

# The impact of multimedia and vocabulary acquisition across basic English I and introduction to speech communication courses

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## Resumen

Después de doce años de tomar cursos de inglés, cuando los estudiantes llegan a la Universidad de Puerto Rico en Ponce, manifiestan en el Perfil Institucional del Estudiante que necesitan mejorar sus destrezas orales, escritas y de comprensión. Para satisfacer las demandas de más vocabulario y práctica oral, la investigadora indagó si al añadir a los cursos de inglés más práctica de vocabulario, mediante el uso de multimedios, se ayudaba a los estudiantes a ganar vocabulario y sentirse más seguros al comunicarse. Para analizarlo, se tuvieron en cuenta la percepción, el rendimiento y la aptitud.

**Palabras clave:** vocabulario, facilitar, adquisición, multimedia, Universidad de Puerto Rico en Ponce

## Abstract

After twelve years of taking English courses, when students come to the University of Puerto Rico at Ponce, they state in the institutional Student Profile that they need to improve their speaking, writing and comprehension skills. In order to meet the demands of more vocabulary and oral practice, the researcher investigated if by adding to the English courses more vocabulary practice, by using multimedia, whether it helped students gain vocabulary and feel more confident when communicating. To analyze this, perception, performance, and aptitude were taken into consideration.

**Keywords:** vocabulary, facilitate, acquisition, multimedia, University of Puerto Rico at Ponce

## Introduction

According to Trines (2018), Puerto Rico's education system is structurally virtually identical to the U.S. system. He states that the island has a K-12 school system divided into six years of elementary education, three years of junior high school and three years of senior high school, a design that is comparable to that found in several U.S. states. Therefore, learning English as a second language is a compulsory requirement for all students in Puerto Rico's public and private school systems. Nevertheless, when students come to the University of Puerto Rico at Ponce (UPR-P), they state in the institutional Student Profile that they need to improve their speaking, writing and

comprehension skills (Perfil del Estudiante, 2018). It is alarming to know that after twelve years taking English, students report they lack basic English skills. As posited by Marcano (2013), students continue to struggle, and they are scoring below the national average in the area of English achievement in the *Pruebas de Aprovechamiento Académico* (PAA) test.

Moreover, when students enroll in college, they take additional English courses as requested by the curriculum of the Programs they belong to. In the University of Puerto Rico in Ponce, students take Basic English if they score 554 or lower in their PAA test. This course has as a co-requisite a laboratory where students, in class or online, put into practice for

one hour a week sounds known to cause difficulty in the English language; therefore, an intensive oral practice is given. Nevertheless, this does not seem enough since according to the 2019 data received from OPEI, there is still a 7% of students who receive D, 5% o fail and 2% of withdraw from the INGL 3102 course. Results for INGL 3102 are not too far, in 2018-2019 (2020 data is pending) 3% of students receive a D, 5% F and 5 withdrew from the course.

Likewise, PAA results received in this institution during 2019, around 189 freshmen students scored below the 445 minimum cutting score to take Basic English I this is of great concern for there is no Pre-Basic or remedial course given in this institution. Therefore, even with a low PAA score, a percentage like the one shown above, students struggle to pass Basic English courses. Therefore, to comply with the vision established in the Strategic Plan (Vision UPR-P, 2021) which states UPR-P strives to be the UPR unit which most effectively promotes the development of the potential of its students so they will contribute to the well-being of the country; innovative strategies must be put into practice in order to strive to develop communicatively competent students in English and Spanish. Learning vocabulary in English can strengthen vocabulary in Spanish since many words share common roots and according to her findings, Mendez (2013) found in her investigation that the more extensive one's vocabulary is, the higher one's language proficiency will be. In English as a Foreign Language (EFL), learning without having adequate vocabulary knowledge, learners may not show the desired results in language learning process and its competence (Macis & Schmitt, 2017).

Khan, Radzuan, Shahbaz, Ibrahim & Mustafa, (2018) state that learning any foreign language is fundamentally associated with vocabulary knowledge shortage of vocabulary items obstructs the process of second language learning. Consequently, keeping in mind that

when UPR-P students are asked the first day of their English class what they believe are their shortcomings, most students mention more vocabulary. In addition, they mention that learners' language competence is not at the desired proficiency level of the language learning; consequently, English educators encounter a colossal challenge. Cohen, (2014) argues that learners, language instructors, curriculum developers and language researchers all agree on the view that vocabulary learning is an indispensable part of Second Language (L2) learning.

### **Statement of the problem**

As posited before, when asked in class what skills in English they believe they need to improve, many students bluntly state they lack vocabulary along with oral communication, reading, and comprehension skills. Therefore, the researcher investigated whether by adding additional multimedia vocabulary lessons, students' vocabulary knowledge increased, improved, and if so, what impact it had on their performance in all language arts and vocabulary acquisition. According to a study done by Yusra, Osman, Zuarni and Mohd (2018) by using multimedia students can obtain a new learning experience with better understanding of the concepts and perform better in their assessment. Their results also demonstrated that the implementation of multimedia as a tool for learning, captured the students' interest and made them passionate in their learning process.

### **Purpose of the study**

In order to meet the demands of more vocabulary and oral practice, the researcher studied whether by adding additional vocabulary lessons and oral production practice using multimedia to the INGL 3102 and INGL 3191 courses would help students feel more confident when orally communicating, writing, listening and reading. Therefore, the proposed research aimed at appraising the vocabulary knowledge of some of the students enrolled in Basic English and Oral Communication courses.

### Justification

Graves, August and Mancilla-Martínez (2013) hold that students who are word conscious are aware of the words around them; this includes the words they read and hear and those they write and speak. This awareness involves an appreciation of the power of words and an understanding of why certain words are used instead of others, and a sense of the words that could be used in place of those selected by a writer or speaker. Hence, since the English courses a student takes in UPR-Ponce are determined by the student's program, the Department cannot add a particular course to teach this or another course for students to take unless requested by a specific program. In addition, a professor needs to comply with the description of the course established in the Main Master as determined by the Vice Presidency of Academic Affairs. Consequently, professors may use additional exercises to integrate vocabulary and oral production skills; nevertheless, the course cannot be completely oral communication if not stated in the description.

As posited by Nunan (2017), a leading researcher in the field of L2 vocabulary, learners must use certain techniques and strategies for achieving proficiency of vocabulary knowledge. Nevertheless, Khan, Radzuan, Shahbaz, Ibrahim & Mustafa, (2018) state that when it comes to the use and availability of vocabulary in different backgrounds and situations, EFL instructors face challenges to identify the most relevant, effective and suitable strategies that can be utilized to facilitate EFL learners for developing the numbers of their vocabulary items. Therefore, this researcher sought to investigate the extent multimedia technology may benefit language acquisition and whether the strategies incorporated facilitated language acquisition.

### Research Questions

In addition, this investigation sought to answer several questions: What is the difference

between the vocabulary knowledge students had at the beginning versus at the end of the course? What is the perception of students to adding complementary vocabulary videos to English courses? To analyze this, perception, performance, aptitude, attitudes, among others, were taken into consideration.

### Hypothesis

The following hypotheses were proposed for this study:

Ho1: The vocabulary complemented by using multimedia will cause no significant difference in the students enrolled in the Basic II and Oral Communication courses.

Ha1: The vocabulary complemented by using multimedia will cause significant difference in the students enrolled in the Basic II and Oral Communication courses.

### Population and Sample

The population for this investigation consisted of students enrolled at the University of Puerto Rico at Ponce. In addition, the sample were students taking INGL 3102 and INGL 3191 at that moment. The selection of the participants was carried out through convenience sampling. Likewise, one group section from each course was selected because of their availability and disposition to participate in the research.

### Research Design and Instrument

This research was aimed at comparing whether by adding additional multimedia vocabulary lessons, students' vocabulary knowledge increased, improved, and if so, what impact it had on their performance in all language arts and vocabulary acquisition. In order to accomplish this goal, the researcher used a Mixed Methods Research Design which included both quantitative and qualitative data.

In terms of the quantitative data, the data were collected from the Vocabulary Knowledge Test created by the researcher for this investigation and administered to each section; one from INGL 3102 and one from INGL 3191. The Vocabulary Knowledge Test of two parts; the first part consisted of 42 vocabulary words which had to be matched to their meaning in English. For the second part, the test consisted of twenty sentences with a vocabulary word used. The students had to select the correct meaning of the word in bold according to the context of the sentence. The structure of the test was the same for both INGL 3102 and INGL 3191 courses; nevertheless, the words were different according to their level.

On the other hand, the qualitative data was collected using a questionnaire about the students' perception of the strategies implemented. It also sought to find out whether the additional vocabulary lessons presented in Moodle, had an impact on their fluency, reading, and writing skills. In addition, the researcher wanted to know if students believed the materials and multimedia used had an impact on their other language skills. For this, a perception questionnaire was answered by each student participating in the investigation. The data collected by the questionnaire was analyzed by using a Likert scale using the terms *strongly agree*, *agree*, *neither agree or disagree* or *strongly disagree*. The questionnaire consisted of 27 premises which may be seen in the findings of this investigation.

### **Methodology and Activities**

This research was aimed at appraising the vocabulary acquisition of one group of students enrolled in INGL 3102 and another group INGL 3191 (January – May 2021) at the beginning and at end of the semester, in order to assess if there was a significant improvement in the amount of words students learned with the help of multimedia. It also sought to investigate how engaging in vocabulary acquisition activities using multimedia, may affect other

language skills like listening, oral production, writing and speaking.

During the month of January, and since we started classes face-to-face yet, there was the possibility of ending up online because of COVID-19; students received two workshops about using Moodle. In addition, the researcher uploaded videos in Moodle about how to use this platform in case the student as a doubt they can watch the video. In terms of the quantitative data, the investigator applied a vocabulary knowledge pre-test during the first week of class to assess how much vocabulary the students possess and to compare it with the result at the end of the investigation. Since there were established objectives in the syllabi and a limited class time, students watched the additional lessons as class assignments and in their spare time. In order to achieve this goal, the researcher recorded a series of eight vocabulary lessons using the multimedia equipment requested for the purpose of this investigation. These videos included the words and definitions of the vocabulary included in the test given to the participants. The videos were designed and recorded by the researcher. Once edited, these lessons were uploaded to Moodle by the researcher and students had full 24/7 access to these lessons.

An important aspect was that once the recorded vocabulary lessons were uploaded to Moodle, the student had access to them until the end of the semester so they could go back and search for any word they might have forgotten or watch the lessons in their spare time. Moreover, in order to collect the quantitative data to determine if the students acquired new vocabulary, a post-test was given to the students with the same structure and vocabulary words of the pre-test. The investigator then, analyzed the test by using a t-test in SPSS to find out differences. It is also important to emphasize that the vocabulary test for INGL 3102 and the test used in INGL 3191 would not necessarily include the same vocabulary words. Nevertheless, the same multimedia strategies

and teaching methods mentioned in the paragraph above, were used both groups.

Moreover, the researcher aimed at describing the students' perception whether the additional vocabulary lessons presented in Moodle had an impact in their fluency, reading, and writing skills if they believe the materials and multimedia used had an impact in their four language skills. This would provide qualitative data for the study. For this, a perception questionnaire was answered by each student participating in the investigation.

### **Description of the Study**

The investigator applied a vocabulary knowledge pre-test during the month of April as soon as UPR-Mayagüez' IRB approved this investigation. This had to be adjusted since the researcher wanted to begin in February; yet, permission was not granted until the IRB's approval. The test was taken by the students enrolled in the INGL 3102 and INGL 3191 courses, to see how much vocabulary they mastered at the beginning and to compare them with the results at the end of the investigation. Likewise, at the end of the investigation students were administered a post-test with the same structure and vocabulary words of the pre-test. The investigator then analyzed the test results to find out differences. The vocabulary words presented to students enrolled in INGL 3102 were different to the ones tested for INGL 3191. However, the multimedia strategies and teaching methods were the same. First the investigator selected forty words with their meaning from the academic vocabulary list for INGL 3102 and forty for INGL 3191. Then, the investigator decided to divide each group of forty words into four videos of ten words each, for both English courses, which students watched by accessing Moodle. A script was created for each video which were then recorded by this investigator. Moreover, in order to produce the videos; the camera, the tripod, the lighting set, the green screen, and the microphone were used accordingly in order to

create high quality recordings. Then, Prof. Anayarí Batista helped to edit the videos through *Apoyo A La Docencia*. It is important to state that all the material supplied with the university funds were kept in safe place and used during the creation of these videos.

Once the videos were prepared, students had already taken the pre-test to assess their knowledge of the new vocabulary words. Consequently, this researcher uploaded the videos to YouTube and then linked them to the Moodle platform where students could watch them at any moment. This was very convenient since in late April students went back to online classes. When students did their last two oral presentations, they chose to at least three of the words from the videos and used them in context. The last day of class students took the post-test which was the same as the pre-test. In addition, they answered the Perception questionnaire to find out their thoughts about the use of these videos with vocabulary words. Last, the investigator analyzed and compared all the answers to the pre and post-tests and also the answers to the perception questionnaires.

### **Results and Findings**

During this investigation a pre and a post-test were administered to the subjects in order to measure whether they had gained vocabulary from the videos presented in class. Even though we started the semester face-to-face; nevertheless, ended between online and face-to-face, from the INGL 3102 course eighteen students participated. Out of these eighteen students the pre-test showed that only two mastered the vocabulary, that is 11%. On the other hand, the post-test revealed that 67% of the students mastered the vocabulary which demonstrates there was a gain of new words. In the case of INGL 3191, there were sixteen participants. In the pre-test only three students mastered the vocabulary provided. However, results from the post-test revealed that thirteen students out of sixteen 81% mastered the vocabulary presented in the videos. Therefore,

answering the Research Question, what is the difference between the vocabulary knowledge students had at the beginning versus at the end of the course? We can conclude that the videos

were in fact a good tool to acquire new vocabulary which is so important in the acquisition and development of the language.

**Table 1**

INGL 3191 Students' Perception

INGL 3191 Premises:	Strongly Agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
1. Vocabulary is a skill that should be given more attention in language courses like English.	12	0	0	0	0
2. Vocabulary knowledge is a good indicator of academic success.	7	4	1	0	0
3. Vocabulary is a skill that should be given more attention in language courses like English.	12	0	0	0	0
4. Having a vast vocabulary knowledge is imperative in order to communicate effectively in the English language.	9	2	1	0	0
5. After watching the videos, you can state that those videos helped to develop academic skills by acquiring more vocabulary.	9	2	1	0	0
6. After watching the videos, you can state that those videos facilitated the acquisition of vocabulary.	9	3	0	0	0
7. After watching the videos, you can state that those videos improved your vocabulary.	8	4	0	0	0
8. Having videos guided by a professor helped students as independent learners more so than just a traditional list of words on a paper.	8	4	0	0	0
9. The videos presented were an effective tool that helped students gain rich vocabulary more easily than a traditional list of words on paper.	9	2	1	0	0
10. The videos with additional vocabulary words helped to develop more communicatively competent students in the English language.	9	2	1	0	0
11. Having videos with a professor pronouncing vocabulary words facilitated the acquisition of vocabulary more easily than a list of words on a traditional piece of paper.	9	3	0	0	0
12. Having videos with the inclusion of written vocabulary words projected for you to read facilitated the acquisition of vocabulary more easily than just listening to the word.	9	3	0	0	0
13. Videos like the ones presented in this investigation helped to promote and facilitate the acquisition of vocabulary words to development students capable of communicating effectively to deal with the high demands of the society.	10	2	0	0	0
14. Videos like these ones, should be included in <u>every English</u> class to facilitate the acquisition of new vocabulary.	9	3	0	0	0
15. These kinds of videos should be included in <u>every</u> language (Spanish, sign language, among others) class to	10	2	0	0	0

## The impact of multimedia...

INGL 3191 Premises:	Strongly Agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
facilitate the acquisition of new vocabulary.					
16. The included videos helped to improve the students' English language skills and their academic performance.	8	3	1	0	0
17. The videos promoted vocabulary words characterized by everyday social conversations and usage.	7	4	1	0	0
18. You would make time watch short supplementary videos like these, during my free time, just to learn more vocabulary.	7	5	0	0	0
19. Listening and speaking functions are meaningful and authentic communication tasks which should be given more attention in English courses with videos like these.	11	1	0	0	0
20. The videos helped to improve the students' English language skills and academic performance.	8	3	1	0	0
21. Recording videos using the vocabulary learned, helped me in the acquisition of the new words.	8	4	0	0	0
22. Using technology, like the videos, helped facilitate the acquisition of new vocabulary in a second language.	8	4	0	0	0
23. The length of the videos was appropriate.	10	2	0	0	0
24. The quality of the videos was appropriate for academic purposes.	10	2	0	0	0
25. Forty new words was enough content.	6	5	1	0	0
26. I believe more words should be included to the forty we already had on the videos.	4	5	3	0	0
27. This vocabulary words videos are a must for the English course.	8	4	0	0	0
28. Rate this investigation	4.82 out of five Stars				

This table shows the perception of the twelve students enrolled in INGL 3191 course who answered the perception questionnaire. The numbers indicate the number of students who strongly agree, agree, neither agree or disagree, or strongly disagree.

**Table 2**

### INGL 3102 Students' Perception

INGL 3102 Premises:	Strongly Agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
1. Vocabulary is a skill that should be given more attention in language courses like English.	4	3	0	0	0
2. Vocabulary knowledge is a good indicator of academic success.	4	1	2	0	0
3. Vocabulary is a skill that should be given more attention in language courses like English.	3	4	0	0	0
4. Having a vast vocabulary knowledge is imperative in order to communicate effectively in the English language.	3	3	1	0	0
5. After watching the videos, you can state that those videos helped to develop academic skills by acquiring more vocabulary.	4	3	0	0	0
6. After watching the videos, you can state that those	4	3	0	0	0

INGL 3102 Premises:	Strongly Agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
videos facilitated the acquisition of vocabulary.					
7. After watching the videos, you can state that those videos improved your vocabulary.	2	4	1	0	0
8. Having videos guided by a professor helped students as independent learners more so than just a traditional list of words on a paper.	4	3	0	0	0
9. The videos presented were an effective tool that helped students gain rich vocabulary more easily than a traditional list of words on paper.	4	3	0	0	0
10. The videos with additional vocabulary words helped to develop more communicatively competent students in the English language.	3	3	1	0	0
11. Having videos with a professor pronouncing vocabulary words facilitated the acquisition of vocabulary more easily than a list of words on a traditional piece of paper.	4	3	0	0	0
12. Having videos with the inclusion of written vocabulary words projected for you to read facilitated the acquisition of vocabulary more easily than just listening to the word.	4	3	0	0	0
13. Videos like the ones presented in this investigation helped to promote and facilitate the acquisition of vocabulary words to development students capable of communicating effectively to deal with the high demands of the society.	4	3	0	0	0
14. Videos like these ones, should be included in <u>every English</u> class to facilitate the acquisition of new vocabulary.	4	2	1	0	0
15. These kinds of videos should be included in <u>every</u> language (Spanish, sign language, among others) class to facilitate the acquisition of new vocabulary.	4	2	1	0	0
16. The included videos helped to improve the students' <u>English language skills and their academic performance.</u>	3	2	2	0	0
17. The videos promoted vocabulary words characterized by everyday social conversations and usage.	3	3	1	0	0
18. You would make time watch short supplementary videos like these, during my free time, just to learn more vocabulary.	2	4	1	0	0
19. Listening and speaking functions are meaningful and authentic communication tasks which should be given more attention in English courses with videos like these.	5	2	0	0	0
20. The videos helped to improve the students' English language skills and academic performance.	4	2	1	0	0
21. Recording videos using the vocabulary learned, helped me in the acquisition of the new words.	3	4	0	0	0
22. Using technology, like the videos, helped facilitate the acquisition of new vocabulary in a second language.	4	2	1	0	0
23. The length of the videos was appropriate.	4	3	0	0	0
24. The quality of the videos was appropriate for academic purposes.	3	4	0	0	0
25. Forty new words was enough content.	0	6	1	0	0
26. I believe more words should be included to the forty we already had on the videos.	1	3	3	0	0



## The impact of multimedia...

INGL 3102 Premises:	Strongly Agree	Agree	Neither agree or disagree	Disagree	Strongly disagree
27. This vocabulary words videos are a must for the English course.	3	3	1	0	0
28. Rate this investigation	4 out of five stars				

This table shows the perception of the seven students enrolled in INGL 3102 course who answered the perception questionnaire. The numbers indicate the number of students who strongly agree, agree, neither agree or disagree, or strongly disagree.

### Summary of the Tables 1 and Table 2:

These answers in both perception questionnaires were quite similar; therefore, the investigator can reach the same conclusion from the answers given. As a result, from the input provided by the students participating in this investigation, the investigator concluded that most, if not all, the students who answered the questionnaire do want vocabulary skills to be given more attention, especially in language courses like English. Out of the twelve students, nine believe that having a vast vocabulary knowledge is imperative in order to communicate effectively in English and also believe. In addition, they also said that the videos presented in the study facilitated the acquisition of new vocabulary which also helped develop other academic skills and communication competences. Students also Strongly Agreed or Agreed the videos presented improved their vocabulary and that being guided by a professor in the videos or a familiar face and their pronunciation, facilitated the learning process and helped them to be independent learners more than if it had been words on a piece of paper.

In order to answer the second Research Question: What is the perception of students to adding complementary vocabulary videos to English courses? Students strongly agreed or agreed, videos like the ones presented during the investigation should be included in every English class in order to facilitate the

acquisition of new words. Likewise, students stated that they would make the time to watch such videos since they were of an appropriate length and quality, and because they improved their English language skills and academic performance. Most participants mentioned that the amount of words was enough although more words may be included. They also said that going through the experience of them recording videos also helped them to acquire new vocabulary. Last, they rated these videos with 4.82 stars out of 5.

### Conclusion

This investigation has provided evidence which suggests using multimedia like videos, help motivate students into learning new words which also benefit in the vocabulary acquisition and oral practice. Likewise, multimedia has the benefit that in can be used in face-to-face, online or hybrid courses and that students are willing to take free time to watch them. Another benefit is that the Department now has a list of vocabulary words and videos which may be used in any of our English courses. In conclusion, as the literature revealed, this study confirms that the implementation of multimedia as a tool for learning, captures students' interest and has a positive impact in the acquisition of vocabulary in another language.

### Limitations and Recommendations

This author believes had it not been for the many setbacks encountered during this study; pandemic, difficulty finding an IRB, going back to online courses just two weeks into the study, one month to complete it, the results in the post-test could have been even higher. This investigator believes it would be good to

repeat this study in the near future at a time we are back to face-to-face courses and students are less stressed out. We know the hassles and unpredictability everyone has been through during the past two years; these elements were not taken into consideration when the investigation was planned since none could have predicted this to happen. It has been a strenuous two years a factor that may have affected the results since COVID-19 had a huge impact in the educational system; moreover, it changed our lives forever.

I do feel satisfied with what was achieved. I got an opportunity to do a study at UPR-P for the first time. In addition, I had the opportunity to record myself and create high quality videos by putting into use what my colleagues and I learned in the many Certifications we took during the past years. These videos can be used by other professors in similar courses in order to enhance the vocabulary skills of our students. Furthermore, with this study our English Department also gained a list of vocabulary words to be used as part of our courses, something that students have mentioned they need more of. Moreover, students gained new and richer vocabulary they can use in their following English courses or as part of their future plans. Last and equally important was the answers to the student's perception questionnaire. It is of great satisfaction for this investigator to have read the liked and enjoyed the videos. They also stated that they found the vocabulary and videos pertinent and suggested that they be used in all the other courses.

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