

Collector Documentation

Documentation by Anthony Haffey on behalf of [Some Open Solutions](#).

If you identify bugs or errors please try to save and refresh the page. Please do report any bugs or errors at:

<https://collectalk.com/categories/bugs-and-errors>

If you have suggested clarifications, please go to
<https://collectalk.com/categories/documentation>

The most up to date version of this documentation can be found at:

https://docs.google.com/document/d/1SKYIJF1dAjMDS6EHUIwfZm2KQVOzx17S6LbU_oSGxdE/edit?usp=sharing

License

Collector (Garcia, Kornell, Kerr, Blake & Haffey)

A program for running experiments on the web

Copyright 2012-2016 Mikey Garcia & Nate Kornell

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Using Collector online (i.e. without installing Collector)

To use without installation go to one of the following pages:

- <https://some-open-solutions.github.io/ocollector>

(allows you to choose which release of Kitten you want)

- <https://ocollector.org>

(allows you to choose which release of Kitten you want)

- <https://some-open-solutions.github.io/collector>

(will use the most recent version of kitten that is stable - not yet what we'd recommend)

To use without installing, you will need to register with Dropbox and Collector

Dropbox registration

Go to: <https://ocollector.org> once there select a version of Collector to use. As it says on the page, it is fine to swap between versions of Collector when creating experiments, but **DO NOT SWAP WHEN TESTING PARTICIPANTS!**

So let's go to ocollector.org:



Which version of Collector do you want to use?

All your experiment resources are on dropbox, so you can swap versions when developing, but do not swap versions once you start testing participants.

Kitten - 0



Which should take you to the home page. Just click on “Kitten” to proceed to Collector:

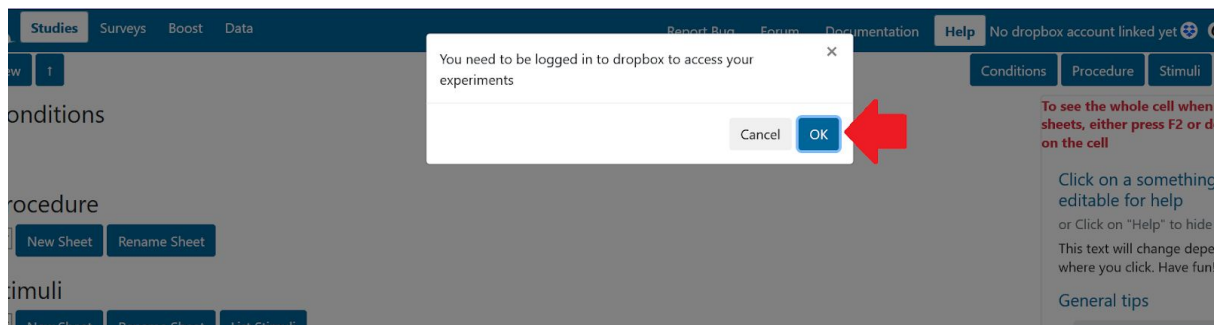
Collector

A free tool for online data collection

Select which version you would like to use:



You should then be asked to login in with dropbox. Just click on “OK” (you’ll have the chance to register an account later). If you accidentally click “Cancel” just refresh the page.

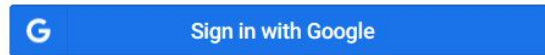


You will then be asked to sign in to dropbox. **I strongly recommend that you do this with a NEW GOOGLE ACCOUNT (which you’ll create next).** The reason for this is that I would suggest you keep your research resources separate from your personal or other accounts. So a new account does this, and google make it easy to do this by creating a free account with them.

To do this click on “Sign in with Google”:



Sign in to Dropbox to link to Collector-SOS



or

This page is protected by reCAPTCHA and is subject to the Google [Privacy Policy](#) and [Terms of Service](#).

[Forgotten your password?](#)



Now you need to create your new google account. Click on the “Create account” button:

 Sign in with Google



Sign in

Continue to **Dropbox**

Email or phone

|

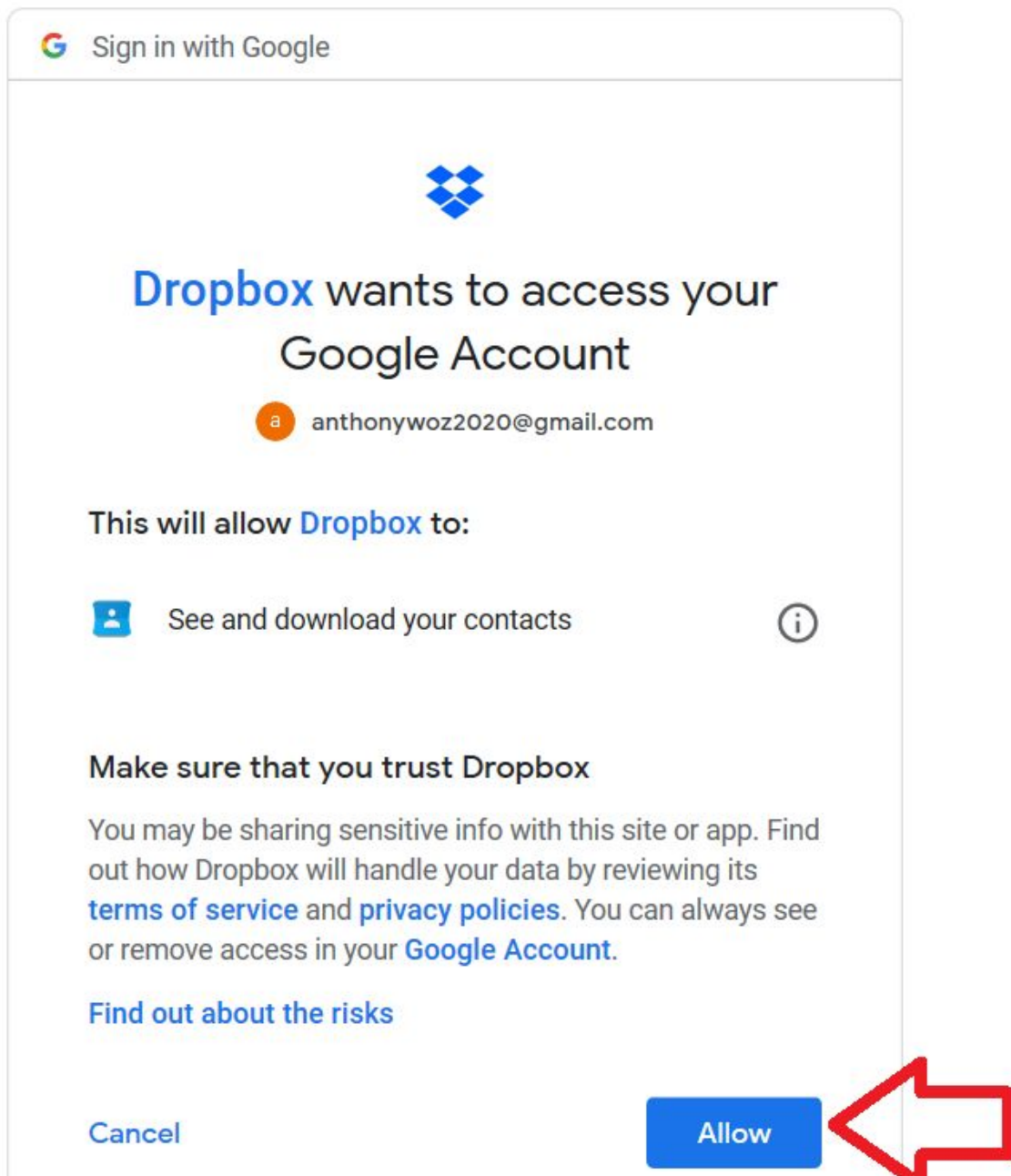
[Forgot email?](#)

To continue, Google will share your name, email address, language preference and profile picture with Dropbox. Before using this app, you can review Dropbox's [privacy policy](#) and [terms of service](#).

[Create account](#)

[Next](#)

And then go through the process of creating an account. Once you have registered with google, you'll get to the following page, where you'll click "Allow":



You should get to the following page, in which you'll be able to select a **free/basic** option:

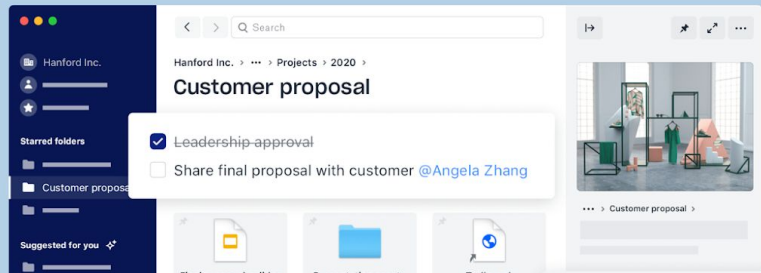
Work comes together in Dropbox Business

Organise all of your team's content, tune out distractions and get everyone coordinated with the world's first smart workspace.

Try free for 30 days

Purchase now

or get Dropbox Basic



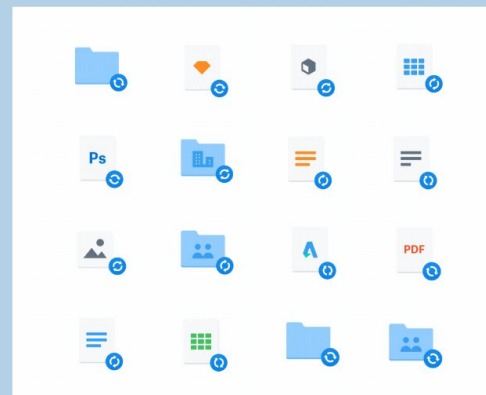
Then click on “Sign up for free”:

Dropbox Basic


Get a Dropbox free account

Sign up for 2 GB of storage, and start accessing and sharing photos, documents and other files from any device.

Sign up for free



And Now you can register with dropbox with your newly created google account by clicking “Sign up with Google”:



Create an account [or log in](#)

First name

Surname

Email


Password

This page is protected by reCAPTCHA and is subject to the Google [Privacy Policy](#) and [Terms of Service](#).

☐ I agree to the [Dropbox Terms](#).

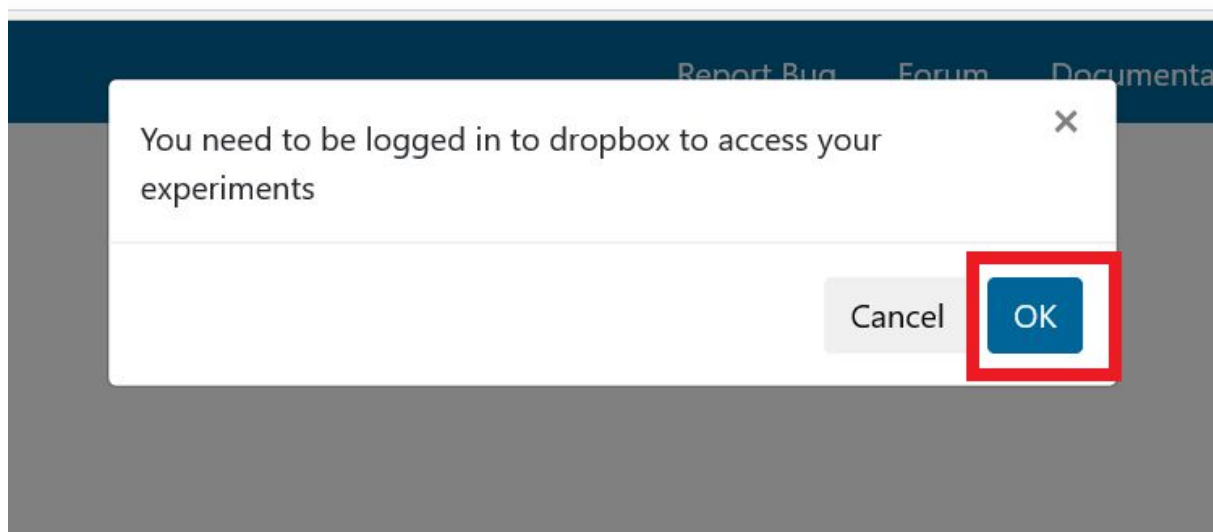
Create an account

or

 Sign up with Google

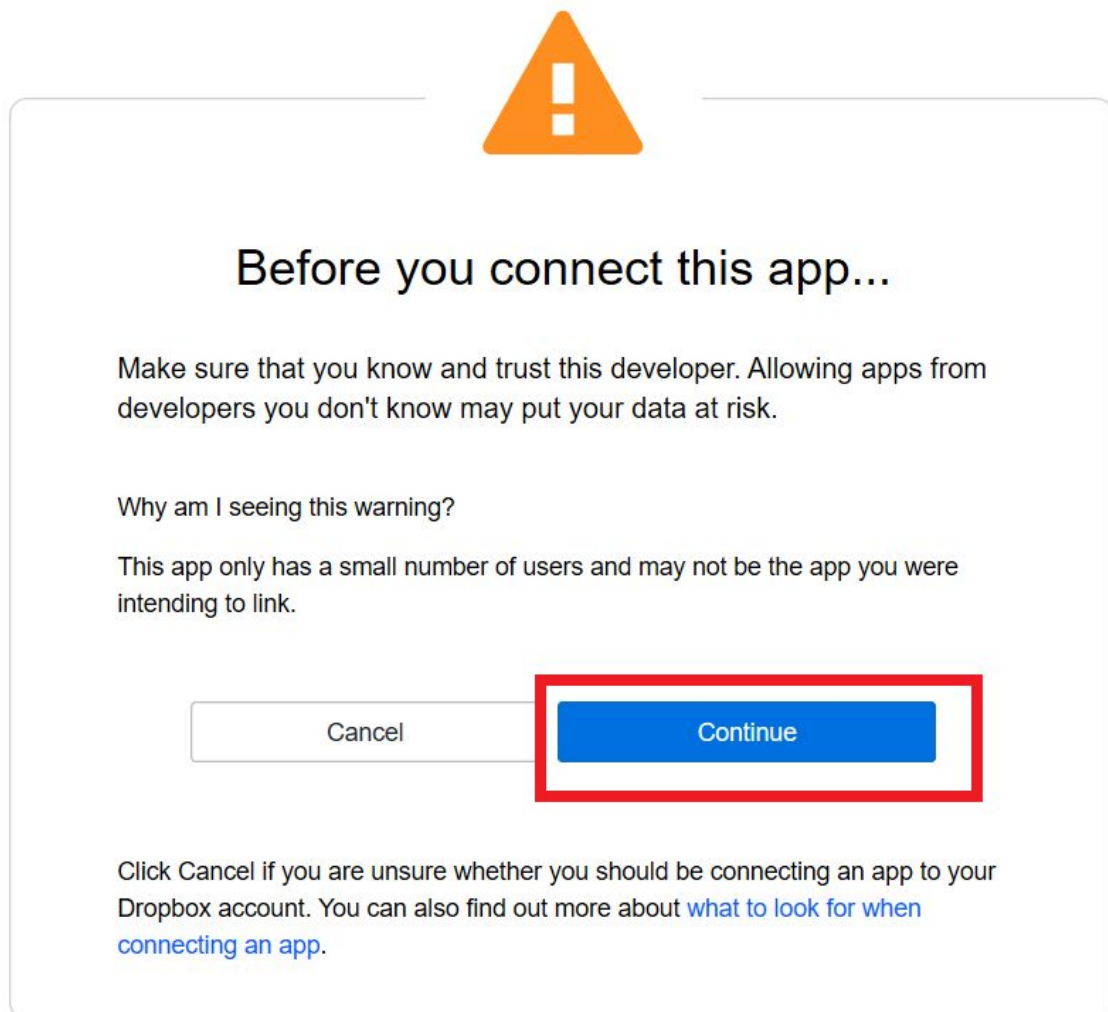
- Now choose the account you just created,
- Then click “Allow”.
- Then you should be asked to sign up. You just need to accept Dropbox terms and click “Sign up”.

You should arrive at your home page on dropbox. Let's go back to ocollector.org until you're back on the version you chose to use. Once you get back to something like [“https://ocollector.org/0/kitten/”](https://ocollector.org/0/kitten/) you should see the same request you had at the start of this process. Click on “OK” again:

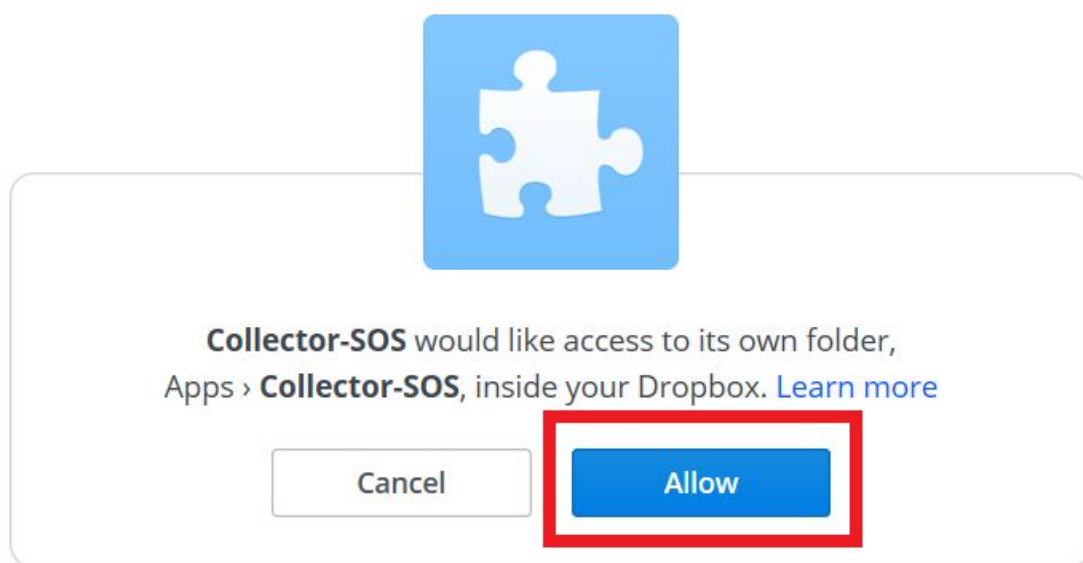


And this time you'll be asked if you want to connect Collector-SOS to your new dropbox account. Select "Continue":

(If you have been using your personal account so far, you might want to go back a few steps if you find the next message makes you uncomfortable with using personal accounts for Collector)



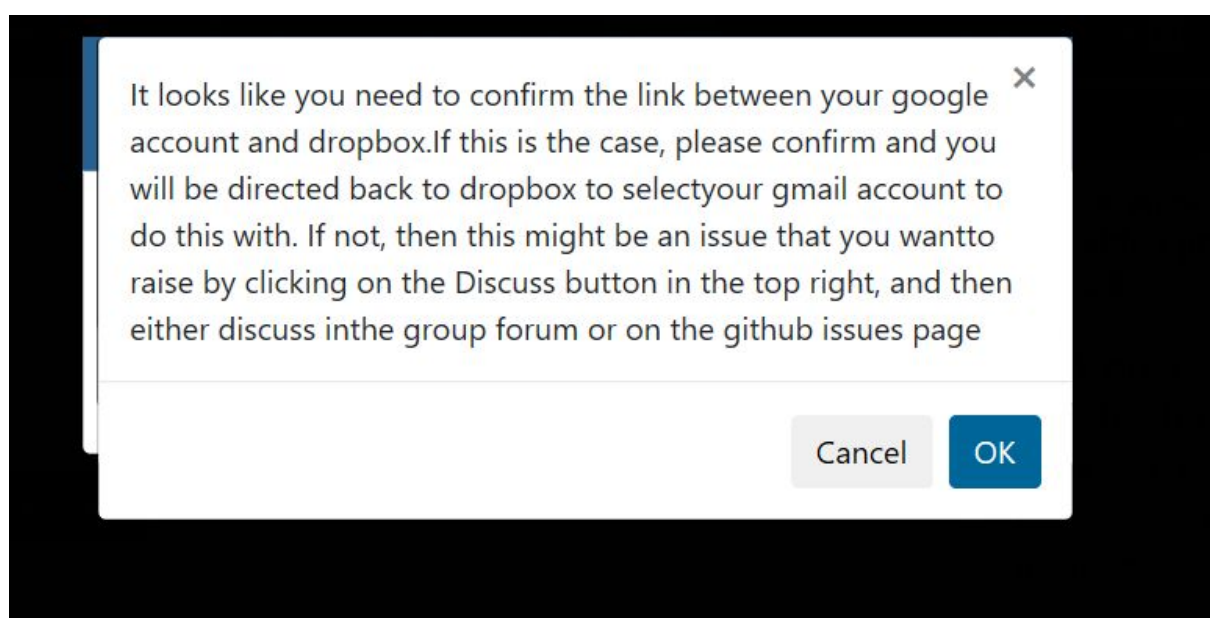
Now you'll be asked if you want Collector-SOS (some open solutions) to have it's own folder. This means that Collector will only ever edit files within this folder, and never anywhere else on dropbox. Select "Allow":



It is possible that you'll see quite a few messages, and need to close the front one by clicking on the X in the top right corner of it.

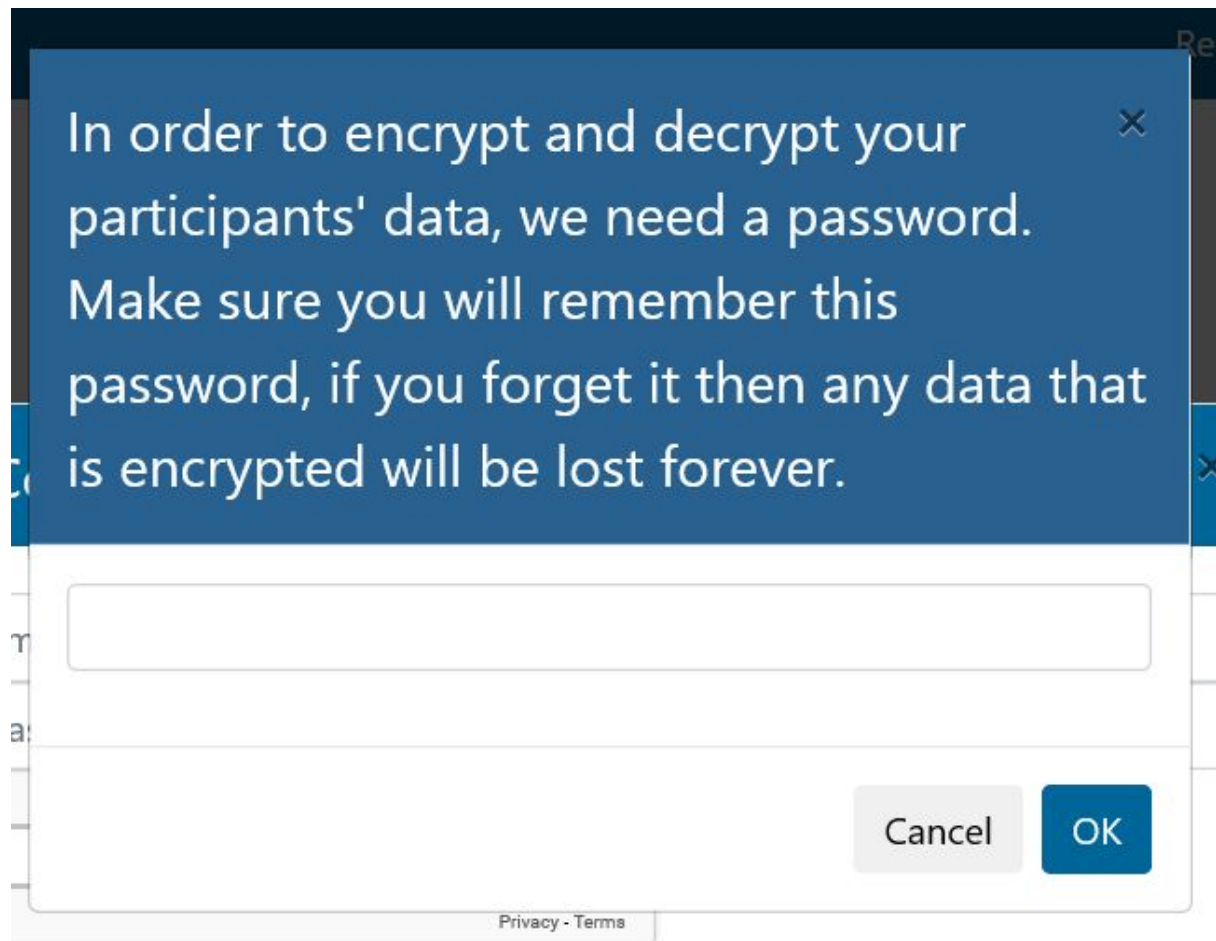


Once you've done that you might see the following error message:



If you click on “OK” and sign in again, this should fix the connection between dropbox and your google account.

Once that works, you should be able to start settings some of your settings, such as your password for data encryption and decryption. This should be asked for automatically:



Think carefully about what your password will be. **Do not use a password you use for anything else!** Here are some reasons why:

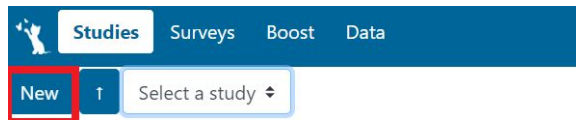
- You may want to share this dropbox account with a collaborator
- Whenever possible, you should not use the same password on different websites.

However, having said that, your password will never be stored (see [What happens with my password for encryption and decryption](#) for clarifications of how your password is used to decrypt data).

Creating experiments

For the purposes of this documentation, I'll be using the example of creating a stroop task called "stroop_example".

To create a new experiment just click on the “New” button at the top left of the screen:

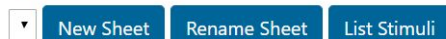


Conditions

Procedure



Stimuli



If you're developing your experiment online rather than with an installation, give it a few seconds for the experiment creation to finish. You'll know it's ready because the new name will be where "Select a study" was before:



Conditions sheet

The conditions sheet controls some of the settings of the experiment. For example, if you want the user to have a randomised id rather than what they typed, then change the cell just below “participant id” from “on” to “random”:

Conditions

[illegible][illegible]

Have a look around at the different settings (notice how the “Help” sidebar tells you about each of them as you click across different columns).

If you want to have different participants experience different conditions, then describe the differences in the different rows. This will result in you creating slightly different links for each version of the task.

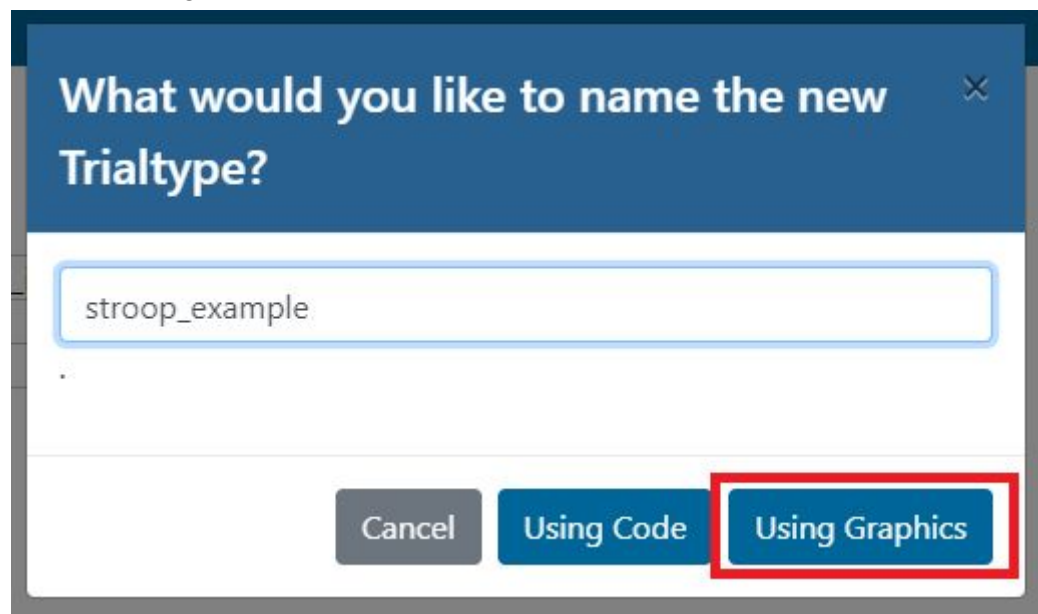
The differences between the different conditions will be due to differences between the different **procedure** and **stimuli** sheets. To create a new procedure or stimuli sheet, click on the “**New Sheet**” buttons in their respective sections.

Trial type editor

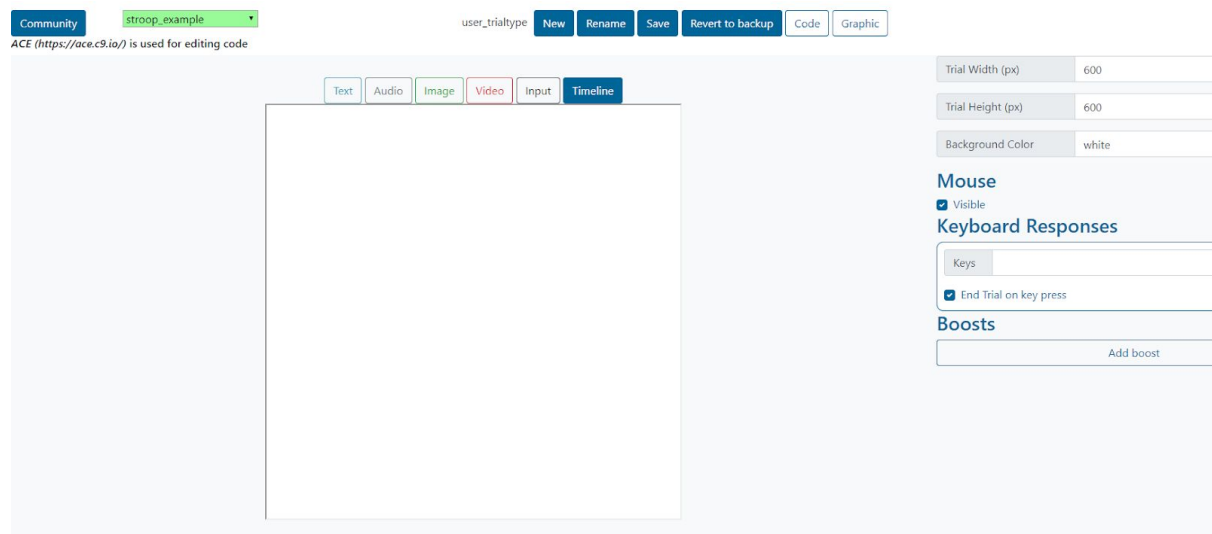
Trial types are types of trials the participant will experience. To create a new trialtype just click on the “New” button towards the bottom of the page:



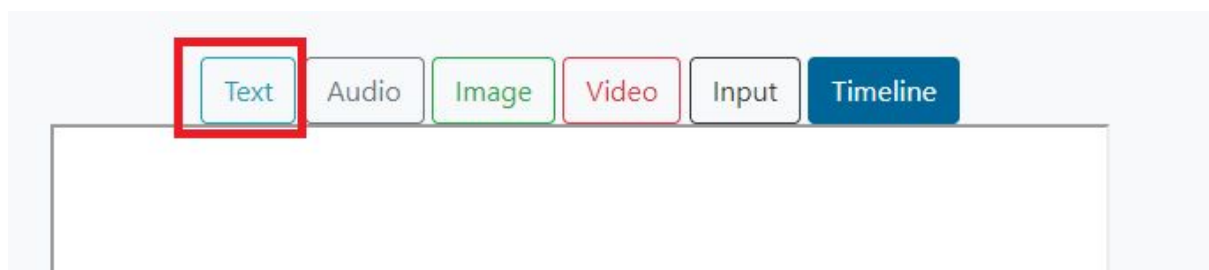
And then you'll be asked for a name and whether you want to create the trialtype using code or the graphic editor. Let's start by talking through how to use the graphic editor. So let's click on “Using Graphics”:



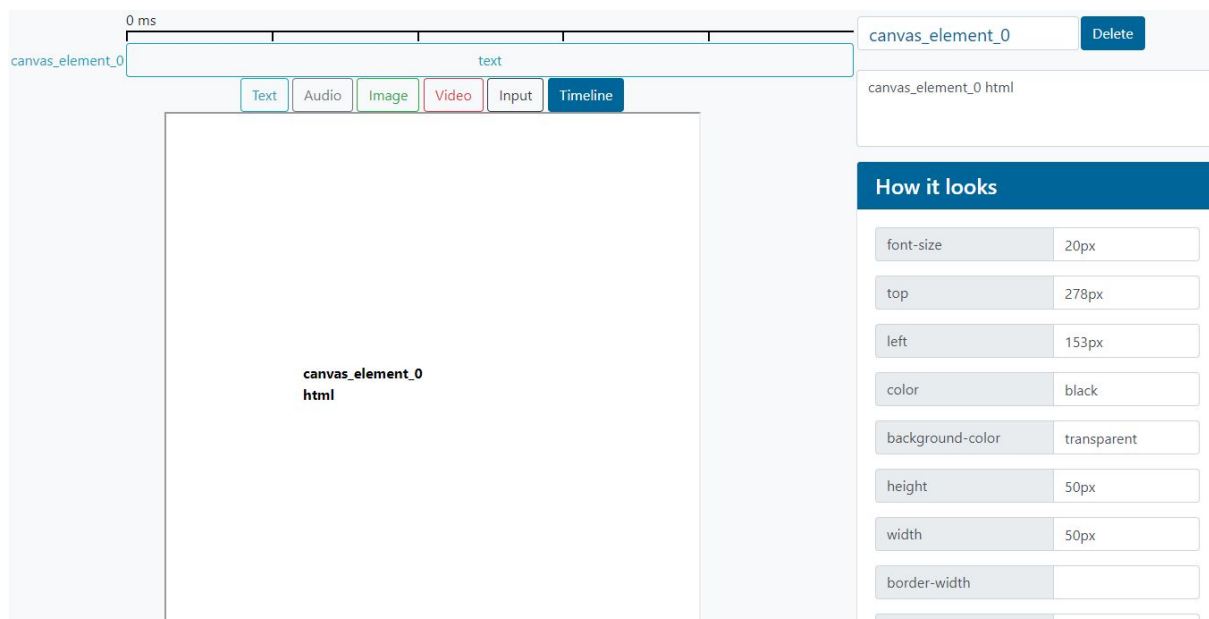
You may have noticed that I've given exactly the same name to the experiment and the trialtype “stroop_example”. I find this helpful as they can never get confused with each other. Once you've created the new trialtype you should see the the graphic editor:



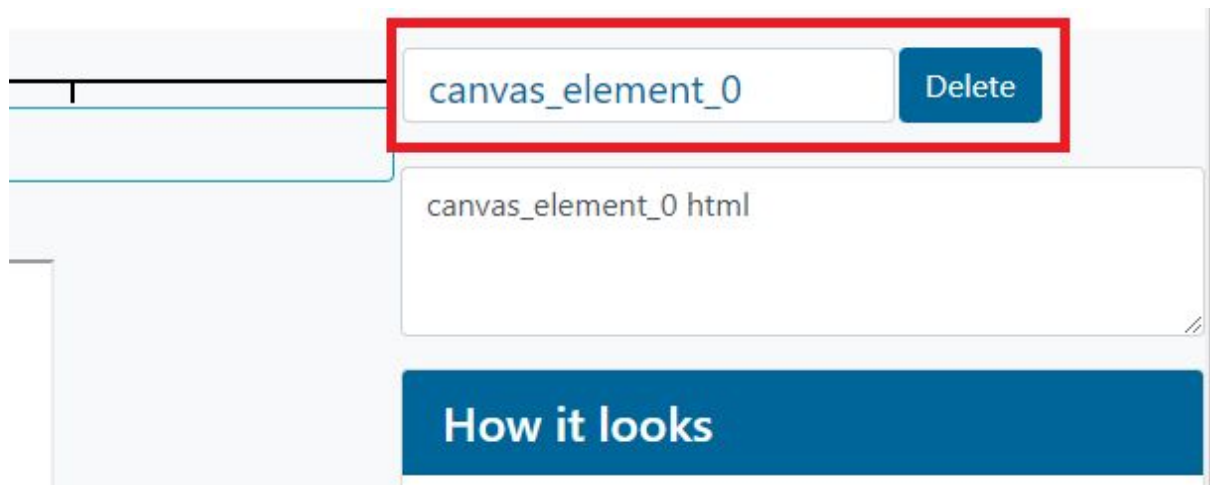
For a simple stroop experiment, we'll start by adding some text. Just click on the **Text** button:



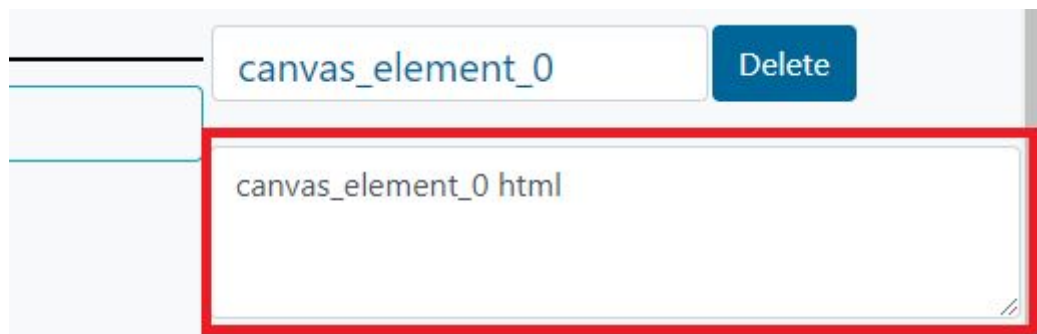
And then click where you want it. I'm going to try to put this pretty close to the center of the page:



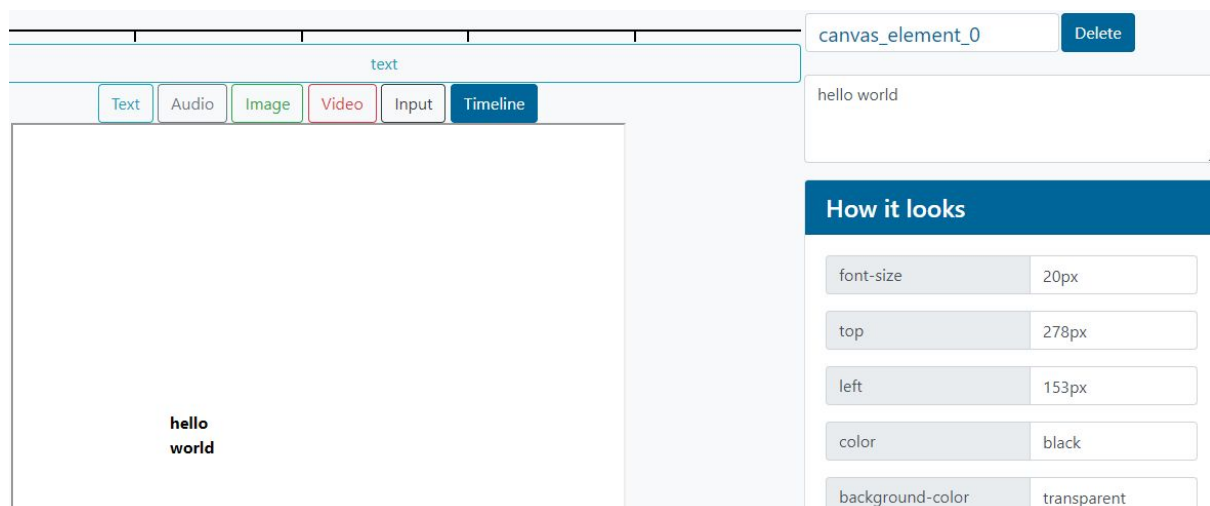
Let's unpack what we now have. In the top right corner we have the element_id "canvas_element_0":



This can be useful for making the experiment interactive, but we don't need to worry about that for now. Just below that we have the actual text in this element:



As it stands, every time you use the trial "stroop_example" you will get the text "canvas_element_0 html" - which is not particularly helpful. Let's change that to just say "hello world" to see exactly how this works:



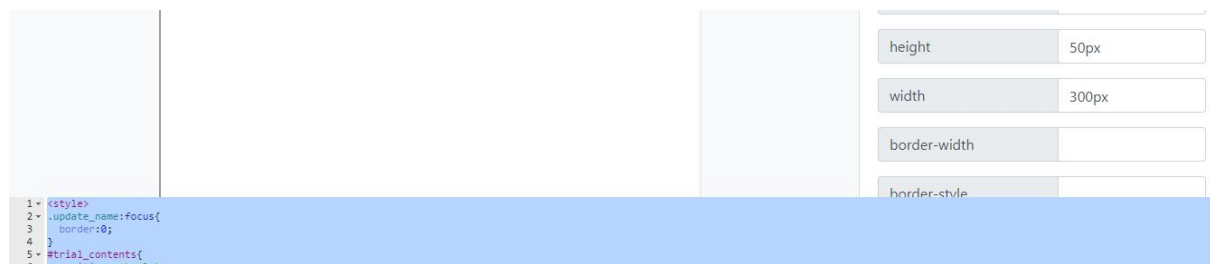
So you could theoretically create a separate trial with a different word or series of words for each trial. However, that would be very time consuming, so we're going to embed a **variable**

instead. **Variables** change for each trial depending on what you have in your procedure and stimuli spreadsheets. You just write the column title in the `{{}}` brackets. For a stroop task, we'll make use of the fact that **stimuli** sheets already have a **cue** column. So let's just refer to that column (we'll edit the **stimuli** sheet later). We'll replace "hello world" with `{{cue}}`.

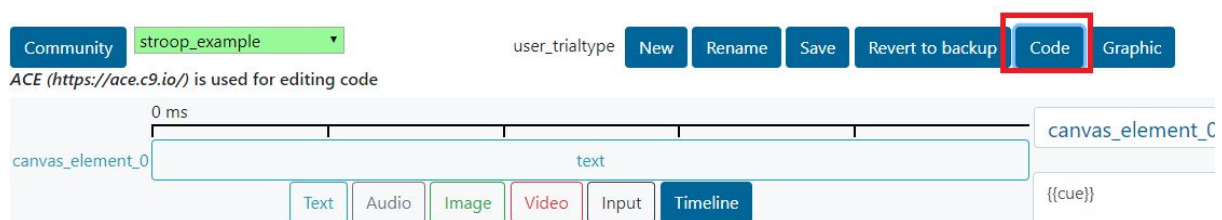
How it looks

Play around with the "How it Looks" panel to see the different sizes and colors you can have.

You might find that the **code** editor is in the way of the lower options:



You can hide the **code** editor by clicking on the "Code" button at the above the **graphic** editor:



You might need to click it a couple of times before the **code** editor disappears. You can click it again to make it come back. This can be a nice way to learn code - as you edit the experiment using the **graphic** editor, the code is written for the **trial type**. But let's get back to making our stroop task.

Being a stroop task, **color** is something that will also have to be a variable that changes from trial to trial. So I'm going to replace "black" with `{{letter_color}}` which is a column I'm going to need in my stimuli sheet later. I'm also going to make the font-size 30px; and the width 300px:

{{cue}}

| How it looks | |
|------------------|------------------|
| font-size | 30px |
| top | 278px |
| left | 153px |
| color | {{letter_color}} |
| background-color | transparent |
| height | 50px |
| width | 300px |

It's important to have an appropriate width; if your width is too small your text will run over multiple lines. You might have noticed this in the earlier example with "hello world".

Timeline

At the top of the graphic editor, we get a sense of what happens when. In our case, let's:

- Add a fixation cross at the start for 500ms
- Add a 500ms gap following this by changing the start time of the word to 1000ms

To add a fixation cross, we just add another text element as described above. I'm going to make the **font-size** 100px and put it 250px from the top and left. This should put it in the center of a 600 x 600 pixel trial. To make it only be present for 500ms I'm going to scroll down to the **interactivity** panel, and change the **hide(ms)** value to 500ms:

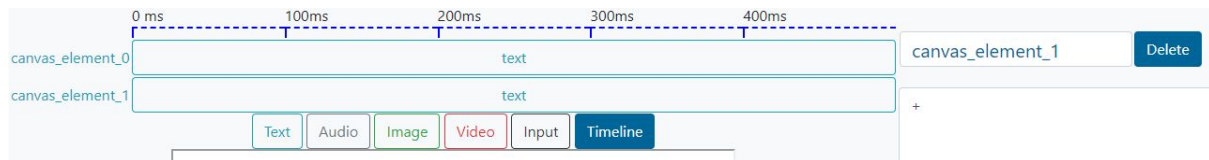
| | |
|---------|---|
| z-index | 0 |
|---------|---|

Interactivity

| | |
|-----------|-----|
| show (ms) | 0 |
| hide (ms) | 500 |
| name | |

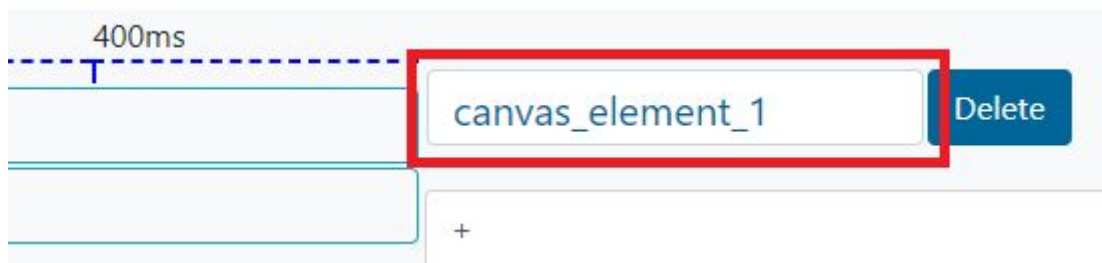
(Note that you can click on **how it looks** or **interactivity** headers to hide and show these interfaces).

Now that we've changed the **hide** time for the fixation, our timeline at the top looks like this:

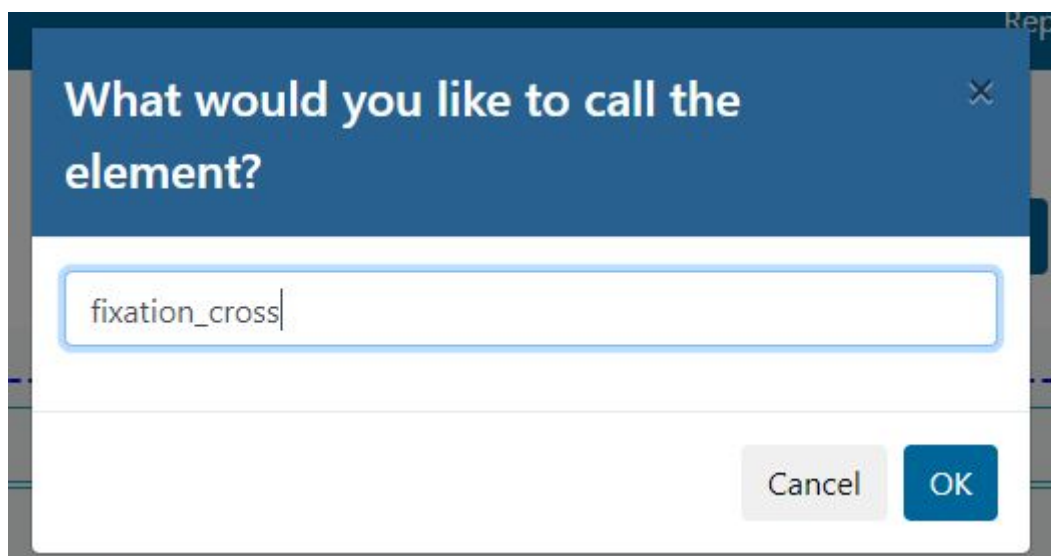


The **dotted blue line** means that at least one of the elements has no stop or hide time (i.e. will display until the end of the trial). Pay attention to how the timeline changes as we change the show and hide times to the stroop word.

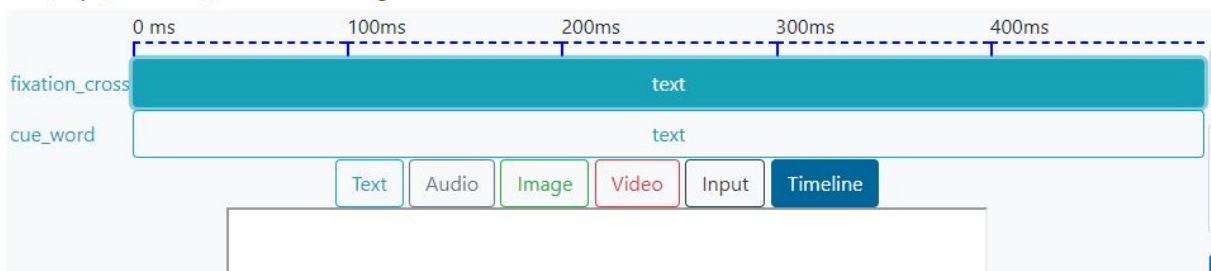
But first, let's change the element names so that the timeline makes more sense. Just click on the element name:



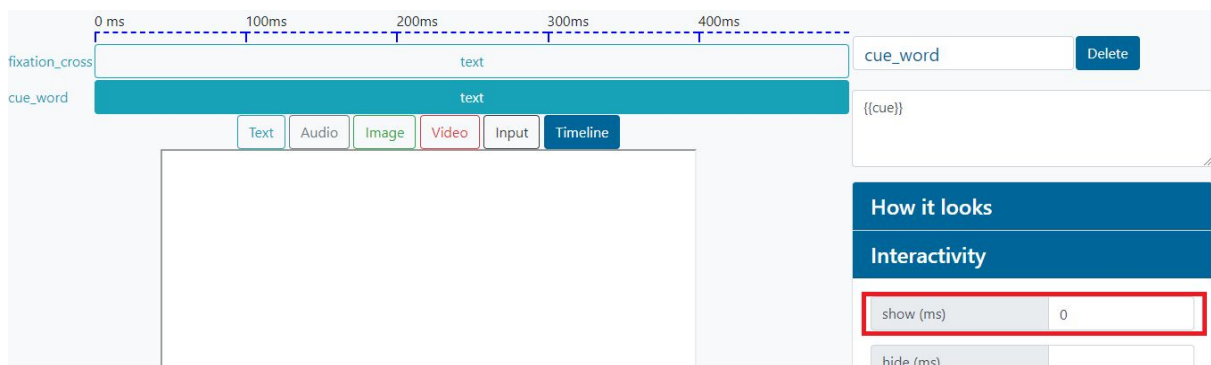
And you'll be asked for a new element id. I'm going to change the fixation cross element's name to "fixation_cross":



I'm also going to change the stroop word ("{{cue}}") element id to "cue_word". To switch between elements, either click on them in the timeline, or click on them on the **canvas**. The timeline is a bit easier to read now:



The next step is to have a 500ms gap between the fixation cross end and the start of the cue word. So let's just **show** the cue word at 1000(ms). This option is just above the **hide** input we just updated:



Let's change that to 1000 and see what it does to our timeline:



That seems sensible enough. Now we need to actually capture the participant's response!

Capturing response with keyboard

For stroop tasks, you typically need to capture a participant pressing on a key that represents a color. For simplicity's sake, I'm going to accept keyboard responses of "a" and "b". To be able to set the valid keyboard responses click on the canvas anywhere that there isn't an element. You should see the following:

Text Audio Image Video Input Timeline

text

Trial Height (px) 600

Background Color white

Mouse

☒ Visible

Keyboard Responses

Keys

☒ End Trial on key press

Boosts

Add boost

{{cue}}

I'm just going to add the letters "g" for green and "b" for blue to **keys**. Notice also the **End trial on key press** checkbox. This is what it says - if you have this ticked then as soon as the participant presses any of the keys you put in the **keys** input, the trial will end.

Capturing the response with the mouse

This is less relevant for a stroop task, but if you want to see what the participant clicked on in the trial, then select that element, go to the **interactivity pane** and change the **name** and **value**. The **name** will be related to the column header in your data sheet. So I'm going to make the name "clicked_element". The **value** will be what value you will put in that column if the participant clicks on that element. In this case I'm going to change the **value** to "fixation". I'm also going to tick the **End trial on click** option. If you do the same you should see the following:

How it looks

Interactivity

| | |
|-----------|-----------------|
| show (ms) | 0 |
| hide (ms) | 500 |
| name | clicked_element |
| value | fixation |

☒ End trial on click?

Do the same for the cue_word element, but use the **value** “cue”.

Changing the canvas size

The canvas, i.e. the space that stores your trialtype, will by default be 600x600 pixels. If you want to change that, just click anywhere on the canvas where there isn't an element, and change the **trial width (px)** and **trial height (px)** settings.

900ms

1200ms

text

Input

Timeline

| | |
|-------------------|-------|
| Trial Width (px) | 600 |
| Trial Height (px) | 600 |
| Background Color | white |

Mouse

☒ Visible

Now we're ready to use this trialtype in our experiment.

Procedure sheet

The procedure sheet describes what order things will happen in your experiment. By default the first trials/events will be at the start of your spreadsheet, and the last will be at the bottom

of your spreadsheet. For example, in the procedure sheet below:

Procedure

procedure_1.csv ▾

New Sheet

Rename Sheet

| | | | | | | |
|---|------|------------|----------|-------------------|-----------|--|
| 1 | item | trial type | max time | text | shuffle 1 | |
| 2 | 2 | instruct | user | This is the start | off | |
| 3 | 3 | instruct | user | This is the end | off | |
| 4 | | | | | | |

The participant would be presented with an instruction of “This is the start”. When they moved onto the next trial they would get an instruction of “This is the end”.

Shuffle 1, 2, 3 etc.

You may want to randomise the order of some of the trials. If you want to do this then you just put the same word into all the rows you want to be randomised together. For example, in the following procedure I want to randomise the order of the middle three instructions:

Procedure

procedure_1.csv ▾

New Sheet

Rename Sheet

| | | | | | | |
|---|------|------------|----------|-------------------|------------------|--|
| 1 | item | trial type | max time | text | shuffle 1 | |
| 2 | 2 | instruct | user | This is the start | off | |
| 3 | 3 | instruct | | Random 1 | instruct_shuffle | |
| 4 | 4 | instruct | | Random 2 | instruct_shuffle | |
| 5 | 5 | instruct | | Random 3 | instruct_shuffle | |
| 6 | 6 | instruct | user | This is the end | off | |
| 7 | | | | | | |

You can see above that I set the value in the “shuffle 1” column to “instruct_shuffle” for rows 3,4,5. Each participant will start with the instruction “This is the start”, and end with “This is the end”, but the order of the middle instructions will be randomised for them. We’ll replace these later with the “stroop_example” **trial type** we’ll create later.

shuffle 2, 3, 4 etc.

Whilst shuffle 1 allows you to shuffle trials within **blocks**, sometimes you'll want to shuffle the order of blocks. To do this, create a shuffle 2 column to shuffle/randomise the order of the **blocks**.

Collector will use the values written in these columns to randomise the order of blocks. For example, if your procedure sheet looks something like:

Procedure

procedure_1.csv ▾

New Sheet

Rename Sheet

| | | | | | | | |
|----|------|------------|----------|-----------------|-----------|-----------|--|
| 1 | item | trial type | max time | text | Shuffle 1 | shuffle 2 | |
| 2 | 2 | instruct | user | never shuffle m | off | off | |
| 3 | 2 | instruct | user | block 1 trial 1 | block_1 | half_1 | |
| 4 | 2 | instruct | user | block 1 trial 2 | block_1 | half_1 | |
| 5 | 2 | instruct | user | block 2 trial 1 | block_2 | half_1 | |
| 6 | 2 | instruct | user | block 2 trial 2 | block_2 | half_1 | |
| 7 | 2 | instruct | user | block 3 trial 1 | block_3 | half_2 | |
| 8 | 2 | instruct | user | block 3 trial 2 | block_3 | half_2 | |
| 9 | 2 | instruct | user | block 4 trial 1 | block_4 | half_2 | |
| 10 | 2 | instruct | user | block 4 trial 2 | block_4 | half_2 | |
| 11 | | | | | | | |

Then because of column “**shuffle 2**” your participant will start with trials on rows 3:6 half the time (on average), and on rows 7:10 the other half (on average).

At the moment you can only shuffle blocks once, but future releases of Collector will let you have a “shuffle 3”, “shuffle 4” etc. to do more block shuffling.

Trial type

The above examples are of the “instruct” **trial type** - which is just a simple way of giving the participants instructions that you write in the “text” column in your procedure sheet. You can create your own **trial types** using the trial type editor at the bottom of the interface.

Alternately, you can copy existing trial types that other users have made from <https://collectalk.com/>.

However, if you followed the above instructions, we now have a “stroop_example” **trial type** we can use. So let's replace “instruct” with “stroop example”:

Procedure

| | | | | | | |
|-------------------|------|---------------|--------------|-------------------|------------------|--|
| procedure_1.csv ▾ | | New Sheet | Rename Sheet | | | |
| 1 | item | trial type | max time | text | Shuffle 1 | |
| 2 | 2 | instruct | user | This is the start | off | |
| 3 | 3 | stroop_exempl | user | Random 1 | instruct_shuffle | |
| 4 | 4 | stroop_exempl | user | Random 2 | instruct_shuffle | |
| 5 | 5 | stroop_exempl | user | Random 3 | instruct_shuffle | |
| 6 | 6 | instruct | user | This is the end | off | |
| 7 | | | | | | |

The text “Random 1” etc. won’t actually do anything in this case, so feel free to delete it.

Item

In the above example, you might have noticed the “item” column has numbers 2,3,4,5,6 in it. This is because your procedure sheet can refer to stimuli you describe in your **stimuli** sheet. These numbers refer to **rows** 2,3,4,5,6 in the **stimuli**. We start at 2 because when you edit the stimuli sheet here (or in Excel) the first stimuli will be on row 2. We’ll change what’s in the **stimuli** sheet later to refer to **variables** needed for a stroop task.

Max time

This is the maximum time in milliseconds from the start of the trial. You might find that you want your timings to be dependent on events within the trial. In which case you’ll want to use the **code** editor for **trial types**, or perhaps a **boost** that you apply to a **trial type** that controls timings in this way.

Text

This is only relevant for trial types that include a “{{text}}” **variable** in their code. The instruct **trial type** does, so it’s an easy way to add instructions. In the **procedure** spreadsheet.

Stimuli sheet

This is where you define the stimuli or variables for each trial. In our stroop task, we need to update the “cue” column to reflect the words used in a stroop task, and add a column “letter_column” which defines the colors of the word. So let’s just have 4 trials for each combination of blue and green:

Stimuli

| | | | | | | | |
|-----------------|-------|--------|--------------|--|-----------|--------------|--------------|
| stimuli_1.csv ▾ | | | | | New Sheet | Rename Sheet | List Stimuli |
| 1 | cue | answer | letter_color | | | | |
| 2 | blue | Apple | blue | | | | |
| 3 | green | Banana | green | | | | |
| 4 | blue | | green | | | | |
| 5 | green | | blue | | | | |
| 6 | | | | | | | |

You may notice there's a redundant "answer" column - that's fine, it'll just be ignored.

List Stimuli button

If you are running an experiment with pictures, videos and/or audio files then there's an easy way to generate a list of all the stimuli if you've uploaded them to the **stimuli** folder on dropbox. Just click on the **list stimuli** button below the **Stimuli** title:

Stimuli

| | | | | | | | |
|-----------------|-----|--------|--------------|--|-----------|--------------|--------------|
| stimuli_1.csv ▾ | | | | | New Sheet | Rename Sheet | List Stimuli |
| 1 | cue | answer | letter_color | | | | |

You should get an interface like this:

2 out of 2

AllNone

Filterfilter

Apply

Spreadsheet

/stimuli

CollectorCat.png
kitten.png

It might take a minute or two, depending on how many stimuli files you have.

Spreadsheet button - If you click on the "Spreadsheet" button, you should be able to download a list of the files (and **very importantly** their dropbox locations). This can save time massively if you have a lot of stimuli.

Filter input - if you have lots of stimuli, just type in letters for what you want to keep. For example, if I only wanted "CollectorCat.png", I could type in "Cat" (**This IS case sensitive**) and then click **apply**. I would then see:

2 out of 2

All

None

Filter

Cat

Apply

Spreadsheet

/stimuli

CollectorCat.png

Importantly, if I clicked on the **spreadsheet** button now I will only get information for the filtered list.

Helper sidebar

On the right hand side there is a “helper” sidebar. You’ll notice that the advice it gives you changes depending on what you’re focusing on. For example, when I’m looking at the “participant_id” column in the **conditions** sheet I get the following help:

| participant_id | end_message | start_message | buffer |
|----------------|-------------|---------------|--------|
| random | | | 5 |
| | | | |

To see the whole cell when editing the sheets, either press F2 or double click on the cell

participant_id

Participants give their ID

By default, participants will give a **participant id** (e.g. a Prolific Academic or MTurk ID) at the start of the experiment. Change this setting to either **random** (recommended) to generate a unique and randomised id for the user, or **off** (not recommended) for the participant to have the id 'notUnique'. The participant_id influences the name of their data file. If the participant does not put in an ID, they will skip the **start_message**.

General tips

Downloading and Uploading experiments

On either side of the experiment name, there’s an up arrow for uploading an experiment and a down arrow for downloading the selected experiment:

Studies

Surveys

Boost

Data

New

↑

stroop_example ⇅

↓

Save

Rename

Delete

Versions

Run

This can be an easy way to duplicate an experiment. Just download it, and then upload it and give it a different name!

If your experiment included trialtypes that were written using the **Code** editor (as opposed to the **Graphic** editor), Collector should ask you if you want to upload those trialtypes also.

Similarly, any Surveys that were included in the original experiment should be downloaded and uploaded accordingly.

Running your study

Save!

Make sure you've saved! You usually can just press CTRL-S to save. The best way to save all your progress is click on the save button in the top left of the **studies** interface:



Conditions

| | | | | | | |
|---|-------------|----------------|---------------|----------------|------------|---------|
| 1 | name | notes | stimuli | procedure | fullscreen | welcome |
| 2 | condition_1 | You can put mo | stimuli_1.csv | procedure_1.cs | off | |
| 3 | | | | | | |

Click the “run” button

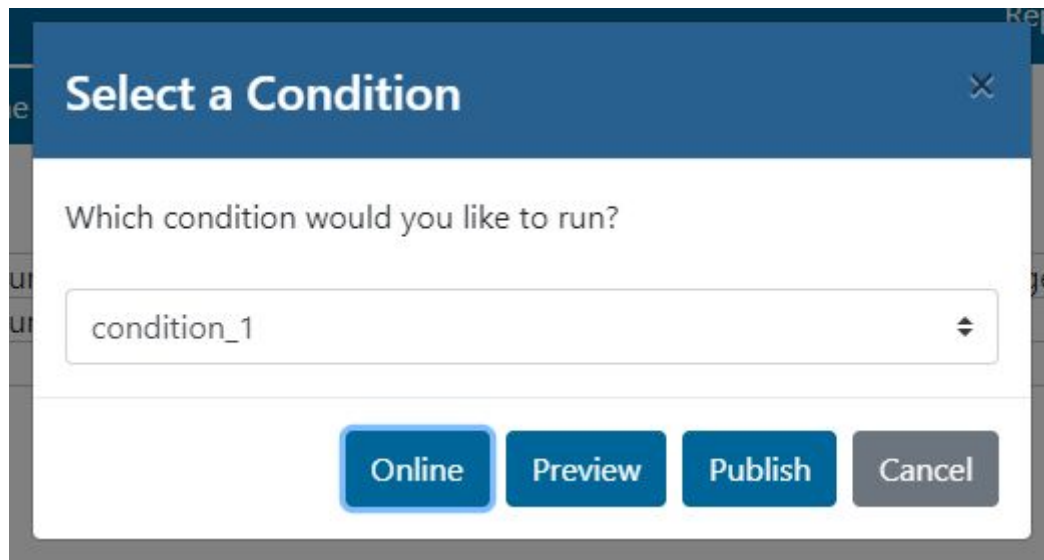
When you click on the **run** button:



Conditions

| | | | | | | | |
|---|-------------|----------------|---------------|----------------|------------|---------|---------------|
| 1 | name | notes | stimuli | procedure | fullscreen | welcome | participant_i |
| 2 | condition_1 | You can put mo | stimuli_1.csv | procedure_1.cs | off | | on |
| 3 | | | | | | | |

You'll generally see an interface like the following:



Online - will take you to where you would want to send participants. But see **publish** before using this

Preview - this should run the task without saving data


Publish - this will allow you to publish your task onto a server that will handle either saving

of your data. You can also get to the **publish** interface by clicking on the **C** icon in the top right of the screen.

Publishing your task

After clicking on **run** → **publish** or just the **C** icon on the top right of the screen, you should see something like:

Register

| Server | Register User | Register Experiment |
|---|-----------------|---------------------|
| ocollector.org | Create Account | Publish |
| | Delete Account | Unpublish |
| | Forgot password | |
| open-collector.org | Create Account | Publish |
| | Delete Account | Unpublish |
| | Forgot password | |
| Add server | | |
| <div>email</div> <div>password</div> <div> <input type="checkbox"/> I'm not a robot <div>  <div>reCAPTCHA</div> <div>Privacy • Terms</div> </div> </div> | | |

If you are a member of one of the following universities, you are automatically able to have your data e-mailed to you:

University of Reading (i.e. have an @reading.ac.uk e-mail address)
 University of Reading Malaysia (i.e. have an @reading.edu.my e-mail address)
 University of California, Los Angeles (i.e. have an @g.ucla.edu e-mail address)
 University of DeMontford (i.e. have an @dmu.ac.uk e-mail address)

To get your data e-mailed to you and backed up, put in your e-mail and password and then click on **create account** for the server you want to register with. Once you have successfully registered with that account, you can then **Publish** your experiments to that server. Once you've successfully published your experiment, you're ready to start data collection!

Note, if you publish your experiment with multiple servers Collector will use some of the servers as back-ups in case the first server fails.

Once you've reached here with the stroop task (and have successfully registered your experiment), close this interface and click on the **run** button as described above. You can now click on the **online** button to see how your task looks (and allow us to look at your data in a bit).

Have multiple studies in a row

You might find that trying to have everything your participant does in one experiment is a bit too complicated to fit into one procedure sheet and stimuli sheet. A way to deal with this is to break your research up into multiple experiments. To make the participant move from one experiment to another, add a "forward_at_end" column to your conditions sheet, and then put the URL of the next part of your experiment in there.

To find out the URL, open the experiment in question and run it, selecting the "online" option.

Decrypting your data (and understanding it)

I'm going to include some clarifications about actually running your task in this section, so feel free to skip to [decrypting your data within the "Data" tab](#) if you already have been e-mailed or downloaded data.

If you're working through the stroop task exercise, you'll see something like the following when you run your experiment:

Collector

It's very important to read the following before starting!

If you complete multiple Collector experiments at the same time, your completion codes may be messed up. Please do not do this!

If you participate in this experiment, your progress in it will be stored on your local machine to avoid you losing your progress if the window or tab closes or freezes. This data will be cleared from your computer once you have completed the task. **However, if you do not want this website to store your progress on your computer, DO NOT PROCEED.**

If the experiment freezes, try pressing **CTRL-S** to save your data so far.

I'm just going to run the experiment as "example_p".

Assuming everything went okay, you'll get through the task until you reach:

Please wait while we confirm that all your data has been saved

After a while, the data should be saved, and you'll see:

Thank you for participating. If you'd like to download your raw data [click here](#)

This is totally optional, but please select the country you are completing this from and then click on "Submit"

Submit



It seems that the lag between completing an experiment and the researcher's e-mail acknowledging it vary quite a lot. However, if your participant sees the second screen with the map the data is on the way. If they get stuck on:

Please wait while we confirm that all your data has been saved

...for 5 or more minutes then something has gone wrong. You may need to ask them to press CTRL-S to save the data so that they can email it to you directly if this occurs.

Decrypting your data within the "Data" tab

Once your data has arrived in your e-mail, download it, and then go to the **data** tab at the top of the Collector interface:



Once there you can click on the "Decrypt files" button, select your file in your downloads folder (or wherever you saved it).

You'll need the password you created originally to decrypt it. Once you've typed it in you should be presented with your file!

Understanding your data

If you've been working through the stroop example, your data should look something like this:

| | P | Q | R | S | T | U |
|--|-------|--------|--------------|-------------------|-----------------|---|
| | cue | answer | letter_color | keyboard_response | clicked_element | |
| | | | | | | |
| | blue | Apple | blue | | | |
| | blue | | green | g | | |
| | green | | blue | b | | |
| | green | Banana | green | g | | |
| | | | | | | |

You can see in column **s** “keyboard_response” that I pressed g then b then g. This seems to be correct as “b” represents me thinking the letters were blue, and “g” represents me thinking the letters were green (which matches column **R** “letter_color”). Had I clicked on the fixation cross or the word, then column **t** “clicked_element” would have included the words “fixation” or “cue”.

Surveys

To create and edit surveys, go to the Survey tab at the top:



You cannot create a survey from scratch, you need to select a previously existing survey to base the new survey on. I'm going to use demographics just because it has a lot of different types of questions. Just select “demographics.csv” and then click on **new survey**:



The **helper bar** on the right should tell you a lot about each column depending on where you click in the survey. So I'm just going to highlight the fact that after each change to the survey you can preview your changes by clicking on the **preview** button:

The screenshot shows the top navigation bar of a survey editor. It includes buttons for 'New Survey', 'exemplar_demographics.csv' (with a dropdown arrow), 'Save', 'Rename', 'Delete', 'Spreadsheet', and 'Preview'. The 'Preview' button is highlighted with a red rectangular box. Below the navigation bar, the survey form is visible with several questions and their corresponding input fields:

- Gender:** Three buttons labeled 'Male', 'Female', and 'Other'.
- Age:** A single-line text input field.
- Education (which level are you currently in, or is the highest you've completed):** A dropdown menu showing '-- no option selected --' with a small upward arrow icon.
- Do you speak English fluently?** Two buttons labeled 'Yes' and 'No'.
- At what age did you start learning English? (write "0" if from birth):** A single-line text input field.
- What is your country of residence?** A single-line text input field.
- What is your preferred hand?** Three buttons labeled 'Left', 'Right', and 'Both'.
- If you would like to please state your ethnicity:** A single-line text input field.

If you want to go back to editing, just click on the Spreadsheet button to the left of the preview button:

This screenshot shows the same top navigation bar as the previous image. In this instance, the 'Spreadsheet' button is highlighted with a red rectangular box, indicating it should be clicked to return to the editing mode.

Type

There are a lot of different **types** of survey question you can have. If you click on any cell in the “**type**” column you should see a summary of each type of question:

checkbox

If you want the participant to be able to select multiple options, use a checkbox. If you only want them to be able to select one option, use a 'Radio',

date

This allows standardised storage of date. Note that this works better in Chrome than firefox.

dropdown

A standard dropdown list.

instruct

Allows you to type in instructions.

likert

Participants can click on one of the options that they want.

number

Only allows participants to type in a number

para

Gives the participant a large text box to write in their answer. ",

radio

Allows the participant to only select one option in a list (unlike checkboxes)

shortAnswer

Gives participant space for a small paragraph for their response

slider

The participant can slide between values you specify

text

Gives the participant a text box to write in their answer

answers

Answers the participant can choose

A single answer or list of answers the participant can choose. Put a pipe character (|) between each possible answer. If you're having problems finding the pipe key, you can highlight the pipe in the brackets and then copy and paste it.

values

What each answer is worth

Values work in parallel to **answers**, in which you associate a score for each answer. For example, if the answers the participant could choose were 'strongly agree|agree|disagree|strongly disagree' and the values were '3|2|1|0', then the value of strongly agree would be 3, agree would be 2, disagree would be 1, and strongly disagree would be 0. These value of the participant's response is stored by itself in the data, and can also be used when adding together the **score** across multiple items. To get the score across multiple items, create a column with 'score:[your score name]'. Once you've created this column, click on any cell in that column to get more guidance.

score:[your score name]

What is the scale or subscale you want this questionnaire to contribute to

To get a score for a questionnaire, you need to have a column header that is formatted with "score:[name of your scale or subscale here]". Inside this column you can add a "1" or "r1" for each question you want to contribute to this scale (see answers and values above). 1 will add the question to the score as described in the **answers** and **values** columns and "r1" will do the same but with the **values** reversed.

feedback

Tell the participant about each answer

You can list what feedback you associate with each response. Put a pipe | between each feedback

feedback_color

What color is each feedback

The colors you want to associate with each feedback (e.g. green for the correct ones, and red for the wrong ones. Put a pipe | between each feedback color

item_name

Column name in data sheet

The **item_name** will be what the column header is in your data sheet. So make sure it's unique!

no_text

No text on left side of survey

If you have an item, in which you want the content that would normally be on the right side of the survey to take up the whole width of it, put **'on'** in this column.

optional

Can a participant ignore this item?

The default assumption is that a participant doesn't need to respond to any particular item in your survey. If they need to reply to an item then put a **no** in this column.

shuffle

Randomise the order of items

In this column, if you want to randomise the order of questions, you can either simply write **'on'** in the items you want randomised, or you can use a different words for different groups of items you want randomised together. For example, if you wanted the first and second half of your items shuffled, you could write 'first' in the shuffle column for each of the first half of the items, and 'second' for each of the second half of the items. The order of items is preserved otherwise, so any items without a word in the shuffle column will not be shuffled. If you write 'off' in this column, the item will **not** be shuffled.

text

Question text

This will be presented on the left side of the survey. This is useful if you have a question with responses for this item. If you want to have no text for this row of the survey, create a column **no_text** in your sheet, and turn it on. If you want the text to take up the whole row, then under the **type** header, choose 'instruct'

FAQ/General questions

Can I use Collector if I am not a programmer?

YES! This program was designed to allow researchers to work with a format they're very familiar with (spreadsheets) to create interactive experiments. As you will see in the tutorial Collector is almost a completely programming free solution. Of course there are times when being able to code will make your life easier but we have tried to minimize user coding wherever possible.

What language is Collector written in?

Collector is written mostly in javascript/Jquery. Formatting of the presentations is controlled mostly by HTML5 and CSS2.

Do I need to ask anyone if I want to use Collector?

No. Collector is distributed under the GNU GPLv3 license (full text can be found in the **Web/Admin** folder). You are free to use, modify, and distribute this program as you wish. If you distribute a modified version of this program you are required to make your modified version available to the public under the same GNU GPLv3

license of the original program. If you are publishing papers that have used Collector experiments we ask that you acknowledge its use somewhere. This isn't a requirement of using this software but we'd like to get the word out to as many people as possible about its availability.

Collector will be citeable in a prepublication journal later this year.

If you build trial types that you think others would find useful please go to <https://www.collectalk.com> to share.

Troubleshooting

My changes aren't being reflected in the experiment. Why?

1. Save all your files before running the experiment. 90% of the time when you are having this problem it is because you forgot to save the changes you've made. Seems silly but I run into this all the time.
2. Clear your cache. There are extensions for chrome (<http://goo.gl/r961i>) and firefox (<http://goo.gl/r3Zky>) that make this process very quick
3. Are you sure you're editing the right experiment/folder? (this is for if you edit the experiment files directly, not within the Collector.py interface)

Further notes

What happens with my password for encryption and decryption

Upon creating a Collector folder in your dropbox account, a public and private key are generated using tweet nacl library by dchest available at <https://cdnjs.cloudflare.com/ajax/libs/tweetnacl/1.0.1/nacl.min.js> . The public key is used for encrypting data, the private key is used for decrypting data. Your private key is encrypted using Crypto-Js available at <https://cdnjs.cloudflare.com/ajax/libs/crypto-js/3.1.9-1/crypto-js.min.js>

This means that your private key can only be used when you type in your password, and thus the data can only be decrypted by someone who knows your password.

What happens with my password for Collector

When creating an account on Collector you are asked for a password. This password is hashed using a randomly generated salt and pepper at the start and end of your password using PHP:


```
$salt = create_random_code(20);
$pepper = create_random_code(20);
$prehashed_code = create_random_code(20);
$hashed_password = password_hash($salt.$user_password.$pepper,
PASSWORD_BCRYPT);
$hashed_code = password_hash($prehashed_code, PASSWORD_BCRYPT);
```

This means that we don't store your password in bare form on the server. Next time you log in your password is compared to the hashed version, and if they match then we accept it is you, and keep you logged in for 30 minutes. If you don't do anything for 30 minutes then we'll ask you to log in again.

In case you're curious - here's how we generate random codes:

```
function create_random_code($length){
    $characters =
'0123456789abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ';
    $charactersLength = strlen($characters);
    $new_code= '';
    for ($i = 0; $i < $length; $i++) {
        $new_code .= $characters[rand(0, $charactersLength - 1)];
    }
    return $new_code;
}
```

Original contributors

Collector was initially created by Mikey Garcia as software that should allow researchers to conduct online studies for free. The below is taken from the [original repository](#) he created:

Tyson Kerr

"Many of the best ideas/solutions in Collector have come from the mind of Tyson. Tyson's contributions are so wide that it is hard to think of a piece of the code he hasn't been involved with at this point. Despite his broad contributions, I think Tyson would agree with me that his real baby is the getdata functionality in /Data/. Every time you use those slick menus to check participant completion, exclude flagged users, or download all your precious data into one clean sheet you have Tyson to thank."

Victor Sungkhasettee

Figured out how to implement the Audio trial type

Adam Blake

"Completely reorganized the collector.js code to be object oriented. Is responsible for the current look of Collector because he redid nearly all of the CSS to make it much prettier than I initially could."

Nate Kornell

"Without Nate there would be no Collector. Many years ago Nate taught me how to use the tool he had created for himself, Generic, and that code inspired me to write Collector. Most of the core ideas and design decision at the heart of this project are either directly lifted from Nate's program or were based on adaptations of what he had created."