

Effect of Text-Only vs. Video Enhanced Instructions to Tasks on Language Comprehension in a Foreign Language Online Course

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Abstract—This paper aims to explore the effect of types of instructions to tasks, text only vs. video enhanced, on student engagement and language production in an online learning environment. The online learning platforms are text heavy. Although teachers have incorporated video explanations and audio-visual input, the linguistic input in the form of “instructions to tasks” has remained mostly in text form. In face-to-face foreign language classes the moments where teachers explain the task are considered valuable linguistic input teaching moments that appear to be lost in the online environment. The purpose of this project is to evaluate if there is a significant difference in quantity and quality of language production by the student depending on what format the instructions to tasks. Secondary to this goal is exploring what are the students’ attitudes and preferences towards the format of those instructions. Results from this small-scale study show that participants in the video enhance group displayed a tendency to enriched quantity and quality of language production. The context of this study is the foreign language classroom, but it can benefit other content areas as well.

Index Terms—student engagement, text-only instructions, video enhanced instructions, online learning environment, language production

I. INTRODUCTION

The disruptions 2020 brought to institutions of higher education position online teaching at the forefront of every program. Identifying how best to approach online teaching to promote learning has become central to our pedagogical inquiries.

The initial efforts as teaching migrated to either hybrid or fully online delivery were mainly directed at addressing the basic “how to” questions of online teaching: retooling instructors, adding technology solutions to current platforms and making sure students’ needs were met. As teachers adapted to online delivery, most institutions adopted quality standards (National Standards for Quality, 2019) that are used to evaluate courses. These standards gave faculty a set of guidelines and expectations for what components an online course should incorporate. However, moving beyond these initial steps has proven to be more challenging. Once the initial shock of the pandemic passed and courses “had” all the essential parts they needed, new questions arose. Among those questions, in our language courses we have been looking at how to reproduce online the many valuable micro-interactions that occur in the face-to-face (F2F) environment.

One option to recreate more personalized interactions has been the use of video resources like Zoom, Blackboard Collaborate, Flipgrid and many others. Instructors have used video to record their lessons, lectures, feedback and to promote interaction between students. As instructors worked on making these courses more “alive” they created videos to deliver their lectures, used video to have students interact with each other, and used video to give feedback. Still, there is a sense that we, teachers, are missing out on micro teaching moments that lead to implicit or incidental learning that occurs in casual conversations and when we give instructions to tasks.

In F2F language classrooms when faculty give oral instructions on assignments for students to complete in class, those instructions provide opportunities for incidental language learning. In the online environment students also have a vast number of big and small tasks to complete and the majority of the instructions to complete the tasks comes in text form.

This realization prompted the researcher to consider whether there would be an effect on student listening comprehension if students in online classes were to receive instructions to tasks in video form. Are students denied learning opportunities by having only text type of instructions? Would creating video prompts have a return on investment?

II. RELEVANT LITERATURE

In reviewing the literature, an area that still appears to be in need of a better understanding is which type of task prompts or instructions to tasks render the best outcomes as it pertains to student learning and engagement with the tasks. The use of audio and video materials in the teaching of foreign languages online has been abundantly studied. However, the majority of the research related to video and audio-only use addresses questions about:

- a) how content is delivered (Basal et al., 2015; Londe, 2009; Macwan, 2015; Mirvan, 2013),
- b) how explanations are presented (Mandernbach, 2009; Oomen-Early et al., 2008; Skylar, 2009) and,
- c) how video and audio-only type of feedback compare (Dagen et al., 2008; Ice et al., 2010; King et al., 2008).

There is little to no research on the effect of the modality of the instruction to the task itself on the quality and quantity of language comprehended and produced by such prompts. Exploring what types of instructions benefit learners will help instructors reflect on how they are presenting tasks to students, and will help determine if there is value in spending already scarce time redesigning text and into video instructions or if the time and effort needed to do this is not worth it.

As online learning grows as a model of instruction delivery, both institutions and instructors have pushed for a better understanding of how to do it successfully. An important component of successful foreign language teaching has to do with how teachers create an environment that fosters meaningful connections with students. In the day-to-day interactions in our F2F classrooms, both when giving explanations or giving prompts to tasks, casual conversations are used to connect with learners. Conversely, interactions with students online are much more rehearsed, limited and partitioned. Creating experiences where spontaneity and connection with and between students occurs will be vital for online language learning to become a comparable alternative to in-person classes.

It is in this context of searching for more spontaneous, classroom-like interactions that the use of video comes into play. In foreign language teaching, as in many other areas, how we present information, how we explain things and what we say to students about their learning (King et al., 2008) all significantly affect the experience as a whole. There is an ample body of research on the modality of input in foreign language classes as well as feedback pertaining to the development of listening and speaking skills. However, the modality of the prompts to the tasks themselves is seldom studied.

The development of listening skills has occupied a prominent role in the teaching of foreign languages (Hamouda, 2013). Research on the effectiveness of audio and video documents to develop listening comprehension has shown that video tools give us the ability to connect students with authentic and culturally contextualized language (Rahmatian & Armium, 2011). Studies on the comparison of the use of audio and video texts in foreign language contexts (Basal et al., 2015; Londe, 2009; Macwan, 2015; Mirvan, 2013) has focused mainly on the type of input learners had to react to but not on the type of prompt given to them.

Along the same lines, there are several studies on the value and effect of presenting content and lectures using text plus audio versus text plus video and their resulting effects on comprehension and output (Mandernbach, 2009; Oomen-Early et al., 2008; Skylar, 2009). Most studies show significant differences between modalities, showing more positive results in students who were engaged with video expositions and interactions (Siegel, 2015). Additionally, studies on text vs. audio feedback show similar results.

Research on the power of multimodal feedback tells us that leveraging technology to respond to student production via a combination of written, audio and/or video has proven to have positive results when it comes to looping that feedback back into language production (Campbell & Feldman, 2017; Dagen et al., 2008; Ice et al., 2010; King et al., 2008). As studies show the power of multimodal feedback in providing opportunities to help learners to process information, there is a need to study whether the same effect could be found in presenting tasks to learners in a multimodal manner.

The specific language teachers use as they present tasks to learners is also considered linguistic input that although it may not be formally assessed for a grade, it could lead to implicit learning. Hulstijn and Laufer claim that the retention of unfamiliar (new) words is affected by the degree of involvement by the learner in the processing of those words (2001). Within information processing theories, researchers claim that the chance that new information will be kept in long-term memory does not depend on the time that the new information is kept in short-term memory but rather in the involvement and motivational component driven by the need to determine the meaning of a word. Hence, as teachers provide instructions to tasks in our F2F classes, those exchanges become rich opportunities where learners are naturally involved in trying to decipher what the teacher asks them to do. In turn, this opportunity for listening comprehension is lost online as most instructions to tasks are in text form.

III. DESCRIPTION OF THE RESEARCH PROJECT

This small-scale study seeks to contribute to the understanding of how video-enhanced prompts to tasks can be a useful tool to promote listening comprehension and engagement with the task. Using both quantitative and qualitative approaches, this study seeks to answer the following research questions,

1. Is there a significant difference in students listening comprehension skills between those who receive video enhanced instructions to tasks vs. those who receive text-only instructions to tasks in online foreign language classes?
2. What are the preferences of students for receiving those instructions?

The study follows the explanatory sequential mixed methods design “in which the researcher begins by conducting a quantitative phase and follows up on specific results with a subsequent qualitative phase to help explain the quantitative results” (Creswell & Plano Clark, 2018, p. 77).

Participants

Participants for this study consisted of university students aged between 18 and 24 enrolled in first semester university level Spanish course. Participation in this study was voluntary and data was collected while students participated in already scheduled tasks as part of their course. This study took place at a university in the southeastern United States. Students at this particular institution are required to take a foreign language course as part of their core-curriculum; therefore, these courses are populated in large majority with incoming freshman. Thirty-nine students agreed to participate in the study.

The following table illustrates the demographics of each group:

TABLE 1
DEMOGRAPHICS

	Text only group	Video-enhance group
Number of students	21 (14 female/7 male)	18 (13 female/5 male)
Levels of HS Spanish		
0	0	0
1	0	1
2	16	13
3	5	4
4 or more	0	0

IV. DATA COLLECTION

The study took place at the beginning of the 5th week of the semester when participants were entering the third chapter in their textbook and it concluded at the end of the 10th week. Two elementary Spanish one courses were selected at random for the study and one course was designated as the text-only prompts course and the other as video-enhanced prompts course.

To address the research questions, data was collected in three manners. First, the researcher administered an online open-ended questionnaire to collect demographic information, and consent to participate in the project. Secondly, the researcher collected data on listening comprehension activities (see Appendix A) administered to both groups, video enhanced and text only, to determine if it had had an effect on their listening comprehension skills. The language comprehension task consisted of four tasks: 1) ten multiple-choice items, 2) five pairing items, 3) ten translation items; and 4) ten open ended questions. All tasks contained ten items total, with the pairing tasks being two sets of five statements. All items included a combination of content from the chapter and content related to the instructional prompts given for assignments and discussions. The score on this task was not part of a grade and students were aware of it. Lastly, the researcher conducted interviews with a random sample of participants from the video-enhanced group to discuss their perceptions and preferences for the types of prompts received during the semester for different tasks.

TABLE 2
DATA COLLECTION AND INTERVENTION TIMELINE

	Week 5	Week 6 and 7	Week 8	Week 9 and 10
Text-Only group	Consent and demographic information		Language comprehension task	
Video-enhanced Group	Consent and demographic information	Intervention	Language Comprehension Task	Interviews

V. INTERVENTION

The intervention consisted on incorporating video prompts to assignments and discussions as opposed to text prompts. The content and style of prompts to tasks designed for the participants was the same for both groups for the first 5 weeks of the semester. At the beginning on the 6th week of the semester, which coincided with the start of the third chapter, instructions to all assignments and discussions were posted as a brief video prompt. Instructions for quizzes remained in text form. This video enhanced format remained in place until the end of the 7th week when chapter three ended. There were fifteen videos a week each averaging one minute, adding up to thirty video-enhanced prompts for the whole intervention. Recording the videos took the researcher approximately 5 minutes per video, totaling approximately 1 hour of preparation time.

VI. RESULTS OF QUANTITATIVE DATA AND DISCUSSION

The following tables show the results from the language comprehension tasks completed on week 8 by each group. Table 3 shows the percentage of correct/incorrect responses by group for the first three tasks.

TABLE 3
RESULTS FROM LANGUAGE COMPREHENSION TASKS 1, 2 AND 3

		Text	Video
Multiple choice	Incorrect	18.5%	26.7%
	Correct	81.5%	73.3%
Pairing Items	Incorrect	25.9%	7.4%
	Correct	74.1%	92.6%
Translation	Incorrect	43.3%	14.8%
	Correct	56.7%	85.2%

Although the limited number of participants does not allow for a statistical analysis, based on the results shown above the numbers show a tendency towards a positive effect of video-enhanced prompts on language comprehension skills. In other words, participants who received the video enhanced intervention gave overall more responses that were correct.

The first two tasks are more passive in nature, while the translation and open-ended tasks require more linguistic production on the participants' part. The first two tasks, multiple choice and pairing, gave contradictory results. In the multiple-choice task, participants in the text-only group outperformed the video enhanced group, while in the second task, the pairing items one, the results were reversed.

The translation task showed the most significant difference between both groups. The translation tasks required more linguistic output of the participants, as in the case with the translation task. The video enhanced group outperformed the text-only group when it came to the amount of language produced. It is worth noting that the video enhanced group also outperformed the text only group not only in terms of accuracy but in quantity of language.

Something point out is although participants were not pre-tested prior to the intervention, both groups had a comparable number of years of high school Spanish prior to enrolling in this class.

Table 4 shows results for the open-ended questions and degree of accuracy as well as average number of words per response used by group.

TABLE 4
RESULTS FROM LANGUAGE COMPREHENSION TASK 4

		Text	Video
Open Ended	Correct	70%	82%
	Average # of words	3	5

Part of the literature in learner engagement uses word and/or token produced by students as positive indicators of engagement with the task. Pellettieri (2010) suggests language engagement is considered as the most important driving force in research on language learning and teaching. As shown above, participants in the video-enhanced group produced an average of five words per response which was two words higher than the text only group. The degree of accuracy of their responses was also higher.

VII. RESULTS OF QUALITATIVE DATA AND DISCUSSION

Following the language comprehension test, a random sample of students from the video enhanced group participated in interviews. Data from these interviews helped to answer the second research question. Four questions were posed to the participants as listed subsequently.

1. Do you have a preference on how you receive prompts for assignments and discussions: text form or video form? And why?
2. Do you think having video prompts to these tasks had an influence on how you completed the task itself?
3. Would you have these video prompts done any differently?
4. Can you state your most and least favorite thing about the video-prompts?

The perceptions of students varied from responses that could be categorized as positive and those that could be described more as indifferent. The positive perceptions included the videos being useful, innovative and convenient, and adding clarification to the task itself. Table 5 contains a selection of dominating tendencies identified in the answers provided as well as examples from some participants' responses.

TABLE 5
DOMINATING THEMES

Questions	Theme	Examples
1. Do you have a preference on how you receive prompts for assignments and discussions: text form or video form? And why?	General preference for video prompts. Two salient reasons: more personal and it helped visualize the task.	“Video helps me to understand whatever is being said in Spanish much better.” (Female student, 21) “I felt she was talking to me, especially when she used our names in examples.” (male, 18)
2. Do you think having video prompts to these tasks had an influence on how you completed the task itself?	Not aware	“I would like to think it helped but I really do not know.” (male, 19)
3. Would you have these video prompts done any differently?	Video plus text.	“I would have probably liked to have subtitles too, that would be ideal.” (female, 20)
4. Can you tell me what your favorite thing about the video-prompts was and what was your least favorite thing?	Favorite: more F2F classroom like. Least favorite: loading time.	“The videos were not dull or rehearsed, they were casual.” (Male student, 19) “Sometimes it makes it very difficult to get the videos onto your laptop.” (Female student, 21 years)

In their responses to the third question, an overwhelming majority of students mentioned their favorite format would be video and text so they could get the benefit of the facial expressions and hand gestures as well as the text to clarify something they did not comprehend. The result from this question is challenging for language teachers since most teachers tend to use listening tasks solely as listening tasks and not with added subtitles because the consensus is that learners gravitate to process the written text and not the audio.

As described by Woottipong (2014) language learners display more interest in learning the language when their experience is aided by videos. This study also coincides that the majority of participants seem to seem to prefer video-enhanced prompts to tasks.

VIII. CONCLUSIONS AND IMPLICATIONS

The potential for exploration in the use and effect of video enhanced instruction in online environment is promising. The interest for learning in this context has grown and we need to continue researching ways of engaging the learner better. Although the results of this study are positive, they are of limited scope and there are still lingering questions. One of them being about how practical and probable it would be for faculty to spend time creating these prompts. Some recommendations for further research are:

- Conduct a study with faculty to evaluate the interest and ability to produce content in this manner;
- Recreate this study on a larger scale in order to have meaningful statistical data.
- Add a pre-test prior to the intervention to determine whether there is a significant difference in proficiency between the groups. This limitation was partially due to the exploratory nature of the study.

In order to save time, incorporating video-prompts to tasks shall be limited to those tasks that allow bring the “personal touch” in online classes that the faculty and students claim to be missing during online interactions.

APPENDIX. LISTENING TASKS

Task 1: Select the word that would most logically complete the sentence. Text in parentheses represents audio read to participants.

- | | | | |
|---|------------|---------------|---------------|
| A. (Mi padre es...) | 1. Alto | 2. Alta | 3. Altas |
| B. (El esposo de mi tía es mi...) | 1. Primo | 2. T ó | 3. Padre |
| C. (La esposa de mi hijo es mi...) | 1. Yerno | 2. Nuera | 3. Hija |
| D. (El esposo de mi hermana es mi...) | 1. Primo | 2. T ó | 3. Cu ñado |
| E. (Los chicos son...) | 1. Triste | 2. Alto | 3. Divertidos |
| F. (El trabaja en la escuela. El es...) | 1. Pintor | 2. Arquitecto | 3. Maestro |
| G. (Yo soy jueza. Yo soy...) | 1. Abogada | 2. Maestra | 3. Dentista |
| H. (La hija de mi tía es mi...) | 1. Hija | 2. Abuela | 3. Prima |
| I. (Las montañas de los Andes son..) | 1. Bajas | 2. Altas | 3. Planas |
| J. (El clima en la Antártida es...) | 1. Fr ó | 2. Fresco | 3. Caluroso |

Task 2: Match the description to the vocabulary Word that best fits the description

<p>A</p> <p>_____ 1. la esposa de mi padre</p> <p>_____ 2. los padres de mi esposo</p> <p>_____ 3. la hija de mi t í a</p> <p>_____ 4. los hijos de mi madrastra</p> <p>_____ 5. la hija de mi hermano</p>	<p>B</p> <p>a. yernos</p> <p>b. hermanastros</p> <p>c. sobrina</p> <p>d. gente</p> <p>e. suegros</p> <p>f. prima</p> <p>g. madre</p> <p>h. hijastros</p>
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Task 3: Translate the following sentences. Text in parentheses represents audio read to participants.

1. (My parents are short.) _____
2. (Your uncle is nice.) _____
3. (My mom is a doctor.) _____
4. (Our cousins are students.) _____
5. (My grandmother lives in our house.) _____

Task 4: Answer the following questions. Text in parentheses represents audio read to participants.

1. (¿Cu á l es tu apellido?) _____
2. (¿Cu á ntas personas hay en tu familia?) _____
3. (¿C ó mo se llaman tus padres?) _____
4. (¿D ó nde trabajan tus padres?) _____
5. (¿De d ó nde son tus abuelos?) _____

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