

Lexplore

USER MANUAL

Lexplore Application 5.13

Lexplore Reading Ability Test

Stockholm

December 2019

Preface

This User Manual is meant to help the user of the Lexplore Reading Ability Test. In here, we have gathered all you need to know to administer the test correctly. It is important for each user to feel confident implementing the test and to deal with different situations that may occur during the testing. In order to arrive at reliable results, consistent procedures according to guidelines are needed, as well as equal assessment of the pupil's responses to the reading comprehension questions. To enable this, the user requires knowledge of how the test works and what it measures, as well as easy-to-access information on how to interact with pupils in different situations and how to proceed correctly when something out of the ordinary happens. All that information we have tried to gather here.

Stockholm, December 2019

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Chapter 1. – Background

This chapter provides information on what the test measures, how it shall be used, who may use it, and the prerequisites that need to be in place for reliable results.

1.1 The Lexplore Reading Ability Test

Lexplore's reading ability test measures reading ability using recordings of eye-movements and artificial intelligence (AI). The pupil's eye-movement patterns during reading are recorded and sent online to a machine learning algorithm that answers with a measure of the pupil's reading ability compared to pupils of the same year group.

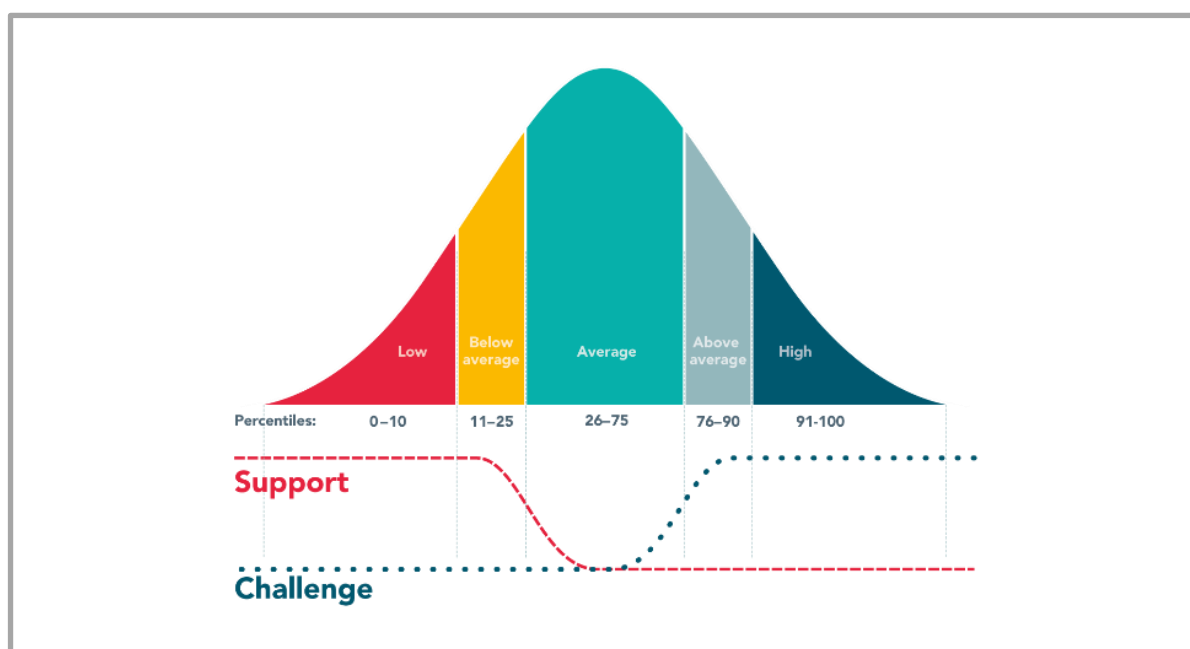


Figure 1, Lexplore's five levels of reading ability

The test typically only takes a few minutes and consists of three parts. It begins with a rapid automatic naming (RAN) task with letters and continues with the reading of two short texts with follow-up questions. The rapid naming comes first to allow the pupil to begin with a simple task and be comfortable with the situation. The texts following the rapid naming task are adjusted for year group level and composed so that even struggling readers can get through them.

The tool is built on a large data collection of eye movement recordings from children during reading. For the results to be reliable, there is a need for consistency, keeping the testing environment the same as it were when the original tests were conducted.

The questions following each text are there to encourage the pupil to read for understanding. Therefore, it is important that the pupil knows there will be questions. This foreknowledge of the follow-up questions ensures that the same conditions prevail as those during the original data collection. The pupil's responses to the questions are registered to provide a separate measurement of basic reading comprehension along with the result from the analysis of the eye movements during reading.

The reading comprehension questions measure the pupil's basic reading comprehension of the same text that was read while the eye movements were recorded. The pupil is asked to report on simple details from the reading by answering two or three questions. To avoid allowing social skills or talkativeness to influence the results, the correct answers are specific details taken from the text. To avoid letting ability/lack of ability to follow instructions influence the results, the information requested in the questions can be provided in any order.

The Lexplore test for reading ability does not measure advanced reading comprehension (the ability to reflect on the content and relate it to one's own experiences, etc.).

The goal with using Lexplore is to deliver an objective measure of the pupils' reading ability so that the school can monitor the reading development of all pupils and provide intervention where warranted. The test is available for use in year 2 to 5. The results are presented in the Lexplore web portal where the level of the user's access determines which pupil's results a user can see. The test is available for schools in Sweden, the US and the UK, supporting respective language both for the testing and presentation of results.

1.2 Intended use and intended user

The Lexplore Reading Ability Test is intended to be used for the following pupil groups:

Year (UK)	Term	
	Autumn	Spring
2	X	X
3	X	X
4	X	X
5	X	X

Autumn = 1 Aug – 31 Dec

Spring = 1 Jan – 31 Jul

- There should be approximately three months between test sessions as a minimum.
- After the summer break, it is recommended that pupils are not to be tested until they get back into the routine of reading.
- Only certified users are allowed to conduct the Lexplore Reading Ability Test.
- The user will have received certification training by Lexplore or a Lexplore-certified partner.

Lexplore recommend that pupils whose reading level is assessed to be low or below average be tested at the beginning, middle and end of the academic year to ensure they are achieving appropriately ambitious reading objectives, and to assess the effectiveness of the applied interventions. Pupils on other reading levels should be tested at the beginning and end of the academic year to ensure appropriate development of reading ability.

1.3 Prerequisites for reliable test results

For the test results to be reliable these conditions must be followed when performing Lexplore's test for reading ability:

- The pupil is tested individually in a calm and quiet environment, e.g. two pupils are not tested at the same time in different ends of the same room
- The pupil needs to take the test freely
- The pupil needs to be comfortable with any observers during the test
- Reading tasks for the year group level of the pupil is used
- The pupil receives correct instructions and the examiner makes sure the pupil understands these instructions

Most importantly, it comes down to making sure the testing is carried out under the same conditions as during the collection of the data that was used to standardise the method. In addition to the testing itself being conducted in the standardised manner, for the results to be reliable, the environment needs to be calm and stress-free so that the pupil feels comfortable and is given the opportunity to perform according to his/her ability.

Chapter 2. – This is how the test is administered

This chapter explains how to administer the test and what to keep in mind. Here are the guidelines on how to interact with pupils, how and when to help them, how the reading comprehension questions should be posed, and how the responses should be assessed.

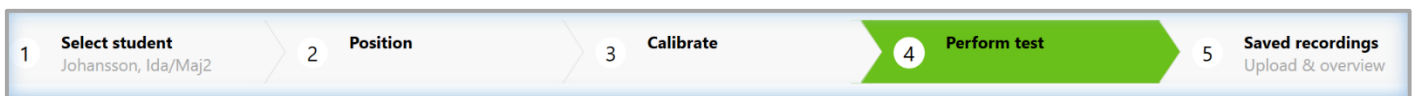
2.1 Before first use – what to expect

Before you become a certified user, you will receive training. The purpose of the training is to make sure you have enough theoretical knowledge about the test and adequate practical skills in using it. This user manual is intended to serve as a tool for you ahead of, during, and after your training.

The training will take place in a separate training organisation with fictional pupils. Once you have had enough practise, you will be ready to start testing real pupils under supervision.

2.2 Test flow

The test consists of three different tasks for each pupil. Firstly, the pupil will be asked to name letters as fast as he/she can and then to read two short stories with follow-up reading comprehension questions after each story. Pupils in year 2 will read both texts aloud while pupils in year 3-5 will read the first text aloud and the second text silently. The pupil's eye gaze can be monitored while they are looking at the screen as they are reading. All the instructions for what to say to the pupil are available for the user during each step. Instructions for what to keep in mind are also available. Before the test begins, the equipment needs to be positioned correctly with the pupil, and a calibration of the pupil's eyes is imperative. The pupil's current state in the test flow is always highlighted at the top of the screen, as shown in the image below.



2.3 A typical testing session

These are the steps you would go through during a typical testing session. The software will walk you through each step by asking you how you want to proceed.

- Select the pupil's name from the list
- Press "Select Pupil"
- Adjust the equipment. When the pupil's positioning is ok, press "Start calibration"
- Give the instructions to the example letters
- Press "Next" when the pupil has finished the example letters
- Give instructions to the RAN-task
- Press "Start recording"
- Immediately press "Next" or space bar when the pupil has finished naming the letters
- Press "Save and move on"
- Give instructions for the reading of the first text
- Press "Start recording"
- Immediately press "Next" or space bar when the pupil has finished reading
- Pose the questions one at a time and mark each answer in the respective box as right or wrong
- Press "Next" when all questions have been marked
- Press "Save recording"
- Give instructions for the reading of the next text
- Press "Start recording"
- Immediately press "Next" or space bar when the pupil has finished reading
- Ask the questions one at a time and mark each answer in the respective box as right or wrong
- Press "Next" when all questions have been marked
- Press "Done"

2.4 Deviations from a typical testing session

There will be situations where you might need to make a different choice on how to proceed due to something occurring during the testing. The most common cases are explained below.

2.4.1 End test

If a user for any reason wants to end the test this can be done at any time except for during an ongoing recording by pressing "End test" at the bottom left.

An example of a situation when the user might wish to end the test is, if a pupil has struggled so much to get through the first text that it seems unfair to ask him/her to read another one. If you are uncertain, ask the pupil if he/she has energy left to take on another story. The reading of one text is enough for the pupil to have a reading ability result on the test.

2.4.2 Cancel recording

A user may wish to cancel an ongoing recording for multiple reasons. Some of these reasons may be that there is a disruption (someone comes in to the room for example), the pupil starts talking about other things or something unexpected occurs, making the user want to cancel the recording. The user may also accidentally press the space bar, thus moving on to the reading comprehension part before the pupil has finished reading.

An ongoing recording can be cancelled at any time, by pressing "Cancel recording" to the bottom left.

Please note! A cancelled recording is not saved.

2.4.3 Why not save? Redoing tasks

After each recording is ended, you will be asked if you want to "Save and move on" or "Not save".

If a warning is displayed advising that the recording quality is poor, along with a recommendation to redo the task, consider the following:

If you choose to redo the task the recording that was made *will not be saved*. Is there a reason to think that the next recording will be better? For example: if the pupil is wearing thick glasses a new recording will probably not be any better. If the pupil was moving around a lot and seems to struggle with sitting still, it is unlikely that the next recording will be much better. In such cases the likely outcome is that the next recording is even worse. In these circumstances it is recommended to "Save and move on" even if there is a warning of the quality being poor. If the next recording is of a higher quality, it can be used solely for the analysis if the first one was poor. All recordings can be used for qualitative analysis.

It is also possible to redo the entire test with a pupil at a later point if the recordings turned out to be of very poor quality.

However, if there was an interruption during the reading, for example because someone came into the room, the user accidentally stopped the recording too soon or cancelled the recording for another reason, redoing the task is recommended.

2.4.4 Automatic text selection control

Within the Lexplore system there are currently eight different texts per year group for pupils in years 2 – 4. Pupils in year 5 are reading the year 4 texts. To avoid a pupil reading the same texts twice during the same academic year, the system automatically keeps track of which texts that the pupil has read.

2.5 Interaction with pupils during the test – when and how to help?

2.5.1 When and how to help during the RAN task

During the RAN-task, a pupil should only have help if he/she does not know the names of the letters. Is this the case, the user can point at the screen and say the letters together with the pupil. Such a recording can be saved but a comment is needed, stating that the pupil had help with the letters.

2.5.2 When and how to help during reading

Sometimes a pupil is struggling with the text but before intervening to help him/her bare this in mind:

The pupil is most likely not experiencing as much difficulty with the task as you think. He/she is most likely used to working in this way.

The basic guidelines for the test states that the pupil should be allowed to read at his/her own pace. The assessment of an individual pupil should never be affected by time pressure. Each pupil should be given the opportunity to perform according to ability.

If you think there is a need to intervene, silently count to five before doing so. The pupil often does find a way forward on his/her own.

Only intervene if:

- The pupil is stuck and lacks strategies to move forward. Then it is appropriate to give the pupil the word he/she is stuck on but no more than that.
- The pupil misreads something that puts everything out of context, making it very difficult to go on. Unless this applies, misreading of isolated words are not corrected.
- The pupil can't read at all. In this case it is appropriate to read one text together with him/her. This recording is not saved, but a comment is needed.

Always add a comment if help was given!

2.5.3 When and how to help during the reading comprehension part

The examiner *must not help the pupil answer the comprehension questions*. This is very important, since the purpose of the test is to measure the pupil's independent reading comprehension level and uncover potential difficulties. The questions should be presented as an informal follow up so that the pupil doesn't feel that he/she is failing if the questions are difficult. The pupil will not see the questions or the text during this part of the test.

2.5.4 General rules regarding interaction during the test

- Instructions are always given before starting a recording. Make sure the pupil understands them.
- During the RAN-task, it is of no consequence if the pupil moves a lot. The RAN-task is a timed task and the pupil must not be disturbed during it.

Interact as little as possible with the pupils during the reading. During an ongoing recording, only adjust the equipment if the red positioning warning is displayed and/or the cross is not seen at all. Otherwise adjust the equipment between the recordings.

2.6 The reading comprehension component

The implementation of the test should be the same for all users. The reading comprehension part of the test has been designed to be easy to administer correctly. The following chapters describe the administration of the test, how to interact with the pupils, and how to evaluate their responses.

To ensure the most reliable, objective results, the comprehension questions will be asked verbally by the examiner. This allows us to focus on comprehension of the text rather than that of the questions themselves. Special consideration has been taken to make the questions clear, easy to understand and never more difficult than the text itself. This is to ensure that the answers accurately reflect what the pupil understood and remembered from the text.

2.6.1 Administering the reading comprehension part

After each reading, and before asking the questions, *always* say: "Here are some questions about what you have just read". The questions are to be asked in a neutral tone of voice, creating a brief conversation about the story the pupil has just read. During the time the questions are being posed after each reading, the pupil can provide the answers to all the questions.

Confirming the pupil's answers

The pupil should not be told whether his/her answers are correct during the comprehension part of the test. The pupil may seek confirmation (for example by looking at the examiner) after providing an answer. It is best to move on quickly to the next question as soon as the pupil has answered. If needed, use a neutral phrase like "thank you", as a confirmation for the pupil that he/she has answered but not of the validity of that answer.

Answers to earlier and upcoming questions

If a pupil's answer gives more information than you were asking for, and by doing so provides the answer/s to upcoming questions, that is ok. Those questions are then considered correctly answered. A question that has been answered beforehand is posed anyway, for the record, but the pupil does not need to answer it. Just add, "but you already answered this one." This is important to say so the pupil won't think what he/she previously stated was incorrect.

If the pupil self-corrects him/herself regarding a question at a later stage during the questions, that question is considered as being correctly answered. Go back and mark the question as "Correct answer."

The pupil doesn't reply

If the pupil doesn't answer at all, proceed to the next question.

Repeating questions

It is ok to repeat previous questions the pupil has not answered. Say, "Now I will ask you the first/other question again," and repeat the question. Avoid asking the pupil if he/she wants to answer the question. Also avoid phrases like "Do you remember?" This type of questions tends to lead to the pupil only replying with "no" and not trying to answer the actual question. If the pupil doesn't reply to a repeated question, move on.

Rephrasing questions

Avoid rephrasing the question as much as possible. However, the purpose of these questions is to get the pupil to account for the content of the text. The questions are meant to be clear and not tricky. The questions should *not* be more difficult to understand than the text itself. Therefore, rephrasing a question is appropriate for example to address the local vernacular. If regional differences prevent the pupil from understanding the question, you may need to adjust it.

When rephrasing a question, ensure not to lead the pupil towards a correct answer by for example repeating any content from the story. Also avoid asking "Do you remember?" If the pupil doesn't respond at all or shrugs, move on to the next question.

2.6.2 Assessment of pupil's responses

Correct answers

An answer is considered correct if the pupil gives *any* of the correct possible answers shown. This applies to the *entire time the questions are being asked*. It is enough for the pupil to mention *one* of the alternatives. Synonyms for the correct alternatives are also accepted. In addition:

- If the pupil accounts for other things not mentioned in the text, in addition to one of the correct alternatives, the answer is correct.

- If the pupil provides answers to earlier or upcoming questions, these are considered as being correctly answered.

- Synonyms are accepted. Examples: *ill* instead of *sick*, *lamp* instead of *light*.

- All grammatical forms of the correct alternatives are accepted.

The correct answers are in most cases in base form. It is of no consequence which grammatical form of the word the pupil uses when answering the question. The pupils are free to express their answers as they see fit. We only want to know if they can answer the question, not how they answer it.

Incorrect answers

The general guideline for when an answer is considered incorrect is if none of the correct alternatives are mentioned. This applies to the entire time the questions are being asked.

-If the pupil provides other details from the text but does *not* include what is asked for, the answer is incorrect.

-Concepts that are more general but includes a correct answer are not acceptable. Example: *Animal* is not accepted for *dog*. *Swimming* is not accepted for *diving*. *Fruit* is not accepted for *banana*.

-"I don't know" is considered an incorrect answer.

-"I don't remember" is considered an incorrect answer.

-If a pupil doesn't reply at all but sits in silence or shakes his/her head, this is considered an incorrect answer.

The "Did not participate" Button

The "Did not participate" button is only used to indicate that a pupil didn't participate in the comprehension part of the test. This is rare. It may occur if a pupil is unable to communicate (won't speak, mute), says he/she won't answer questions (a prerequisite for the entire test is voluntary participation), or needs to leave before completing the entire test. If a pupil did not participate in the question part, his/her reading comprehension has not been tested. This pupil should not receive a result on the reading comprehension part. However, a pupil sitting quietly, but not answering one or more questions is considered to have participated. His/her answers are marked incorrect.

2.7 Comments on deviations

The purpose of the comments is to explain why a result might be deviant. In the Lexplore Application and in the Lexplore web portal it is possible to leave both internal free text comments (visible only to examiners and system administrators internally) and choose predefined comments from a list (visible for any viewer of the results).

It is best if the comments are entered on the same day/the day after the testing. Add comments directly in the Lexplore Application when possible. Leaving a comment about a pupil not participating can ONLY be made in the Lexplore web portal.

The following predefined comments can be added. It is possible to add multiple comments for one pupil.

- Calibration problematic/incomplete
- The examiner helped by saying the letters
- The examiner helped out when the pupil read the text
- The pupil did not participate
- The pupil did not use his/her glasses during the test
- The pupil was very active during the test
- Data collected for research

If the examiner is reading a text together with the pupil, to allow him/her to participate despite lack of reading skills, the recording should not be saved. If it is saved, make an internal comment about the pupil not doing the reading and receiving a lot of help.

Adding comments about pupils not participating is best done manually on a printed class list for later entry in the web portal. Report to the one in charge of the test session once all comments are in place. If you have doubts about which comment to choose, leave a free text comment describing the situation and Lexplore will help select a suitable comment.

Please avoid making any subjective and assessing comments.

2.8 Additional advice

- Lock the computer (Windows button+L) if you need to leave the computer.
- If a pupil is nervous about the test, offer him/her to come and have a look at the equipment to be sure of what he/she is declining. This is often enough for the pupil to have a change of mind.
- It can prove helpful for very active pupils to hold on to a stress ball or similar (like a fidget spinner).
- Some pupils will calm down if the examiner chats a little, but others are quite the opposite, they find chatting stressful. With very active pupils it is often best not to chat but move on with instructions as soon as possible, before their concentration level drops.

Chapter 3. – Lexplore test equipment and software required

3.1 Equipment Requirements

Only test equipment delivered by or approved by Lexplore or a Lexplore-certified partner can be used.

The user is responsible to ensure that the latest versions of the Lexplore Application and the Tobii Eye-Tracking Service approved by Lexplore are in use. The latest software versions can be downloaded via <https://portal.lexplore.com/install>.



Figure 2, Test equipment: External monitor with stand (yours may not look like the one in the image), Eye tracker, laptop with Lexplore application

3.1.1 The Lexplore test equipment

The following equipment is needed for the testing:

- Laptop with charger
- External monitor
- Eye-tracker
- Mobile phone (2-step authentication in web portal)
- Internet connection

3.1.2 Required software

The following software is required to be installed on the laptop used:

- The Lexplore Application
- Tobii Eye Tracking Service

Downloaded at: <https://portal.lexplore.com/install>

3.1.3 System requirements (minimum) and technical specification

Laptop	External monitor	Eye Tracker
CPU (processor): Intel i3 2Ghz or higher e.g. Intel i5 RAM: 4GB Operating System: Windows 10 Pro Disk storage: 5GB available space Connections: 1x HDMI-port** 1x USB port (2.0 BC 1.2* or 3.0) Display: 12", 1920x1080 Other: Internal Microphone, wifi	Size: 15" – 27" Resolution: 1366 x 768 Connection: HDMI** Monitor Stand: Able to adjust height and angle both negative and positive. Eye tracker mounting: Make sure there is room below the screen surface to mount the magnet for the eye-tracker	Tobii Eye Tracker 4C

*Battery charge

** Other digital monitor connections are ok as an alternative e.g. DVI and Display port

3.2 Lexplore Application test flow - five steps

Log in

Log in by using your Email and Password.

If your organisation is using Microsoft Office 365 and have decided to use that as single-sign-on, log in to Lexplore's System using the Office 365 button. Some customers use a specific Customer ID for the whole organisation. If you are informed to apply this, press on the settings icon, and enter the Customer ID in the field and press save, see figure below.

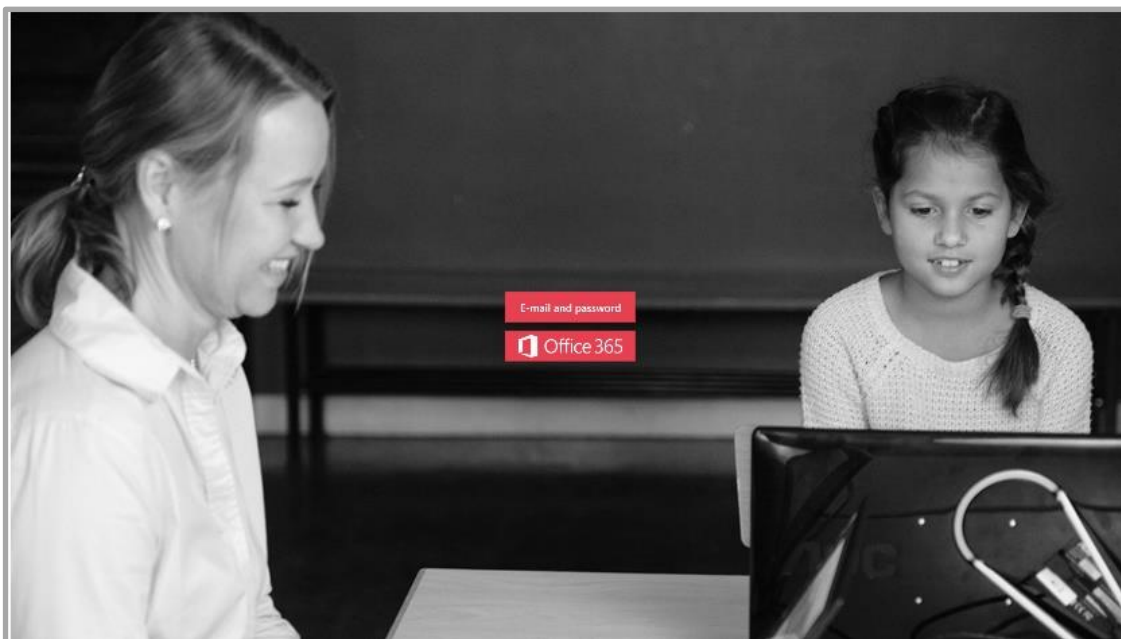


Figure 3, Sign in options

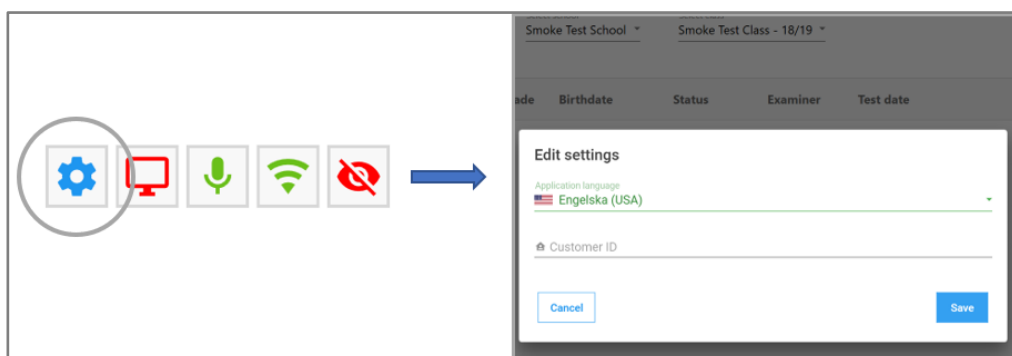


Figure 3.1, Set up Customer ID

Log out

Log out by clicking on the log out button which displays your name, located in the top of the application interface.

3.2.1 Select Pupil

To access the list of pupils to be tested, use the drop-down menus to select an organisation, then select your school and finally select the class you are going to test, see Figure 4.

1 **Select student** 2 Position 3 Calibrate

Select organisation
Demo Lexplore ▼

Select school
Stockholm Swedish School ▼

Select class
2 Müller - 17/18

Figure 4, Select class

Use the arrow keys on your keyboard, or click on the pupil that you wish to test and press "Use selected student" in the lower right-hand corner, see Figure 5.

Log out Ida Bergman Wonderland, Steven

1 **Select student** 2 Position 3 Calibrate 4 Perform test 5 Saved recording... Upload & overvi...

Select organisation
Demo Lexplore ▼

Select school
Stockholm Swedish School ▼

Select class
2 Müller - 17/18 ▼

Select student

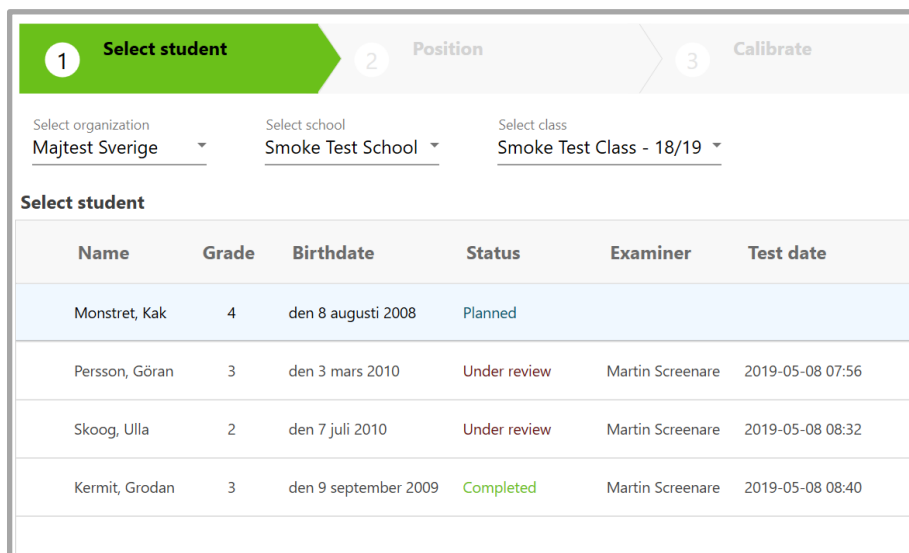
Name	Grade	Birth date	Status	Examiner	Screening date
Star, Wendy	2	March 4, 2009	Planned		
Universe, Michel	2	June 8, 2009	Planned		
Enterprise, Lexi	2	August 8, 2009	In progress	Ida Bergman	6/19/2018 2:00 PM
Wonderland, Steven	2	April 6, 2009	In progress		

Use selected student

Figure 5, Select pupil --> Start test

Status information

The status information in the class list shows if a pupil is “planned” to be tested or “in progress”. This information is useful when multiple examiners are performing tests simultaneously within the same class.



The screenshot shows a web interface for selecting a student. At the top, there are three steps: 1. Select student (highlighted in green), 2. Position, and 3. Calibrate. Below the steps, there are three dropdown menus: 'Select organization' (Majtest Sverige), 'Select school' (Smoke Test School), and 'Select class' (Smoke Test Class - 18/19). Below these is a table titled 'Select student' with columns: Name, Grade, Birthdate, Status, Examiner, and Test date. The table contains four rows of data.

Name	Grade	Birthdate	Status	Examiner	Test date
Monstret, Kak	4	den 8 augusti 2008	Planned		
Persson, Göran	3	den 3 mars 2010	Under review	Martin Screenare	2019-05-08 07:56
Skoog, Ulla	2	den 7 juli 2010	Under review	Martin Screenare	2019-05-08 08:32
Kermit, Grodan	3	den 9 september 2009	Completed	Martin Screenare	2019-05-08 08:40

Figure 6, Class list, pupil status

Planned = This pupil is yet to be tested.

In progress = An examiner has started the test with this pupil, but the test is not finished.

Completed = The test is finished and passed the automatic quality review. The result is available for all authorised personnel.

Under review = The test is finished but failed the automatic quality review. The result can only be seen by examiners.

Selected Pupil

Once a specific pupil has been selected, the name of the pupil will be shown both in the "Select Student" button (in the test flow at the top) and at the top of the Lexplore Application interface until another pupil is selected, see Figure 7. It is possible to go back and select another pupil at any time during the test flow except during ongoing recordings. As soon as a new pupil is selected, a new positioning and calibration is needed before testing is possible.



Figure 7, Selected pupil information

3.2.2 Positioning

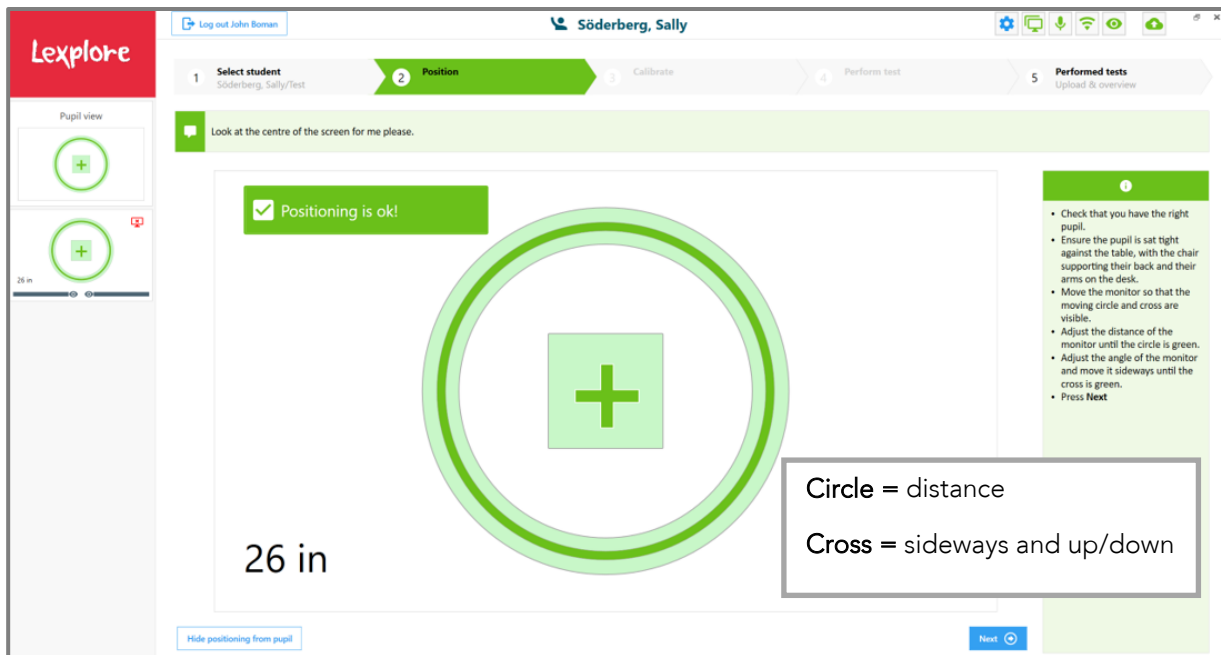


Figure 8, Positioning. Green circle and green cross indicate ok positioning.

To achieve the highest quality of recording during the test, the positioning of the pupil is very important. The ideal distance between the pupil and the monitor is 65 cm. A positioning help tool is available to make sure that the pupil is positioned within the acceptable range. Interactive help is provided during this process to achieve good positioning.

1. Start by ensuring that the pupil is sat tight against the table, with the chair supporting their back and their arms on the table.
2. Move the monitor so that the moving cross and circle are visible (eye tracker captures the eyes of the pupil).
3. Adjust the distance of the monitor until the circle is green.
4. Adjust the angle of the monitor and move it sideways until the cross is green.
5. When the circle and cross are both green the positioning is ok and the Next button in the lower right corner is activated, see figure 8.
6. Press Next to move onto Calibration.

The system has a certain tolerance. The recording quality will normally be acceptable if the distance between the pupil's eyes and the screen is between 50-80 cm. However, the range for acceptable distance during positioning is 60-70 cm

to allow for some pupil movements during calibration and the test itself with sustained recording quality.

Red warnings, see Figure 9, will appear when the distance is outside the acceptable range.

If the pupil has been positioned in front of the screen but neither the moving circle nor cross are seen, it is likely that the angle of the monitor needs to be adjusted for the eye tracker to see the pupil's eyes.

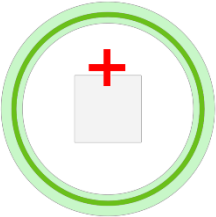

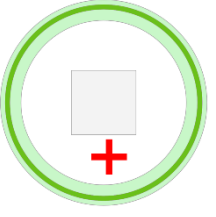

Angle	Distance
 <p>Angle the monitor upwards</p>	 <p>Distance is too great, more than 70*cm</p>
 <p>Angle the monitor downwards</p>	 <p>Distance is too short, less than 60**cm</p>

Figure 9, Positioning warnings. *More than 80cm during calibration and recording **Less than 50cm during calibration and recording.

Positioning help during calibration and test

Once the pupil is in the correct position, the positioning help tool is available during the rest of the test process to alert the examiner if the pupil's position is out of range. If the distance between the monitor and the pupil is less than 50cm or more than 80cm the red warnings according to Figure 9 are shown.

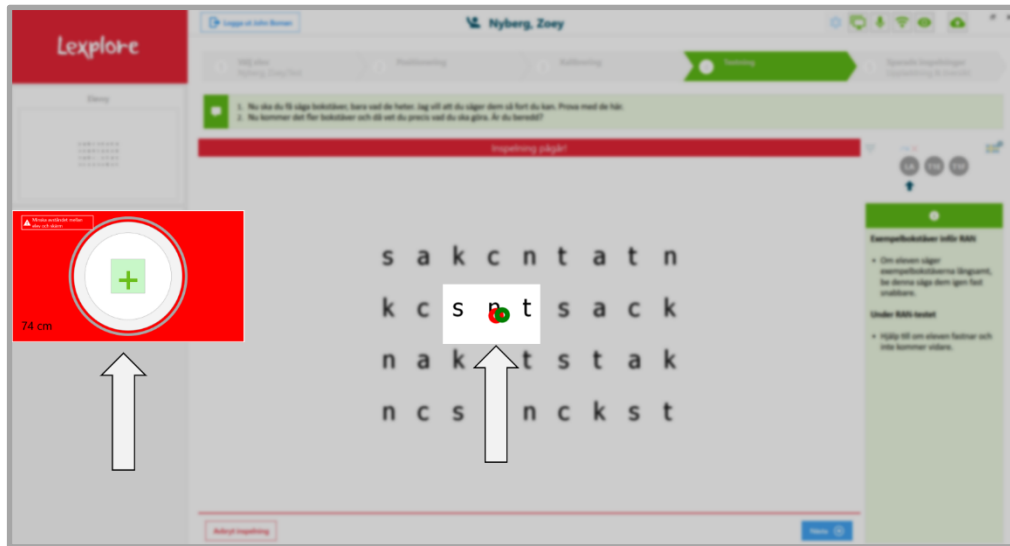


Figure 10, Positioning help during test

The positioning help tool can be enlarged by dragging the right-hand edge of the window to the right.

The two bars below the positioning help tool, see Figure 10, represent the eyes of the pupil. The left bar represents the left eye and vice versa. When the eye tracker has full contact, the bars are dark grey. If the eye tracker loses contact partly or fully the colour of the bars switches to white accordingly.

If the pupil moves too far to the side of the screen the eye tracker will lose contact with one or both eyes. This would also be the case if the pupil closes one or both eyes for longer than a blink. Large sideways movements are not common during testing, but make sure that you can see the dark grey cross representing the pupil's sideways position in the positioning help tool. Also ensure that the two bars are dark grey to make sure that positioning is ok and that the eye tracker has good contact with the pupil's eyes.

If the eye-tracker can see both of the pupil's eyes a red (left eye) and green (right eye) circle can also be seen moving across the application interface, see Figure 10.

3.2.3 Calibration

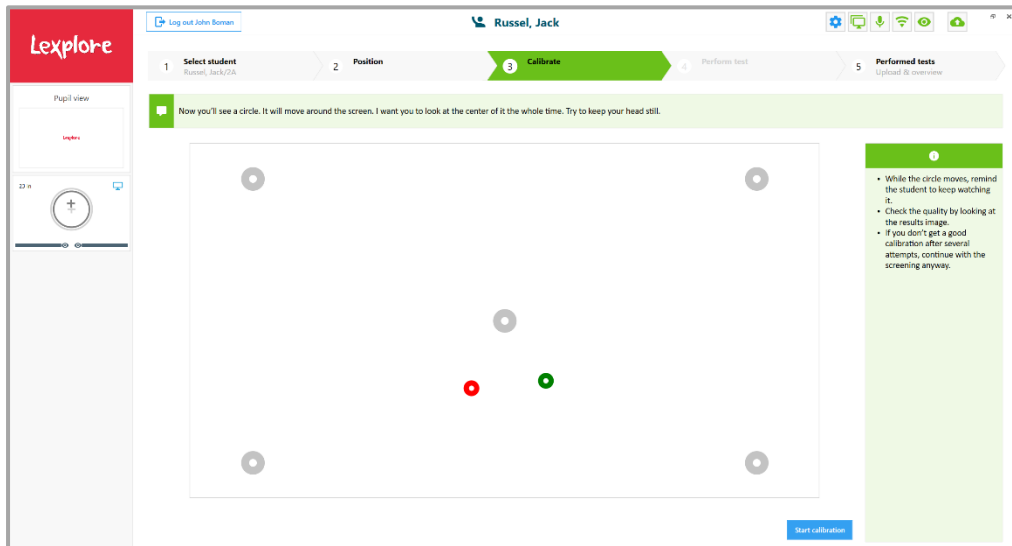


Figure 11, Calibration

1. Ensure that the pupil's position is still within acceptable range and instruct the pupil to follow the circle on the screen with his/her eyes while trying to keep his/her head still.
2. Press "Calibrate". Make sure that the pupil focuses on the circle, especially when it is not moving. Follow the pupil's eye movements on the application interface (i.e. the red and green circles).
3. When you have finished the calibration press "Next".
4. If for some reason, you wish to stop an ongoing calibration press "Stop calibration".
5. If the calibration quality is low, see calibration examples in Figure 12, instruct the pupil again and press "Recalibrate".

In certain cases, it can be difficult to achieve a good calibration. The most common reason is that the pupil is wearing glasses with thick frames. In this the case, ask the pupil to keep his/her head extra still during the calibration so the frames won't get in the way of the eye-tracker signal. If there is a need for repeated tries it can prove useful to chat with the pupil while he/she is looking at the moving circle

and point out that he/she needs to look at it “all the time even if you know where it is going”.

Sometimes, for unknown reasons, the calibration is problematic even after several attempts and a poor calibration must be accepted. If this is the case, make a comment and proceed with the test anyway. The system is often able to deliver a result despite a less optimal calibration and there are still qualitative values in a low-quality recording (sound etc.).

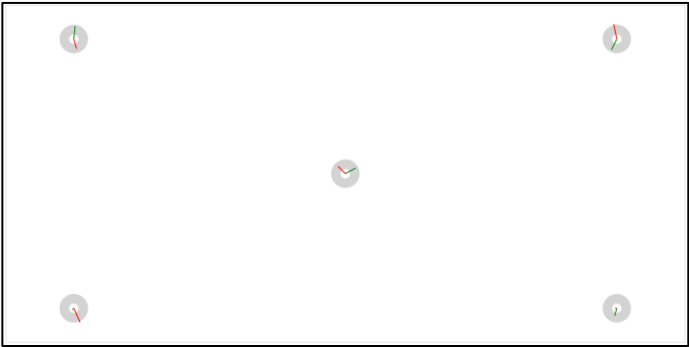
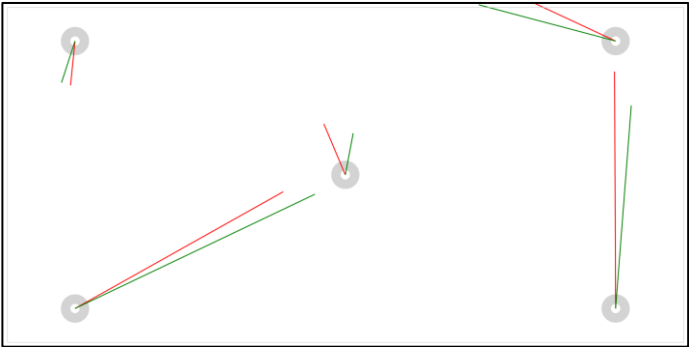
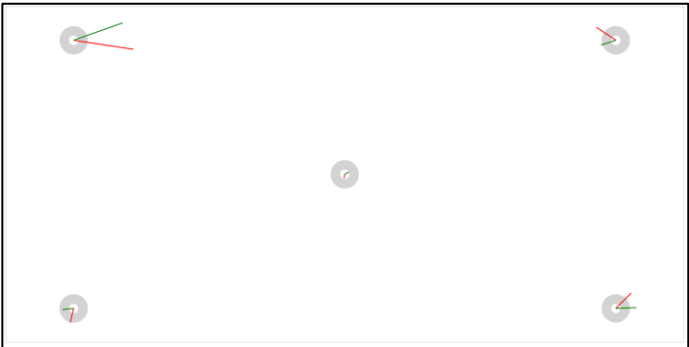
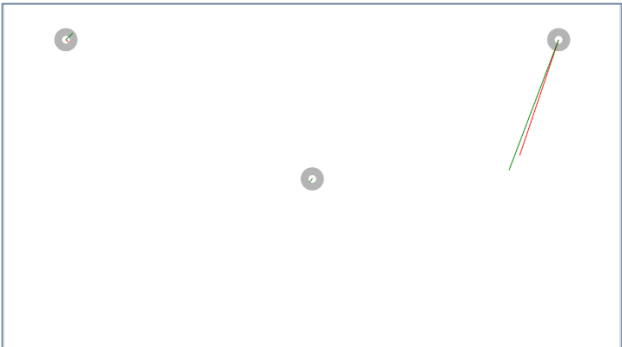
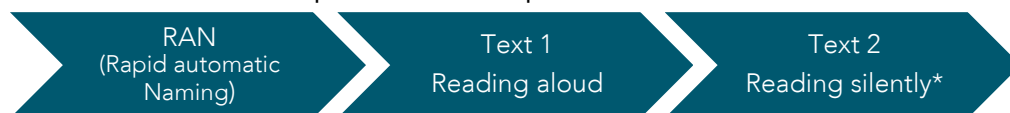
<p>Optimal Two lines inside all circles</p> 	<p>Poor calibration Lines are too far outside of the circles. Accept only after a few recalibrations. Write a comment!</p> 
<p>Intermediate Lines within 4 out of 5 circles.</p> 	<p>Incomplete calibration The two circles in the bottom lack lines. This means that the eyes were not recorded. Check positioning! Accept only after several recalibrations. Write a comment!</p> 

Figure 12, examples of calibration quality

3.2.4 Perform test

The test consists of three different tasks for each pupil. First, the pupil will be asked to name letters as fast as he/she can. Then the pupil will be asked to read two short stories and answer a few comprehension questions.



*Pupils in year 2 read both text 1 and text 2 aloud

Reading aloud and reading silently

Pupils in year 2 will read both texts aloud while pupils in year 3-5 will read the first text aloud and second text silently.

Only allow a pupil in year 3-5 to read the second text aloud if the pupil is unable to read silently.

Please note! There is an indicator at the bottom of the screen that shows whether the pupil should be reading the text aloud or silently see Figure 14 and 16. If you adjust the instructions based on the pupil's need, please indicate by clicking on the appropriate button.

Start recording

To initiate a recording press "Start recording", see Figure 13. While a recording is active a notification message is displayed on the screen, see Figure 14. The red and green circles represent the pupil's eyes as they move over the text.

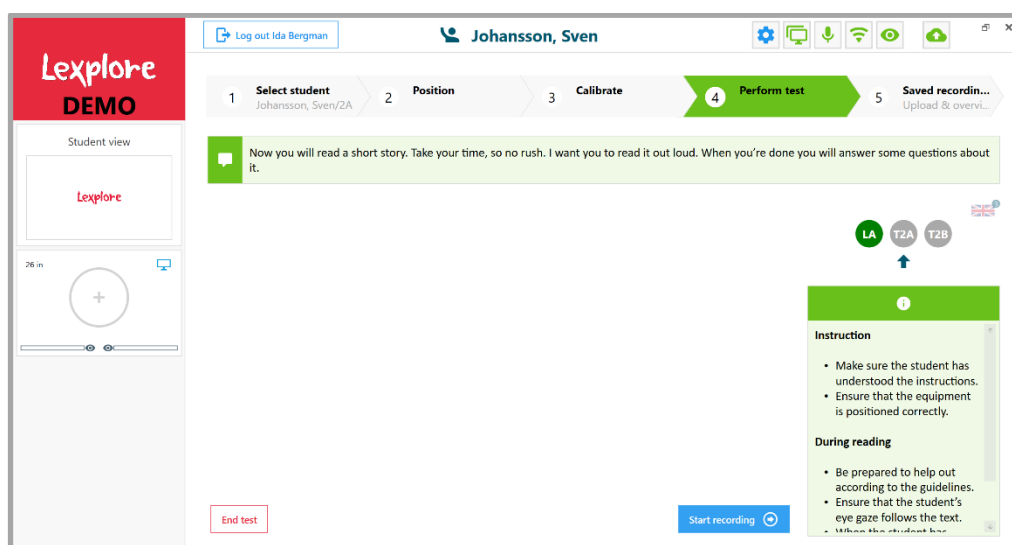


Figure 13, Start Recording

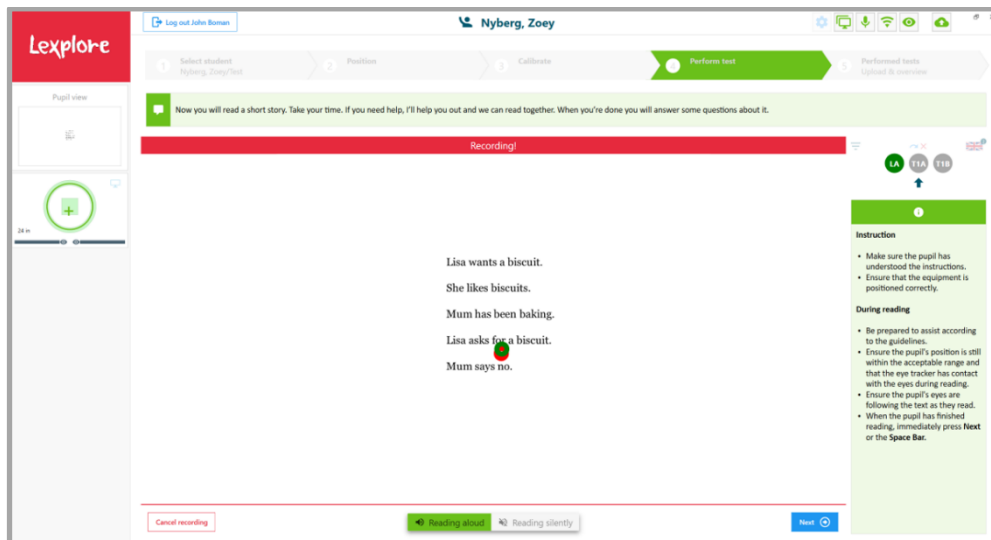


Figure 14, "Next" button down in the right-hand corner.

Space bar and Next button

During the recordings use the space bar key on the keyboard or press "Next" to move on to the next step, see figure 14.

Reading comprehension questions

After pressing "Next" or space bar after each reading, the questions are posed, one at a time. The answer for each question is marked in the box. Only when all the questions have been answered is it possible to move on by pressing "Next" or the space bar.

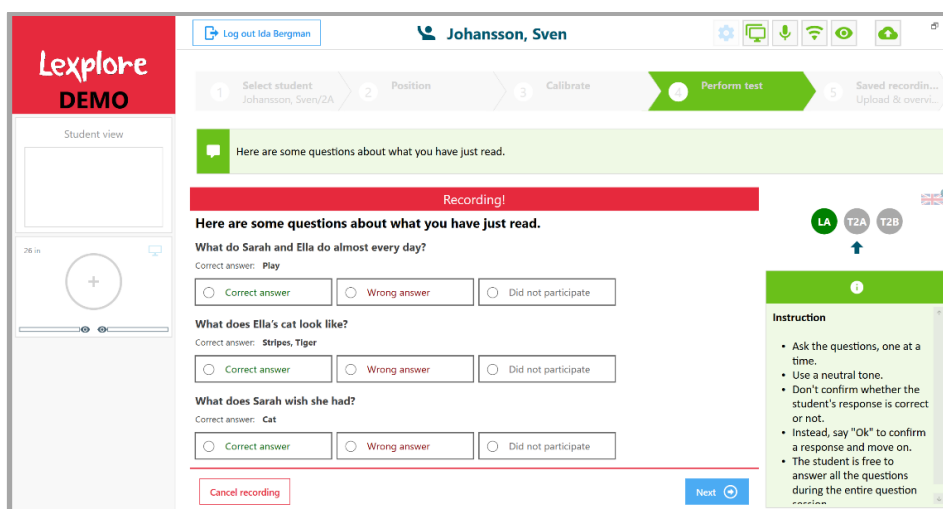


Figure 15 Reading comprehension questions

Saving or not saving a recording

After each recording a choice is given to “Save and move on” or “Do not save”. If you choose not to save you will be given the choice to redo the task or to move on without saving, see Figure 17. If you choose to redo the task, a new text will be presented to the pupil.

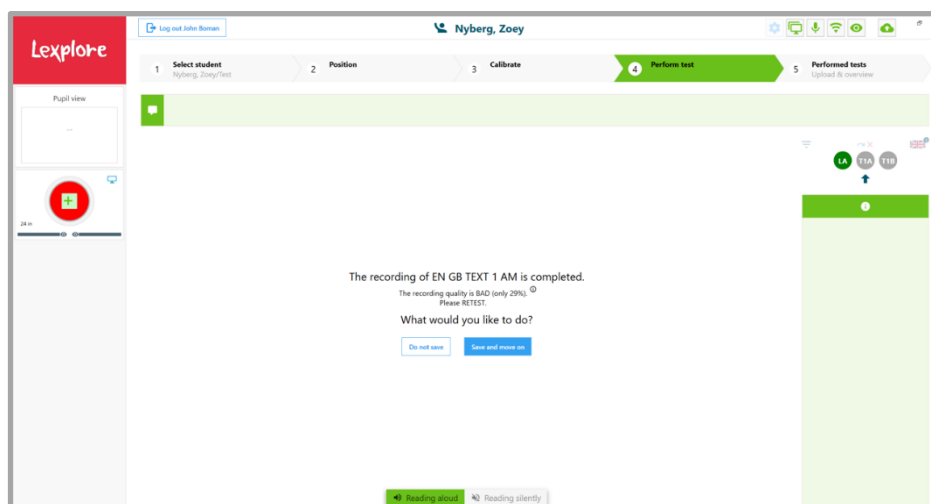


Figure 16, Choices presented after a recording – ‘Do not Save ’or ‘Save and move on’.

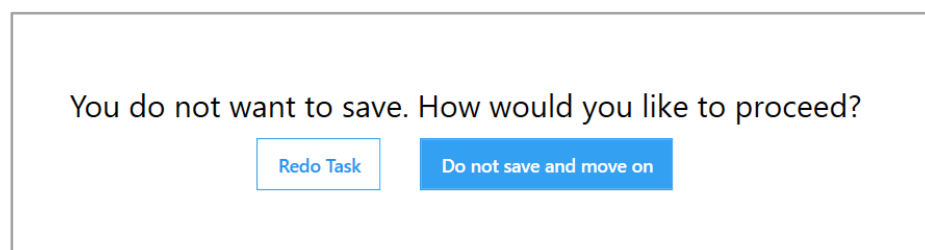


Figure 17, Redo the task or move on without saving

Recording quality	Criteria
80% and above	Ok
70% - 80%	Poor
Below 70%	Bad

Test progression icons

To easily follow the progression of the test, symbols for each recording are shown to the right on the screen, see Figure 18. A green arrow indicates the current recording in progress. Once a recording has been completed and saved the corresponding symbol turns green. If a recording has not been saved it is indicated with a red cross below the symbol. RAN stands for Letter test, T1 stands for the first text and T2 stands for the second text.

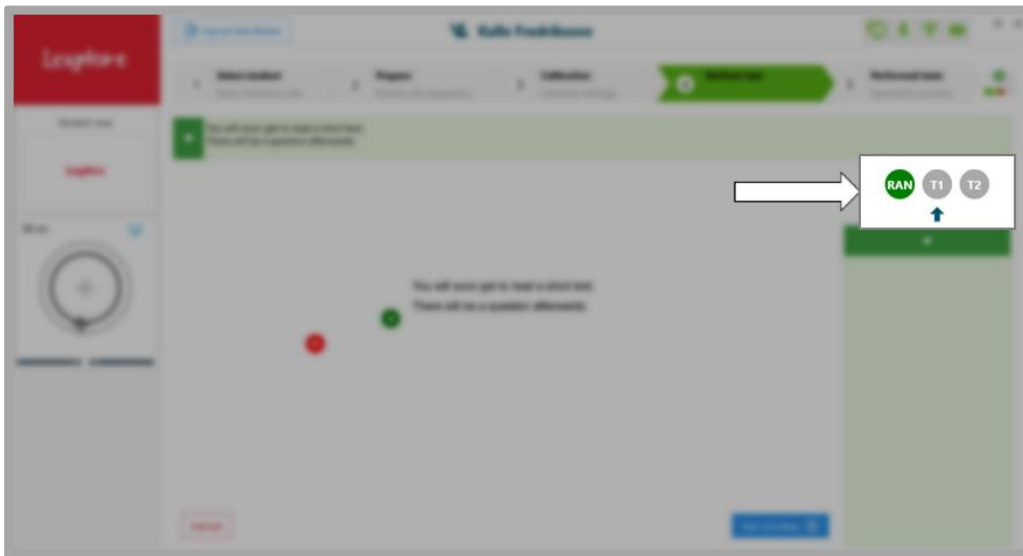


Figure 18, Current test indicator

Cancel Recording

It is possible to cancel a recording if something goes wrong that you believe will affect the result, and you do not want to click through the whole recording flow. In this case, press "Cancel recording", see Figure 19. You will get the choice to "Redo task" or "Move on without saving." If you cancel the recording of a text, the system will automatically select a different text to make sure that the pupil has not been aided from having read part of the text already.

There are eight different texts available per year group in the system.

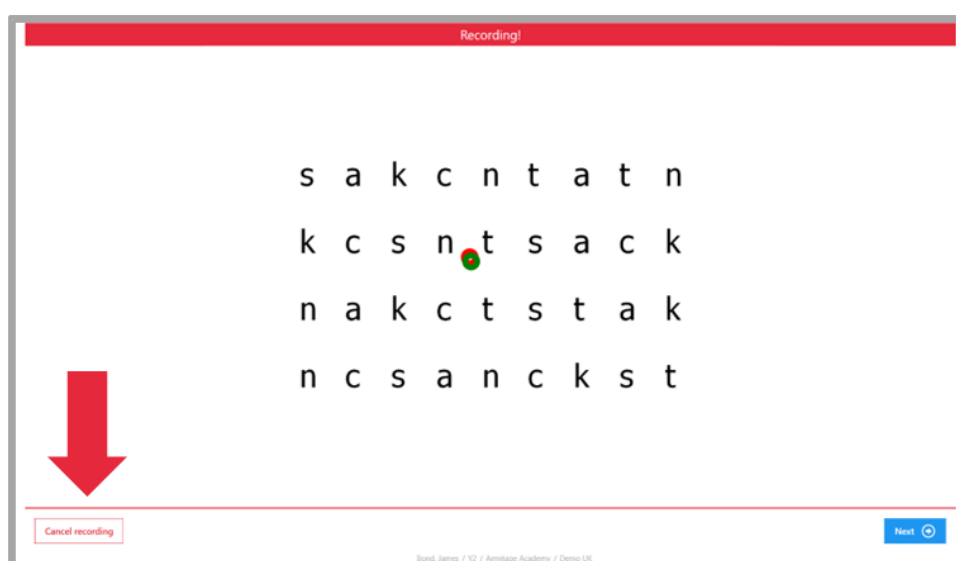


Figure 19, Cancel Recording

End test

In between the three recordings it is always possible to end the testing session by pressing "End test". Once you have confirmed that you wish to end the test you will be directed to 'Saved recordings', step 5 in the test flow, which gives you an overview and the upload status of the tests you have performed so far. To select a new pupil press step 1 "Select student" again or the button "Done" in the lower right-hand corner.

3.2.5 Saved recordings

This step provides an overview of the tests that you have conducted, see Figure 21.

Add comments

This is where comments about the test can be added if needed. To add one or more pre-defined comments and/or internal comments in free text, click on the speech bubble icon for the corresponding test session, see figure 20. Please note! Comments about a pupil not participating can ONLY be added via the Lexplore web portal.

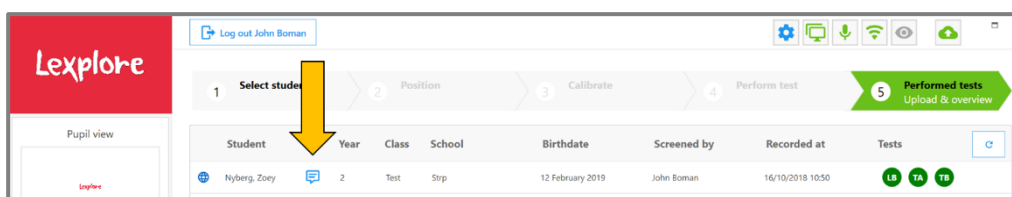


Figure 20, add comments in step 5

Upload status

Information about upload status and when the recordings were made is provided for each pupil. A green circle means that the upload has finished, and a purple circle means that the upload is in process. A red circle means that an error occurred during the recording. You do not need to wait for the uploads to finish before selecting a new pupil. To select a new pupil press step 1 "Select student" or the button "Done" in the lower right-hand corner.

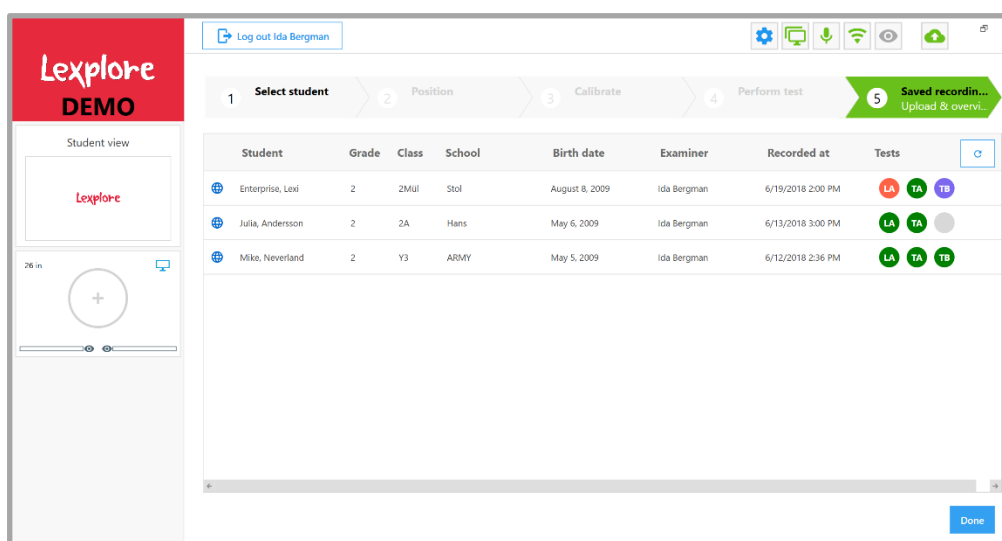


Figure 21, Saved recordings, upload status and the option to add comments

Navigate to the pupil's results

By clicking on the globe icon to the left of each pupil's name when the upload is ready, see Figure 21, it is possible to navigate to the pupil's results in the Lexplore web portal. Navigation to the specific pupil's result will be preserved even if the user is not logged-in to the portal, which requires two-step authentication.

If two results have been saved on the same pupil within the same test session, an orange frame is shown around the results in the pupil view and status set to "under review". Add a comment explaining what has happened and if possible, what test result should be removed, then inform your contact at Lexplore or email support@lexplore.co.uk.

3.3 Lexplore application, Settings and Error messages

In the top right corner of the Lexplore Application, there are seven settings and status icons to inform you if there is an update available, and to advise if any settings are wrong, see Figure 22. You can click on each icon to get more information and access the respective settings. Green indicates a correct status and red indicates an error.

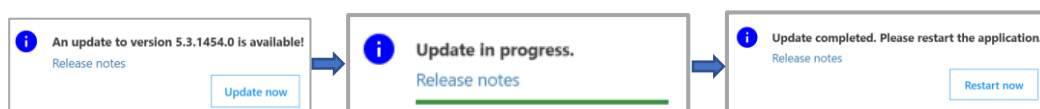


Figure 22, Settings icons

The following icons are presented from left to right.

3.3.1 Software updates

The icon with the yellow flag is only shown when there is a new version of the application available. The icon is shown both on the log-in page and after logging in. By clicking on the icon and choosing "Update now" the new version of the Lexplore Application will be downloaded in the background. Once the download is complete, re-start the application and the new version will be ready to use.



Users who do not have the full permissions to update the software will be asked to contact their system administrator. Lexplore will also inform the personnel responsible for the school IT that an update is available.

3.3.2 Language settings

The blue icon on the left is used to choose the language for the application interface. It is currently possible to choose between British English, US English and Swedish. This setting does not change the language of the texts the pupils read.

3.3.3 Display settings

When preparing the Lexplore equipment for the first time, certain display settings needs to be made. If the correct settings are not in place the icon will be red. To adjust the settings, click on the display settings icon and choose

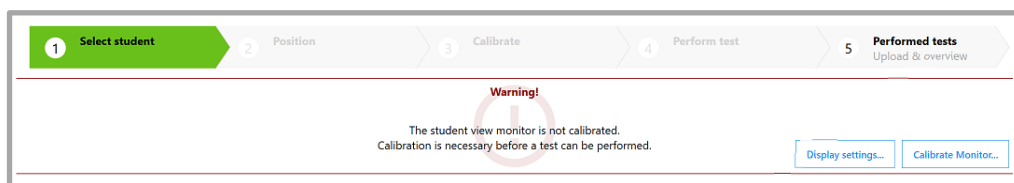


Figure 23, Warning message that the monitor is not calibrated

"Display settings". Go to Multiple displays and choose "Extend these displays". Save the changes you have made.

Before the system is ready for use, the monitor also needs to be calibrated. This only needs to be done once for each monitor/laptop being used. If the calibration has not been done the warning message shown in Figure 23 will be displayed. If this warning appears, press "Calibrate Monitor". You will then see the calibration help tool shown in Figure 24 on the pupil monitor. Move the mouse to the pupil monitor and use it to adjust the lines so that they correlate with the white markings on the top of the eye tracker. When ready, press done.

If the monitor and/or laptop are replaced, this monitor calibration procedure needs to be repeated.

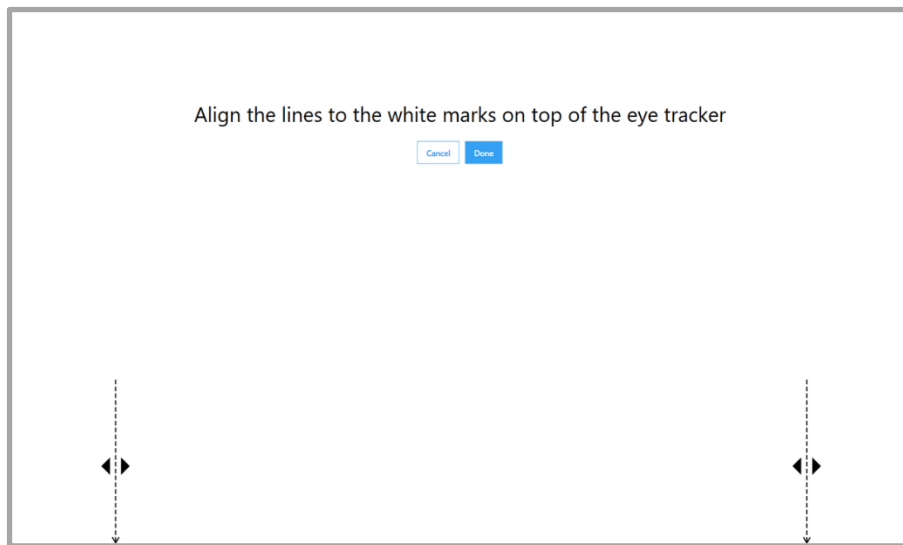


Figure 24, Use the mouse to align the lines with the white markings on top of the eye tracker

3.3.4 Sound settings

The microphone icon will turn red if the microphone is turned off or the recording volume is below 90%. It is still possible to conduct tests with the microphone turned off. This is only applicable for certain situations, e.g. when testing pupils with a protected identity. Different laptops have different ways of accessing the settings for the microphone. You may use this icon to quickly access these settings.

3.3.5 Network settings

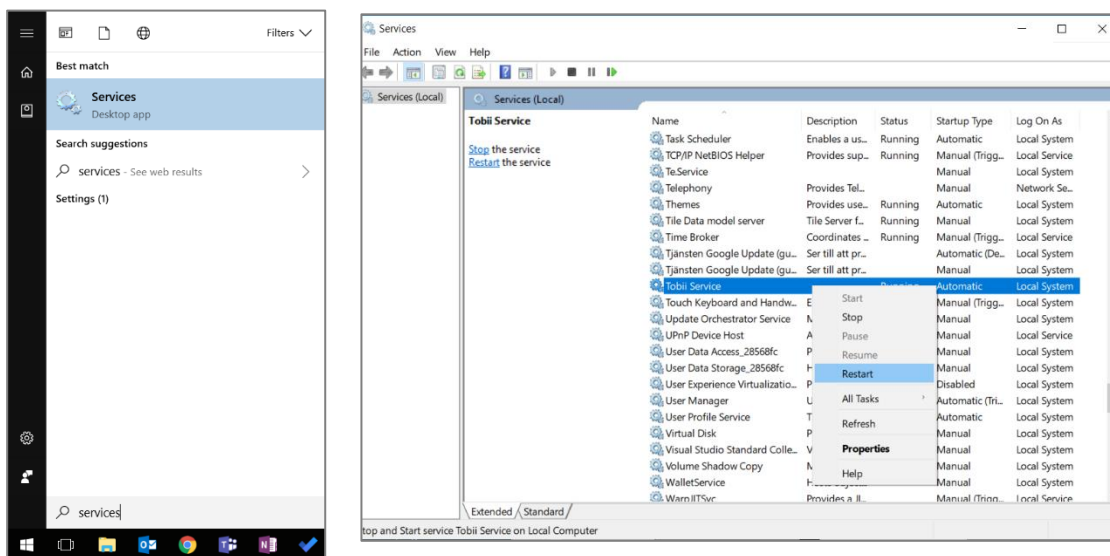
The network symbol will turn red if there is no internet connection. It is still possible to proceed with the tests even when the network connection is lost. All files are safely stored on your laptop's hard drive until they are uploaded to the Lexplore cloud service. If there is a problem with firewalls blocking an internet connection to the Lexplore Application the "Upload Service" and "Analysis Service" icons will turn red informing you of this. Please contact Lexplore Support and your IT personnel for further guidance. Please note! You need an internet connection to be able to log into the application.

3.3.6 Eye tracker settings

The eye tracker icon has two status modes; green and red. The icon is green when it operates as normal. A red icon indicates that there is a connection problem, this can be either a physical connection problem (USB-cord) or something related to the Tobii Eye Tracking Service.

If the USB cord is correctly connected to the laptop but the eye-tracker will not connect, restart your laptop. Leave all cables connected to the laptop while restarting. If the problem persists restart the Tobii Eye Tracking Service, see below.

1. 2.



1. Open the Windows menu
2. Write "Services"
3. Open Services from the list
4. Find "Tobii Service" in the list
5. Right-click on Tobii Service
6. Choose "Restart"

3.3.7 Cloud upload settings

If you experience a slow or unstable network connection, you can temporarily disable the uploading. This can be helpful if you use a cellular network or if you are far away from the Wi-fi router.

Open the cloud upload panel and switch off the uploading. Turning off uploading will create more bandwidth to load class lists and operate the application user interface. Turn on the uploading again when you have a stable internet connection.

3.4 Keyboard shortcuts in the Lexplore Application

Press	To
ENTER	Moving forward through the test flow (Not when recording) e.g. Select Pupil, Next, Start calibration, Save recording
Space bar	During recordings (Next)
CTRL + R	Start recording
Esc	Cancel recording

Chapter 4. – Preparations

This chapter provides a checklist when preparing for a test session and instructions on how to assemble the Lexplore equipment. There is also an example of how to address a class/group of pupils.

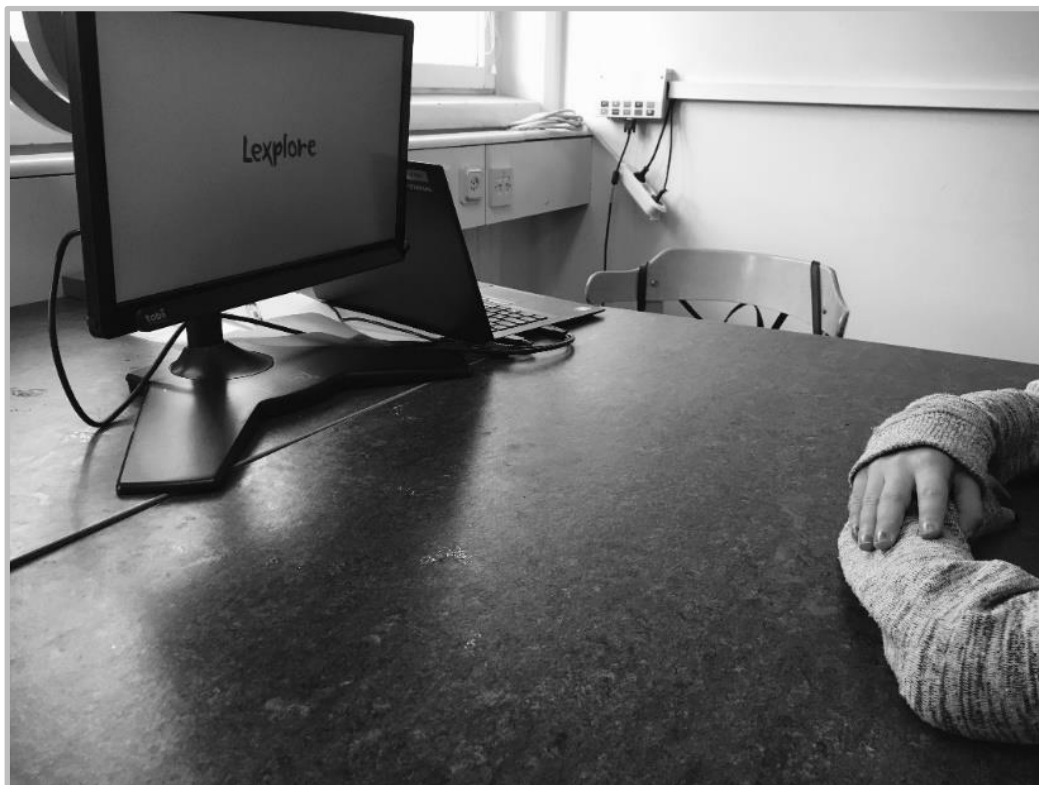


Figure 25, Lexplore equipment mounted and arranged ready for testing

4.1 Checklist

Confirm the following before the start of testing:

All the equipment is in place

- Laptop with charger
- External monitor with connection cord and net cable (only Beetronics)
- Monitor stand
- Eye-tracker
- Extension cord
- Mobile phone and charger
- Internet connection
- Lists of pupils
- Test schedule

Equipment is ready to go

- Lexplore Application installed/updated
 - You can log in to the Lexplore Application
 - Check that the pupils are listed in the application ready for testing.
 - You can calibrate (i.e. the eye-tracker is working)
 - You can log in to the Lexplore web portal
 - Your mobile phone is fully charged
- You know whom to call for support if required

4.2 Setting up the Lexplore Equipment at the testing site

1. Arrange the table, chairs and equipment according to Figure 25. This position allows you to have eye contact with the pupil and to adjust the external monitor if needed. This arrangement will prevent the pupil from being distracted by what is on the laptop.
2. Try to arrange the equipment so that the distance between the external monitor and the edge of the table where the pupil will sit will be around 65cm. Pushing the chair close to the table and letting the pupil rest his/her arms on the table will avoid unnecessary movements.
3. Do not use rotating chairs or chairs with wheels.
4. Put a sign on the door; "Reading assessment in progress – please do not disturb!"
5. Assemble the external monitor with stand.
6. Attach the external monitor connection cord/-s and net cable if applicable to the monitor.
7. Attach the eye-tracker to the magnet on the lower edge of the external monitor (be sure it is seated correctly).
8. Open the laptop and attach the eye-tracker cord and the cord from the external monitor to the laptop. If an AOC-monitor is being used, please observe that the cord from the monitor may have two USB-outputs; use the one joining both cords (do not use the short cord).
9. Start the laptop.
10. Make sure that you are connected to the internet.
11. If the USB cord is correctly connected to the laptop but the eye-tracker will not connect, restart your laptop. Leave all cables connected to the laptop while restarting. If the problem persists restart the Tobii Eye Tracking Service, see the chapter Eye-tracker settings.
12. Start the Lexplore application.
13. Make sure the external monitor screen is white and showing the Lexplore logo and that the status icons on the laptop are green.

4.3 Introduction to a class/ group

Below is an example of how you can address a group of pupils:

" Hello everyone! My name is ... and I come from..."

"I am here today to read with you, one at a time."

"I will be in another room (tell them where it is). There, I have a very special monitor. It is equipped with new technology. It can actually tell what you are looking at. It can see what you are looking at while you are reading."

"First I will ask you to name some letters for me and then to read one or two short stories. After each story there will be a couple of questions"

"Do you have any questions?"

Chapter 5 – Administration

This chapter will advise of the administrative tasks that can be performed in the Lexplore Results Portal (<https://portal.lexplore.com>). There are two roles which have different permissions within the Portal, they can perform some or all of the administrative tasks:

- Examiner
- User Administrator (only part 5.4)

The image below demonstrates a typical timeline of the tasks that need to be performed throughout the school year.

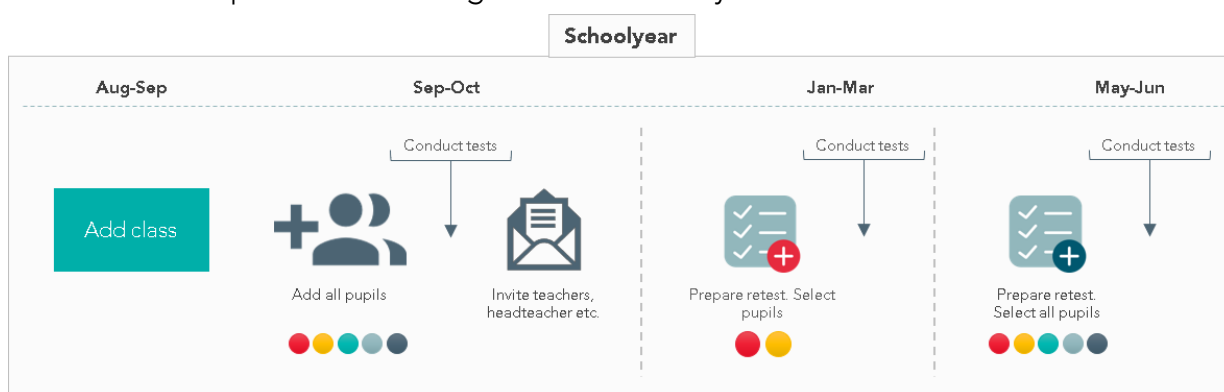


Figure 26, Year with Lexplore

5.1 Creating a Class

A class is linked to a specific school year. Therefore, the existing classes must be added and renamed every school year, e.g. class 2a in school year 17/18 is added as class 3a for the school year 18/19. A class can only be created on the current school year.

Within the Portal the Lexplore school year ends on 31st of July and begins on 1st of August. It is only possible to add pupils into a class during the current school year.

A class can include pupils of different year groups.

Only Examiners can create classes.

Add a class by navigating to your school view and press the red "**ADD CLASS**" button. Name the class, and then press "**Save**", see Figure 27. Two classes within the same school year cannot have the same name.

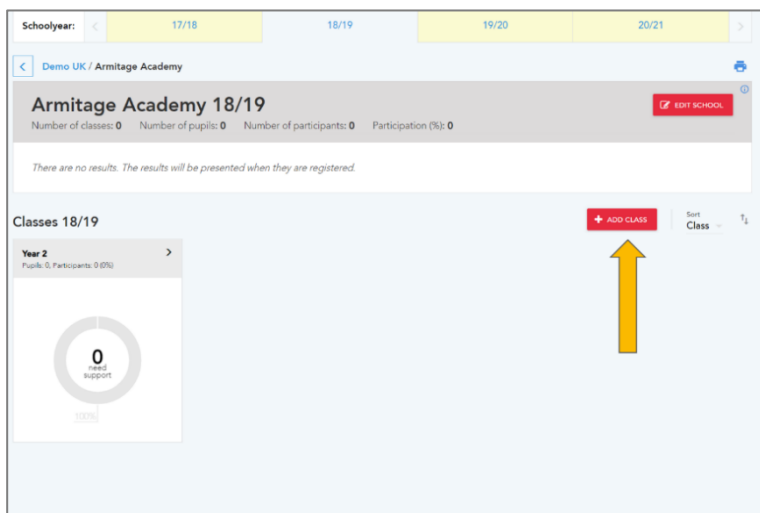


Figure 27, Add class

5.1.1 Editing or Deleting a Class

Change the name of the class by pressing the "**EDIT CLASS**" button in the class view. If needed you can delete a class, however, it is not possible to delete a class that contains pupils. Press the "**REMOVE CLASS**" button to delete a class. See Figures 28, 29, 30.

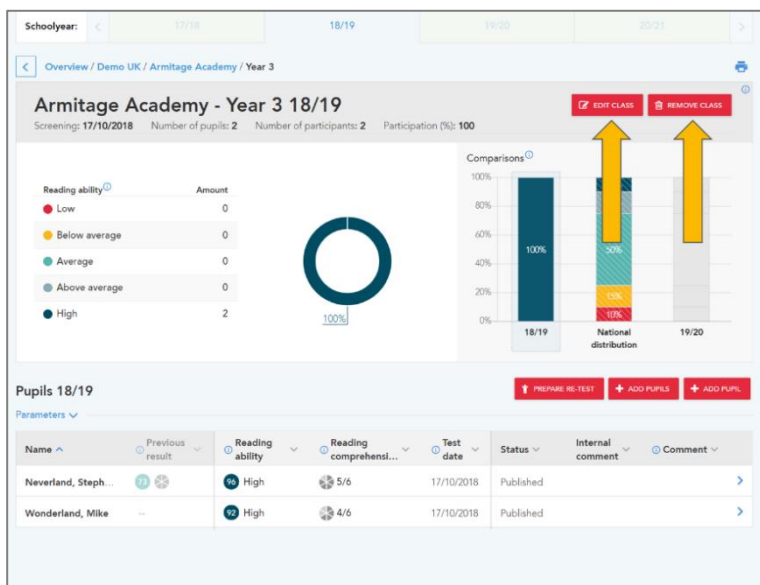


Figure 28, Edit or Delete class

✕

Edit class

Name*

Year 3

Save

Figure 29, Edit name of class

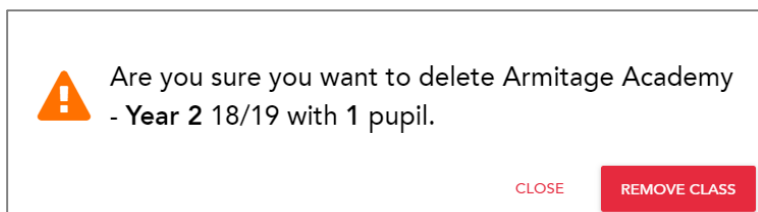


Figure 30, Remove class

5.2 Adding Pupils

Each school year a pupil must be added into the Portal. A Unique ID is required for each pupil, and the same ID for that pupil must be used each time the pupil is added into the Portal. The Unique ID is used to connect past and present results onto one pupil record.

Please note: If you do not use an identical Unique ID for the pupil for each test session, the results will be saved on two separate pupil records.

A 'Status' will be displayed for each pupil advising where they are in the test process, please see below.

Pupil Status	Description
Planned for testing	The pupil has been added to the system is available for testing in the Application.
In progress	The test has been started in the Lexplore Application
Published	Automatic quality review completed. The result is available to all authorised personnel. The pupil is still available for testing in the Application.
Under Review	The test is finished but failed the automatic quality review. The result can only be seen by examiners. Common problem are multiple recordings on the same student or low recording quality.
Analysis not possible	Data collected to develop AI models. There will be no result of reading ability.
Test session finalised	The pupil is no longer available for testing in the Application. This is shown with a "No" in the result portal class column "Available in app".

Pupils will manually be removed from the test application by a Lexplore Administrator when the test session is finalised. This is normally done 2-4 weeks after the pupil completed the test.

If a pupil is not tested during a test period, his/her "Status" will be left as planned. Once the test session is finalised, the pupil needs to be prepared for re-test later in the school year.

Please note! A pupil should only be tested once per test session. If several tests are carried out with the same pupil, a comment must be added so that the Quality Reviewer knows which test results to remove.

5.2.1 Adding a Pupil

Add one pupil at a time by pressing the red '**ADD PUPIL**' button while in the class view, see Figure 31.

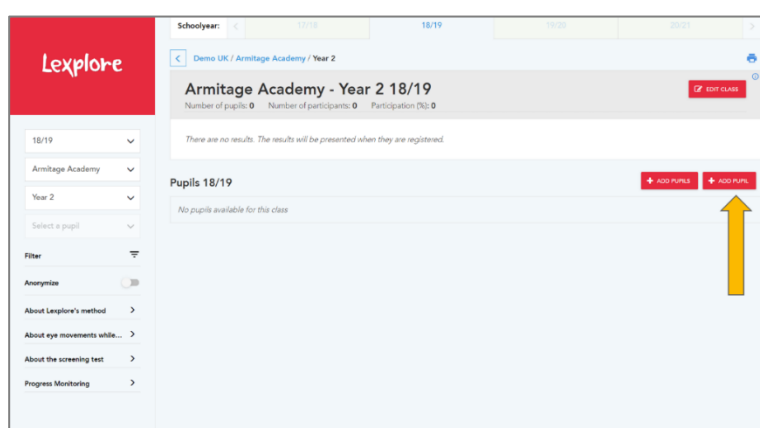


Figure 31, Add pupil

A window will open, fill in the pupil information as required. All fields are mandatory except Gender. If you would like statistics regarding gender comparisons for reading, gender will need to be entered for each pupil. As mentioned earlier in this guide, the same Unique ID must be used for a pupil every time they are added into the Portal for re-testing. This is to ensure pupil records are linked together for progress monitoring.

'Year' must be chosen so it fits the planned time of the testing. When the pupil details have been added, press "**Save**", as shown in Figure 32. The pupil should then be visible in the class list, with the status of 'Planned for testing'.

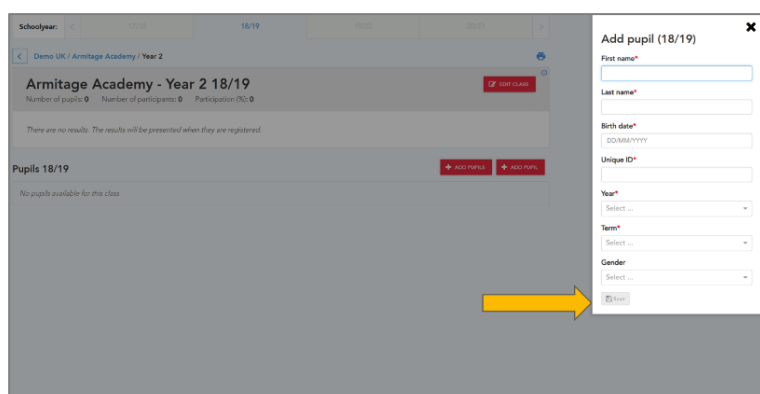


Figure 32, Add pupil information

5.2.2 Import Pupils with Excel

Import pupils via Excel by pressing the red '**IMPORT PUPILS**' button while in the organisation, school or class view. With this function, it is possible to automatically generate any number of schools included within that organisation and all the classes with the pupils within them.

In the organisation view it is possible to create schools and classes that do not already exist in the organisation. It is also possible to import pupils to already existing schools and classes. Alternatively, import pupils to already existing schools and create new classes.

In the school view it is possible to create classes that do not already exist in the school. It is also possible to import pupils to already existing classes.

When importing data, certain formats need to be used. Each column needs a certain header and it is imperative that the headers are named correctly. The table below describes the column headers needed and the allowed formats for each column's data. All columns are mandatory except Gender.

Important! When importing pupils for the second time (e.g. start of new school year), make sure that the same Unique ID is used for each pupil. It is recommended to use the pupils' MIS IDs.

Please note! First name and Last name of the pupil **MUST** have separate columns.

Please note! If any of the columns below (except Gender) are missing or if the column headers are not written exactly as below (see Figure 33) the system will not be able to process the Excel file. If this happens an error message will appear. The columns however, do not have to be in the order shown below.

Mandatory columns	School	Class	First name	Last name	Date of birth	Year	Unique ID	Gender (optional)
Approved formats	Free text <i>Name of the school</i>	Free text <i>Name of the class</i>	Free text <i>Pupils' First names</i>	Free text <i>Pupils' Last names</i>	12 September 2008 12/09/2008 12-Sep-08 12/9/2008 12/9/08 2008-09-12	2,3,4,5 <i>Data collection: 6,7,8,9</i>	Free text <i>Preferably use MIS ID</i>	M/F Male/Female Boy/Girl
Examples	<i>River Primary Academy</i>	2MrSmith	John	Marks	2008-10-24	2	Z35620	Male
	<i>River Primary Academy</i>	3MsFox	Jessica	Johnson	2007-02-15	3	M61324	Female

Figure 33, Excel template for import of pupils

Step by step

- Make sure that the pupil information, including school and class is exported from the schools/MATs MIS to an encrypted Excel file and is sent to Lexplore for processing.

Or

- Make sure that the mandatory columns are included with correctly named headers, and that approved formats are used for the data in each column according to the table shown in Figure 33.
- Save the Excel file on the computer
- Sign in to <https://portal.lexplore.com>
- Click on the button **"IMPORT PUPILS"** in the results view of the new empty organisation or in the class view, see Figure 34.

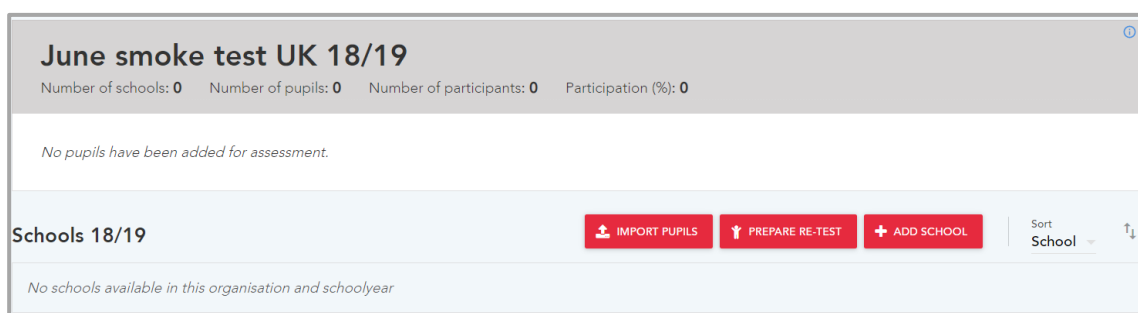


Figure 34, Import pupils button

- Import pupil data from an Excel file by clicking on **"CHOOSE EXCEL FILE"** or drag and drop the Excel file from the File Explorer onto the indicated area, see Figure 35.

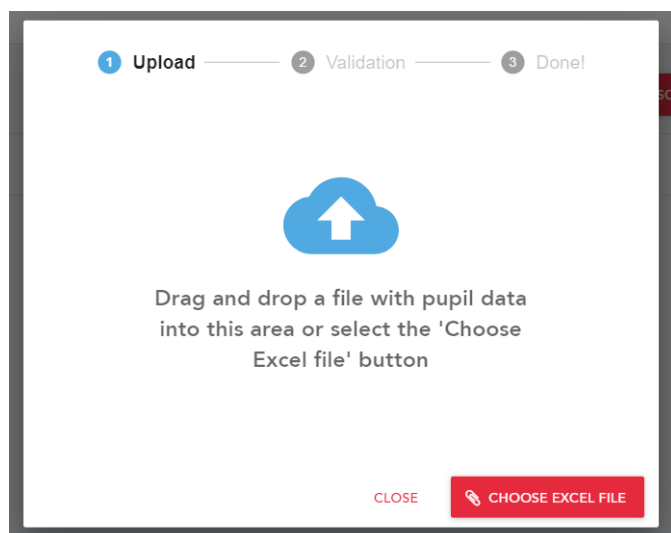


Figure 35, Import pupils window

- Check that the pupil data to be imported looks ok. A warning or error is given if something needs to be adjusted in the Excel file before the data can be imported, see examples below.
- If warnings are shown, decide if it is ok to save/import the data or if the Excel file should be updated first, see examples below.
- If the Excel file is encrypted with a password, a warning will appear and give you the option to enter the password.
- Click on "**Save**".
- Schools, classes and pupils according to the data in the Excel file, are now automatically created in the organisation.

Please note! When the pupil information has been added to the Portal, the status for all pupils added will be "Planned for test", meaning that all pupils are available for test in the Lexplore application.

5.2.2.1 Warnings and Validation Errors

Validation error

It is not possible to save the data in the Lexplore Results Portal if there are one or more validation errors. Correct the errors in the Excel file e.g. include mandatory columns, correct column headers or the data format and choose the Excel file once again.

- " **There are pupils with duplicated Unique IDs.**"
 - This error message is shown if a Unique ID is used for more than one pupil in the Excel file
- "The selected Excel file: e.g. Pupildata.xlsx could not be uploaded. Ensure that mandatory columns and approved column headers are used in the imported Excel sheet."
 - Validate that all column headers have the correct name.
- "Missing value for e.g. First name"
 - One or several of the mandatory column fields are missing data e.g. First name, Last name, Date of birth, Unique ID.

Warnings

Here are some examples of warnings which are concerned with name changes and pupils already existing in different classes etc. but where the user can choose to upload the data anyway.

- " A pupil (Mark Hammer) with Unique ID 19930915-4061 exist in the system.
Saving will update the pupil information to: Markus Hammer, 19930915-4061."

- This warning is shown if the system detects that a pupil who is already in the system has had a name change according to the Excel file data being imported.
- " The pupil: Clark Kent already exist in class MrParker-1.
The pupil will move to class MrErixon.
- If a pupil has changed school or class the system will automatically move the pupil.

5.2.3 Prepare Pupils for Re-test

After the pupils have finished their first test of the school year the pupils are no longer available for testing in the Lexplore Application. Before the next testing period, the pupils must be prepared for re-test. In the Portal there is a button named "**PREPARE RE-TEST**" press this button to open the dialogue window as shown in Figure 36.

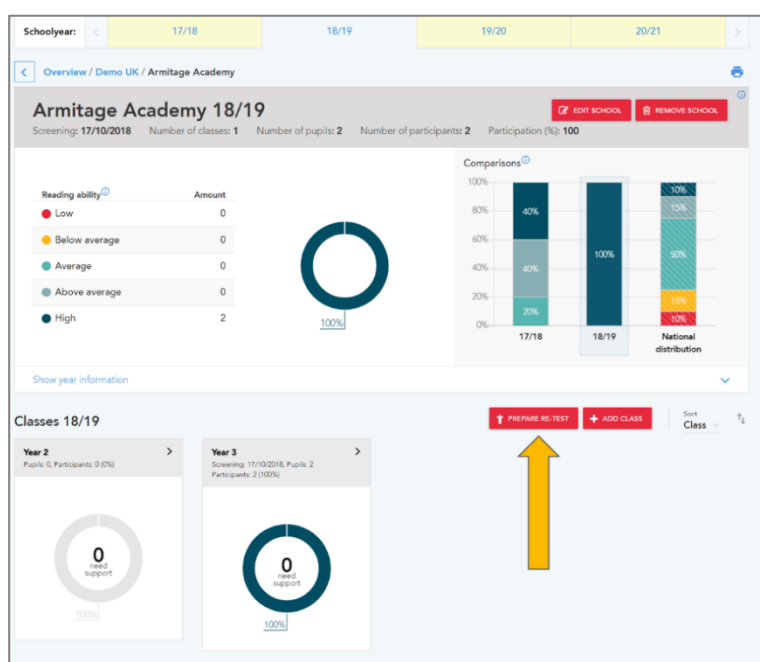


Figure 36, Prepare for Re-Test

Pupils with white checkboxes are not scheduled for testing, which means that they are not available in the Lexplore Testing Application. Mark the checkbox so it turns blue to schedule individual pupils for re-test. If the checkbox is blue and filled in, the pupil is scheduled to be tested, which means the pupil is available in the Lexplore Testing Application.

There is an option to filter the pupils by class, reading ability level and planning status (see Figure 37). Use the filters to select the pupils in the list to be tested.

Clicking in the checkbox '**Select all**' will mark all pupils who have been filtered out. Clicking the same checkbox again will deselect all the pupils.

The "**UNDO CHANGES**" button removes all the selections made for testing, (also for changes made to pupils not visible with an enabled filter).

Above the list of pupils, it displays the total number of pupils to be tested.

When you have made your selections, press "**NEXT**".

Confirm the pupil testing periods you have chosen in the validation step by pressing "**SAVE**".

The screenshot shows the 'Choose pupils' interface. On the left, there are filters for school, class, year, reading ability level, and planning status, all set to 'All'. A 'RESET FILTERS' button is at the bottom. The main area is titled 'Add pupils to be re-tested by selecting them in the list below'. It includes a 'Select all' checkbox and an 'UNDO CHANGES' button. Below this, it says '1 pupil planned for re-test.' and 'Remove 1 pupil from planned re-test.' with a red X icon. A table lists pupils with columns: PLANNED, PUPIL, BIRTH DATE, READING ABIL..., YEAR, SCHOOL, and CLASS. The table contains five rows of data.

PLANNED	PUPIL	BIRTH DATE	READING ABIL...	YEAR	SCHOOL	CLASS
<input checked="" type="checkbox"/>	Pupil 410	12/07/2019	Missing	YR3	Sommar19Skolan	3B
<input type="checkbox"/>	Pupil 359	12/07/2019	Missing	YR3	Inspelningsskolan	2A
<input checked="" type="checkbox"/>	Pupil 409	12/07/2019	Missing	YR3	Sommar19Skolan	3B
<input checked="" type="checkbox"/>	Pupil 282	12/07/2019	100/High	YR2	Sommar19Skolan	1C
<input checked="" type="checkbox"/>	Pupil 295	12/07/2019	Missing	YR5	Sommar19Skolan	4A

At the bottom right, there are 'CLOSE' and 'NEXT' buttons.

Figure 37, Prepare for Re-Test, mark pupils

5.2.4 Editing Pupil information

Edit a pupil's personal information by navigating to the pupil in question and press the "**EDIT PUPIL**" button. Change the desired data and then press "**Save**". **Please note:** "Year" is bound to the planned test session.

The screenshot shows the 'Edit pupil' interface. On the left, there's a sidebar with 'Mike Wonderland' and a 'Last test' button. The main area shows the pupil's profile with fields for 'First name', 'Last name', 'Birth date', 'Unique ID', 'Year', and 'Gender'. A yellow arrow points to the 'Last test' button. The bottom section shows a 'View age assessment recording' button and a graph of 'Reading ability' over time.

Figure 38, Edit pupil information

5.2.4 Delete Pupil

You can delete a pupil from a class, school, or organisation but you need to have permission as an Examiner in all the classes/schools you wish to delete the pupil from. Note that aggregated statistics are affected when deleting a pupil.

Navigate to the pupil in the class you wish to delete the pupil from. Press the "DELETE PUPIL" button. Select from the list to delete the pupil from the class, school, or from the entire organisation.

To confirm the deletion of the pupil, you need to enter the word "DELETE" in the field provided. Only then can you press the confirm button.

Deletion of a pupil is a so-called "soft delete", where the pupil's results and personal data are not removed from the database. Adding the pupil to the system again will restore the pupil's results, but statistics from previous academic years are erased. In order to permanently delete a pupil, all results must be erased one by one. Contact Lexplore Support for further assistance.

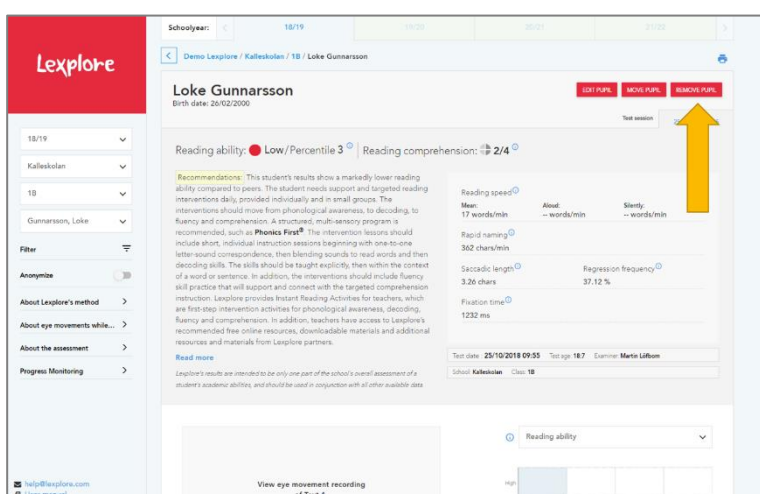


Figure 39, Delete pupil

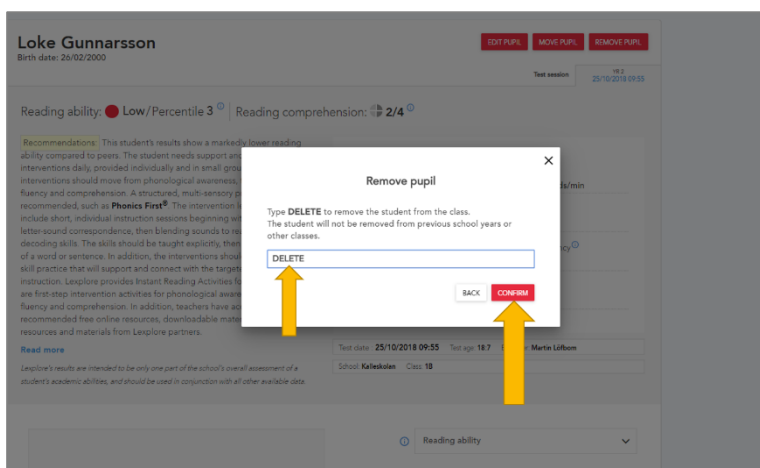


Figure 40, Confirm delete pupil

5.2.4 Move Pupil

It's possible to move pupils who have changed class or school. When moving a pupil between two classes within the same school all data will be transferred to the new class.

When moving a pupil between two schools the pupil will remain in the previous school as a leaver. The pupil who left is greyed out in the class list. The reason for this is to facilitate the handover between the two schools. If you wish to remove the leaver, you need to delete the pupil from that class. The pupil's results will be available in the new school when deleting a pupil from his previous school or class.

You can only move a pupil in the current school year.

To move the pupil, select "MOVE PUPIL" on the pupil view. Then select which school and class the pupil should be moved to. Press 'Save'.

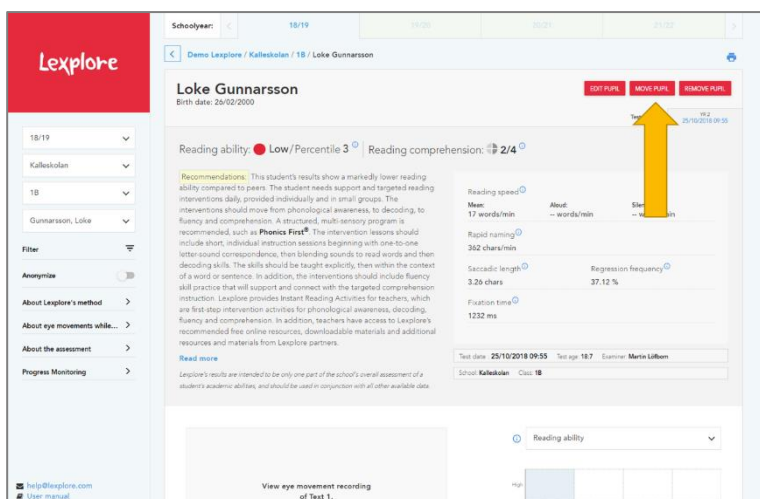


Figure 41, Move pupil

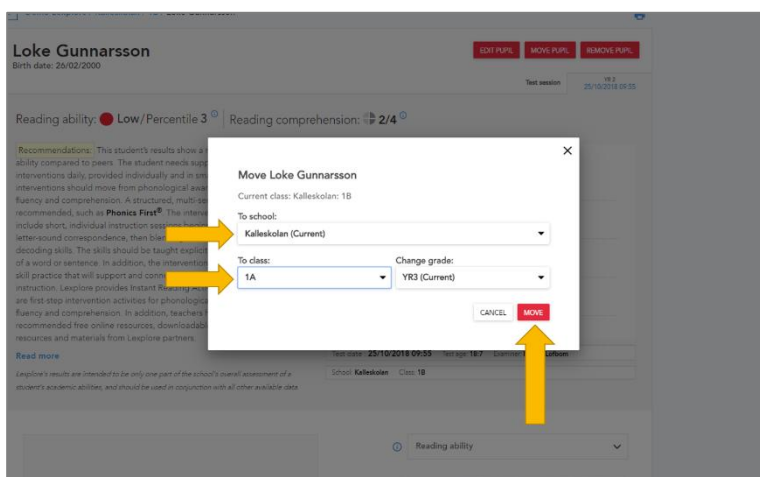
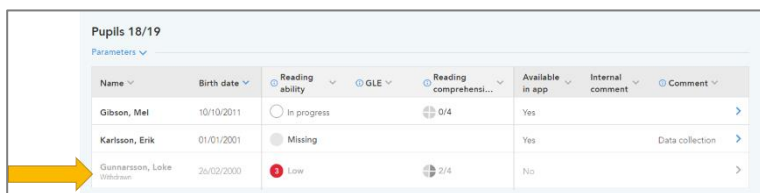


Figure 42, Select school/ class when moving pupil



Name	Birth date	Reading ability	GLE	Reading comprehension	Available in app	Internal comment	Comment
Gibson, Mel	10/10/2011	In progress		0/4	Yes		
Karlsson, Erik	01/01/2001	Missing			Yes		Data collection
Gunnarsson, Loke	26/02/2000	Low		2/4	No		

Figure 43, Class list with a pupil who left the school

5.3 After the test session

Once the test is completed will the result automatically be reviewed. If the test passes the quality review will it be available for all authorised personnel. Tests who don't meet the required quality metrics gets the status "under review" will manually be reviewed by Lexplore's quality administrator.

5.3.1 Multiple Saved Results

The system will not stop Examiners conducting several tests for the same pupil in one test session. If repeated tests take place, the pupil will be presented with other texts so the they never read the same text twice. Pupils with multiple test results for one testing session will get the status "under review". This will be clearly marked with an orange frame around the recordings, see Figure 44. A comment will be required, stating which results are to be deleted or moved, contact Lexplore Support for further assistance in these cases.

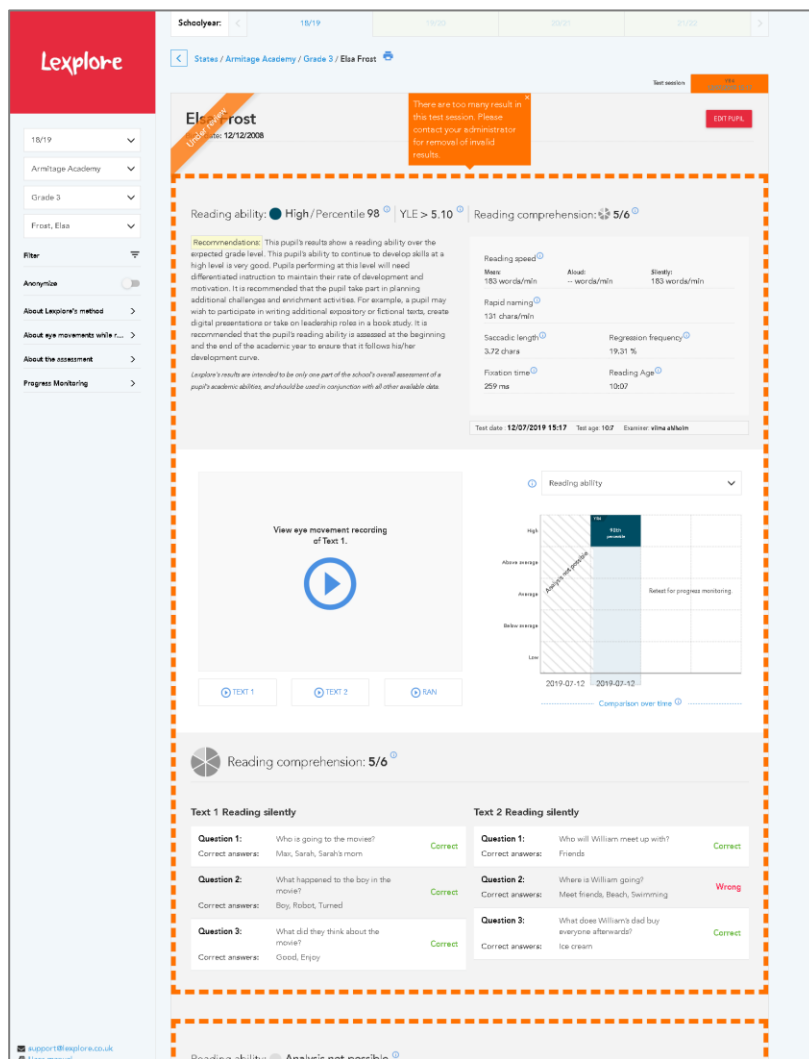


Figure 44, Several recordings saved on the same pupil's test session

5.4 Inviting Users

To invite users to a certain organisation, navigate to the red log-out box in the lower right-hand corner of the screen, and click on "**ADMINISTRATION**" as shown in Figure 44. Select the organisation you wish to invite users to and then press "**INVITE USER**", as shown in Figure 45.

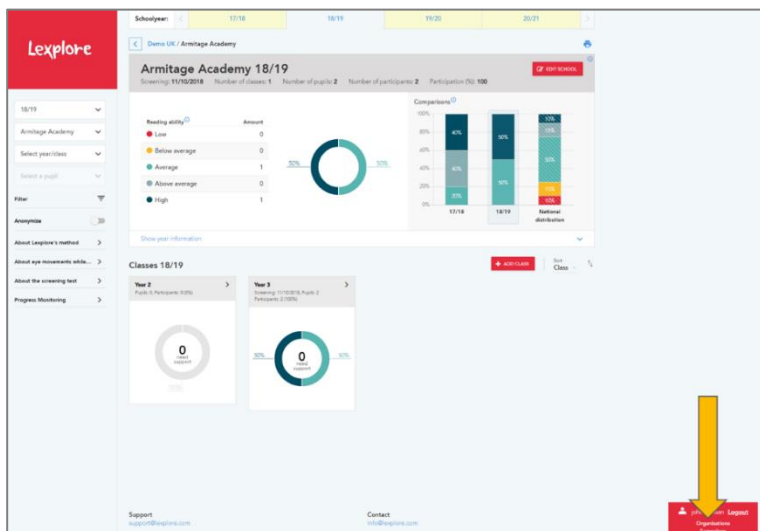


Figure 44, Button for Administering user accounts

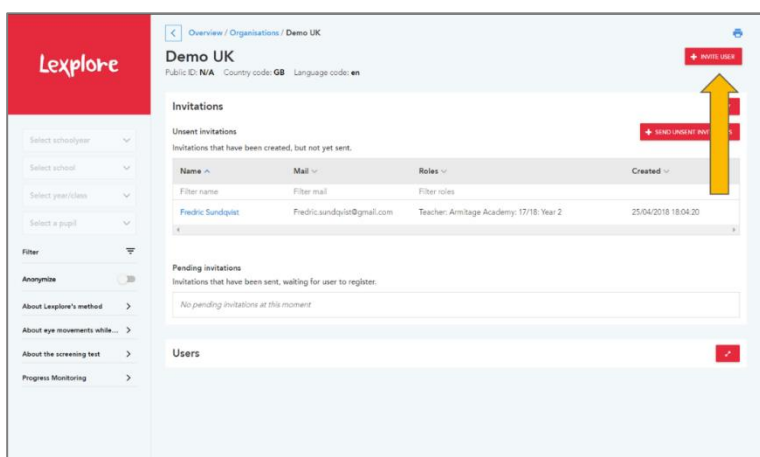


Figure 45, Invite new user

Fill in the user's contact information. Then select the permission role, and if necessary, limit the privileges by specifying the academic year and class(es) that the user should have permission to access. Then press the plus sign (+) to add the selected role(s), with the defined permission to the user. A user can have multiple roles and is then given permissions according to each specific role. Press "**Create invitation**" to save the invitation, see Figure 46.

The defined roles of access within the system set restrictions on who has permission to invite new users and what roles they may have. For full details see section 5.4.1. **Please note:** That a "Teacher" is just an alias for a set of access permissions, i.e. the role doesn't correspond to the person's work title.

- Examiners can invite *Headteacher, Teacher, SENCO and Org. Overview*.
- User Administrator can invite: *Headteacher, Teacher, SENCO, Org. Overview and User Administrator*.
- Examiner Administrator can invite *all roles*

Figure 46, Create new invitation

The invitations are not sent when they are first created, they are saved under 'Unsent Invitations'. This allows for the flexibility of sending all the invitation at once or sending them individually. When the "**SEND UNSENT INVITATIONS**" button is pressed, see Figure 47, an activation email will be sent to all the users listed under 'Unsent Invitations'. Thereafter, users will need to open the email and create a user account and a password; the account will also need to be verified by text message.

Name	Mail	Roles	Created
Carl Park	carl.park@lexplore.com	Principal: Armitage Academy	11/10/2018 10:...
Fredric Sundqvist	Fredric.sundqvist@gmail.com	Teacher: Armitage Academy: 17/18: Year 2	25/04/2018 18:...

Figure 47, Send unsent invitations to all new users

5.4.1 Sending Individual Invitations

Not all invitations have to be sent at the same time, invitations can be sent separately to individual users. To do this, click on the individual's name from the list of 'Unsent Invitations'. The 'Edit invitation' window will open, see Figure 48. Press "**Send invitation**" and the window will automatically close.

When the invitation is sent, it will be added to the list of 'Pending Invitations' until the user has activated their account. Invitations are valid for 90 Days.

Edit invitation

First name* Fredric Last name* Sundqvist

E-mail* Fredric.sundqvist@gmail.com Phone number

Role School Schoolyear Class

Select role... Select school... Select schooly... Select class... +

Role	School	Schoolyear	Class
Teacher	Armitage Academy	17/18	Year 2

Save Send invitation Delete

Figure 48, Sending invitations to individual users

5.4.2 Resending an Invitation

If a user can't find the original invitation or has forgotten to activate their account, invitation emails can be resent. Click on the individuals name in the list of 'Pending Invitations', see Figure 49, and press the "**Resend Invitation**" button as shown in Figure 50.

Lexplore

Overview / Organisations / Demo UK

Demo UK
Public ID: N/A Country code: GB Language code: en

Invitations

Unsent invitations
Invitations that have been created, but not yet sent.

Name	Mail	Roles	Created
George Svensson	George.svensson@lexplore.com	Supervisor: Armitage Academy	12/10/2018 10:55:25

Pending invitations
Invitations that have been sent, waiting for user to register.

Name	Mail	Roles	Sent	Expire	Invited by
Frida Kortengen	Frida.Kortengen@lexplore.com	Teacher: Armitage Academy: 18/19 Year 2	12/10/2018 10:53:31	09/11/2018 09:53:31	John Boman

Users
Registered users in organisation.

Name	Mail	Roles	Inactive	Last login
Carl Park	carl.park@lexplore.com	Principal: Armitage Academy		12/10/2018 10:53:28

Figure 49, Resending an invitation to an individual user

Edit invitation

First name* Last name*

E-mail* Phone number

Role School Schoolyear Class

Role	School	Schoolyear	Class
Teacher	Armitage Academy	17/18	Year 2

Figure 50 Resend invitation

5.4.1 Roles

There are three different categories of roles; First, those who can only see the pupils' results, then those who can perform the tests, and finally Administrators that have varying levels of access to the system.

See results	
Headteacher	Can see all the results in a school, for all school years.
Teachers	Can see all the results for a class for a specific school year.
Org. Overview	Can see aggregated statistics for an entire school or organisation. Cannot see pupils' individual results.
SENCO	Can see all pupils' results in all classes or specified classes in a school. The role can be limited to a specific school year if desired.
Perform test	
Examiners	Permission to perform tests and perform administrative tasks before and after the testing. Access to Lexplore Application. Can invite users to see the results.
Examiners External	Only access to Lexplore Application.
Administration	
Examiner Administrator	Full access to Lexplore's System. This role is designed for Internal personnel at Lexplore.
User Administrator	Can invite Users with roles; Headteacher, teacher, Org. Overview, SENCO and User Administrator.

	Headteacher	Teachers	Org. Overview	SENCO	Users Admin	Examiner External	Examiner	Examiner Admin
See published results	✓	✓	Aggregated statistics only	✓			✓	✓
See public comments	✓	✓	✓	✓			✓	✓
See internal comments							✓	✓
Create comments						Only in the application	✓	✓
Se results "under review"							✓	✓
Conduct tests -Lexplore Application						✓	✓	✓
Import & administering pupils							✓	✓
Add new class							✓	✓
Add new school								✓
Delete results								✓
Move result								✓
Move pupil							✓	✓
Delete Pupil							✓	✓
Invite users					✓ Headteacher Teachers Org. Overview SENCO User admin		✓ Headteacher Teachers Org. Overview SENCO	✓ All roles

5.4.2 Edit, Reset or Delete a user account

To edit an active user account, click on the individual's name in the list, as shown in Figure 51. Please note that an examiner cannot edit another examiner in the list.

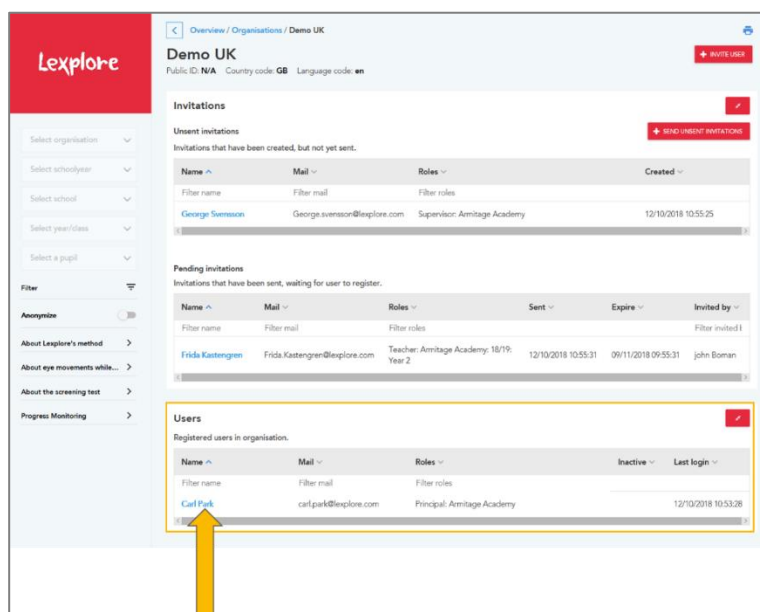


Figure 51, Edit a user account

Explanation to figure 51.

1. To reset the user's phone number for multi-factor authentication, add a new phone number and press **"Save"**.
2. Change the user's permission role by switching or adding multiple roles
3. Delete a saved permission role
4. Delete the user account

The screenshot shows the 'Edit user' interface. At the top, there are input fields for 'First name*' (Fredric), 'Last name*' (Sundqvist), 'E-mail*' (Fredric.sundqvist@gmail.com), and 'Phone number'. Below these are dropdown menus for 'Role' (Select role...), 'School' (Select school...), 'Schoolyear' (Select schoolyear...), and 'Class' (Select class...). A table below these menus shows the current user's role and permissions:

Role	School	Schoolyear	Class
Teacher	Armitage Academy	17/18	Year 2

At the bottom of the form are 'Save' and 'Delete' buttons. Four yellow arrows with numbers point to specific elements: Arrow 1 points to the 'Phone number' field; Arrow 2 points to the 'Class' dropdown menu; Arrow 3 points to the delete icon in the table row; Arrow 4 points to the 'Delete' button.

Figure 52, Edit user information, email, role or delete account