

Animales!: A Card Game to Learn Spanish.

Testing Protocol

By: Ricardo Arevalo

Design

This study uses a within-subjects design to evaluate how playing a card game affects people's foreign vocabulary acquisition when comparing it to traditional foreign language learning techniques.

Particularly, we want to examine how effectively people can learn Spanish vocabulary when playing a card game that is built around Spanish words.

The independent variable of this experiment is the learning method that participants use to acquire foreign vocabulary. We want to compare how much vocabulary our participants can acquire by playing our game in comparison with using a traditional foreign language learning method. Because of this, we asked participants to download the Duolingo app on their smartphones. We also asked participants to choose a language in Duolingo that was not Spanish. In this way, we can ensure that participants will not be able to apply what they learnt in Duolingo while playing our card game and vice versa. Participants agreed on learning Italian in Duolingo as neither of the participants have tried to learn Italian before.

Participants profile

For this experiment, we chose participants who have none or little knowledge of Spanish. In the context of this experiment, all participants were native English speakers. Furthermore, none of the participants neither have taken Spanish classes nor tried to learn Spanish before.

None of the participants is capable to build a basic sentence in Spanish. Participants can repeat Spanish words after listening to them. However, their pronunciation is poor.

In terms of participants' exposure to Spanish, none of them has had relevant exposure to Spanish. Both participants have a co-worker in common who is a native Spanish speaker. Although, participants only speak English at their workplace.

On a final note, participants do not speak any other language apart from English.

Participant's Details

Participants B and participant C volunteered to take part in this experiment once they knew about it. They refused to receive any type of compensation for participating in this experiment.

Participants B and Participant C are 22 years old and 25 years old respectively. Both participants are full-time workers at a hospitality establishment. It seems relevant to remark that (according to

participants) foreigners do not attend often the participant's workplace, so they do not have contact with any language apart from English.

Apparatus

Participants will respond to four questionnaires (see appendix). These questionnaires would be a reference to test the vocabulary knowledge (of Spanish and Italian) of participants before and after playing our card game and using the Duolingo app. Questionnaire 1 and questionnaire 2 will be filled on the first day of the experiment. Questionnaire 3 and questionnaire 4 will be filled on the last day of the experiment.

We will use a Nikon DSLR D5600 attached to a Velbon Tripod to record the gameplay sessions. We will record the audio of these gameplay sessions with the incorporated microphone of the same camera. Finally, we will measure the duration of the gameplay sessions using a timer from a smartphone.

Procedure

We will organise three gameplay sessions where participants will play our card game. Participants will play our card game for three consecutive days (one gameplay session per day). Then, participants will spend another three days using the Duolingo app.

The gameplay sessions are planned to last at least 15 minutes (which is the average time you can spend in Duolingo). We will ask participants to spend the same amount of time on the Duolingo app during the days after the gameplay sessions.

It seems relevant to point out that we are interested in evaluating the motivation of participants to play our game. For this reason, if participants express that they want to keep playing our game for longer than 15 minutes, we will carry on with the gameplay session and record the total length of the gameplay. Consequently, we will ask participants to spend the same amount of time on Duolingo that they did on the gameplay session.

Day 1

Participants will fill up questionnaire 1 and questionnaire 2. After both participants filled both questionnaires we will start with the first gameplay session. Participants will not be allowed to talk about the questionnaires before playing the card game. The gameplay sessions will have three players: participant B, participant C and myself (as the game requires at least three players to play it). I will proceed to explain the rules of the game as briefly as I can in English. I will not give participants any details about translations or strategies, even if they ask for them. After explaining the rules of the game, I will set the timer with 15 minutes and we will proceed to play our card game. Once the time is over, I will ask participants if they want to play for longer. If participants do not want to play for longer, the gameplay session will be over.

If participants do want to play for longer than 15 minutes, participants will be asked how long they want to keep playing. We will add the chosen amount of time to the timer and we will keep playing. Once the time is up, the gameplay session will be over.

We will tell participants how long they spent playing the card game so they can spend the same amount of time using the Duolingo app during the further days.

Day 2

Participants and I will have our second gameplay session. This time, I will ask them if they remember how to play our card game or if they need any clarification about the rules. After answering those questions, we will set the timer with 15 minutes and we will proceed to play the card game. Once the time is over, I will ask participants if they want to play for longer. If participants do not want to play for longer, the gameplay session will be over.

Like in the previous gameplay session, if participants do want to play for longer, we will add the chosen amount of time to the timer and we will keep playing. Once the time is up, the gameplay session will be over.

We will tell participants how long they spent playing the card game so they can spend the same amount of time using the Duolingo app during the further days.

Day 3

Participants and I will have our third and last gameplay session. I will set the timer with 15 minutes and we will proceed to play the card game. Once the time is over, I will ask participants if they want to play for longer. If participants do not want to play for longer, the gameplay session will be over.

Following the protocol from the last gameplay sessions, if participants do want to play for longer, we will add the chosen amount of time to the timer and we will keep playing. Once the time is up, the gameplay session will be over.

We will tell participants how long they spent playing the card game so they can spend the same amount of time using the Duolingo app during the further days.

Day 4

Participants will spend the same amount of time as gameplay session one using the Duolingo app. Participants will be free to use the Duolingo app at any point of the day. The only condition is that participants must spend the same amount of time using the Duolingo app as they did playing our card game.

Day 5

Participants will spend the same amount of time as gameplay session two using the Duolingo app. Participants will be free to use the Duolingo app at any point of the day. The only

condition is that participants must spend the same amount of time using the Duolingo app as they did playing our card game.

Day 6

Following the same protocol as the previous days, participants will spend the same amount of time as gameplay session three using the Duolingo app. Participants will be free to use the Duolingo app at any point of the day. The only condition is that participants must spend the same amount of time using the Duolingo app as they did playing our card game. After they finish their last session using the Duolingo app, participants will have until the end of the day to fill up questionnaire 3 and questionnaire 4.

Appendix

Questionnaire 1

6/12/21 13:12

Your vocabulary in Spanish

Your vocabulary in Spanish

**Obligatorio*

Your thoughts of Spanish

1. Do you find Spanish an interesting language to learn? *

2. Have you taken any Spanish classes in the past? (through school, learning apps, private tutoring...)

3. How hard do you think it would be for you to learn Spanish?

Marca solo un óvalo.

	1	2	3	4	5	
Really easy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Really hard

Your knowledge of Spanish

4. Do you understand the structure of a sentence in Spanish?

Marca solo un óvalo.

- ☐ Yes. I could construct a sentence myself if I knew more words.
- ☐ Yes, but I could not write a sentence myself even if I knew words.
- ☐ No. I still struggle understanding the placement of words.
- ☐ No. I can not make a sentence in Spanish at all.

5. How can you identify a masculine noun from a feminine noun in Spanish?

6. Do you know what article precedes a feminine noun in Spanish? (if you do, write it down)

7. Do you know what article precedes a masculine noun in Spanish? (if you do, write it down)

8. Write down a list of words in Spanish.

9. Could you explain how to identify an adverb in Spanish? (Adverbs are words that describe the way nouns do actions: happily, strongly, quickly...)

10. Could you list some adverbs in Spanish?

11. Write down some sentences in Spanish. (Either short sentences or long sentences).

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Questionnaire 2

6/12/21 13:14

Your vocabulary in Italian

Your vocabulary in Italian

Your thoughts of Italian

1. Do you find Italian an interesting language to learn?

2. Have you taken any Italian classes in the past? (through school, learning apps, private tutoring...)

3. How hard do you think it would be for you to learn Italian?

Marca solo un óvalo.

	1	2	3	4	5	
Really easy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Really hard

Your knowledge of Italian

4. Do you understand the structure of a sentence in Italian?

Marca solo un óvalo.

- ☐ Yes. I could construct a sentence myself if I knew more words.
- ☐ Yes, but I could not write a sentence myself even if I knew words.
- ☐ No. I still struggle understanding the placement of words.
- ☐ No. I can not make a sentence in Italian at all.

5. How would you identify a masculine noun from a feminine noun in Italian?

6. Do you know what article precedes a feminine noun in Italian? (if you do, write it down)

7. Do you know what article precedes a masculine noun in Italian? (if you do, write it down)

8. Write down a list of words in Italian.

9. Could you explain how to identify an adverb in Italian? (Adverbs are words that describe the way nouns do actions: happily, strongly, quickly...)

10. Could you list some adverbs in Italian?

11. Write down some sentences in Italian. (Either short sentences or long sentences).

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Questionnaire 3

6/12/21 13:14

Your vocabulary in Spanish

Your vocabulary in Spanish

***Obligatorio**

Your thoughts of Spanish

1. Do you find Spanish an interesting language to learn? *

2. How hard do you think it would be for you to keep learning Spanish?

Marca solo un óvalo.

	1	2	3	4	5	
Really easy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Really hard

Your knowledge of Spanish

3. Do you understand the structure of a sentence in Spanish?

Marca solo un óvalo.

- ☐ Yes. I could construct a sentence myself if I knew more words.
- ☐ Yes, but I could not write a sentence myself even if I knew words.
- ☐ No. I still struggle understanding the placement of words.
- ☐ No. I can not make a sentence in Spanish at all.

4. Do you know how to identify a masculine noun and a feminine noun in Spanish?

5. Do you know what article precedes a feminine noun in Spanish?

6. Do you know what article precedes a masculine noun in Spanish?

7. Write down a list of words in Spanish.

8. Could you explain how to identify an adverb in Spanish? (Adverbs are words that describe the way nouns do actions: happily, strongly, quickly...)

9. Could you list some adverbs in Spanish?

10. Write down some sentences in Spanish. (Either short sentences or long sentences).

After playing our card game...

11. Do you feel more confident about learning Spanish?

Marca solo un óvalo.

- ☐ Definitely. It was not as difficult as I thought.
- ☐ Yes. I feel a little bit more confident about learning the language.
- ☐ Not really. I still think I will struggle with learning the language.
- ☐ Definitely not. I do not think I will be able to learn the language.

12. Do you feel interested in learning more Spanish in the future?

Marca solo un óvalo.

- ☐ Strongly agree
- ☐ Agree
- ☐ Not particularly
- ☐ Disagree
- ☐ Strongly disagree

13. Did the card game made you feel more engaged with Spanish in general?

Marca solo un óvalo.

- ☐ Strongly agree
- ☐ Agree
- ☐ Not particularly
- ☐ Disagree
- ☐ Strongly disagree

14. If you had to pick a method to keep learning Spanish in the future... would you rather...?

Marca solo un óvalo.

- ☐ Doing it through Duolingo
- ☐ Doing it by playing an advanced version of the card game
- ☐ Going to private lessons

15. Which of these methods was more fun?

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- ☐ Duolingo
- ☐ Our card game

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Questionnaire 4

6/12/21 13:13

Your vocabulary in Italian

Your vocabulary in Italian

Your thoughts on Italian

1. Do you find Italian an interesting language to learn?

2. How hard do you think it would be for you to keep learning Italian?

Marca solo un óvalo.

	1	2	3	4	5	
Really easy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Really hard

Your knowledge of Italian

3. Do you understand the structure of a sentence in Italian?

Marca solo un óvalo.

- ☐ Yes. I could construct a sentence myself if I knew more words.
- ☐ Yes, but I could not write a sentence myself even if I knew words.
- ☐ No. I still struggle understanding the placement of words.
- ☐ No. I can not make a sentence in Italian at all.

4. Do you know how to identify a masculine noun and a feminine noun in Italian?

5. Do you know what article precedes a feminine noun in Italian?

6. Do you know what article precedes a masculine noun in Italian?

7. Write down a list of words in Italian.

8. Could you explain how to identify an adverb in Italian? (Adverbs are words that describe the way nouns do actions: happily, strongly, quickly...)

9. Could you list some adverbs in Italian?

10. Write down some sentences in Italian. (Either short sentences or long sentences).

After using Duolingo...

11. Do you feel more confident about learning Italian?

Marca solo un óvalo.

- ☐ Definitely. It was not as difficult as I thought.
- ☐ Yes. I feel a little bit more confident about learning the language.
- ☐ Not really. I still think I will struggle with learning the language.
- ☐ Definitely not. I do not think I will be able to learn the language.

12. Do you feel interested in learning more Italian in the future?

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- ☐ Strongly agree
- ☐ Agree
- ☐ Not particularly
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- ☐ Strongly agree
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