

D2.3.3: Adaptation and Implementation of EIS

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Author(s)	Andrea Ghoneim (DUK), Hele Lukki-Lukin (Innove)	
List of contributor(s)	Reet Taimsoo (Innove), Anne-Mai Saar (Innove), Mitja Čepič Vogrinčič (ERI), John Hurley (H2 Learning), Anastasia Economou (CPI)	
Deliverable Manager	Andrea Ghoneim	
Deliverable Reviewer(s)	Marios Kyprianou (CPI)	
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N.B.: All Screenshots shown in this deliverable are taken from pages/videos available via https://mahara.ats2020.eu which are either publicly accessible or to which the creator (in all cases Hele Lukki-Lukin) has granted the right to be published in this deliverable.

1 Introduction

The purpose of this document is to show the **implementation and adaptation of the testing platform EIS (Electronic Item Bank – developed by Innove)** which was used for the students' pre- and post-test of the ATS2020 pliot as well as for testing teachers before and after the pilot.

Based on the Functional Specification defined in Deliverable 2.1.2 and the assessment of available tools and platforms in Deliverable 2.2 as well as on the presentations and discussions documented in Deliverable 2.1.4, it was decided to set up the students' test and teachers' questionnaire on EIS, the Electronic Item Bank (http://haridusinfo.innove.ee/en) developed by Innove.

This document is complementary to the development of https://eis.ats2020.eu/public which is documented in the WP2 ePortfolio, especially at https://mahara.ats2020.eu/view/view.php?id=302. While the ePortfolio page devoted to D. 2.2 (https://mahara.ats2020.eu/view/view.php?id=302) was kept simultaneously with WP2 developments since April 2016, this document shows the developments of, in, and around the platform EIS for ATS2020 chronologically.

2 PROJECT MANAGEMENT

2.1 PROJECT TEAM

The Innove Foundation was in charge of EIS for ATS2020. In the same time, test development was done by WP5 (initially led by Mitja Cepic Vogrincic). Anastasia Economou (CPI), coordinator of ATS2020 and co-leader of WPs 2 and 5 acted as a supervisor during the implementation. This proved necessary, as the hard work of adapting EIS for the needs of ATS2020 led to a range of staff changes.

Role	Name	Email
Project Manager	Reet Taimsoo (Innove)	
	Anne-Mai Saar (Innove)	anne-mai.saar@innove.ee
System Developer	Ahti Kelder (Innove)	ahti.kelder@innove.ee
Content Manager	Mitja Cepic Vogrincic e.a. (ERI)	eva.klemencic@pei.si
System Administrator	Hele Lukki-Lukin e.a. (Innove)	hele.lukki-lukin@innove.ee
Supervision	Anastasia Economou (CPI)	anasta@cyearn.pi.ac.cy

Adapting EIS for the needs of ATS2020 needed a big effort from both INNOVE and ERI. A lot of discussions, adaptations, refinements, and testing was necessary till both test and testing environment were finalized. Great thanks go to the core team (Anastasia Economou + Pambos Nicolaou + Nicolas Kanaris (CPI), Hele Lukki-Lukin + Anastassia Voronina + Reet Taimsoo + Anne-Mai Saar + Ahti Kelder (Innove), John Hurley (H2), Mitja

Cepic Vogrincic + Eva Klemencic + Plamen Mirazchiyski (ERI), Borut Campbelj (MISZ), Jarmo Viteli, Anne Rongas + Kaisa Honkonen (UTA) as well as to all partners who tested the test environment, did translations and reported bugs before testing.

This report is only devoted to the technical adaptation and the user instructions for using the EIS testing system, further reporting will be found in the deliverables of WP5 (especially on the quantitative pilot evaluation).

2.2 IMPLEMENTATION PHASES

EIS (Eksamite Infosüsteem or Electronic Item Bank) was developed by Innove and presented at the ATS2020 ad hoc meeting in Ljubljana in 2015 (cf D. 2.1.4 available at https://mahara.ats2020.eu/view/view.php?id=182) together with OPEKA, a self-evaluation tool for teachers, developed by UTA. UTA also had developed an assessment tool for students (OPPIKA). However, it was decided that using EIS for the ATS2020 pilot evaluation would need less adaptations. Following the meeting, a functional specification for an ATS2020 assessment platform was developed (D. 2.1.2, also available via https://mahara.ats2020.eu/view/view.php?id=182) which served as the basis for the implementation of EIS for the ATS2020 pilot.

Thus, the implementation phases look as follows:



Main phases for developing the ATS2020 learning platform

On the figure, the main phases for developing EIS for ATS2020 are shown in a simplified form. The actual development of the system was not that linear but agile meaning adaptations were made during the process based on the needs. Here is a list of adaptations of the system (not extensive list):

- Functionality separation from EIS as a new package;
- Authentication changes (ID based to password);
- Bulk creation of user accounts and passwords (students, teachers, school administrators, country administrators);
- Import/export of items;
- Multi-language support of user interface (creation and adaptations after partner feedback);
- ATS2020 logos and adaptations to the main page (adding the logos and changing the user interface view);
- Filling out testing protocol in English (functionality change and language);
- Unstructured test functionality;
- Content viewing adaptations (same content in different web brausers);
- Deleting double data entries from statistics (fixes);

- Deleting data of students not participating in project (no parental consent);
- Scoring facilitation (creating scoring batches, assigning scorers, reliability scoring functionality etc.).

During the adaptation phase, additional to the tremendous amount of work, mainly done by Innove and ERI, 14 coordination meetings were held, mainly online. The minutes of these meetings are stored at

https://ats2020.sharepoint.com/:f:/r/partners/Shared%20Documents/Work%20Packages working documents/WP2%20Technology%20and%20Tools/EISquestionnaires?csf=1

and at

https://mahara.ats2020.eu/view/view.php?id=16796 (only for logged-in users)

Here is a list of the meetings and the main topics:

1. **EIS testing system for teachers' questionnaire**. Skype meeting after testing the questionnaire

2016-08-12, 12 noon (Cyprus, Estonia)

Participants: Anastasia (CPI), Hele + Marek (Innove), Andrea (DUK)

URL for test version of questionnaire:

https://test.ekk.edu.ee/public/sooritamine/2/0/alustamine

2. **EIS testing system for teachers' questionnaire**. Skype meeting after 2nd test of the questionnaire

2016-08-17, 12 noon (Cyprus, Estonia, Finland)

Participants: Anastasia + Pambos (CPI), Hele + Marek (Innove), Andrea (DUK), Anne + Jarmo (UTA)

3. EIS testing system for students and teachers. Open Issues + solutions

2016-08-30, 2 pm (Cyprus, Estonia, Finland)

Participants: Anastasia + Pambos (CPI), Anne-Mai + Hele + Marek (Innove), Andrea (DUK)

4. EIS testing system for students and teachers. Process Specification

2016-09-02, 12 noon (Cyprus, Estonia, Finland)

Participants: Anastasia (CPI), Hele (Innove), Mitja (ERI), Borut (MISZ), Andrea (DUK

 EIS testing system for students and teachers. Students' test (Module 1 + testtaking/statistics)

2016-09-07, 1 pm (Cyprus, Estonia, Finland)

Participants: Anastasia (CPI), Hele (Innove), Mitja (PEI), Jarmo (UTA), Borut (MISZ), Andrea (DUK) - URL for testing students test:

https://test.ekk.edu.ee/public/sooritamine/4/0/alustamine

6. **EIS testing system for students and teachers. Student's test**: Validity issues, testing of test, technical issues, test administration

2016-09-13, 2 pm (Cyprus, Estonia, Finland)

Participants: Anastasia (CPI), Hele (Innove), Jarmo+Anne (UTA), Andrea (DUK)

7. EIS: to do till pilot pre-test

2016-10-03, 2 pm (Cyprus, Estonia, Finland) = 1 pm Brussels time Participants: Anastasia (CPI), Hele + Anne-Mai (Innove), Anne (UTA), Andrea (DUK), John (H2), Eva (ERI), Borut (MISZ)

- 8. **Test Administration**. Documentation = missing, file of meeting 7 was saved twice
- 9. EIS: TestAdmin + testing of tests + translations

2016-10-24, 2 pm (Cyprus, Estonia, Finland) = 1 pm Brussels time = 12 noon in Ireland Participants: Anastasia + Nicolas (CPI), Hele + Anne-Mai (Innove), Kaisa (UTA), Andrea (DUK), John (H2), Eva + Mitja (ERI), Borut (MISZ)

10. EIS: TestAdmin + testing of tests + translations

2016-10-27, 2 pm (Cyprus, Estonia, Finland) = 1 pm Brussels time = 12 noon in Ireland Duration of meeting: 1,5 hrs

Participants: AnastasiaE (CPI), AnastassiaV + Hele + Anne-Mai (Innove), Anne (UTA), Andrea (DUK), John (H2), Eva + Mitja (ERI), Borut (MISZ)

11. Translations of tests and items to be fixed

2016-11-01.

Participants: not minuted, documentation = screenshot of notepad

12. EIS: Fixing Source Code

2016-11-03, 2:30 pm (Cyprus, Estonia, Finland) = 1:30 pm Slovenia/Austria = 12:30 in Ireland Duration of meeting: 1,5 hrs

Recording of the Meeting:

https://1drv.ms/v/s!Apx8zg32Ss2ok tXT-3ub-WZOMNN2Q

Participants: AnastasiaE (CPI), AnastassiaV + Hele + Anne-Mai (Innove), Andrea (DUK), John (H2), Eva + Mitja (ERI), Kaisa (UTA)

13. EIS: Bugfix Agreement

2016-11-04, 2 pm (Cyprus, Estonia, Finland) = 1 pm Slovenia/Austria = 12 in Ireland Duration of meeting: 45 min

NO recording of the Meeting

Participants: AnastasiaE (CPI), AnastassiaV + Hele (Innove), Andrea (DUK), John (H2), Eva (ERI), Anne (UTA)

14. EIS testing system for students and teachers after bug fixes

2016-11-09, 12 noon (Cyprus, Estonia, Finland), 1 pm (Slovenia, Austria), 2 pm Ireland Duration: 1hr 45 minutes

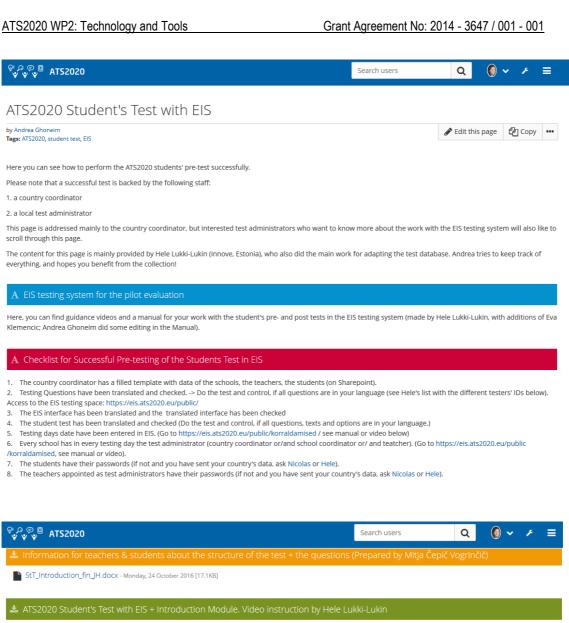
Participants: AnastasiaE (CPI), Hele+Anne-Mai+AnastassiaV (Innove), Mitja (PEI), Anne +Kaisa (UTA), Andrea + Gregor (DUK), John (H2)

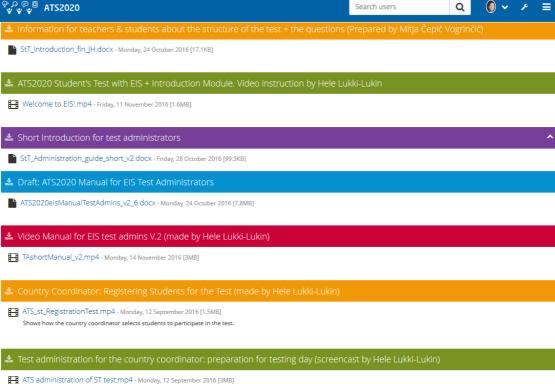
2.3 DOCUMENTATION

User help **documentation** was created for teachers and students with step by step instructions and visualizations. This documentation is available as "ATS2020 Student's test with EIS" via Mahara at the following link:

https://mahara.ats2020.eu/view/view.php?id=2775 (only for logged-in users!)

Here are screenshots of the contents of the page:





EIS Scoring Guide (Word file)

ATS2020ScoringGuide_ver05.docx - Wednesday, 22 February 2017 [893.6KB]

📥 EIS Scoring guide (video instruction by Hele Lukki-Lukin)

ATS2020ScoringGuide.MP4 - Monday, 13 February 2017 [2.5MB]

ATS2020 students' test with EIS. Internal guidance page, available at https://mahara.ats2020.eu/view/view.php?id=2775 (only for logged-in users!)

Additionally, some of the video instructions (for country coordinators) are also available (publicly) via the ATS2020 resources portal at: <a href="https://resources.ats2020.eu/resource-listing?q=EIS&category=GUTS&country=&lng=&learning=&media=&perpage=&sortby="https://resources.ats2020.eu/resource-listing?q=EIS&category=GUTS&country=&lng=&learning=&media=&perpage=&sortby=

The following text is mainly derived from the manual for test administrators. The version 2.6 on which the text is basing and which is stored at the abovementioned Mahara site is available as annex to this deliverable.

3 ANNEX: MANUAL FOR TEST ADMINISTRATORS

The manual for test administrators was elaborated by the ATS2020 EIS task force as mentioned above. The manual bases mainly on the video guides created by Hele Lukki-Lukin.

The manual reached v. 2.6. As at this point, translations to the piloting countries' languages had already begun and the manual was an internal resource, no final version was elaborated.





ATS2020 Manual for Test Administrators

Students' tests with the ATS2020 test database, basing on EIS and provided by Innove (Estonia)
Test administrator's guide to manage the test successfully
Manual by Hele Lukki-Lukin (Innove) and Eva Klemenčič (ERI), edited by Andrea Ghoneim (DUK)

V2 6@2016-10-24

Changes:

deleted section on creating passwords, as this will be done by Hele added short description of the role of the country coordinator

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ATS2020 Manual for Test Administrators		
	asswords, users, supervision and support for test admins	
	pervising the testing session	
)verview	
	nator)	
	oordinator (preparation for testing day)	
I AQ — FUSSIDIE PRUDIEITIS AITU SUTULIOTIS		





Role as a country coordinator – manage passwords, users, supervision and support for test admins

As a country coordinator, we kindly ask you to study the entire manual, as you will have an important role in supervising your country's test administrators. Please make yourself acquainted both with their role and with the additional tasks and responsibilities of the country coordinator.

Role as a test administrator – rules for supervising the testing session

As a Test Administrator, you should observe the following general rules during the test administration:

- Do not answer questions about the content of the test items, or provide any specific information, answers, or instruction about any test task. The best response to any such questions is, "I am sorry, I can't answer any questions. Just do your best with the question."
- Be sure that all students understand what they are asked to do and know how to input their answers. You may answer students' questions about these matters.
- While students are working, move around the room to see that they are following directions and answering questions.
- Students who ask to leave the test session may do so only in an emergency situation (e. g. because he/she becomes ill).
- If a student arrives late, but before the testing session has begun, show the student to their computer. Student that arrive late should <u>not</u> be admitted to the session once the actual testing has begun (that is, once the students have started the tutorial and yet have begun reading the instructions).
- Student should be encouraged to use the full time to complete the test, but if the student has finished answering the questions before the testing session is over, he/she may read quietly at his or her desk, but should not leave the room.

Please note that the test administrators were introduced to the ATS2020 pre-test for students on EIS with an introduction (can be found via http://mahara.ats2020.eu/view/view.php?t=SWkZARwELKYhHgCMU7Qr) which should summarize their main tasks as treated below.





Before, during, and after the test: Quick Overview

Prerequisites	Hardware and Software requirements:	
	PC computer, no tablets	
	2 core processor	
	2 GB memory	
	Browser Mozilla Firefox	
	Quick Time or VLC plugin	
	2. Internet connection	
	3. Students are registered for the test	
	4. Passwords have been created for the students	
	5. Students are divided into groups by allowed testing days and testing rooms.	
	6. There is an assigned minimum one test administrator for every testing day and testing room.	
	7. Recommendation: create usernames and passwords and print them out before the testing day	
	(find detailed information on how to do this below and via ATScreatingPasswords.mp4)	
Testing day – start the test	 Test administrator (TA) logs in at https://eis.ats2020.eu/ S/he chooses: "Central tests - administrating written e-test" S/he clicks on the test name The test administering form with the list of the students' names appears. Mark students in the class ready for test> "Permission to start" The test admin (=TA) pays attention to the students' names and usernames and gives them the 	
	prepared passwords (see below). • Students log in and choose language next to his/her name and click on the main page on a link "You have been directed to take one test" or choose "Take a test" and then "Performance"	
Online communication during the test	While the students are taking the test, the test administrator has to be sure that no student uses other webpages or communication channels.	
Collaboration and assistance during the test	Each student's work must be his or her own. It is essential that students do not discuss their work with each other at any time during the testing.	
icsi	You may read or explain any instructions or text to students as long as you do not provide the students	







	with answers to their questions. You may reword questions, explain the meaning of the words, or explain task requirements to students as long as you do not provide the students with answers to their questions. For example, if a tsk requires students to identify the benefit of completing an action, you may define the word »benefit« for students. Another example: If a task requires a student to click on a hyperlink on the screen, you may explain that they need to use their mouse to click on the hyperlink in the upper screen area, however you may not explain to the student what a hyperlink is.
Testing day – create protocol after the test	After the students have finished the test, the TA (=test admin) clicks on the link below the students' list = "Compilation of the protocol of the test" The report opens with the list of the students. Students, who have finished their tests are marked as "participated". TA marks students who missed the test. If any of the students who really participated in the test are not marked as participated, the TA has to correct it and mark that the student participated. The status of the students who missed the test has to be marked by TA.
Scoring / Protocol	Only those students' responses are going to be scored, who are marked as participated in the protocol. It is possible to add some remarks about some students, by clicking "Additional information". This place is also for information about additional time given to the student for any technical problems.
More than one testing day in your school?	If the test in one school takes place on more than one day, the protocol has to be filled only with the information about the students who participated and then saved. If TA has marked some student as missed from the group that has not started the test yet, the student can't take the test. After last test session has to be the protocol completely filled.

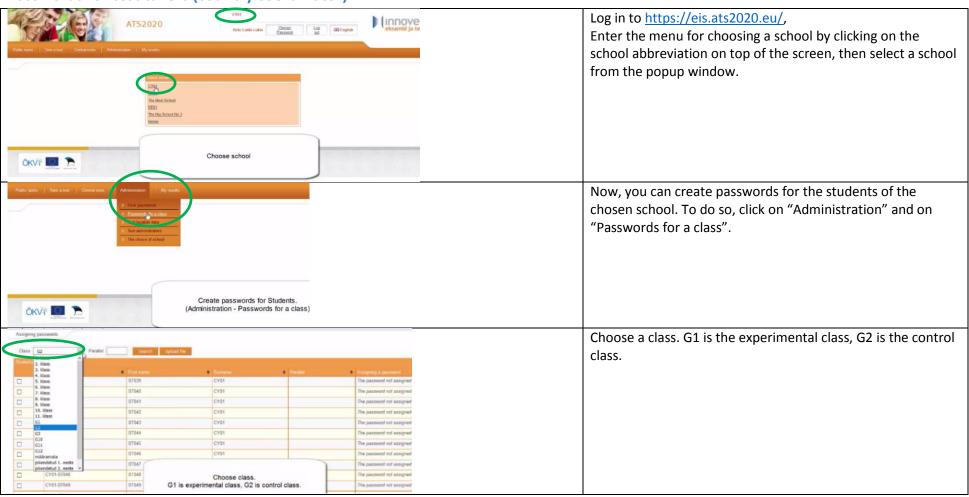
A video manual and videos for the mentioned chapters are available at http://mahara.ats2020.eu/view/view.php?t=SWkZARwELKYhHgCMU7Qr (secret URL – no Registration for Mahara necessary!)







Passwords for test takers (country coordinator)









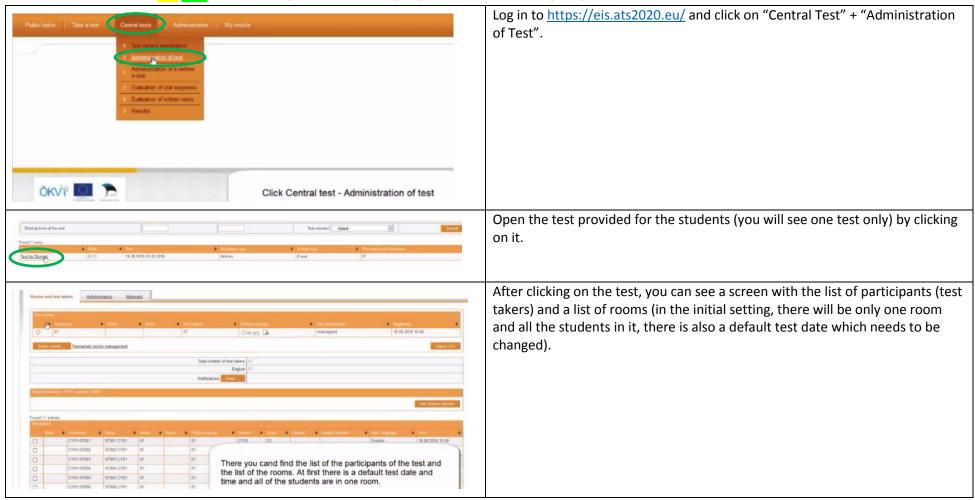
	CY01-ST029 CY01-ST030 CY01-ST031 CY01-ST032 CY01-ST033 CY01-ST034			ST029 ST030 ST031 ST032 ST033 ST034	CY01 CY01 CY01 CY01 CY01 CY01		The password not assigned	Again, the student's IDs and their group are already preconfigured, so you just need to click on "select all", after that on "generate passwords".
	CY01-ST035			ST035	CY01		The password not assigned The password not assigned	
	CY01-ST036			ST037	CY01		The password not assigned The password not assigned	
	CY01-ST038			ST038	CY01		The password not assigned	
CY01-ST011 CY01-ST012 CY01-ST013 CY01-ST014 CY01-ST016	ST011 ST012 ST013 ST014 ST016 ST016	CY01 CY01 CY01 CY01 CY01 CY01	ky2jAtiD Epjro9wz wgaQAYUk La9cU4sX -5A7UE8g NQ5aCbYB	Passwords will ap	opear in new tab. Copy the or excel file.	em to word		The passwords will appear in a new tab. Copy them to a Word or Excel file. Then, close the Tab and generate passwords for the other class (G2) in the same way.
								The Passwords can be transferred to the schools as a printout or via secure electronic ways. If the password list is lost or in case of any other problems, new passwords can be generated using the procedure as above.





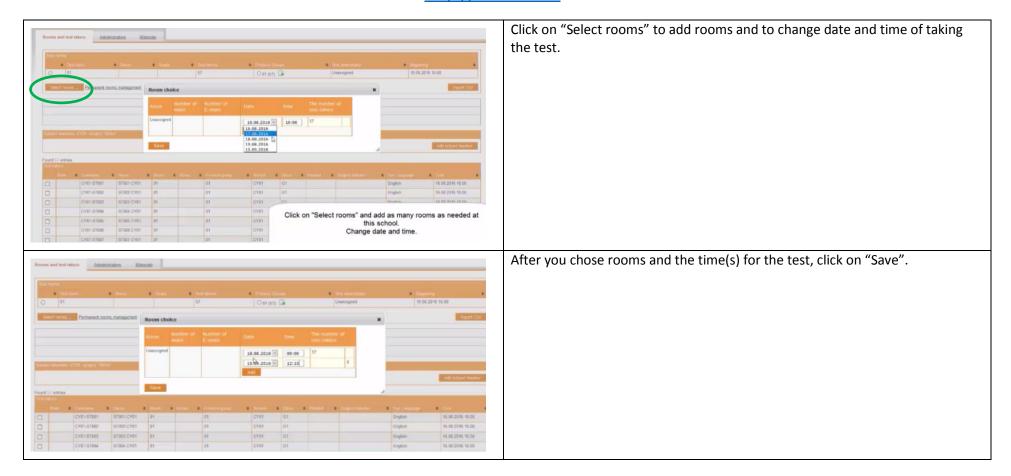


Test administration for testing day)





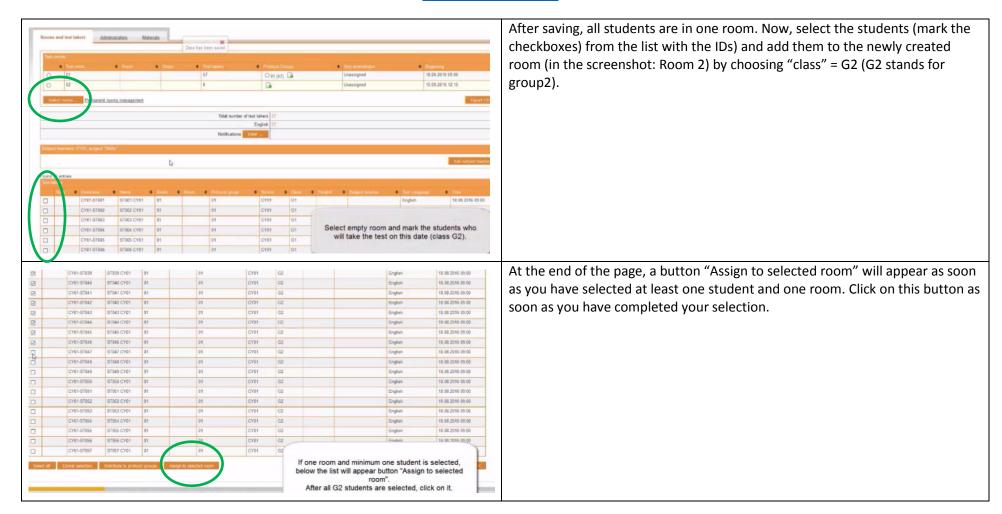




















To assign test administrators to each room, choose the tab "Administrators". Choose a person from the menu which appears after you click on "choose a person". You can choose different test administrators or the same person for the different rooms/test groups.

You can also assign more than one test admin to one room.

After test administrators are assigned you are well prepared for the testing day

FAQ – Possible problems and Solutions

Problem	Follow-ups
The students have to logged in on the testing day, but there is no test to	TA chooses "Central tests">"Administration of written e-tests", clicks on test
take.	name, marks the students ready to start test and clicks the button "Permission to
	start". There will be popup window "Are you sure?">"Yes"
Possible reason : TA hasn't given permission to start to the students	
	Now choose the students "Perform">"Take a test" and "Start"
Solution: TA has to give permission to start	
There is no TA assigned to the test.	EIS administrator chooses Administration - Test administratorsNew
Solutio n: Country coordinator chooses right school (next to name)	Writes user name and name.
>Central tests>Administration of test.	
	Tab Test locations buttonadd test locationselect region and school and save
Clicks on test's name and tab "Administrators". On empty row click on	
"Choose a person". If there is no person to choose, contact to EIS	Tab Administrator's profile click on "Edit" and mark "A person is a test
administrator and send TA name and username, school and group.	





	administrator"
	Then menu Administration of tests click on test name, choose school, tab "Designating administrators" fill empty test conductors using cell drop-down menus.
TA has been logged in, chooses Central tests and Administration of a written e-test, but there is no testing time found.	Country coordinator in that case
Possible reason 1: There is someone else assigned to be TA in this school Possible reason 2: There is some other day assigned to be the testing day Solution: contact to country coordinator who has to control testing day and user's role in this day.	 Chooses right school Central tests - Administration of test Chooses test Controls on test takers form dates of the test, if it needed click on button "Select rooms" and changes date Controls on tab Administrators administrator's names and if the TA is assigned to the room in correct date
TA opens form administration of a written e-test and click on the tests name but on the screen are wrong students usernames.	Country coordinator in that case
Possible reason 1: TA is assigned to administer several test sessions on this day and he/she has opened wrong list.	 Chooses right school Central tests - Administration of test Chooses test Controls on tab Administrators administrator's names and if the TA
Solution : choose again central tests - administration of a written e-tests and choose another test.	is assigned into the room in the room with correct date
Possible reason 2 : TA is assigned to wrong room by country coordinator.	
Solution: Contact country coordinator	





User inserts username and password and on the screen appears "Missing account or invalid password"	Possible reason 1: Username or password is entered incorrectly
	Solution : Enter password to user name row (to see it is written correctly) and copy it to password row. Then enter user name.
	Possible reason 2: To the student are generated passwords several times and he/she is trying to enter using old password
	Solution : If there cannot ascertain last password, there should generate new one
	Possible reason 2: The student is using wrong url.
	Solution: Enter correct url https://eis.ats2020.eu/public
The student is doing the test, clicks on "Save and go to the next task" but there is no new task opens	Reason: connection with the server has lost or it is very slow
	Solution: The student refresh the page and if it's needed, clicks on "Abort test taking" and then "Continue"
The student is doing the test, clicks on "Save and go to the next task" and there will appear red rotary circle.	Possible reason: There is no connection between computer and server.
,	Solution : The student has to wait some time or after few seconds choose "Abort test taking" and then "Continue"
The student has clicked accidentally on "Submit test"	Solution: Test administrator marks on his/her computer the student and clicks below on button "Open Submitted test". Then the students refresh his/her page. The test status in now "Unfinished" and the student clicks on "Continue".
On the testing time there is some period, when the students cannot do the test but there is time limit on the test.	The test administrator clicks on students name row "Extra time". Extra time has to be hh:mm, i.e 15 min = 00:15.
The test administrator can give the additional time, if there are external	







reasons like:

- Electricity problems
- Computer/Internet problems

N.B: If there is no external reason, no extra time can be given (i.E. if students want extra time because they were slow in answering).

After that the students has to click on "abort test taking" and then "Continue".

TA marks in protocol of the test reason(s) of giving extra time by button "Additional information" on student's row.