

Version: Apr 26, 2023

# **ENIGMA**

## **Experimenter Manual**

Tsung-Ying Chen < [enigma.nthu@gmail.com](mailto:enigma.nthu@gmail.com) >

## Table of Contents

<b><i>Basic Info</i></b>	<b><i>basic experiment information and settings</i></b>	<b>4</b>
• Challenge Code		4
• Activate		4
• Preview		4
• Delete		4
• Edit Collaborators (for main experimenter only)		5
• End Collaboration (for coordinators only)		5
• Exclude Exp		5
• Change Settings		5
• Download		5
• Validate Results		5
<b><i>Orientation</i></b>	<b><i>information presented before the experiment</i></b>	<b>6</b>
• Exp Description		6
• Consent Form		6
• Compensation		6
• Training/Test Instruction		6
<b><i>Training</i></b>	<b><i>learning input for the participants</i></b>	<b>7</b>
• Skip Training Session		7
• Stimuli List File		7
• Current Stimuli List		7
• List Instruction		7
• Random Block Order		8
• Block List		8
• Block Settings		8
• Block Elements		8
• Stimuli List File		12
• Current Stimuli List		12
• Random Block Order		12

• Check Rapid Responses .....	12
• Block List.....	13
• Block Settings .....	13
• Block Elements .....	13
<i>Stimuli List</i> <i>stimuli list for the training and test phases</i> .....	<b>15</b>
• Stimuli List Format .....	16
• Special Columns in a Stimuli List .....	16
• URL Columns .....	18
<i>Debriefing</i> <i>debriefing information for the participants</i> .....	<b>19</b>

## Description

There are multiple sections of experiment information and settings, including basic information, orientation, training session, test session, and debriefing. In basic info, you can review and change basic experiment information and settings such as experiment title and keywords. After the first time you activate this experiment, however, you won't be able to change these settings. This constraint helps you keep a consistent experiment procedure for every participant. You can also perform other actions such as activate, delete, and copy the experiment, which will be explained in great detail below.

- Challenge Code

The "Challenge Code" column is useful after you "activate" this experiment, which you can share with your participants for them to quickly find and participate in your experiment.

- Activate

When you choose to activate an experiment, the experiment will appear in the experiment list available to participants, and all participants can freely participate in active experiments. You will not be able to change all the settings and information of the experiment. If you find any issue with an active experiment, you can only choose to reset or delete the experiment.

- Preview

This function can be used to examine if an experiment runs as you expect. Before you activate an experiment, please use this function to check the settings and the flow of the experiment. The data collected during the training and test sessions in the preview mode will NOT be stored on the ENIGMA server.

- Delete

This action can only be executed by the creator of an experiment. Once executed, this action will delete all the data associated with the target experiment.

- Edit Collaborators (for main experimenter only)

If the experiment is managed by a research team, you can add the members of your team who register as an ENIGMA experiment as the collaborators of the experiment. Collaborators cannot reset, copy, and delete an experiment and edit collaborators, but will be able to do other actions, such as running an experiment or downloading the data. Every experiment can have at most five collaborators, and only the experiment who creates an experiment could make changes to the coordinator list.

- End Collaboration (for coordinators only)

If you are added as a coordinator of an experiment, you can use this function to end your role as a coordinator in this experiment, and you will no longer see this experiment in your experiment list or manage this experiment.

- Exclude Exp

If participating in other experiments might influence learners' performance in the current experiment, you could choose to exclude participants who have been involved in other experiments from the current experiment. To exclude an experiment, you can simply enter its Challenge Code. If you need to exclude more than one experiment, you could enter multiple Challenge Codes at once by separating every two codes with a semi-colon ";" (although you cannot enter more than 100 characters at a time). Currently, ENIGMA allows excluding up to 20 experiments for every experiment.

- Change Settings

This option is used to change the information and settings of an experiment that has never been activated before.

- Download

The data collected in this experiment after it is activated can be downloaded here.

- Validate Results

You can ask participants to provide their verification codes when they complete experimental sessions, and use this function to validate their participation(s).

---

## Orientation

information presented before the experiment

---

## Description

In orientation, you can add information that will be presented before each stage begins, including "Exp Description", "Consent Form", "Compensation", "Training Instruction", and "Test Instruction". Information for different languages can be provided to help recruit participants with diverse language backgrounds. When you provide all of the above five types of information as well as "Debriefing" for a language, ENIGMA will mark this experiment to have the information for that particular language, and will recommend this experiment to participants setting the language as their native language or L2. Regardless, you will have to provide all the information for English (US) to be able to activate this experiment.

- Exp Description

The description of the experiment would be the very first information presented to the participants. The experiment should be briefly explained in 1,000 characters to help them judge if they want to take part in your experiment.

- Consent Form

A consent form should clearly explain the rights and responsibilities to participants, and the consent form should be approved by a Research Ethics Board.

- Compensation

In this item, you can use 1,000 characters to briefly explain how a participation is compensated for and how a participant can receive the compensation. Once an experiment recruits the target number of participants and marked automatically as "Complete" in ENIGMA, this information will be hidden to avoid misleading participants.

- Training/Test Instruction

Before a training/test phase starts, ENIGMA will present the instruction to

participants. In 2,000 characters, you should try to explain what the participants should do in a training/test phase. If your experiment does not have a training phase, just enter "Not Application" in "Training Instruction".

---

## Training

learning input for the participants

---

## Description

In the Training Session, the participants will learn the inputs that the researchers want them to learn during an experiment.

- Skip Training Session

In an experiment, you can choose to skip the training session for all participants. If you choose not to skip the training session in an experiment, but the participants are not required to go through the training session again after the first time, the training session will still be skipped for the returning participants.

- Stimuli List File

In this stage, you must upload a stimuli list file, and the blocks in this stage will be created based on the values of the "Block" column, and each block can have access only to the stimuli assigned to the block as specified in the "Block" column.

- Current Stimuli List

Once you have uploaded a stimuli list file that is consistent with the format required by ENIGMA, the item "Stimuli List File" will change to "Current Stimuli List", in which you will see the number of columns, rows, and blocks that ENIGMA automatically calculate. In addition, you can click "Download" to store the current stimuli list as a text file, click "Replace stimuli..." to update your stimuli list, or click "Test Stimuli URLs" to check the availability of the links to your multimedia stimuli.

- List Instruction

A list of stimuli should be a pure-text file with UTF-8 encoding. The first row of the list would be viewed as column headers (please use English alphabets), and

every single row in the rest of the list represents a stimulus and its information. The cells in each row should be separated with a tab key in order to be parsed correctly in ENIGMA. Every list should have at most 1,001 rows (headers included) and 30 columns. Each data cell should contain at most 100 characters. We recommend you to use Microsoft Excel (or other similar software) when editing the list, and then copy and paste the entire list to a text editor (e.g., Notepad or Sublime Text), and you will see a tab-separated list, which you can save as a UTF-8 encoded pure-text file to match the format required by ENIGMA. For detailed information, please see “Stimuli List”.

- Random Block Order

If you check this box, the blocks in the training stage will be ordered randomly for each training session. Otherwise, the training blocks will be presented in order from top to bottom.

- Block List

ENIGMA will retrieve the values from the "Block" column in your stimuli list, identify all unique values, and create corresponding blocks, and the creation and deletion of blocks can only be done through editing your stimuli list.

- Block Settings

Once blocks are automatically created, you will see "Edit", "Add an Element", "↑" and "↓" for each block.

By clicking "Edit", the basic settings of a block can be changed, such as "Block Title", "Num of Repetition", "Random Trial Order", and "Target Accuracy". "Block Label" is assigned automatically based on the values in the "Block" column of the stimuli list, which cannot be changed. After you complete the changes, please click the "Update" button to save the changes temporarily. If you need to apply the changes, click the "Save" button at the bottom of the page.

Click "Add an Element" to add a new element in a particular block to present stimuli or collect responses.

Click the two arrows to adjust block order.

- Block Elements



When you click "Add an Element" in a particular block, a new experimental element will be added to the block. Click on each element to edit its settings (explained below).

- **Element Title:** Customize the title of an element. Initial numbers, spaces, and special symbols are not allowed. Elements assigned to have the same order (see **Element Order** below) must have a different title.
- **Element Type (Presentation):** When an element type is set to "Presentation", then the main function of this element will be presenting stimuli.
- **Element Type (Random Recall Test):** Add a memory test to this block to help participants focus on the stimuli. After a set number of trials (determined by **Random Trial Interval**) a memory test is administered, during which a stimulus randomly drawn from the prior set number of trials will be presented to your participant. The participant has to judge if said stimulus is the exact same stimulus presented immediately before the memory test. The chance of the exact same stimulus to appear is adjusted to 50 percent, so the chance for the participants to necessarily answer "Yes" or "No" is equal.
- **Element Onset:** Determines how much time (in seconds) should pass before an element is initiated. If you give a number "0", an element is initiated immediately. This setting must be a number between 0 and 3600. You can also put `[[Delay]]` here to retrieve numbers from the Delay column in your stimuli list.
- **Element Length:** This setting determines the length (in seconds) of an element after it is initiated. For text and image stimuli types, a length of "-1" means "infinity", meaning that the stimuli will continue until a response is given. For audio and video stimuli types, a length of "-1" means the length of the audio/video. That is, the length of the presentation of the stimulus will vary based on the audio/video stimulus. If you want the length of an element to be synced to other audio/video stimuli from your stimuli list, you can fill in the name of the column (e.g., `[[AudioURL]]`).
- **Stimuli Type:** You could choose "Text", "Audio", "Video", or "Image" as the type of stimuli presented in the current element. If the texts or URLs are from a certain column in the stimuli list, you could enclose the name of the column in double square brackets (e.g., `[[AudioURL]]`), so the

presented stimuli vary across different trials.

- **Stimuli Position (X/Y):** Determines the relative position of a visual stimulus on the X/Y (horizontal/vertical) axis. The position is by default the center of the screen, with both X and Y set to "0". When a positive value is given to X or Y, the stimulus will be moved upward or rightward; when a negative value is given, the stimulus will be moved downward or leftward. The unit of movement is the "percentage of the width/height of the stimulus" - If X is "2", the stimulus will be moved rightward by 2% of its width; if Y is "3", the stimulus will be moved upward by 3% of its height. You can also have by-trial movement values from the stimuli list if you enclose column names in double square brackets in these settings (e.g., [[PosX]]).
- **Element Order:** A smaller number means a higher order. If two elements have the same order, they will be presented at the same time.
- **Collect Responses:** When checked, collect responses in this element. This option is mandatory when element type is set to "Random Recall Test".
- **Response Type & Keys:** Choose one of the three types of responses to collect (unary/binary/Likert (3-7 points)). The second field (Response Type) is the text prompt that will be presented on the screen. The third field (Keys) sets the key that your participant needs to press when responding to the stimuli. Supposed that you choose to collect unary response, your second field might be "Continue" (the text prompt) and the third field might be "g" (the actual response key). Or, if you choose "binary", the second field might be "yes,no", and the third field might be "a,l" (use a comma to separate different texts and keys). When you choose to collect responses on a Likert scale, you need to have three to seven corresponding text prompts and response keys. Note that if you need to set the space key as the response key, you should specify "space" in the third field.
- **Correct Response:** Set the correct response of the response key(s), so that ENIGMA will code response correctness automatically for you. You could set the correct response as a fixed key (e.g. "space"), or use double brackets (e.g., [[Correct]]) to set a column from your stimuli list as the correct response. The correct response(s) in an element must also be the response keys chosen for the element. This setting is not used when an element is set as a Random Recall Test.

- **Check Response Accuracy:** Check this box if you want ENIGMA to help check if participants' respond correctly according to your setting above. Response accuracy will then be stored as part of the experimental results. If the element type is set to "Random Recall Test", response accuracy is always checked.
- **Show Response Feedback:** When checked, gives your participants feedback on their correctness immediately after their response.
- **Feedback Texts:** Provide text prompts corresponding to "Correct" and "Incorrect". The two prompts have to be separated with a period, such as "✓, X".
- **Feedback Length:** Determines the length (in sec) of the feedback.
- **Random Test Interval:** When the element type is set to "Random Recall Test", you can decide the random interval for this test. For instance, "4-7" means the test is administered for every 4 to 7 trials. This randomness prevents the predictability of the test, and efficiently forces your participants to focus on every stimulus. The lower bound of the interval should start at least with 2 stimuli (e.g., "2-4"), because only in this condition it is possible for WL to randomly select a stimulus that is not equivalent to the last stimulus presented immediately before the random test.
- **Random Test Prompt:** Set the text prompt for a random recall test to prepare your participants for the test.
- **Random Test Prompt Length:** Decide the length (in sec) of the Random Recall Test text prompt. Note that this length cannot be set to "-1" (infinitely long).

After you change any setting, click on the "Update" button to save the settings of the element temporarily. Or, if you choose not to update the element settings, click on the "Hide" button to go back to the list of elements. You can also choose to "Delete" an element temporarily.

When you "Update" or "Delete", all the changes won't be applied until you click on the "Save" button at the bottom of this page.

## Description

In the test phase, you as an experiment designer will provide language input for the participants and evaluate their learning outcome. The settings for the test phase are similar to those for the training phase, only parts of the settings are not applicable here.

- Stimuli List File

In this stage, you must upload a stimuli list file, and the blocks in this stage will be created based on the values of the "Block" column, and each block can have access only to the stimuli assigned to the block as specified in the "Block" column. For a more detailed instruction on how to organize the stimuli list file, please see "List Instruction" in this item.

- Current Stimuli List

Once you have uploaded a stimuli list file that is consistent with the format required by ENIGMA, the item "Stimuli List File" will change to "Current Stimuli List", in which you will see the number of columns, rows, and blocks that ENIGMA automatically calculate for your reference. In addition, you can click "Download" to store the current stimuli list as a text file, click "Replace stimuli..." to update your stimuli list, or click "Test Stimuli URLs" to check the availability of the links to your multimedia stimuli.

- Random Block Order

If you check this box, the blocks in the training stage will be ordered randomly for each training session. Otherwise, the training blocks will be presented in order from top to bottom.

- Check Rapid Responses

When you check this item, ENIGMA will help check if more than half of the trials have valid responses and these responses are on average shorter than 350 ms (i.e., a reasonable response latency for making proper linguistic judgments). Such rapid responses might suggest that the participant does not take the test session seriously and could simply respond randomly and potentially interfere with your experimental results.

- Block List

ENIGMA will retrieve the values from the "Block" column in your stimuli list, identify all unique values, and create corresponding blocks, and the creation and deletion of blocks can only be done through editing your stimuli list.

- Block Settings

Once blocks are automatically created, you will see "Edit", "Add an Element", "↑" and "↓" for each block.

By clicking "Edit", you can change the basic settings of a block, such as "Block Title", "Num of Repetition", "Random Trial Order", and "Target Accuracy". "Block Label" is assigned automatically based on the values in the "Block" column of the stimuli list, which cannot be changed. After you complete the changes, please click the "Update" button to save the changes temporarily. If you need to apply the changes, click the "Save" button at the bottom of the page.

Click "Add an Element" to add a new element in a particular block to present stimuli or collect responses.

Click the two arrows to adjust block order.

- Block Elements

When you click "Add an Element" in a particular block, a new experimental element named "Element XXX" will be added to the block, and click on each element will show the element's settings as follows:

- **Element Title:** Customize the title of an element. Initial numbers, spaces, and special symbols are not allowed. Elements assigned to have the same order (see **Element Order** below) must have a different title.
- **Element Onset:** Determines how much time (in seconds) should pass before an element is initiated. If you give a number "0", an element is initiated immediately. This setting must be a number between 0 and 3600. You can also put `[[Delay]]` here to retrieve numbers from the Delay column in your stimuli list.
- **Element Length:** This setting determines the length (in seconds) of an element after it is initiated. For text and image stimuli types, a length of "-

1" means "infinity", meaning that the stimuli will continue until a response is given. For audio and video stimuli types, a length of "-1" means the length of the audio/video. That is, the length of the presentation of the stimulus will vary based on the audio/video stimulus. If you want the length of an element to be synced to other audio/video stimuli from the stimuli list, you can fill in the name of the column (e.g., [[AudioURL]]).

- **Stimuli Type:** You could choose "Text", "Audio", "Video", or "Image" as the type of stimuli presented in the current element. If the texts or URLs are from a certain column in your stimuli list, you could enclose the name of the column in double square brackets (e.g., [[AudioURL]]), so the presented stimuli vary across different trials.
- **Stimuli Position (X/Y):** Determines the relative position of a visual stimulus on the X/Y (horizontal/vertical) axis. The position is by default the center of the screen, with both X and Y set to "0". When a positive value is given to X or Y, the stimulus will be moved upward or rightward; when a negative value is given, the stimulus will be moved downward or leftward. The unit of movement is the "percentage of the width/height of the stimulus" - If X is "2", the stimulus will be moved rightward by 2% of its width; if Y is "3", the stimulus will be moved upward by 3% of its height. You can also have by-trial movement values from the stimuli list if you enclose column names in double square brackets in these settings (e.g., [[PosX]]).
- **Element Order:** A smaller number means a higher order. If two elements have the same order, they will be presented at the same time.
- **Collect Responses:** When checked, collect responses in this element. This option is mandatory when element type is set to "Random Recall Test".
- **Response Type & Keys:** Choose one of the three types of responses to collect (unary/binary/Likert (3-7 points)). The second field (Response Type) is the text prompt that will be presented on the screen. The third field (Keys) sets the key that your participant needs to press when responding to the stimuli. Supposed that you choose to collect unary response, your second field might be "Continue" (the text prompt) and the third field might be "g" (the actual response key). Or, if you choose "binary", the second field might be "yes,no", and the third field might be "a,l" (use a comma to separate different texts and keys). When you choose to collect responses on a Likert scale, you need to have three to seven corresponding text prompts and response keys. Note that if you need to set the space key as the response key, you should specify "space" in the third field.

- **Correct Response:** Set the correct response of the response key(s), so that ENIGMA will code response correctness automatically for you. You could set your correct response as a fixed key (e.g. "space"), or use double brackets (e.g., [[Correct]]) to set a column from your stimuli list as the correct response. Your correct response(s) in an element must also be the response keys chosen for the element. This setting is not used when an element is set as a Random Recall Test.
- **Check Response Accuracy:** Check this box if you want ENIGMA to help check if participants' respond correctly according to your setting above. Response accuracy will then be stored as part of the experimental results. If the element type is set to "Random Recall Test", response accuracy is always checked.
- **Show Response Feedback:** When checked, gives your participants feedback on their correctness immediately after their response.
- **Feedback Texts:** Provide text prompts corresponding to "Correct" and "Incorrect". The two prompts have to be separated with a period, such as "✓, X".
- **Feedback Length:** Determines the length (in sec) of the feedback.

After you change any setting, click on the "Update" button to save the settings of the element temporarily. Or, if you choose not to update the element settings, click on the "Hide" button to go back to the list of elements. You can also choose to "Delete" an element temporarily.

When you "Update" or "Delete", all the changes won't be applied until you click on the "Save" button at the bottom of this page.

---

## Stimuli List

stimuli list for the training and test phases

---

## Description

In the training and the test phases, you need to upload a stimuli list in order to continue with your experiment design. The stimuli list needs to contain certain information and some special information which is optional for more complicated experiment design.

- Stimuli List Format

A list of stimuli should be a pure-text file with UTF-8 encoding. The first row of the list would be viewed as column headers (please use English alphabets), and every single row in the rest of the list represents a stimulus and its information. The cells in each row should be separated with a tab key in order to be parsed correctly in ENIGMA, as in the following example:

<b>StimuliID</b>	<b>TextStimuli</b>	<b>AudioURLs</b>	<b>Correct</b>	<b>...</b>
1	Ball	<a href="http://test.url/ball.wav">http://test.url/ball.wav</a>	a	...
2	Bird	<a href="http://test.url/bird.wav">http://test.url/bird.wav</a>	1	...
...	...	...	...	...

Every list should have at most 1,001 rows (headers included) and 30 columns. Each data cell should contain at most 100 characters. We recommend you to use Microsoft Excel (or other similar software) when editing the list, and then copy and paste the entire list to a text editor (e.g., Notepad or Sublime Text), and you will see a tab-separated list, which you can save as a UTF-8 encoded pure-text file to match the format required by ENIGMA.

Here we provide the stimuli lists used in the training/test session in the Demo challenge as examples:

- [https://lngproc.hss.nthu.edu.tw/enigmaTest/training\\_demo.txt](https://lngproc.hss.nthu.edu.tw/enigmaTest/training_demo.txt)
- [https://lngproc.hss.nthu.edu.tw/enigmaTest/test\\_demo.txt](https://lngproc.hss.nthu.edu.tw/enigmaTest/test_demo.txt)

- Special Columns in a Stimuli List

When the headers include texts that match some special strings of letters in case, the contents of the columns are processed differently as follows:

- Block (Required)
 

Your stimuli will be grouped automatically according to the labels included in the "Block" column. In addition, blocks will only be generated automatically in ENIGMA based on the labels in this column.
- Correct (Required for the Test Session)
 

The stimuli list for the test session must include the "Correct" column to set up the correct responses (it is optional for the training session). Participants will see their response accuracy rate in the debriefing session after they complete an experiment. Correct response keys can only be set as common keyboard keys,



including "space", "0-9", and "a-z". If there is more than one correct response key, please separate every two keys with a comma "," (e.g., "a,l,space").

- StimuliID (Optional)

You could add numeric labels for each stimulus in the list. Since ENIGMA DOES NOT number your stimuli automatically, we recommend you to label your stimuli by including this column to facilitate your analysis of experimental results.

- Condition (Optional)

This column can be included and to group your stimuli into different experimental conditions. ENIGMA will help you assign your participants randomly to each condition. If you wish to reuse the same stimulus in different conditions, you can include all the applicable conditions in this column and separate them with a semi-colon ";", such as "experimental;control". Note: Each condition should also be included in each block. Since condition is randomly selected by ENIGMA, if a block does not include a selected condition, there will be no stimulus selected for this block, which would result in errors when running an experiment.

- Session (Optional)

If your experiment requires participants to complete multiple sessions ("Multiple Participation" is "Yes" in the Basic Info settings), and different subset of stimuli for different sessions is to be used, then you could include this column and specify the session number for each row, and ENIGMA will select the subset for your participant depending on their progress. For instance, if the "Number of Participation" is set to "2", then you have to specify the number from 1 to 2 in this column. Multiple session numbers can also be specified for stimuli by separating the numbers with a semi-colon ";", such as "1;2". You CANNOT skip any session number, and stimuli marked with a session number higher than the "Number of Participation" setting will NEVER be selected. You can also choose to include this column for either or both stimuli lists. Note: If this column is included, make sure that every session includes all the blocks and that each block in each session includes all the conditions (if the Condition column is included as well).

- \*TextStimuli\* (Optional)

You could include columns with a name including the string "TextStimuli" (e.g., "WordTextStimuli"), and store data that will be presented as pure texts in the experiment. Namely, if you put URLs into these columns, ENIGMA WILL NOT load the contents via the links.

- \*AudioURL\*, \*VideoURL\*, \*ImageURL\* (Optional)  
If you have columns with a name including the strings "AudioURL", "VideoURL", or "ImageURL" (e.g., "StimuliAudioURL"), the data stored in these columns can be used as paths to audios, videos, or images, and ENIGMA can load these contents and use them as stimuli in the experiment (see "URL Columns" section below).
  - Length (Optional)  
This column is to specify the length (s) of presenting a stimulus. This column must include numeric values between -1 and 3600.
  - Delay (Optional)  
You can include this column to specify the delay (ms) in presenting a stimulus. This column must include numeric values between 0 and 3600.
  - PosX, PosY (Optional)  
This column is to specify the position of a visual stimulus. This column must include numeric values between -10000 and 10000. The number here means the proportion to the stimulus' length or height. For instance, if PosX has a value of -50, then the visual stimulus will be moved from the center to its left by 50% of its length.
- URL Columns

In a URL column, a link must start with "<http://>" or "<https://>", and should be directly connected to a .wav/.mp4/.jpg/.png file as in the following examples:

- <https://lngproc.fl.nthu.edu.tw/enigmaTest/test.wav>
- <https://lngproc.fl.nthu.edu.tw/enigmaTest/test.png>

In every URL column, you cannot mix URLs linked to different types of files. For instance, if you include URLs linked to either .wav or .jpg files in a column with a header including "AudioURL", you will receive an error message from ENIGMA. In addition, to minimize cross-browser compatibility issues, "AudioURL" columns can only have links to .wav files, "VideoURL" columns can only have links to .mp4 files encoded using H.264 or H.265, and "ImageURL" columns can have links to common Web image .jpg or .png files.

Note that file sharing links provided by most cloud storage (e.g., Dropbox, Google Drive, OneDrive) cannot be processed in ENIGMA since these links only direct browser to a "page" where a file is shared rather than to a shared "file" itself. Thus,

we recommend you to upload your files to a Web space provided by your institution, so ENIGMA could load the multimedial files via the direct links.

When you click "Test Stimuli URLs" on this page, ENIGMA will help check if your URLs can be accessed normally. This function is mainly used to avoid cases where you have typos in your links that make these links invalid. If your URLs pass the test in this function, it only means that all URLs can be accessed normally, but it doesn't mean that these URLs are direct links to the multimedia files.

---

## Debriefing

debriefing information for the participants

---

### Description

When participants complete the test phase, the information you provide here as part of the debriefing process will be presented to participants. According to the common research ethics guidelines, experimenters have the responsibility to provide most detailed explanations to allow participants to understand the purpose/goals of the study. ENIGMA by default allows 5,000 characters for your debriefing information. However, if we receive complaints regarding the links (e.g., for the inclusion of violent or sexual information), your experiment data could be removed, and your experimenter account will be suspended.

If participants are required to complete multiple test sessions, the debriefing information will only be shared after participants complete all test sessions. Debriefing information will neither appear when participants share their performance in an ENIGMA experiment in a social network site.

As mentioned in the instruction on the orientation information, you should at least provide debriefing information in English (US). This is because when the information in other language is not complete, ENIGMA will show all the information in English (US) by default.

This instruction is credited to Yi-Shan Lin, Wei-Hsin Lo, Bo-Ting Yang, & Hong-Yi Wang