Appendix:

First interview transcript:

David:

Hello, Mrs. Morey. Thank you for being my client for my computer science IA. I would like to ask if you perhaps have been encountering some problems in your Spanish classes?

Mrs. Morey:

So, what types of problems were you thinking about and what level? ab initio or DP

D:

Probably ab initio. Like when people start learning.

M:

So something that could help them learn, perhaps a strategy or a computer program. Okay. Yes. So, I would definitely say memorizing vocabulary. The amount of vocabulary to mesmorize is really difficult for students, and that's where you can get them to be successful: helping their recurrency of vocabulary.

D:

What would be some exercises you think would be effective when coming to memorizing?

M:

So it would be interesting if you had a software where they might give you a flashcard of let's say, "Tienda". The students would have to then recognize: "Oh, that's shop". And vice versa.

It's easier to go from Spanish to English first. A more difficult level is then to go from English to Spanish. So like, you see the word shop and have to come up with Tienda.

What happens is as students go through these vocabulary practices, they'll do it once and then they might not study it again until a test. Also, they go through it once and then they might be done with it. What I would like to see is a program that will learn which ones they got wrong and keep floating those so that they see those vocabulary words more often. So something where if they went on every week, they're not always going over things they know. I'd rather them go over the ones that they didn't know until they know it. And so the program that could learn from their mistakes would be ideal.

D:

I see, how many times should they encounter the words?

M:

I am not so sure of the scientific number, but around four to five times for an Ab initio level, I think, is where students could remember and retain it using flashcards.

D:

I see.

M:

Is that something you would use for your IA?

D:

Maybe I just like I would say it's more like about between how long is the next encounter.

M:

Oh, I see. Let's say you studied unit one and then you study all the vocabulary unit one and you take the test and everything. Great. But then you might not study that vocabulary again for another year and that's way too long. So, it would be great if the vocabulary just can keep circulating and recycling. So that when they're on unit two, maybe some of those words they learn in unit one come up in the flashcard as well. Right. Not just new vocabulary, but it's cycling from the previous units. So, it's constantly throwing words for the students to test: like "do you remember this word?".

Maybe by the end of the year they will have seen that word at least four times. So you can imagine the bank of vocabulary words is usually around 600 to 700 words at the end of year one. So those 700 words, it would be nice to cycle them throughout the year as they continue to retain some of that vocabulary as they continue to see it. In that way, they should be able to retain the words personally.

D:

And in terms of practicing vocab, would it be better for an application where the student enters whatever the vocabulary that he wants to know or there should be already a set list of vocabulary and he has to go through it?

M:

Well, that's in part. So, part of it is that there should be a set list that they can begin with that they need to have in order to be successful in how they're using engaging with the language. But you're saying would it be good if they put in their own words to learn? Students do that, but what they tend to use is Google Translate, and I don't want them to use Google Translate.

D:

Okay. So, for now, the criteria would be to learn from mistakes and have recurring encounters of words.
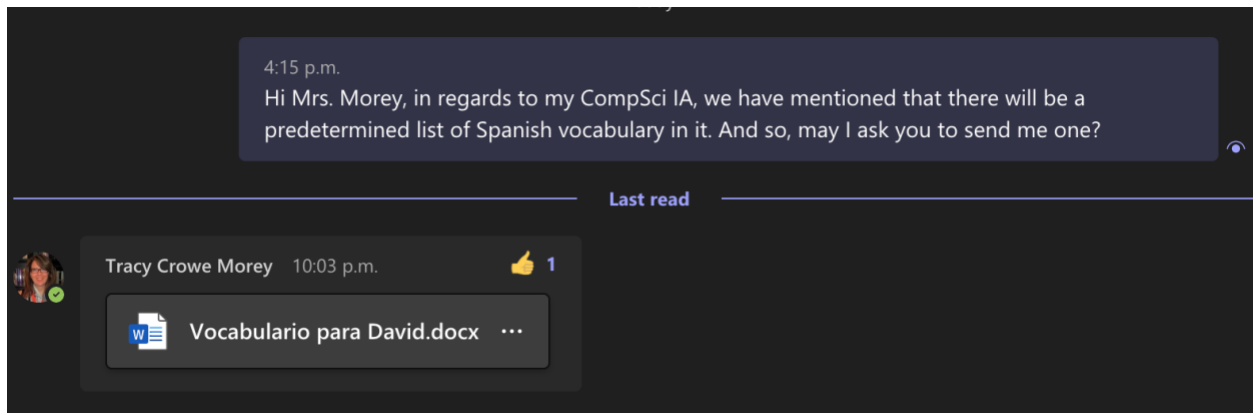
M:

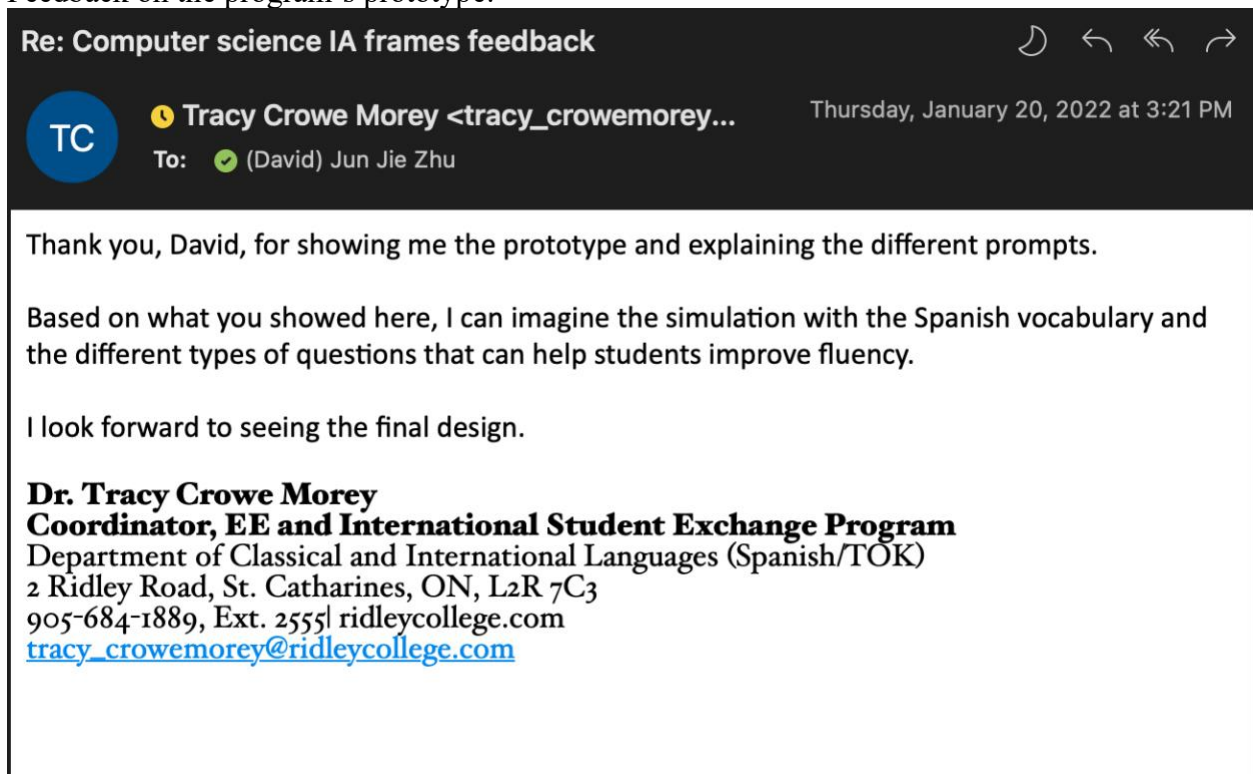And it targets those particular words that they got wrong.

D:

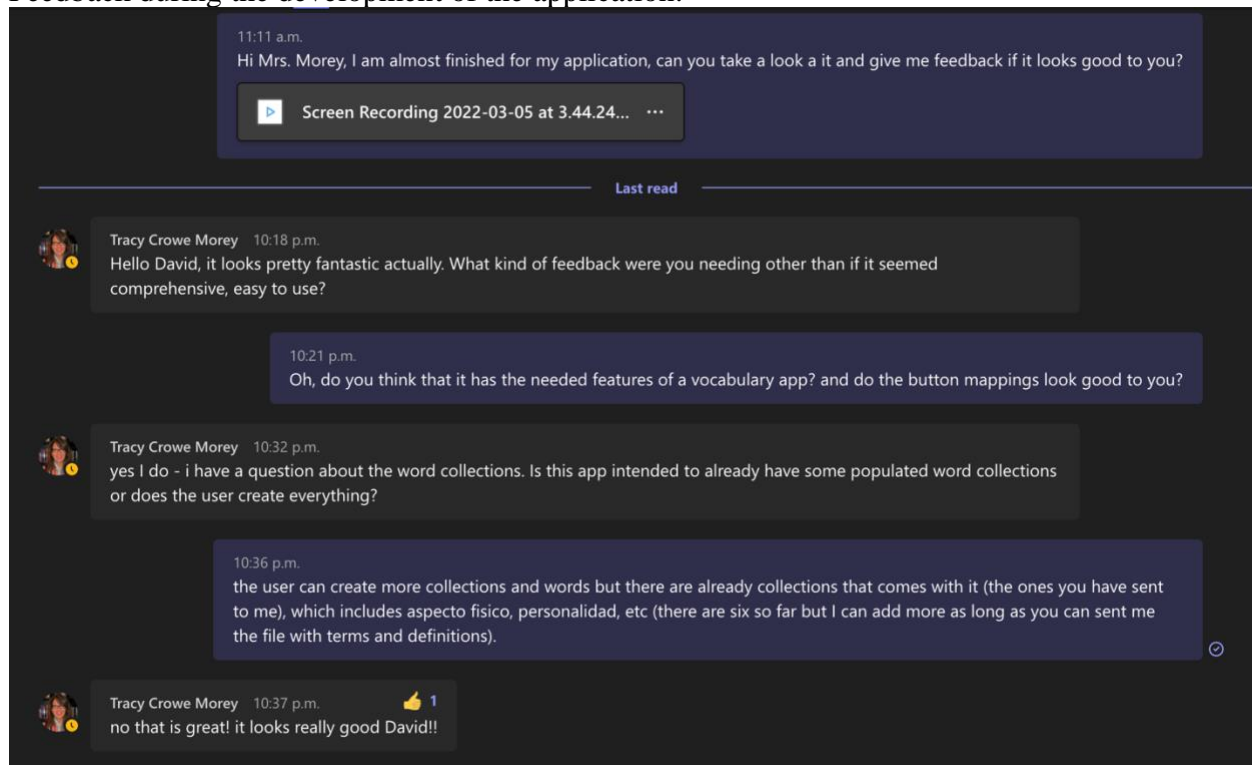Okay. I think I have a general idea of what to do now. Thank you so much.

Conversation about a predetermined list of Spanish vocabulary (See appendix 2 for the complete list):

Feedback on the program's prototype:

Feedback during the development of the application:

Evaluation form template sent to Mrs. Morey to fill out:

Client's Evaluation of Success Criteria

Success Criterion	Level of Success	Mrs. Morey's Feedback
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		

Possible improvements and updates in the future

Type	Area of improvement	Feasibility
Minor improvements		
Major improvements		
Extension		