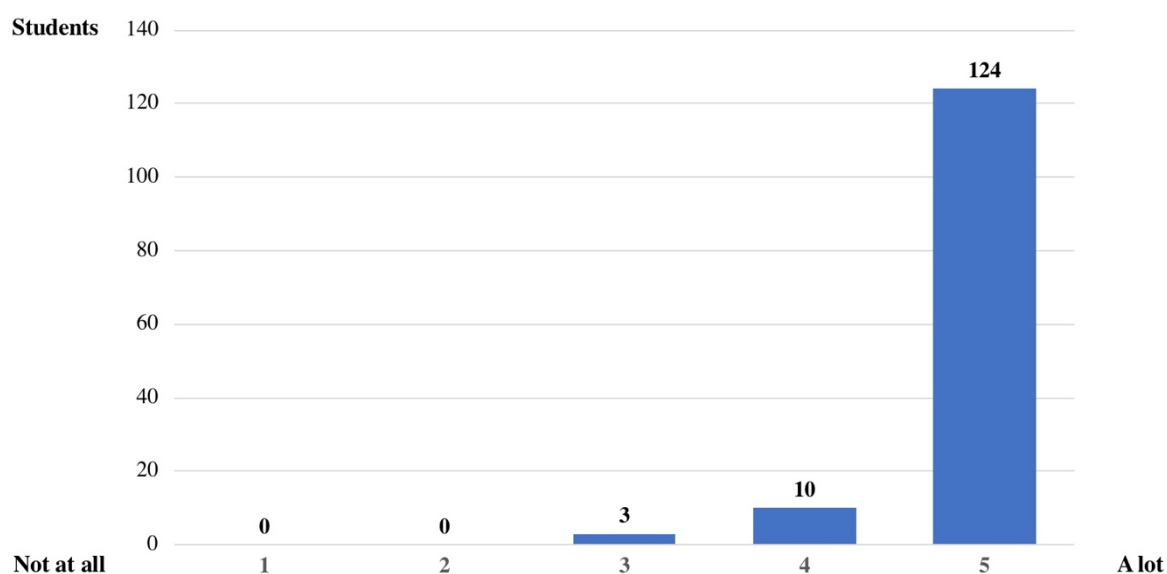

Figure 11. Students' opinion on the relevance of TikTok and YouTube videos to develop their grammatical competency in Spanish.

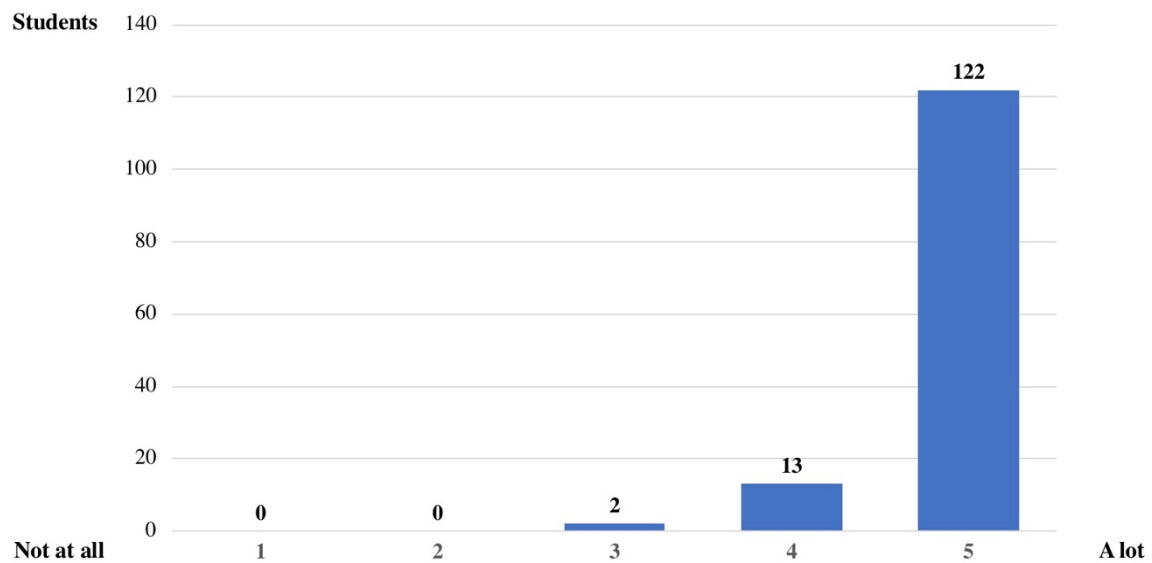**Question**: The consolidation activities performed in the sessions helped me strengthen my learning.

Figure 12. Students ' opinion on the benefit of the consolidation activities.

Question: The feedback and followup I received throughout this part of the course was clear, precise, and beneficial to my learning progress.
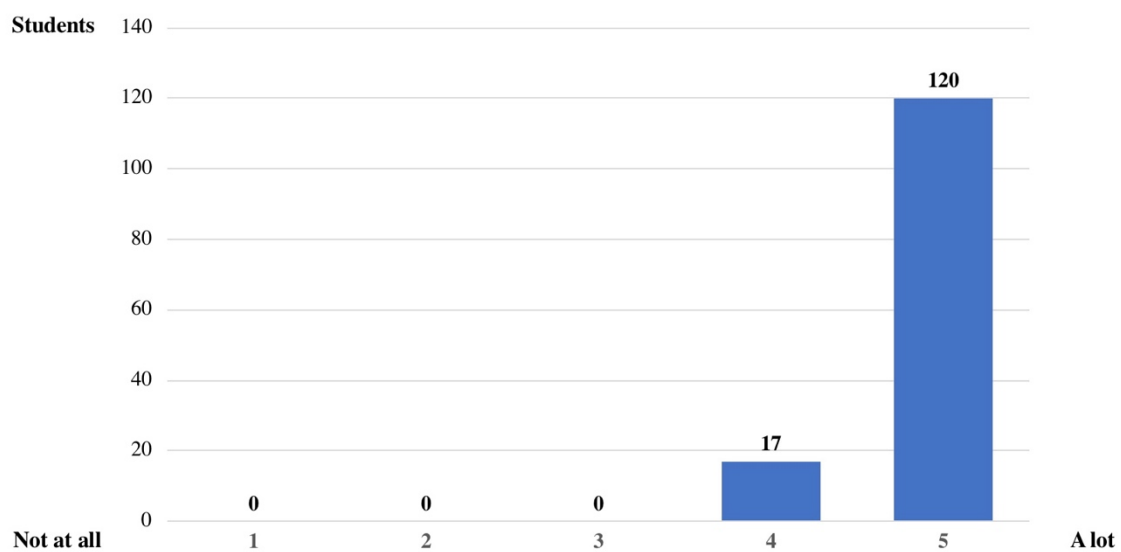
Figure 13. Students ' opinion on the feedback and follow-up received.

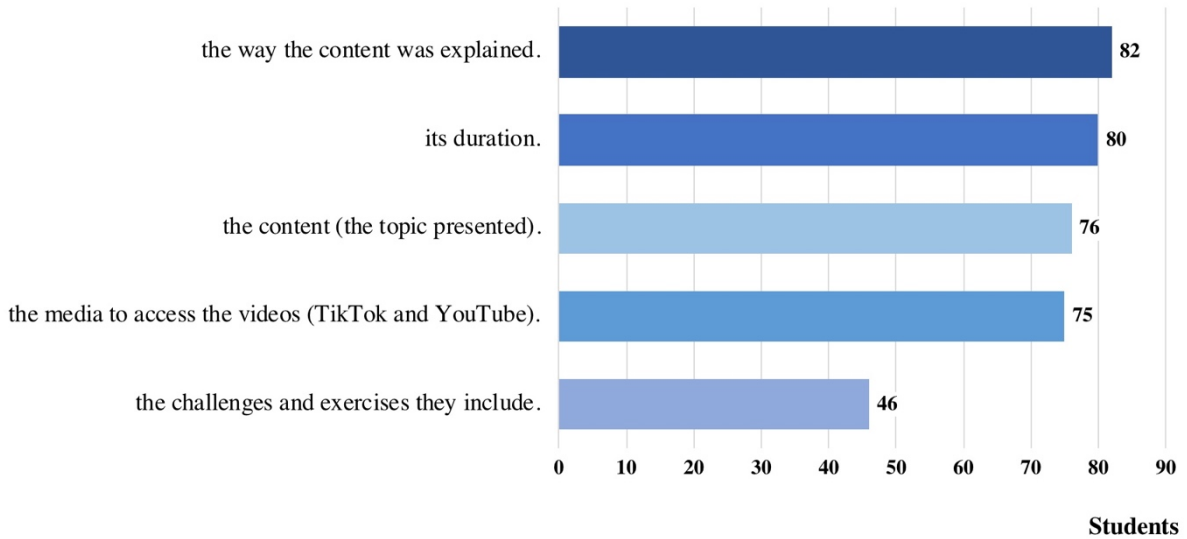**Question**: The best part of the videos was (you can select more than one option):

the way the content was explained. — 82
its duration. — 80
the content (the topic presented). — 76
the media to access the videos (TikTok and YouTube). — 75
the challenges and exercises they include. — 46

(axis: 0 10 20 30 40 50 60 70 80 90)

Students

Figure 14. Students' opinion on the aspects of *TikTok* and *YouTube* videos that they considered most beneficial.

Question: The main difficulty I had with this methodology was

a technical problem that recurrently presented itself. — 61
the independence I needed to watch the lessons. — 55
the evaluation formats (tests, activities, and participation). — 27
the type of designed learning activities. — 0
the type of learning resources (TikTok and YouTube videos). — 0
the lack of followup from the teacher. — 0
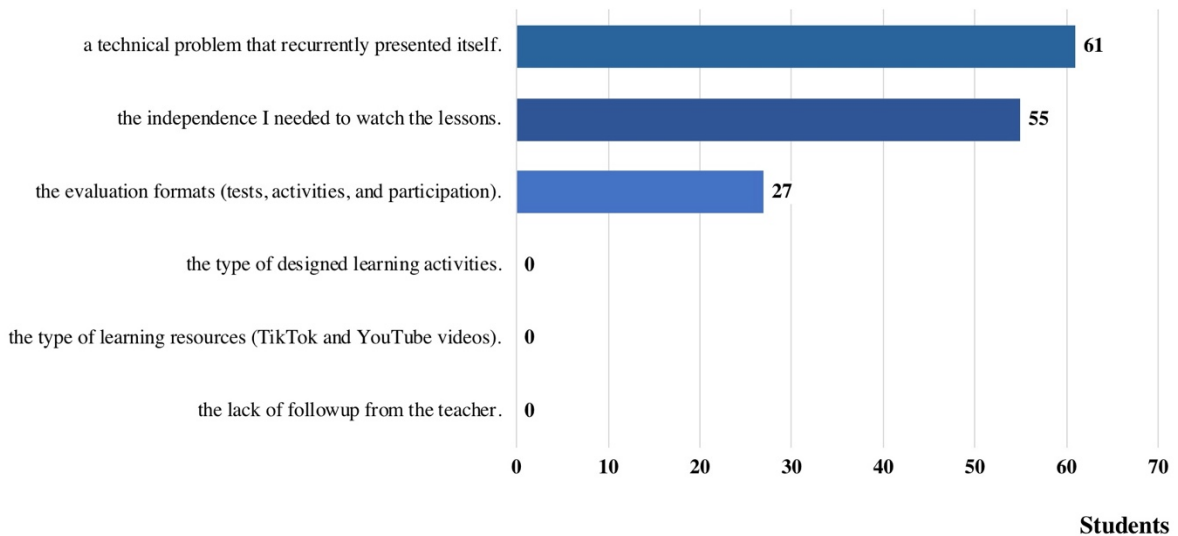
(axis: 0 10 20 30 40 50 60 70)

Students

Figure 15. Students' opinions on the most significant difficulties they encountered when learning with the Flipped Classroom model with *TikTok* and *YouTube* videos.

Question: I feel that the Flipped Classroom method used in the segment of the course helped me improve my Spanish grammar competency.
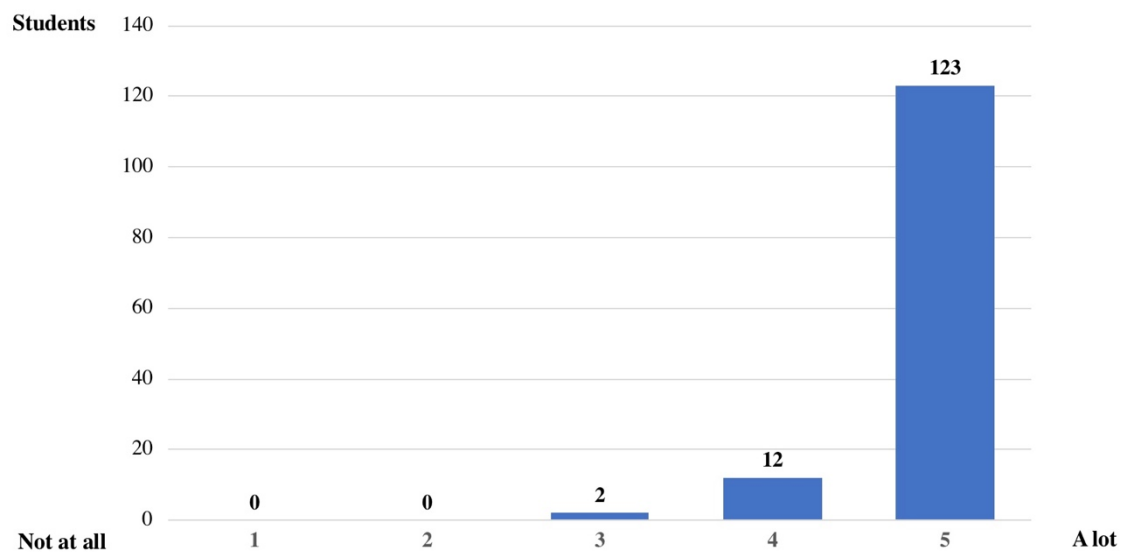

Figure 16. Students' opinion on the relevance of the Flipped Classroom model with TikTok and YouTube videos to develop their grammatical competency in Spanish.

Question: I feel that the Flipped Classroom method with TikTok and YouTube videos used in this segment of the course motivated me to learn Spanish grammar.
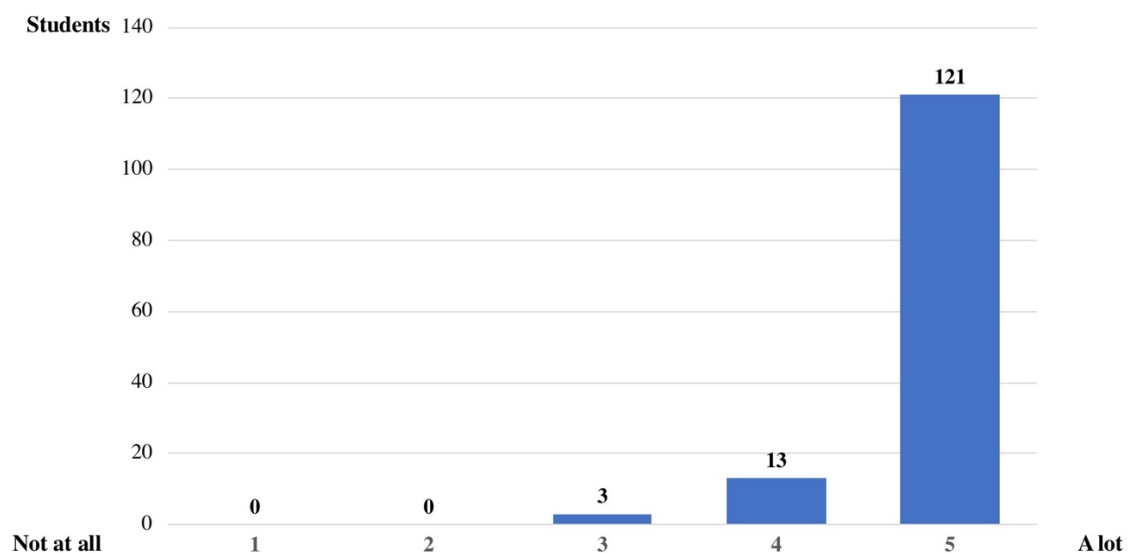

Figure 17. Students' opinion on the motivation generated by TikTok and YouTube videos to develop their grammatical competency in Spanish.

Regarding the opinion of the professors involved in implementing the model, their survey results are summarized below (see Table 10).

Questions about TEACHING	Professors' answers
For me, the new role I had to assume in planning this methodology was	1. **not complex. (2 professors)** 2. a little complex. 3. somewhat complex. 4. complex. 5. very complex.
My course preparation with all the components of this methodology was	1. **not complex. (2 professors)** 2. a little complex. 3. somewhat complex. 4. complex. 5. very complex.
I consider the greatest advantages of developing this grammatical competency were	☐ **the videos. (2 professors)** ☐ the evaluation and feedback. ☐ the question and answer sections. ☐ **the mastery of the topics achieved by the students. (2 professors)** ☐ **the activities/challenges that I designed to consolidate the topics. (2 professors)** ☐ **the different roles assumed by the students and teacher. (2 professors)** ☐ **the different activities executed at home and in the class. (2 professors)** ☐ none; I perceived no advantages in the Inverted Classroom methodology.
I consider the greatest disadvantages of this methodology were	☐ understanding it. ☐ organizing my time. ☐ guiding the students. ☐ designing consolidation activities. ☐ having to give assessment, feedback, and followup. ☐ **designing the videos if I had to do it. (1 professor)** ☐ **none; I perceived no disadvantages in the methodology. (1 professor)**
Select the greatest benefits you saw in your students during their learning process with this methodology.	☐ **I saw them more motivated. (2 professors)** ☐ **Their questions diminished. (2 professors)** ☐ **Their participation increased. (2 professors)** ☐ **They came better prepared to class. (2 professors)** ☐ **They showed better mastery of the topics. (2 professors)** ☐ **They did their activities with more success. (2 professors)** ☐ I perceived no differences from the traditional model.
Select the greatest difficulties you perceived in your students during their learning process with this methodology.	☐ Lack of organization. ☐ Feelings of frustration. ☐ Task oversaturation (causing stress). ☐ Continuous confusion about the learning contents. ☐ **I did not really perceive that they confronted major difficulties. (2 professors)**
From my perspective, the Flipped Classroom method can be more beneficial than the traditional model for the development of grammatical competency.	1. I do not agree. 2. I slightly agree. 3. I somewhat agree. 4. I agree almost totally. 5. **I completely agree. (2 professors)**
I consider that the videos as a medium to teach grammatical content to the students are	1. not relative. 2. slightly relative. 3. somewhat relative. 4. relative. 5. **very relative. (2 professors)**

Table 10. Opinion of the participating teachers on the Flipped Classroom model with TikTok and YouTube videos.

Discussion

The present study's findings provide evidence that the Flipped classroom model is efficient for developing language skills, as reported in several studies, some mentioned in the introduction of this work. The findings also show that *TikTok* and *YouTube* videos are valuable resources to enrich this methodology. In this research, 100% of the participating students improved their performance in Spanish grammatical competency, showing that, despite the belief that social media are tools only designed for entertainment, they can be used for learning, including by the students in a school system.

In addition to these resources' efficiency in the learning process, the study revealed that they increased the students' motivation to learn. Ninety-eight per cent of the students surveyed reported that the methodology used with *TikTok* and *YouTube* videos increased their motivation to learn Spanish grammar. Ninety-nine per cent also reported that they found this methodology beneficial for learning the topics related to their grammatical competency.

Finally, this study indicated that the teachers found high value in the Flipped Classroom model and the use of *TikTok* and *YouTube* videos. The professors involved reported that it did not involve more work despite being a new methodology for them. They also highlighted the benefits they perceived in their students, such as increased preparation, participation, and motivation.

On the other hand, the risk of involving social media in the learning process, especially with young students, cannot be ignored. These tools are full of great distractions for students, including dances, jokes, beauty tutorials, life tips, and film reviews. It is easy for users of all ages to become distracted and captured by this type of content, which would be adverse to the objective of learning. That is why it is imperative to train teachers well to know how to train students well in managing these tools. It is also crucial to design the videos attractively, perhaps following the methods used by *influencers* and the trends taking place in the networks. In this way, students will find these materials also stimulating.

Conclusions

The methodology implemented in this study proved to be a great support for the improvement of the grammatical competency in Spanish for this population. Not only did it help students increase their performance, but it also kept them more motivated to learn. There are various methodologies and tools to support the teaching-learning process, as mentioned at the beginning of this article; social media hand in hand with a didactic technique can become a very relevant option for this.

The present investigation proves that a teacher's contribution to social media is enormous, showing how to design a class to improve learning. In this and other studies, it has been shown that audiovisual materials are the language of the XXI century. It is not easy to visualize today's classes without the support of these types of resources. Additionally, the materials designed in the social media formats of *TikTok*, *YouTube*, *Instagram* and *Facebook* (short videos with one minute of duration: *"Shorts"* and *"Reels"*) have two benefits. First, the format is attractive and familiar to students, especially young people. The short duration aligns with their attention spans using a resource of this type. Second, the teacher's contributions to the users of social media are also of great value. It is a gift made in a world where daily sharing is routine.

There is still much work to be done regarding incorporating social media materials into the classroom. This study and others have demonstrated the value of such learning resources for student motivation and support for teachers. However, it is a fact that, due to their novelty in education, tools such as *TikTok, Instagram, Metaverse,* and augmented reality must be more explored to understand their usefulness for teaching in various knowledge areas.

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