

WORCESTER POLYTECHNIC INSTITUTE

**The Incorporation of Technology-Based Learning in
Spanish Courses at WPI**

In partial fulfillment of the requirements for the
Degree of Bachelor of Science

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Date: May 2, 2010

Acknowledgments

First, I would like to acknowledge and thank my advisor, Professor Ingrid E. Matos-Nin, for allowing and helping me in completing this project. I would also like to thank her along with Professors Margarita Halpine and María Warren for allowing me to survey their students. In addition, I would like to thank all of the students who participated in my survey, because without them no real data could have been found.

Abstract

This project was done to evaluate whether the incorporation of technology into Spanish courses would be beneficial. A survey was given to nearly 100 current Spanish students and was then analyzed. Various resources pertaining to the subject along with the survey results led to the conclusion that technology based learning would indeed be beneficial for WPI students. A range of common to rare technologies could eventually be used in Spanish courses.

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1 Introduction

Spanish is increasingly becoming a more important language to know. Being a fluent speaker can be of great help to someone in getting a better job, it is also an important contributor to a student's cognitive development, and even helps our national security and economy. Learning about, and experiencing other cultures, will give students a more complete understanding of the rest of the world, essentially "opening their eyes" to things they might never have expected. Conversely, knowing where individuals fit with regards to the rest of humankind will greatly change their perspective of life, thus helping them grow and mature due to a better understanding of themselves.

Since acquiring fluency in Spanish can be so beneficial, it becomes apparent that students at WPI who take Spanish courses should end up becoming fluent or at the very least, very competent in the language. The methods that are imposed in the courses now do not always allow this level of accomplishment, so something must be done so that our students can achieve higher levels of fluency.

Many students at WPI take Spanish courses to fulfill their "Humanities and Arts" requirement. Six courses are offered that teach the students how to become quite proficient in the language. These courses are mainly taught in the same manner as they have been for decades, by the repetition and memorization of verbs, grammar, sentence structure, etc. This is neither the most "fun" nor interactive way to learn a language or anything at that. Therefore, this opens up the question of how to improve

the system so that students will learn faster, stay interested, and at the end of the six courses, become even more articulate in Spanish than if they had done things the “traditional” way. This is where incorporating more technology in the classroom could end up being of enormous benefit.

The students of today are very different from students from the past. The reason for this can be best explained by the culture we have been brought up in, especially the influences of technology and its incorporation into all aspects of our lives. As technology advances, people adapt by doing and learning things differently. This becomes problematic when people become so digitally focused that they have difficulties learning and even paying attention when material is taught using the same methods as they have been for decades. This is why modifying the way in which Spanish courses are taught could be quite beneficial to WPI students, especially if the addition of more technology becomes incorporated.

Many different types of resources were used in determining whether changes should be imposed and if so, what types of changes would be the most beneficial for students. These resources fully encompassed both language learning and learning in general. They ranged from previous studies, what types of technologies are currently available, how the brain actually learns and remembers things, and even the psychological factors involved in learning. Incorporating many if not all aspects pertaining to the subject of solving this problem is the best way to get the most complete and accurate results. This

is because when viewing the “Big Picture,” all of the smaller pieces that make up the whole must also be analyzed, or else the full picture cannot be completely understood. A survey was also given to 86 WPI students that were currently taking a Spanish course. This survey was given to understand the student’s motives behind their learning Spanish, and their opinions on what the best method of learning Spanish is. The final question on the survey was whether they thought it would be beneficial to incorporate a fun video game into class, through which Spanish would be learned. This final question was the primary focus of the project, and the students surveyed were greatly in favor of this new incorporation.

2 Background

Spanish is an ever-growing, important language and when learning it as a second language (L2), it is crucial to be using the best tools available. Becoming bilingual, especially in Spanish is very advantageous when searching for a great job. Most schools teach Spanish in the “traditional” way, which revolves around rote memorization. This is not the most effective way to teach the class, especially now that more and more technology can be incorporated into the class. This chapter will address many types of technology that can be used to learn Spanish along with background information about learning, memory, and what seems to work best. The first section will look at the different types of computer-based technology that can be used and are being used to teach Spanish. The second section will talk broadly about learning and memory, and the best methods for learning new languages. The third section will discuss interactive games through which one can learn a second language.

2.1 Various Technologies Used for Language Learning

The technologies that are being used for language learning focus mainly around computers and the Internet. The first types of technology mentioned are social-networking sites that allow people to interact socially over the Internet. Next, computer-assisted language learning will be discussed. Further on, podcasting and video-podcasting are discussed which broadcast audio and video files over the Internet. The final topic being discussed involves computer software that teaches Spanish.

2.1.1 Social-Networking Sites for Language Learning

Social-networking sites (SNSs) like Facebook and MySpace have been shown to be able to improve L2 learning by directly communicating with other people around the world. It has been demonstrated that when communicating, especially with native speakers, you will learn a lot faster and a lot more. If a good relationship builds between a native Spanish speaker learning English and some English-speaking individual learning Spanish, they can practice speaking to each other in the language they are learning, so they can correct each other as they go. However, this is not a live voice chat, which would be the best way of this type of incorporation (McBride 2009).

2.1.2 Computer-Assisted Language Learning

Computer-Assisted Language Learning (CALL) has come a long way since it was first developed. Call has the ability now to help with a student's pronunciation and can also show you when to pause, stress words or phrases, and the use of intonation (Tanner and Landon 2009). The type of feedback with CALL programs is very important, because if you just click a button to get the correct answer, you probably will not learn as much as you would if the program gave you hints and explained why you were wrong. This is why if using a CALL program it must be very good at showing where the student went wrong, because that is how they will learn (Murphy 2009).

2.1.3 Podcasting and Video-Podcasting

Both audio podcasting and video-podcasting can be quite beneficial to L2 learning.

These methods allow students to record either their voice, or a video of them doing some type of assignment. These recordings can then be put on the Internet and viewed by anyone, or by only a select few. Once a submission has been made, others can view or listen to them, and comment and correct anything that they know is incorrect. This has been shown to work quite well with a small set of college students who submitted 3-5 minute podcasts, to which their professor and peers left comments and feedback. Their individual pronunciation was initially emphasized, but towards the end of the semester, the students became more focused on the grammar and vocabulary and less interested in the correct pronunciation, which would be the only downside to this method (Ducate and Lomicka 2009). Video-podcasting is very easy now mainly because of YouTube, in which videos can be uploaded instantly, for the whole world to see. Some people may be shyer than others and not want to participate in submitting videos, so they could just submit a regular audio podcast (McBride 2009).

2.1.4 Language Learning Software

There is a great deal of language learning software out there today. The most known is probably Rosetta Stone, which of course claims they are the best, but there are other good programs like Fluenz Spanish and Rocket Spanish. Rosetta Stone mainly shows pictures and has native speakers say words and phrases, so you learn by combining a visual input (picture), written words, and sounds, without any English. Fluenz Spanish on the other hand translates everything from Spanish to English using native speakers and can have the subtitles on or off. Rocket Spanish is for people who can learn by just listening, and the files can be played on an mp3 player, whenever, wherever. Therefore, there is a big variety in types of software that can help one learn Spanish (Rosana Blog, The).

2.2 Learning, Memory, and the Best Ways to Learn a New Language

Learning and memory are the basis of learning and being able to use a new language. The first part in this section will go over how the brain actually learns and is able to form memories. The second part will explain how a language is learned with respect to a psychological background. The final section will discuss generally good ways of learning Spanish.

2.2.1 Learning and Memory with Respect to the Brain

The brain has many parallel pathways, like with vision. When something is seen, its motion, color, and shape all run in parallel on different neurons and land in different parts of the brain where they are further processed. So one may think they are observing something in one area, all at once, they actually are not (Bear et al. 2007, 330). The brain also shows plasticity, in which different parts can overlap and take on different functions. An extremely big help in memorizing things is the concept of relational memory. This is when memories form that links everything that is happening at once, which demonstrates that memories are best formed when many if not all the senses are involved (749-750). This is a key feature of declarative memory formation, which is the type of memory that involves learning Spanish for example. One final example that helps show that memories are connected through all senses is that if a rose is viewed and smelt, either the smell or the sight of the rose can tell you that it is a rose, but the same cannot be done with something like an onion. This shows a genuine association between the two stimuli, and that one can lead to the other (780).

2.2.2 The Psychology of Learning a Language

There are two basic approaches to learning how to read a new language. The first one is the phonics approach, which focuses on phonics and the basic rules of translating letters into their appropriate sounds. The whole-language approach indicates that reading materials should be meaningful, and focus on real-world material. This approach

teaches the recognition of whole words and even sentences, without having to go through all of the phonics stuff in which learning can become much faster. To increase vocabulary, direct instruction teaches students the definition of words; and immersion has students involved in reading, listening, and other activities by which the students learn the definitions simply by being directly involved in whatever process they were presented and realizing the context in which they were used. Most researchers agree that most vocabulary is learned by this method, not simply memorizing the definitions (Santrock 2008, 369-370).

2.2.3 Definitive Ways to Learn Spanish

Captioning videos has been shown to improve understanding of foreign films because English sub-titles can be read as a Spanish movie is being watched. One particular study showed that for Spanish students, captioning the video the first time watched and not captioning the second time was very effective when having to perform an oral vocabulary test after watching the videos. This method could reduce the listener's anxiety and activate selective and global listening strategies, thus allowing automatic processing (Winke et. al. 2010). Traveling for an extended amount of time to a Spanish speaking country is also a great way to fully immerse yourself in Spanish culture and it allows you to learn Spanish very quickly. Since all parts of the brain are somehow linked, going away for an IQP or MQP, and studying abroad will leave you fully immersed in the language. You would have to speak Spanish, listen to it, read it, and

see everything that is culturally Spanish. One company that specializes in this is called statravel, and if you book with them online they actually have a class to teach you both the language and culture, and you can also roam around and go on tours and just explore the country (Elrod).

2.3 Interactive Games

A few interactive games have either been used or created in order to learn a new language. First, there is a game called TILT that is used by American soldiers to learn a new language like Arabic, and is an extremely advanced game. Second, there is a website called games2train.com, which contains much simpler games but can also help in language learning. The last section will describe how a game like The Sims 2 can be used in language learning.

2.3.1 Tactical Iraqi Language and Culture Training (TILT)

This game is used by many of the United States Armed Forces, in order to learn Arabic language and Iraqi culture. This game is extremely advanced; you speak Arabic into the microphone, and are instantly given feedback on how, what, and when to speak Arabic. It also gives you tips on what kind of body language you should be using when conversing. It not only teaches you the language, and also that it is not just what you say that matters, it is how you say it (Leipold). The game teaches these vital concepts through its advanced system that allows the game to analyze if any mistakes are made

in either speech or body movements. If a mistake is made, a villager may call you out and you may be in trouble. The reason for having this amount of technology is that in real-life if one of these vital mistakes were made, that soldier would be dead, so essentially this game is saving actual lives (Murr 2004).

2.3.2 Games2train.com

This website has simple games in which Spanish can be learned. These games are question-led, and can be used solely with questions, if you do not want to play the game. It teaches through the use of not telling you what you already know, learning through mistakes, multi-sensory stimulation, and many other methods. You can discover things or have tasks that must be completed, so with this program you get a wide variety of approaches by which to learn (Prensky).

2.3.3 Language Learning Using The Sims 2

The Sims 2 can be used to learn and practice Spanish by recording what your character is doing in the game, and synchronizing it with your character actually doing what you say they are doing. The professor can then correct any mistakes, and students view and listen to what their peers did. This most likely can be done using other games as well (Purushotma 2006).

3 Procedure

The main goal of this project was to see whether incorporating technology-based learning into Spanish courses at WPI would be beneficial. Research was done on topics that showed how language could be taught via the use of technology. Most of these resources were found through the internet. One particular on-line journal was very helpful, because the name of the journal was “Language Learning & Technology” and that included exactly the type of references I was looking for. Any data that could not be found there that needed to be up to date was searched for online and eventually found. The information about the brain and psychology with respect to learning was found using textbooks I already had.

The survey that was conducted was given to Spanish students in Professor Ingrid Matos-Nin’s Elementary Spanish I and Advanced Spanish I classes, one to Professor Margarita Halpine’s Advanced Spanish I class, and one to Professor Mariá Warren’s Elementary Spanish I class. Once all of the surveys were tabulated into Excel, graphs were made visually showing the results. Most of the data was represented as pie charts, because they made the most sense when dealing with percentages.

4 Results

This chapter contains the data gathered from the 86 WPI students that took part in the voluntary survey given. The English version of the survey can be found in Appendix A, which was the survey that was given to the students. The survey has also been translated into Spanish, and can be found in Appendix B. The raw data from all 86 surveys can be found in Appendix C. The raw data is useful for very in-depth analyses because it shows each answer for every individual.

The first part of the survey asked the sex and graduation year for the participant. This data by itself provided no value to the goal of the project, so no figures were made of them.

The first actual question on the survey asked why the student was taking Spanish classes. The five possible responses can be seen below in Figure 1. Some students chose more than one response, and since the graph was made to represent all of the data, it is shown as percentages for all the data collected.

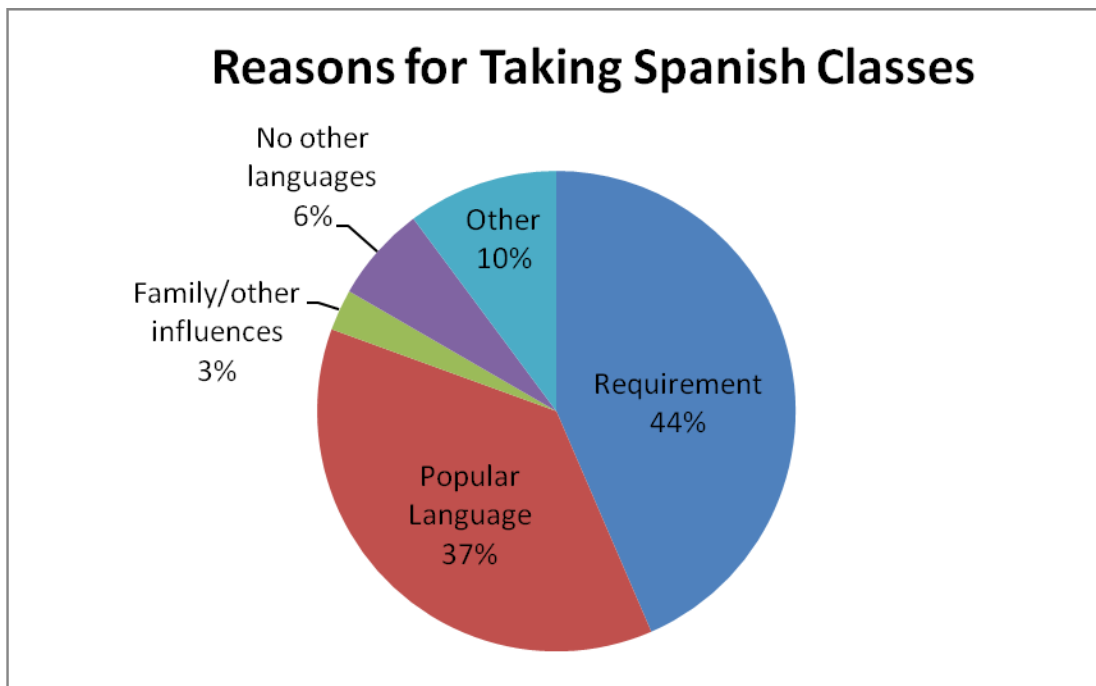


Figure 1: Reasons for Taking Spanish Classes

The second question asked whether the student always wanted to learn Spanish. This was a simple yes or no question and the combined data can be seen in Figure 2.



Figure 2: Whether Spanish Always Wanted to be Learned

Question 3 asked what the students wanted to accomplish by taking Spanish. Some students again chose more than one response, and the percentages per response can be seen in Figure 3.

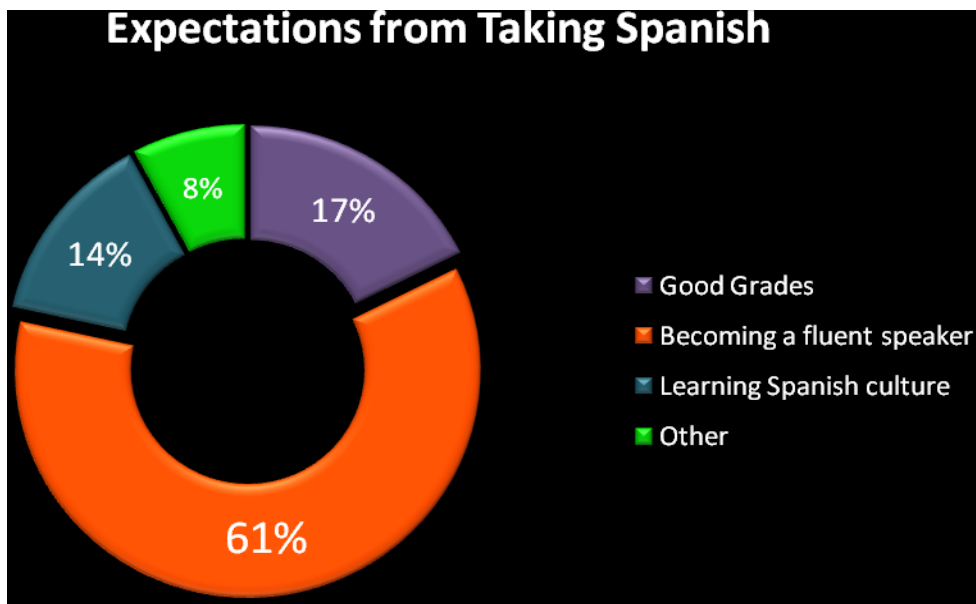


Figure 3: Personal Accomplishments from Taking Spanish Courses

The fourth question on the survey asked if they thought their futures could somehow benefit from taking Spanish now. Any type of benefit would suffice for answering “Yes,” but specific examples like getting a better job or traveling to Spanish speaking countries were given as reference points. This data can be seen in Figure 4.

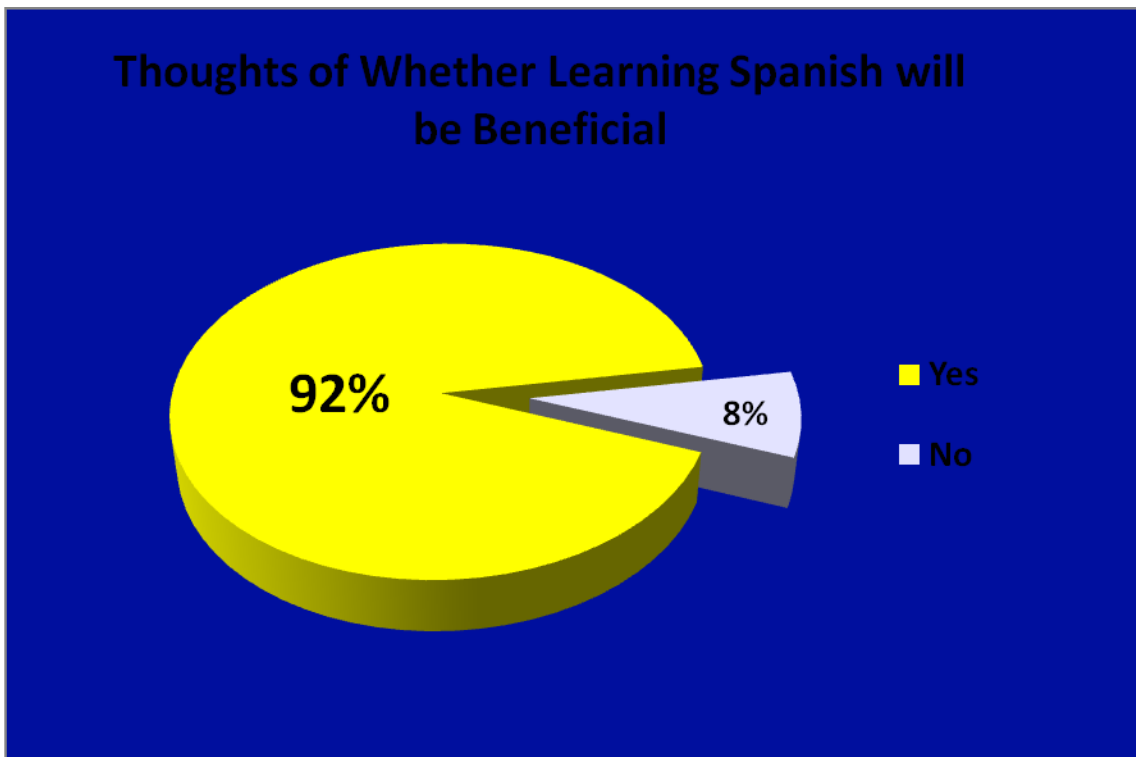


Figure 4: Will Spanish Help my Future in any Possible Way

The fifth question also had only yes or no responses, and asked if they thought that taking six Spanish courses was easier than writing a sufficiency as with other Humanities and Arts classes. The combined responses for this question are located in Figure 5.

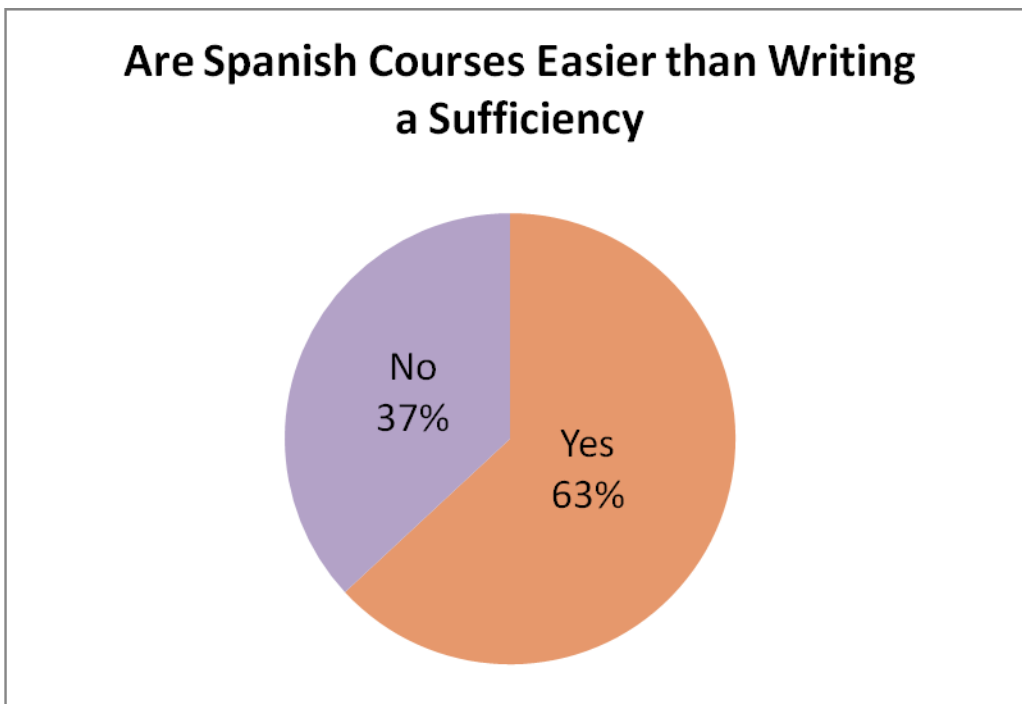


Figure 5: Are Six Spanish Courses Easier than Writing a Sufficiency

The only languages taught at WPI are Spanish and German, so question 6 asked if there were other languages available at WPI, would they be more inclined to take a different language. These results gave a perfect 50:50 ratio between yes and no, and the simple graph is shown in Figure 6.

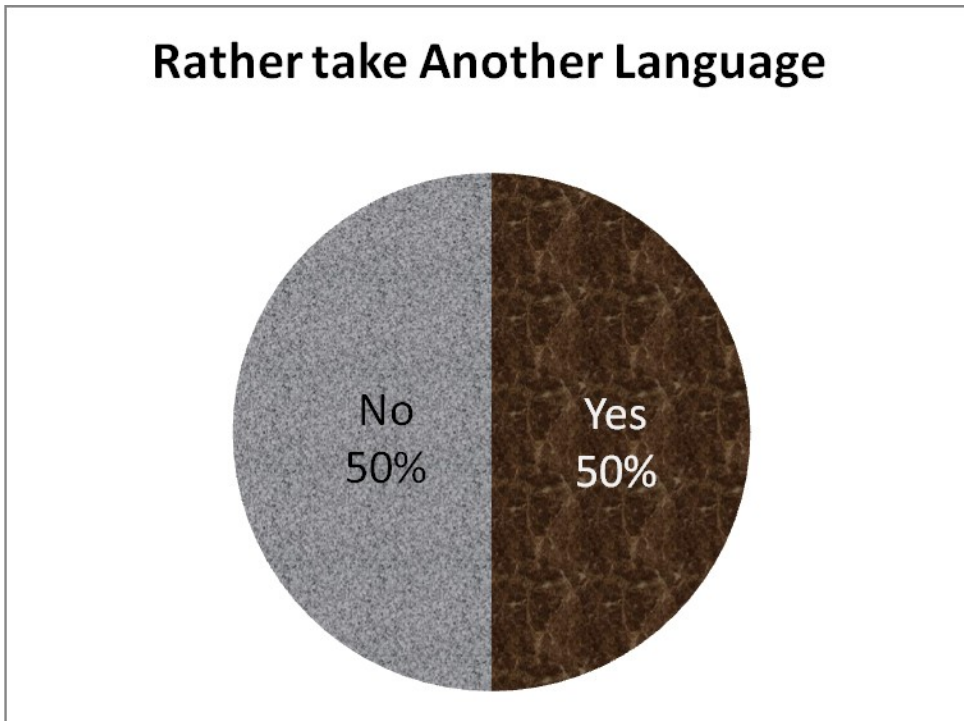


Figure 6: Percentages of Rather Taking another Language if one were offered

The follow-up to question six, asked what preferential language they rather take if offered at WPI. Ten preferred languages were given, and the total amount of students who chose each one can be found in Figure 7.

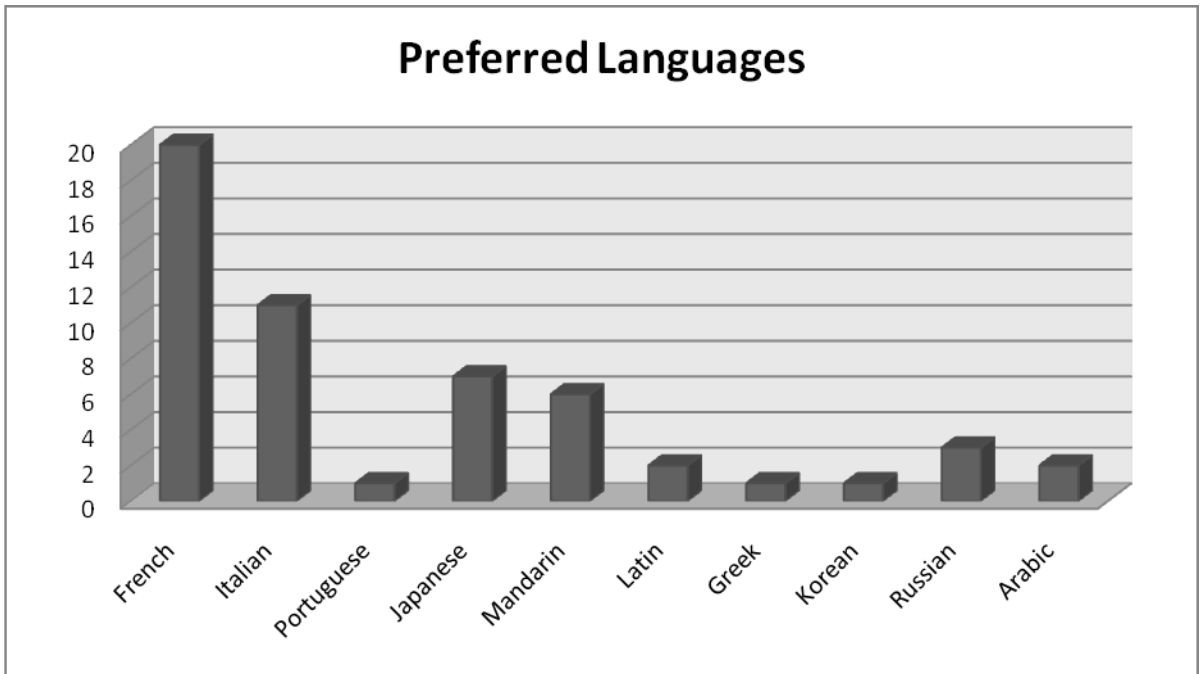


Figure 7: Amount of Students that Rather Take a Language not offered at WPI

The seventh question had six options, and the best way of learning Spanish was to be chosen. Again, students often chose more than one, with 16 students choosing all of the possibilities. The 16 that chose all were put into a separate category so that the first five possible answers would not all have 16 extra votes on them. This better displays the data, and the differences can be seen more clearly. The results for this question were displayed by the number of times people chose each method, and can be seen in Figure 8.



Figure 8: Opinions on what is the Best Method to Learn Spanish

The question on whether the students were planning to get a minor in Spanish was asked in question eight. The ratio between students planning on it to not was around 1:2, and the data can be seen below in Figure 9. The question also had a follow-up, which was to explain why they were, or were not planning to minor in Spanish. The general analysis for why they were planning to get a Spanish minor was because it will help them get better jobs, and the reason why they were not was primarily due to not having enough time to do so. Each individual response can be seen in Appendix C.



Figure 9: Percentage of Students who Plan to get a Minor in Spanish

The last and most important question of the survey was whether the students would want a fun video game incorporated into Spanish classes. It was stated that perhaps the Department of Interactive Media and Game Development (IMGD) could possibly make it, thus keeping everything “in house” and controlled by WPI. This was question nine, and the results can be seen in Figure 10.



Figure 10: Would a Fun Video Game Incorporated into Spanish Classes be Beneficial

5 Analysis of Results and Other Resources Used

The main part of this project was to gather various types of information that related to the incorporation of technology-based learning of foreign languages, especially for Spanish classes. Learning and memory in general were also on the list of information to be found. The results from the survey given to WPI students were also very important, because the data retrieved directly correlates to WPI students who are currently taking Spanish courses.

Most of the background information found pointed towards technology being an essential resource in the ability to learn Spanish. All of the current technologies, whether a Social-Networking Site, Computer-Assisted Language Learning, Podcasting, and even software like Rosetta Stone have all been shown to be beneficial in learning Spanish. CALL and Rosetta Stone are non-interactive in the sense that there is no communication with other humans, it is just a computer. The more interactive technologies seemed to work better.

The game TILT seemed to be one of the best ways to incorporate technology into Spanish class, but we would not need such an advanced game. The way the brain processes things and the psychology behind it show that the best way to learn is to involve multiple senses, if not all of them. This is why TILT would be the best option here.

As for the data from the survey, Figure 1 shows that the majority of people take Spanish because it is a requirement or because it is a popular language.

Figure 2 shows that around $\frac{3}{4}$ of the students always wanted to learn Spanish, which is a high percentage.

The majority of people want to become fluent speakers, because 61% of the students in Figure 3 said so.

Figure 4 reveals that 92% of students polled believed that learning Spanish now would somehow benefit them in the future.

Around two-thirds of the students believed that taking 6 Spanish courses is easier than doing a Sufficiency, which is seen in Figure 5.

Figures 6 and 7 show that exactly 50% of people rather take another language, and the most popular language was French, probably because they took it in high school.

Figure 8 demonstrates that the majority of people believe that speaking is the best way to learn Spanish, but also 16 people said that all methods should be incorporated.

Figure 9 shows that almost $\frac{1}{3}$ of the students are planning to get a minor in Spanish.

Finally, Figure 10 shows that most people believe that the incorporation of a fun video game would benefit the courses.

6 Conclusions and Recommendations

After all the research had been done on previous studies, and what is available now, it is clear to me that more technology should be incorporated into Spanish courses. The students surveyed show that many or all methods of learning are the best ways to learn Spanish. It is clear that technology plays a vital role in today's society, so incorporating it in class seems obvious. If the tools and resources are available, then we should be using them. It would be a good idea if the IMGD made a game that could then be used directly in WPI classes. This game must use multiple senses in order to achieve the best results concerning memory. Microphones should be added to a computer lab in which the professor could communicate with each individual student. If a local or global program that teaches English as a second language to native Spanish speakers could eventually be incorporated into a new "language learning experience" at WPI, then direct communication between WPI students learning Spanish could be made with these other students. This would be a great experience for all, and a great way to practice speaking, because both parties would speak in the language they are learning, and the native speaker would then be able to correct them.

Future work that should be done would be a cost analysis, because TILT cost \$7.4 million, and I know we cannot spend anywhere near that, so a realistic price with realistic benefits should eventually be found.

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Appendix A: Survey Given to Students

IQP Spanish Survey

Are you a Male or Female?

What year do you graduate?

1. Why are you taking Spanish classes? A. Requirement. B. Popular language.
C. Family/other influences. D. No other languages. E. Other _____

2. Did you always want to learn Spanish? Yes No

3. What do you want to accomplish by taking Spanish? A. Good grades B. Becoming
a fluent speaker. C. Learning Spanish culture D. Other _____

4. Do you think by taking Spanish now it could improve your future; like getting a better
job, traveling to Spanish countries, or some other type of benefit? Yes No

5. Do you think that taking 6 Spanish courses is easier than having to write a sufficiency
like in other humanities classes? Yes No

6. If there were other languages that were taught besides Spanish and German would
you be more inclined to take one of those? Yes No

If yes, what language would you want to take? _____

7. What do you think is the best way to learn Spanish? A. Reading. B. Writing.
C. Visually. D. Listening. E. Speaking. F. Other _____

8. Are you planning on getting a minor in Spanish? Yes No

Why or why not?

9. If the Department of Interactive Media and Game Development (IMGD) made a fun
video game through which you would learn Spanish, would you want that to be
incorporated into class? Yes No

Appendix C: Raw Data from Collected Surveys

CLASS	M/F	YEAR	Q1	Q2	Q2 why	Q3	Q4	Q5	Q6	Student	Q8 What	Q7	Q8	Q8 Why	Q9
AL	M	2002	B	Yes		B	Yes	Yes	Yes	1	Italian	A	Yes	Only have to take a few more classes to get a minor, since I'm doing my S&F in Spanish.	No
AL	M	2002	B	Yes		B	Yes	No	No	2		E	No	Not enough time.	Yes
AL	F	2002	A	Yes		C	Yes	Yes	Yes	3	French or Italian	E	No		No
AL	M	2001	B	Yes		B	Yes	No	Yes	4	Greek, Latin	E	No	Time Requirement	Yes
AL	M	2003	B	Yes	after high school	B, C	Yes	Yes	No	5		A, B	No	If I didn't play basketball maybe.	Yes
AL	M	2002	A	Yes		B	Yes	Yes	No	6		E	No	Just haven't thought about it. Could still be an option.	Yes
AL	M	2002	A, D	Yes		B	Yes	Yes	No	7		F; Combination of all	No	Already doing another minor.	No
AL	F	2002	A	Yes		A, B	Yes	Yes	Yes	8	French	A, B, D, E	No	Can't bother.	No
AL	M	2002	A, D	Yes		B	Yes	Yes	No	9		E	Yes	I figure I am so close after sufficiency why not.	Yes
AL	F	2002	A	Yes		D; Sufficiency	Yes	Yes	No	10		D, E	Yes		Yes
AL	F	2003	B	Yes		B	Yes	Yes	Yes	11	Arabic	E	No	Course overload.	Yes
AL	F	2003	A, D	No		D; Able to hold a conversation.	Yes	Yes	Yes	12	Portuguese	F; All	Yes	It's only an extra 3 classes and good for transcript.	Yes
AL	F	2003	E; to minor in it	Yes		B	Yes	No	No	13		E	Yes	Because I think it will be helpful in the future.	Yes
AL	M	2003	A	Yes		B	Yes	Yes	No	14		E	Yes	To graduate with something more than just an Engineering Degree.	Yes
AL	F	2003	B	Yes		B, C	Yes	Yes	No	15		D	Yes	It is beneficial for future- to put on resume. You have an advantage over others since it's a popular language.	Yes
AL	F	2003	A, D	Yes		B, C	Yes	Yes	Yes	16	Italian	D	No	Already getting another minor so I do not have enough electives.	Yes
AL	F	2002	A	Yes		B, C	Yes	Yes	No	17		E	Yes	I've taken Spanish for 6 years- I want to do more with it after college.	Yes
AL	F	2002	B	Yes		B	Yes	Yes	No	18		E	No	No room for extra classes.	Yes
AL	F	2002	E; Didn't want to go to Holy Cross for French.	No		B	Yes	Yes	Yes	19	French	D	No	I'm not good enough at it lol.	Yes
AL	M	2002	B	Yes		B	No	Yes	No	20		C	No		Yes
AL	M	2002	A	Yes		A	Yes	Yes	Yes	21	Japanese	D, E	No	Not interested.	Yes
AL	F	2002	D	Yes		C	Yes	No	Yes	22	French	E	Yes	... edge useful for my major	Yes
AL	F	2002	A	Yes		B	Yes	Yes	No	23		E	No	Lack of time. I want to do a math minor.	No
AL	F	2001	A, D	No		B	Yes	No	Yes	24	Chinese, Arabic, Russian	A, E	No		Yes
AL	M	2003	B	Yes		B	Yes	Yes	No	25		E	Yes	job opportunities.	No
AL	F	2003	A	No		C	No	Yes	Yes	26	Chinese	A, B	No	I don't need to.	Yes
AL	M		A, D	Yes		A	Yes	Yes	No	27		E	No		Yes
AL	F		B, D	Yes		A, B	Yes	No	No	28		E	No	I want to get a different minor.	Yes
AL	M	2003	C	Yes		B	Yes	Yes	Yes	29	Japanese, Russian, Italian	E	Yes	It would reflect well on my communication skills.	Yes
AL	M		B	Yes		B	Yes	Yes	Yes	30	Italian	D	Yes	Want to be fluent... more marketable.	Yes
AL	M		B	Yes		B	Yes	Yes	Yes	31		E	No		Yes
AL	F	2003	A, B, E; minor	Yes		B	Yes	Yes	Yes	32	Italian	B, E	Yes	I want to become fluent in the language.	Yes
AL	M	2001	A	No		B	No	Yes	Yes	33	Mandarin	E	No		No
AL	F	2002	B	Yes		B	Yes	No	Both; I would take two	34	Chinese	E	No	Because I do not want to hurt my GPA more than I currently am.	Yes
AL	M	2003	B	Yes		B	Yes	Yes	No	35		E	No		Yes
AL	M	2002	B	Yes		B	Yes	Yes	No	36		E	Yes	Because I already have six courses towards it.	Yes
AL	F	2000	A	Yes		A	Yes	Yes	Yes	37	Italian	A	No	Not enough classes for a minor (Double Majoring).	Yes
AL			A	No		D; Fulfill K&M requirement for graduation.	No	No	No	38	French, Korean, Japanese	E	No	Too hard.	Yes
AL	M	2001	A	No		D; Complete sufficiency	No	Yes	Maybe?	39	French, Japanese	A, B	No	No need.	Yes

CLASS	M/F	YEAR	Q1	Q2	Q3 why	Q4	Q5	Q6	Q7	Student	Q8 (what)	Q9	Q10	Q11 Why	Q12
A1	M	2012	B	Yes		B	Yes	Yes	Yes	1	Italian	A	Yes	Only have to take a few more classes to get a minor, since I'm doing my Sufr. in Spanish.	No
A1	M	2012	B	Yes		B	Yes	No	No	2		E	No	Not enough time.	No
A1	F	2012	A	Yes		C	Yes	Yes	Yes	3	French or Italian	E	No		No
A1	M	2013	B	Yes		B	Yes	No	Yes	4	Greek, Latin	E	No	Time Requirement	No
A1	M	2012	B	Yes	after high school	B, C	Yes	Yes	No	5		A, B	No	If I didn't play basketball maybe.	No
A1	M	2012	A	Yes		B	Yes	Yes	No	6		E	No	Just haven't thought about it. Could still be an option.	No
A1	M	2012	A, B	Yes		B	Yes	Yes	No	7		F, Combination of all	No	Already doing another minor.	No
A1	F	2012	A	Yes		A, B	Yes	Yes	Yes	8	French	A, B, D, E	No	Can't bother.	No
A1	M	2012	A, D	Yes		B	Yes	Yes	No	9		E	Yes	I figure I am so close after sufficiency why not.	No
A1	F	2012	A	Yes		D: Sufficiency	Yes	Yes	No	10		D, E	Yes		No
A1	F	2013	B	Yes		B	Yes	Yes	Yes	11	Arabic	E	No	Course overload.	No
A1	F	2013	A, B	No		D: AMe to hold a conversation.	Yes	Yes	Yes	12	Portuguese	F, All	Yes	It's only an extra 3 classes and good for transcript.	No
A1	F	2013	E, to minor in it	Yes		B	Yes	No	No	13		E	Yes	Because I think it will be helpful in the future.	No
A1	M	2013	A	Yes		B	Yes	Yes	No	14		E	Yes	To graduate with something more than just an Engineering Degree.	No
A1	F	2013	B	Yes		B, C	Yes	Yes	No	15		D	Yes	It is beneficial for future to put on resume. You have an advantage over others since it's a popular language.	No
A1	F	2012	A, B	Yes		B, C	Yes	Yes	Yes	16	Italian	D	No	Already getting another minor so I do not have enough electives.	No
A1	F	2012	A	Yes		B, C	Yes	Yes	No	17		E	Yes	I've taken Spanish for 6 years- I want to do more with it after college.	No
A1	F	2012	B	Yes		B	Yes	Yes	No	18		E	No	No room for extra classes.	No
A1	F	2012	E: Didn't want to go to Holy Cross for French.	No		B	Yes	Yes	Yes	19	French	D	No	I'm not good enough at it lol.	No
A1	M	2012	B	Yes		B	No	Yes	No	20		C	No		No
A1	M	2012	A	Yes		A	Yes	Yes	Yes	21	Japanese	D, E	No	Not intend to.	No
A1	F	2012	D	Yes		C	Yes	No	Yes	22	French	E	Yes	...edge useful for my major.	No
A1	F	2012	A	Yes		B	Yes	Yes	No	23		E	No	Lack of time. I want to do a math minor.	No
A1	F	2013	A, B	No		B	Yes	No	Yes	24	Chinese, Arabic, Russian	A, E	No		No
A1	M	2013	B	Yes		B	Yes	Yes	No	25		E	Yes	Job opportunities.	No
A1	F	2013	A	No		C	No	Yes	Yes	26	Chinese	All	No	I don't need to.	No
A1	M		A, D	Yes		A	Yes	Yes	No	27		E	No		No
A1	F		B, D	Yes		All	Yes	No	No	28		E	No	I want to get a different minor.	No
A1	M	2013	C	Yes		B	Yes	Yes	Yes	29	Japanese, Russian, Italian	E	Yes	It would reflect well on my communication skills.	No
A1	M		B	Yes		B	Yes	Yes	Yes	30	Italian	D	Yes	Want to be fluent... more marketable.	No
A1	M		B	Yes		B	Yes	Yes	Yes	31		E	No		No
A1	F	2013	A, B, E: minor	Yes		B	Yes	Yes	Yes	32	Italian	B, E	Yes	I want to become fluent in the language.	No
A1	M	2013	A	No		B	No	Yes	Yes	33	Mandarin	E	No		No
A1	F	2012	B	Yes		B	Yes	No	Maybe (I would take two)	34	Chinese	E	No	Because I do not want to hurt my GPA more than I currently am.	No
A1	M	2013	B	Yes		B	Yes	Yes	No	35		E	No		No
A1	M	2012	B	Yes		B	Yes	Yes	No	36		E	Yes	Because I already have six courses towards it.	No
A1	F	2010	A	Yes		A	Yes	Yes	Yes	37	Italian	A	No	Not enough classes for a minor (Double Majoring).	No
A1			A	No		D: Full WLM requirement for graduation.	No	No	No	38	French, Korean, Japanese	E	No	Too hard.	No
A1	M	2013	A	No		D: Complete Sufficiency	No	Yes	Maybe?	39	French, Japanese	All	No	No need.	No