

# Study 4

3(intact logged streak, broken logged streak, or no log) between subjects design

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To ensure that you are a real person, please write the answer to this math problem in WORDS:

7 + 2

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[Participants who did not write 'six' or who were not using Chrome/Firefox were unable to complete the study]

Page Break

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## **Instructions:**

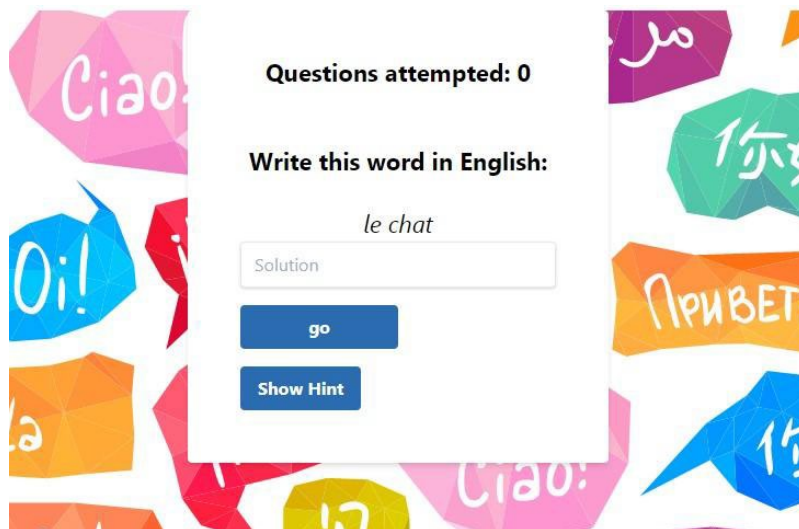
In this study, you will be testing out a language learning app, much like the popular app Duolingo.

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Below is an example screenshot from the French language module:



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To complete the question, you would put your answer (cat) into the 'solution' textbox and hit 'go.'

If you get stuck, you can click 'Show Hint' to see a helpful hint!

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*Display This Question:*

*If condition != control*

Much like other apps, this app features a "**question tracker**." This tracker logs how many language learning questions you attempt while testing this app.

The purpose of this tracker is to show you your progress in completing questions. In fact, many apps use trackers like this to help motivate users.

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*Display This Question:*

*If condition != control*

Language learning questions will be counted towards your question tracker as long as you have seen them; in other words, **they count even if you don't answer the question correctly**.

For example, once you attempt one language learning question, your question tracker will look like this:

**Questions attempted: 1**



Page Break

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You have been assigned to learn Portuguese.

Press the 'Next' button to start using the language learning app.

Page Break

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**Stimuli:**

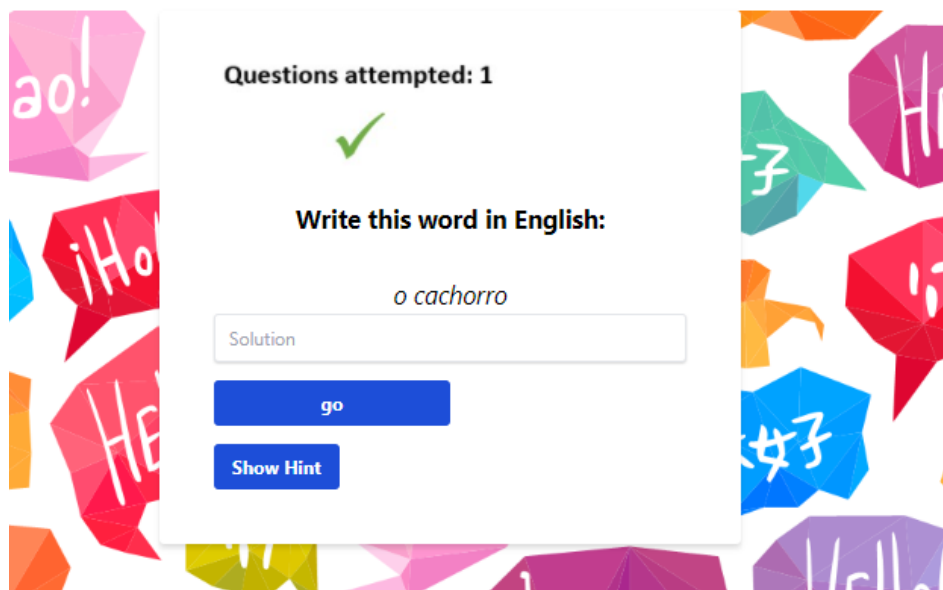
The screenshot shows a mobile app interface with a white central panel. At the top, it says "Questions attempted: 0". Below that, the instruction "Write this word in English:" is displayed. The word "obrigado" is shown in a light blue font. Underneath is a text input field with the placeholder "Solution". At the bottom of the panel are two blue buttons: "go" and "Show Hint". The background of the app is decorated with colorful, abstract shapes and text in various languages, including "iHo", "HE", and "子".

[Participants in the *no log* condition saw the same app interface without the question tracker at the top of the page. For simplicity, we have not repeated the screenshots from the survey without this question tracker]

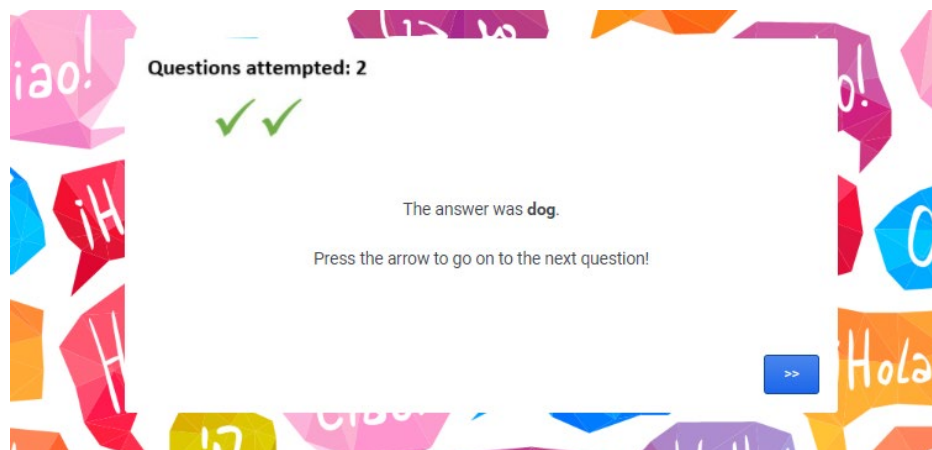
Page Break

The screenshot shows the app interface after the first question. At the top, it says "Questions attempted: 1" next to a green checkmark. Below this, the text "The answer was Thank you." is displayed. Underneath, it says "Press the arrow to go on to the next question!". At the bottom right, there is a blue button with a right-pointing arrow. The background remains the same colorful, abstract design.

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Page Break

Questions attempted: 2

✓✓

Write this word in English:

*a casa*

Solution

go

Show Hint

Page Break

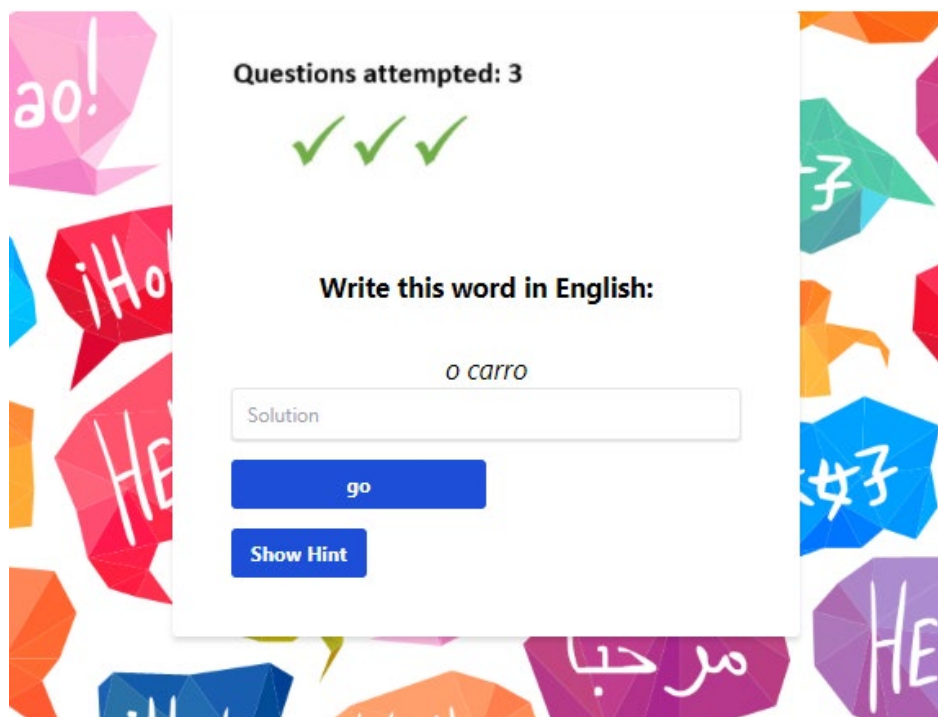
Questions attempted: 3

✓✓✓

The answer was **house**.

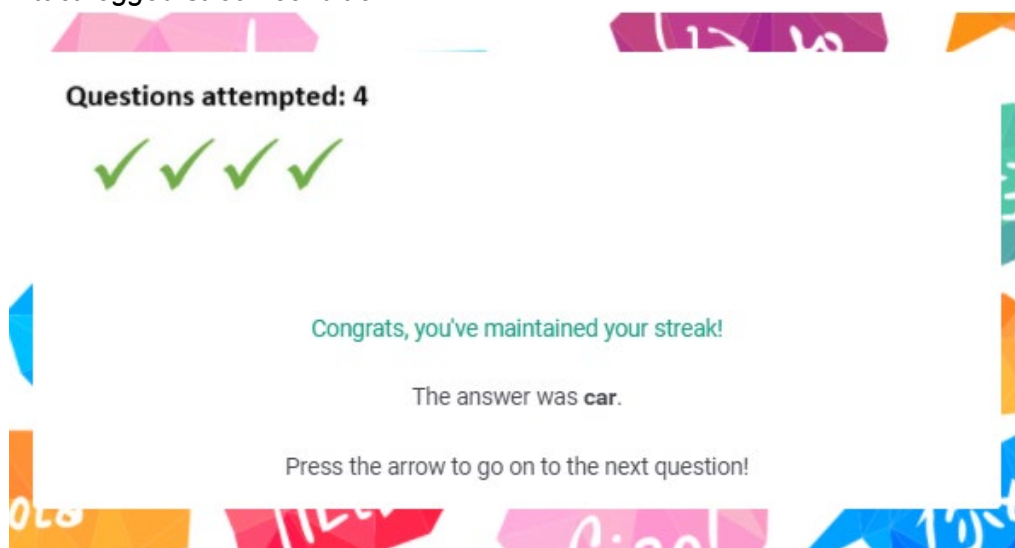
Press the arrow to go on to the next question!

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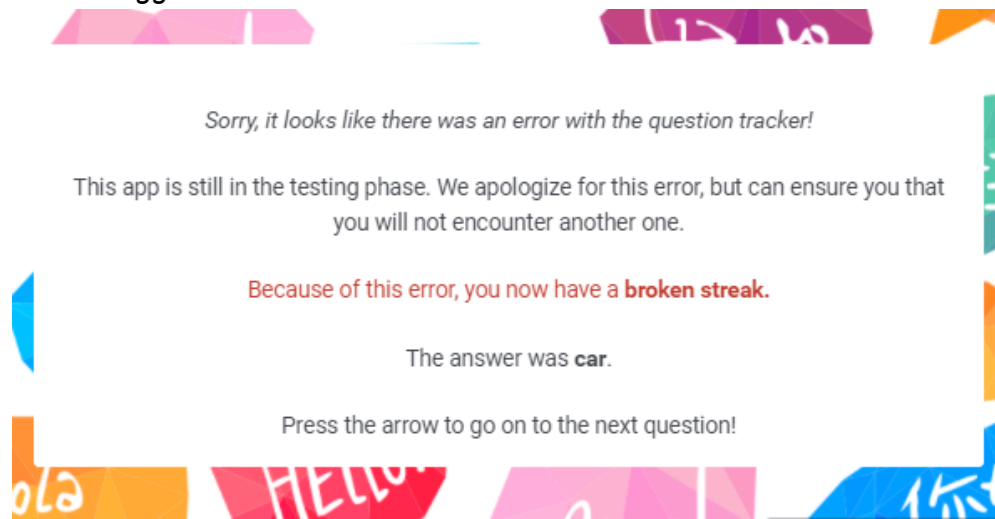


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*Intact logged streak condition:*



*Broken logged streak condition:*



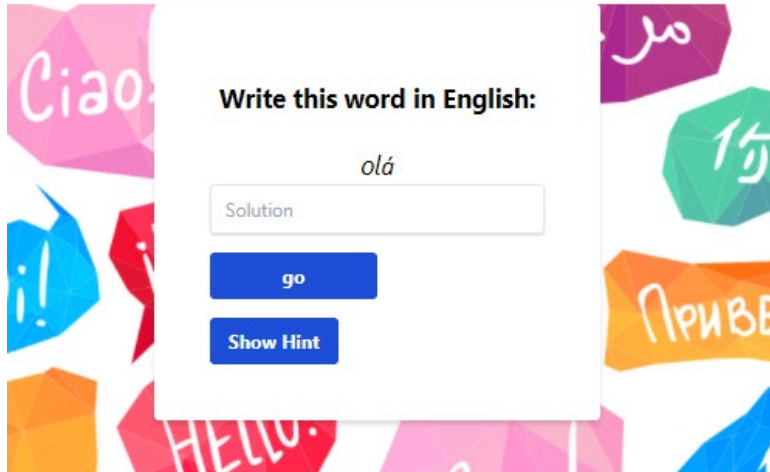
*No log condition: Did not see this page.*

Page Break

At the end of the study, based on DV choice:

Display This Question:

If DV2 = same



Page Break

The answer was **hello**.

You've finished all available language learning questions!

Display This Question:

If DV2 = different



Link: [https://www.youtube.com/watch?v=a0YNpxTJzOY&ab\\_channel=RMVideos](https://www.youtube.com/watch?v=a0YNpxTJzOY&ab_channel=RMVideos)



### **Main Questions:**

*Main DV:*

*Intact logged streak condition:*

**This is your current question tracker:**

**Questions attempted: 4**



**You have a streak!**

You can now choose what type of activity to do next. Both activities take approximately the same amount of time.

If you select that you would like to continue completing a few more language learning questions, you will **maintain your streak** on your game tracker.

Alternatively, you could choose to spend the rest of this study watching a fun video, which would **break your streak** on your game tracker.

*Broken logged streak condition:*

**This is your current question tracker:**

**Questions attempted: 3**



Your **streak is broken** because of an error with the question tracker.

You can now choose what type of activity to do next. Both activities take approximately the same amount of time.

You can choose between continuing to complete a few more language learning questions and watching a fun video. Regardless of what you choose, you will still have a **broken streak** on your game tracker.

*No log condition:*

You've completed 4 language learning questions so far!

You can now choose what type of activity to do next. Both activities take approximately the same amount of time.

You can complete a few more language learning questions, or you could alternatively watch a video.

*Instructions for measures:*

Before you continue with your selected activity, please answer the following questions about how you felt when you made this choice.

***Note that at the top of each screen for the following questions, participants saw an image of their tracker (in the intact and broken logged streak conditions)***

*Direct process measure:*

To what extent did you have a goal of maintaining a streak of completing language learning questions? [1 Not at all, 11 Extremely]

*Sense of accomplishment measures:*

How much did you feel that you accomplished something? [1 Not at all, 11 A great deal]

How much did you feel like you had achieved something? [1 Not at all, 11 A great deal]

How proud did you feel? [1 Not at all, 11 A great deal]

How successful did you feel? [1 Extremely unsuccessful, 11 Extremely successful]

How effective did you feel? [1 Extremely ineffective, 11 Extreme effective]

How motivated did you feel to continue completing language learning questions? [1 Not at all, 11 A great deal]

How determined were you to continue completing language learning questions? [1 Not at all, 11 Extremely]

How much did your past behavior push you to stick with completing language learning questions for the rest of this study? [1 Not at all, 11 A great deal]

How much did you feel driven to continue completing language learning questions? [1 Not at all, 11 Extremely]

How much did you feel compelled to continue completing language learning questions? [1 Not at all, 11 Extremely]

*Behavioral intentions:*

[Intact logged streak and broken logged streak conditions only] Imagine that you continued using this language learning app in your real life. To what extent would you want to be able to see the "question tracker"? [1 Definitely no, 11 Definitely yes]

How likely would you be to recommend this language learning app to a friend? [1 Extremely unlikely, 11 Extremely likely]

How likely would you be to use this language learning app in the future? [1 Extremely unlikely, 11 Extremely likely]

*Stimuli check:*

In this study, you could do two types of activities: watch a fun video and/or learn a language. In general, which of these activities do you enjoy the most? [1 Definitely language learning, 11 Definitely fun videos]

*Demographics:*

What is your gender? [Male (1), Female (2), Other/prefer not to say (3)]

What is your age? [numeric free response]