1. **General overview**

The Early Patterning Assessment – Online is intended to measure 4-6-year-olds repeating and growing patterning knowledge. The online repeating patterning subscale is reliable in assessing children's repeating patterning knowledge, however, the online growing patterning subscale is not. Furthermore, the assessment was developed with a primarily White, middle-class sample. The measure has not yet been administered to a diverse sample of 4-6-year-old children.

Here is the link to the assessment: https://open-lab.online/test/patterning_share_version/5f3c4f75ef9c1f5efa91eed5

Note: this link will just allow you to go through the assessment. It will not gather data for you if you send it to participants. In order to gather data, you will need to setup a study on the website that runs the assessment. The steps below will help you do this.

Other notes:
- Assessment works best in Google Chrome or Firefox; it will not work in Safari or Internet Explorer
- Ideal for your participants to be using a computer/laptop. Tablets have worked but are not always successful, phones will not work
   o The larger the screen the better

2. **Info on setting up an open lab account**

The assessment was built using lab.js (https://lab.js.org/), a free, open, online study building platform. Studies designed using lab.js are run through Open Lab (https://open-lab.online/). Open Lab houses the studies and runs the experiment. In addition, Open Lab collects and stores all the data from your studies. You can create an Open Lab account by following the link above. Make sure you are in the "Sign-up" tab and not the "Login" tab.

3. **Steps to running the assessment through Open Lab**

1. Open this lab.js link (https://labjs.felixhenninger.com/?url=https://open-lab.online/labjs/601471810f011c7cb622535f)
    a. This is the link to the assessment in lab.js

2. Upload the assessment to your Open Lab account by clicking on the "Upload to Open Lab..." button shown below
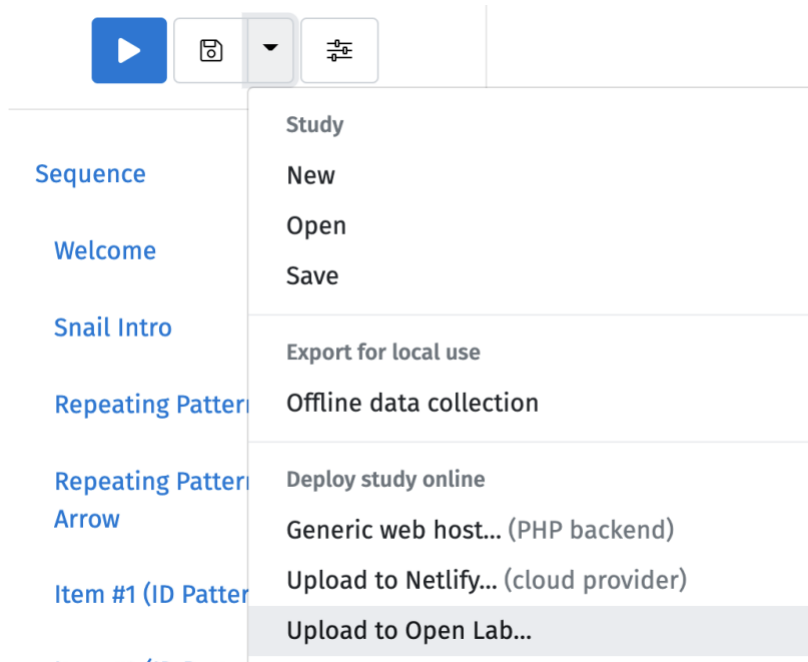
3. It may take a few minutes to upload.
4. When it is ready to be opened on Open Lab, select the "Manage Study on Open Lab" Button
5. Save the assessment as a task with a name you will remember
   a. **Keep the task as private**
6. When the task has been created, you will then create a study that will allow you to collect data using the Early Patterning Assessment
   a. Select the "STUDIES" tab on the top left of the screen
   b. Create a new study and name it something you will remember
      i. **Do not use any spaces or special characters when naming your study** – it can cause difficulty when you send the link out to your participants
      ii. E.g., name it "PatterningStudy" NOT "Patterning Study"
7. Adding the assessment (the task you created in step 3) to your study (what you created in step 4)
   a. Within the "STUDIES" tab, select the "SELECT TASKS" tab towards the top of your screen
   b. Scroll to the lower portion of the page and click on the task you created – this will add the task to your study
8. You should now have a study containing the Early Patterning Assessment that is ready to share with your participants
   a. Click on the "STUDIES" tab in the top left corner and this should bring you to the home page of your study

4. **Sharing the assessment with your participants**

1. To share the study, click on the "INVITATIONS" tab within the "STUDIES" tab
   b. There are multiple links/options on how to share the assessment with your participants
   c. Select whichever best suits your needs
   d. E.g., we use the "Signing up with a participant code link" and ask the participant to input their participant code which we provide at the beginning of every session. This allows us to easily identify their data on Open Lab after they complete the assessment
   e. Note: Open Lab will not allow you to open the study when you are signed into your Open Lab account

5. **Accessing the data on Open Lab**

1. Select the "DATA" tab located on the top left of your screen
2. Select the "Participants" option located towards the top left of your screen (below the "DATA" tab)
   a. Note: you can also select the "Results by Task" option, and this will allow you to download all data for the assessment in one file
3. Identify the participants data you would like to access (e.g., as mentioned above, we provide the code ahead of time, so it is easy for us to identify which data file is associated with which participant)
4. Under the "Data" column, select "Get"
   a. This will download the data as a csv file
5. To delete a participant's data, under "Details" select "Open"
   a. Then, select the "x" under the "Delete" column for each task file
   b. After all files have been deleted, you need to navigate back to the "Participants" page, and locate the participant
   c. Now, you should be able to delete the participants by selecting the "x" under the "Delete user" column

Other information regarding the assessment:

1. Items with poor item characteristics from our data collection that you might consider revising

When developing the online version of the Early Patterning Assessment, we identified a number of items that had poor item characteristics in our initial analysis.

The following items had item-total correlations between 0.1 and 0.2.

For the repeating items, these were items: 2, 3, 10
For the growing items, these were items: 22, 23, 24, 28, 32, 33, 37

The following items had item-total correlations below 0.1.

For the repeating items, these were items: 16
For the growing items, these were items: 21, 25, 26, 29, 35, 36

Given that a large number of these items were pattern identification items, to improve item characteristics, we decided to recode the pattern identification items so that a pattern was paired with a non-pattern. To be scored as correct (i.e., scored a 1 opposed to 0) participants needed to both correctly identify a pattern, and correctly reject a non-pattern. For example, to be correct (i.e., get scored a 1) on item 25 and 26 combined, the participant would have had to correctly identify item 25 as a pattern, and correctly reject item 26 as a non-pattern. If they only did one of these correctly, they would be scored as incorrect (i.e., scored a 0) for item 25 and 26 combined.

We re-ran our analysis with these newly coded pattern identification items, and this improved the item-total correlations particularly for the pattern identification items.

2. Items we excluded from our analyses

When conducting our analyses with the newly coded items, we decided to exclude items with item-total correlations below 0.1. We identified 5 items with item-total correlations below 0.1 and as a result we excluded these items from our analyses. These items were items 10, 16, 25 and 26 combined, 29, and 35.

Additional information about the assessment can be found on our website by following this link:
https://peabody.vanderbilt.edu/departments/psych/research/research_labs/childrens_learning_lab/IESprojects-and-materials.php

For any questions or concerns feel free to reach out to Jake Kaufman at jake.m.kaufman@vanderbilt.edu.

Thank you and we hope this helps you get your study up and running!

Children's Learning Lab Team