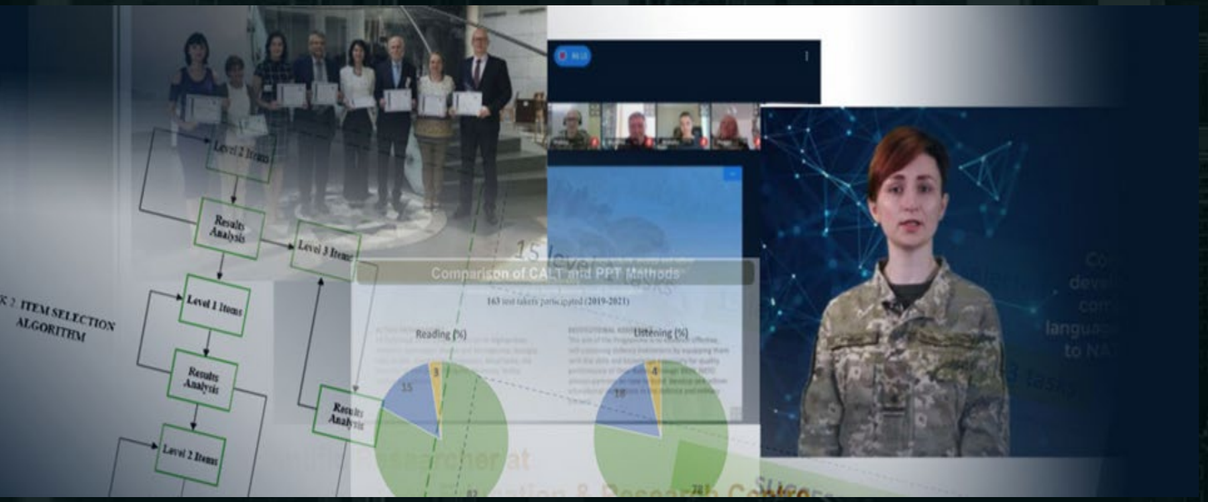
THE NATIONAL DEFENCE UNIVERSITY OF UKRAINE

Foreign Language Education and Research Centre

Computer Adaptive Language Testing: From Theory to Practice

Colonel Viktoriia Krykun, PhD (Education)

Chief of the Research Language Testing Section



The CALT SCIENTIFIC PROJECT

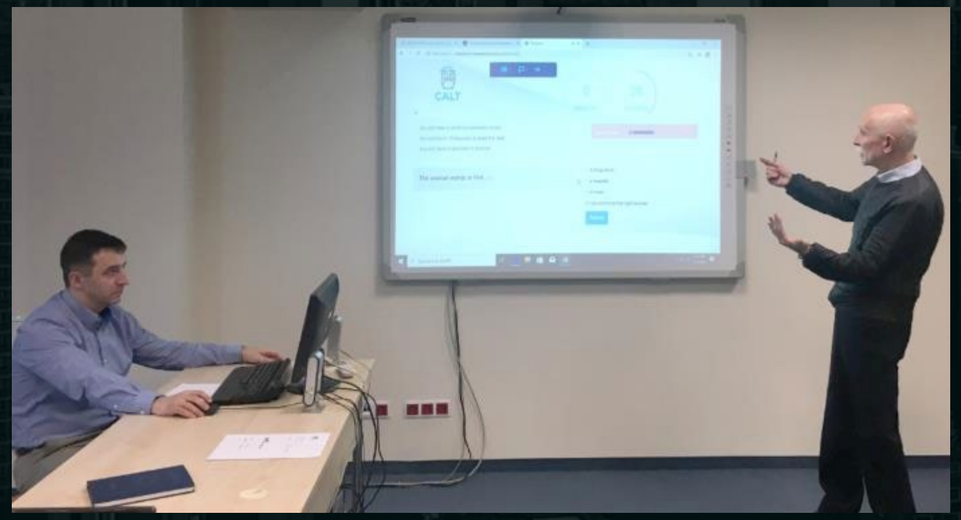
was initiated

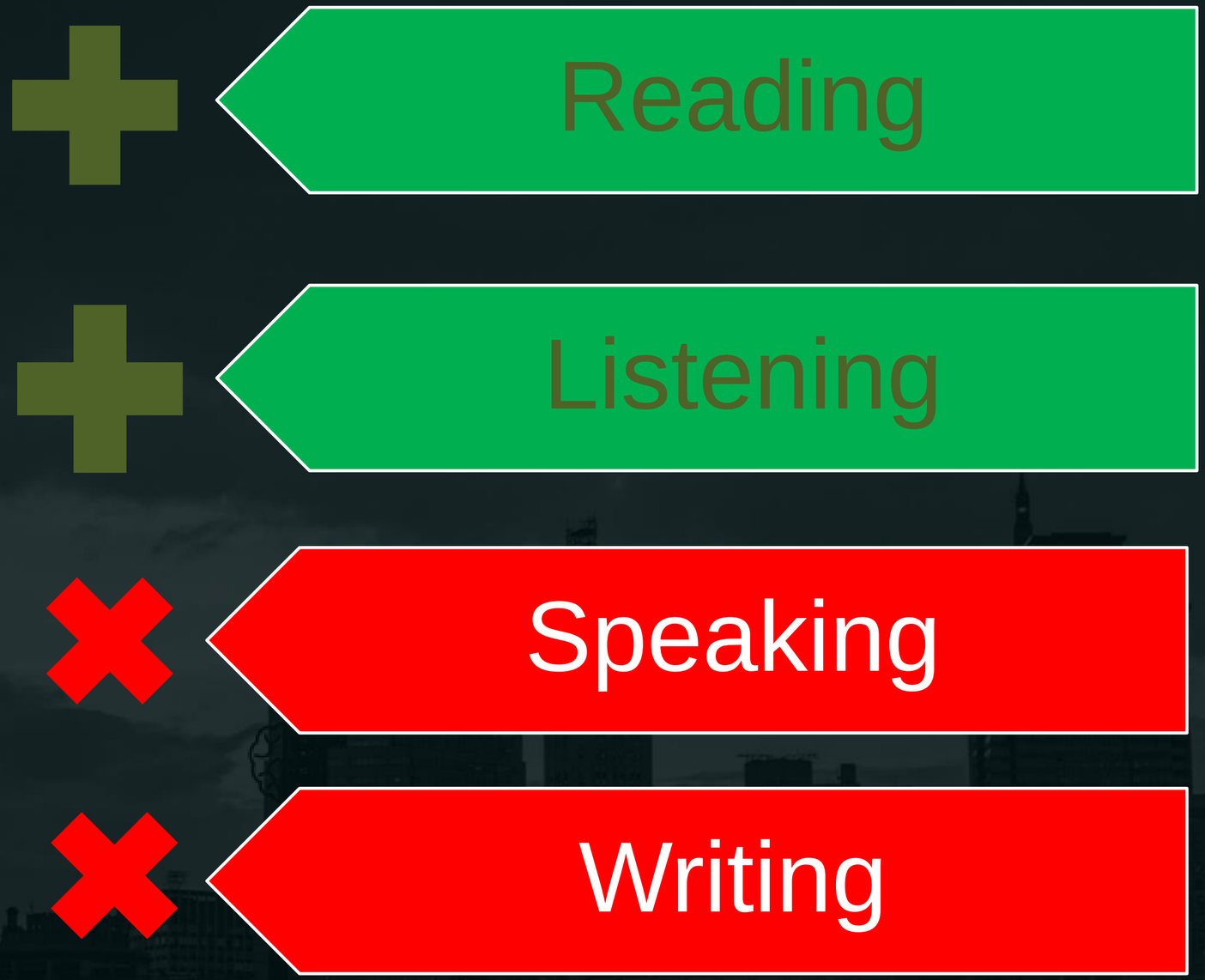
at the National Defence University

of Ukraine

in 2019

Defence Education Enhancement Programme (DEEP)
ADVANCED EDUCATION
НОВІТНЯ ОСВІТА
Information
Media
Security Environment
RUSSIAN CONTEXT




Reading
Listening
Speaking
Writing

WHAT IS CALT METHOD?

CALT

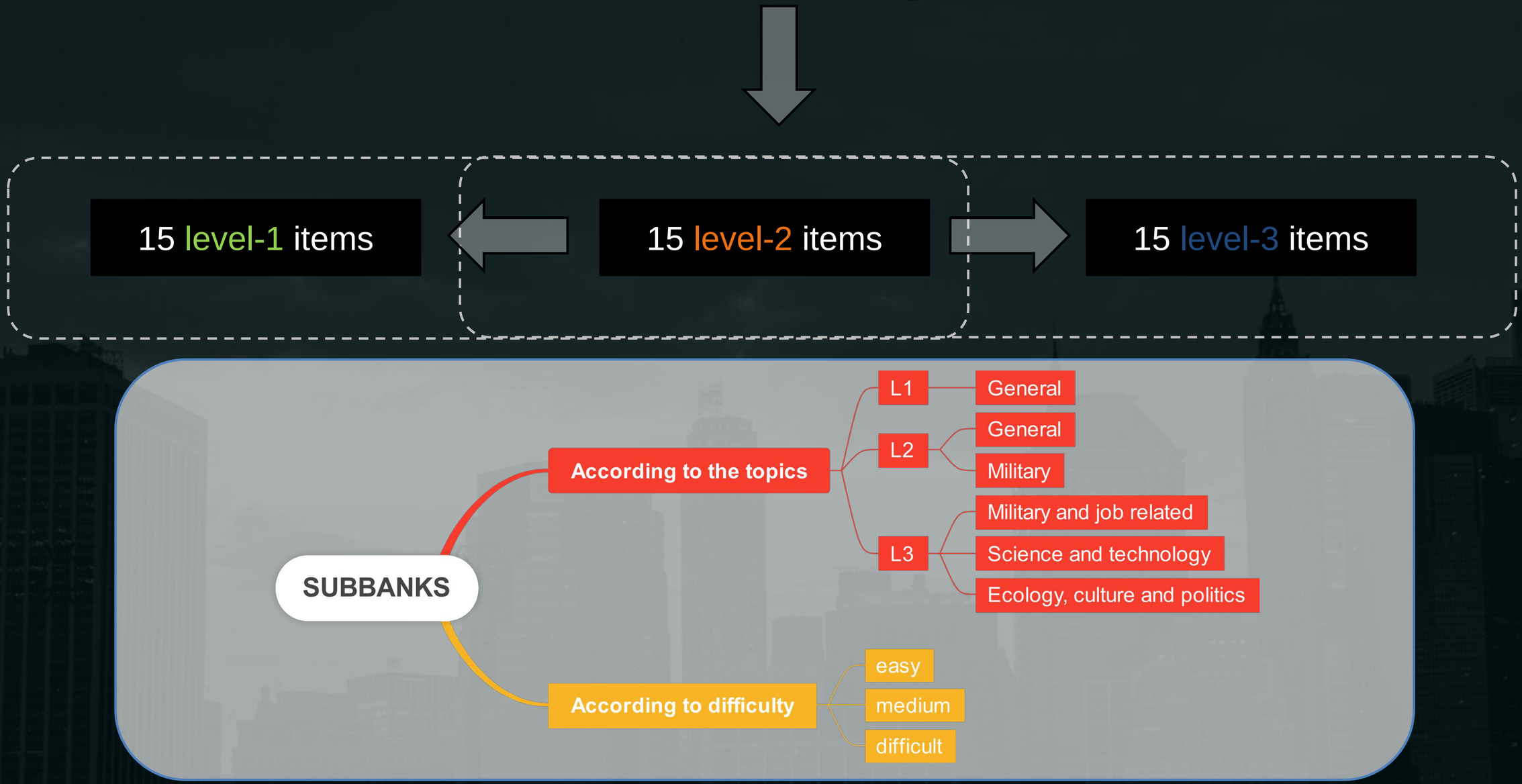
Computer based
test that adapts to the
test-taker's ability level

CALT algorithm creates
a unique testing
experience for each
test-taker

The feedback principle

CALT is a multilevel
language test
according to NATO
STANAG 6001

The CALT Algorithm



CALT ALLOWS

- to reduce a test length, time and resources for testing;
- to improve test security;
- to generate a unique test set for each test-taker from the items bank according to the adaptive principle;
- to obtain reliable and objective results and to process them promptly;
- to provide an immediate reporting of test results;
- to determine automatically a foreign language proficiency level.

STEPS TO IMPLEMENT THE CALT IDEA

- To improve the method according to BILC experts recommendations
- To develop the items
- To pilot the items
- To fill in the banks: Level 1-45 items, L2-90 items, Level 3 – 135 items
- To pilot the CALT software and the method
- To report the results

April 2024 – pre-piloting (11 officers)

June 2024 – piloting (30 officers)

USERS

CALT

FRONT-END

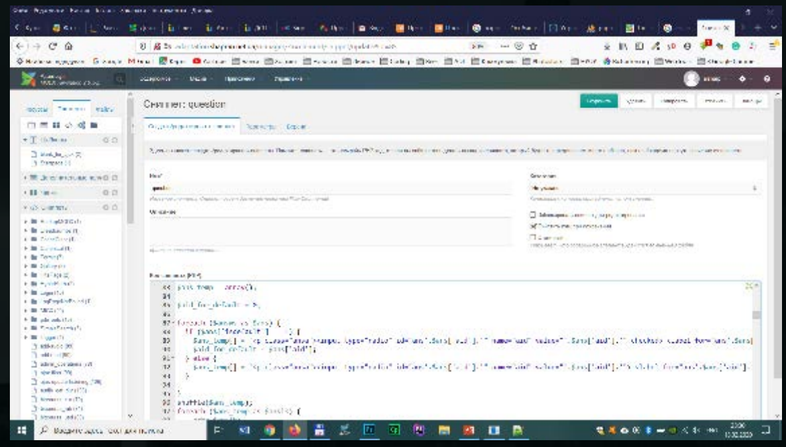
ADMINISTRATORS

TEST DEVELOPERS

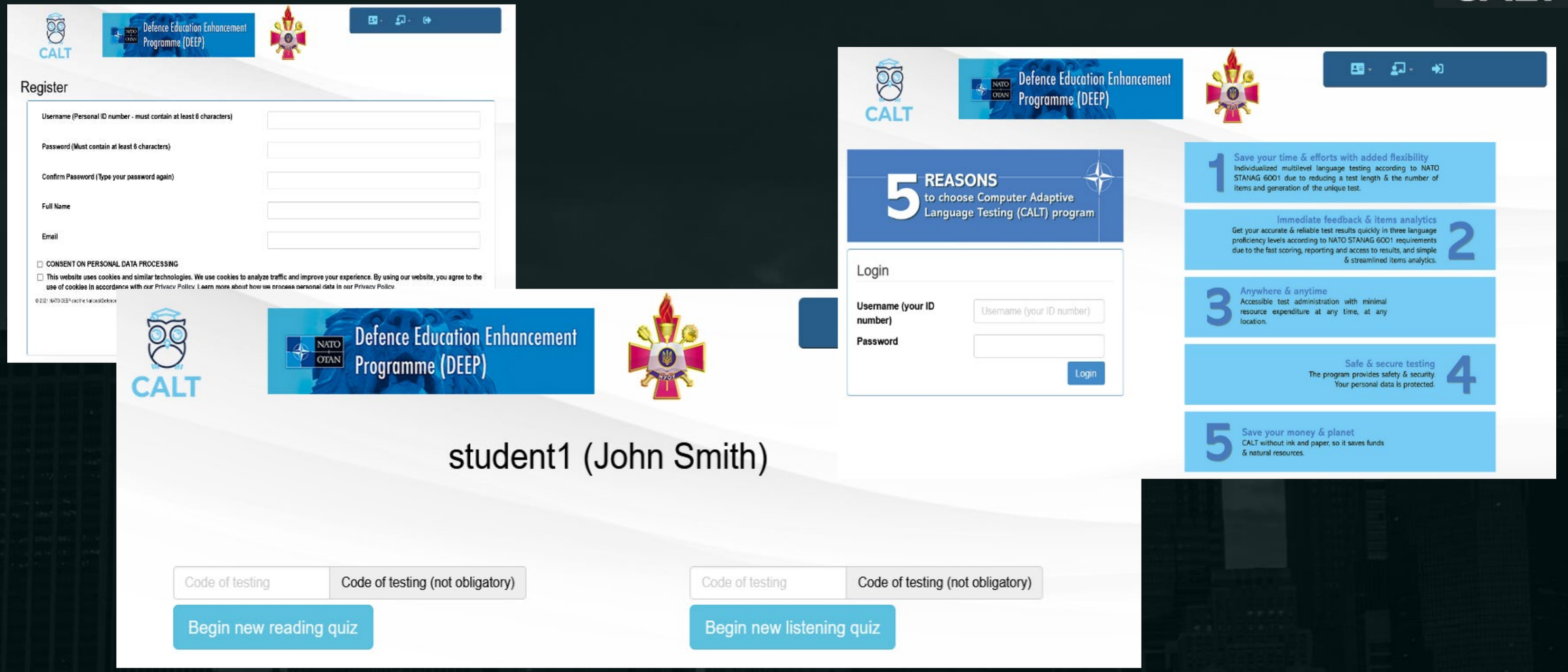
TEST TAKERS

BACK-END

WEB DEVELOPERS



TEST TAKER'S OFFICE



The interface was simplified as much as possible

ENHANCED TEST DEVELOPER'S INTERFACE

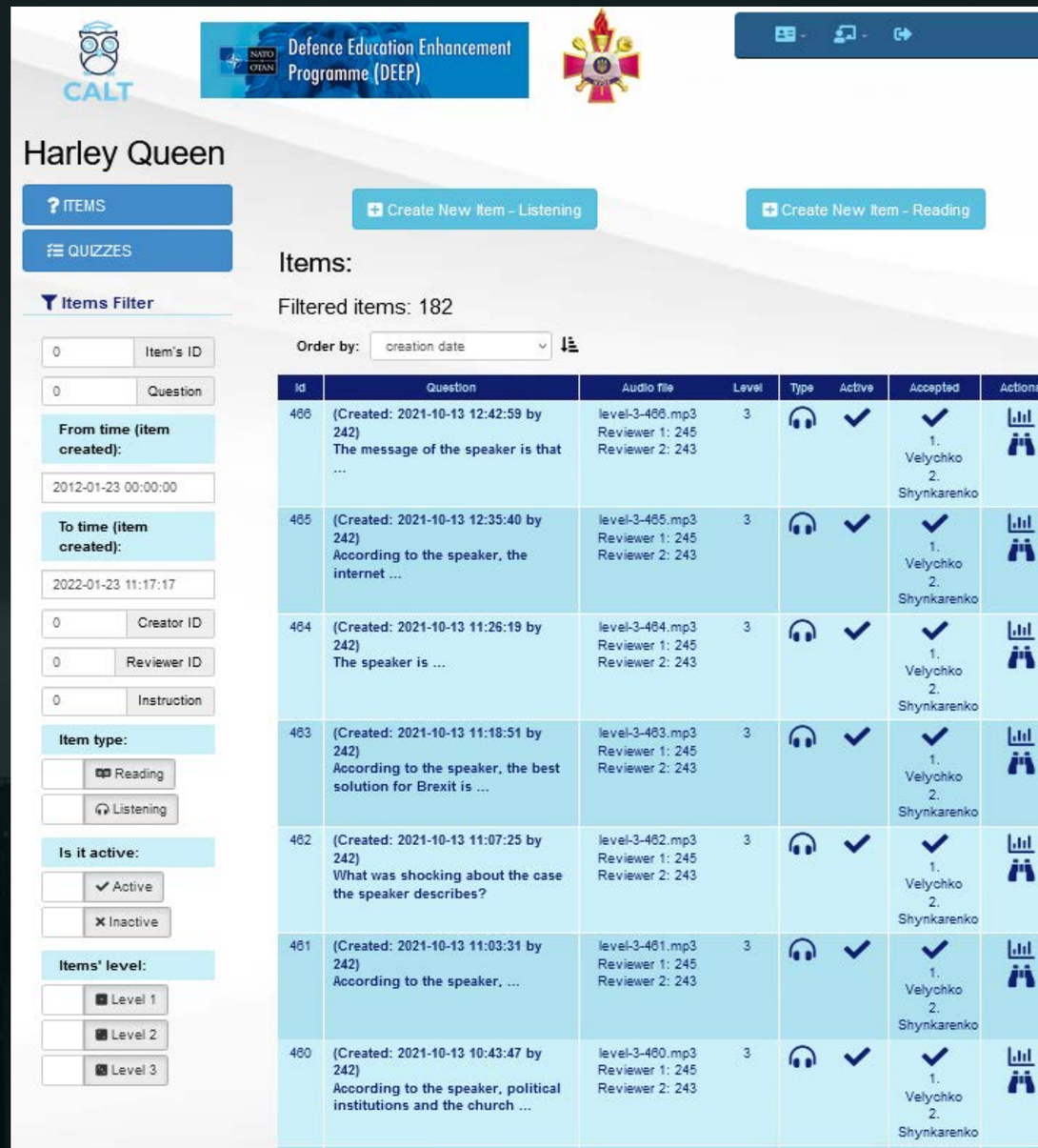
1. Filtering Tool : *filtering options to find specific items.*

2. Online PDF Tests

3. Item Preview Function within the interface before finalizing.

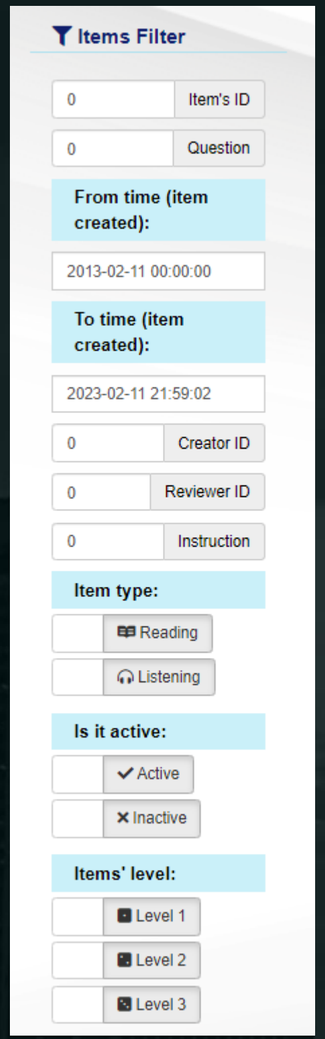
4. Detailed Statistics View : *provides comprehensive statistics for each test item, including performance metrics.*

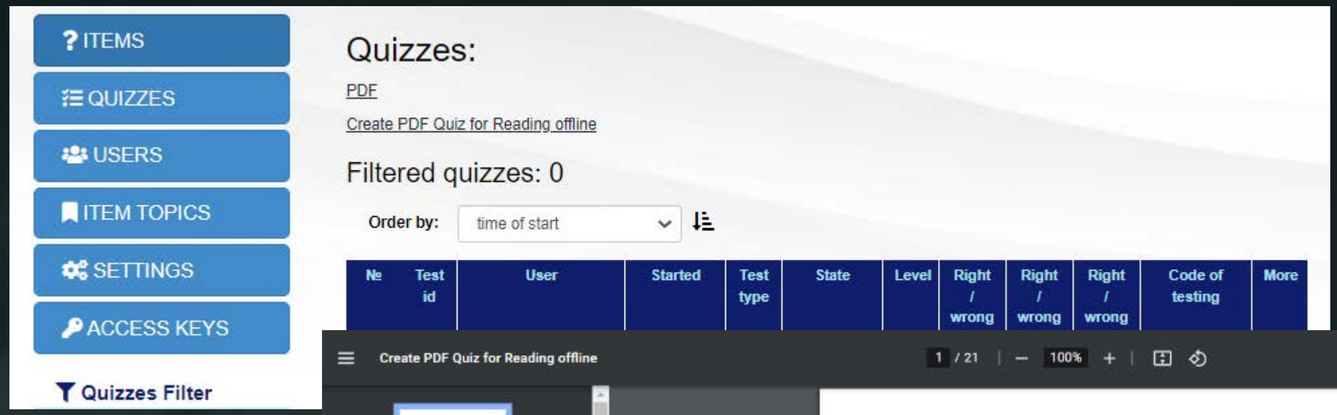
5. In-Depth Test Reports : *generates detailed reports for each test, providing insights into overall performance and item effectiveness.*

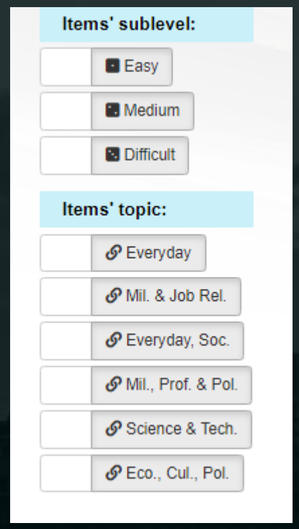


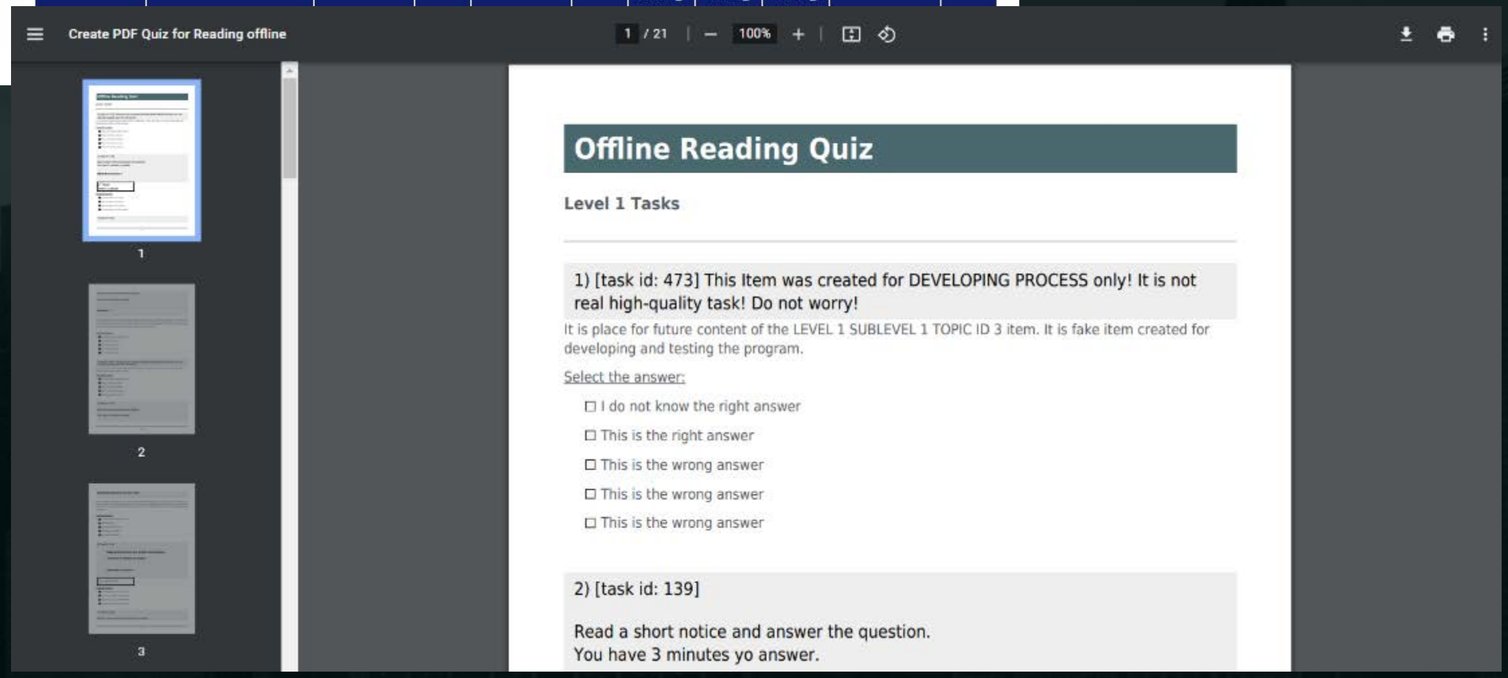
FILTER TOOLS, PDF TEST

CALT







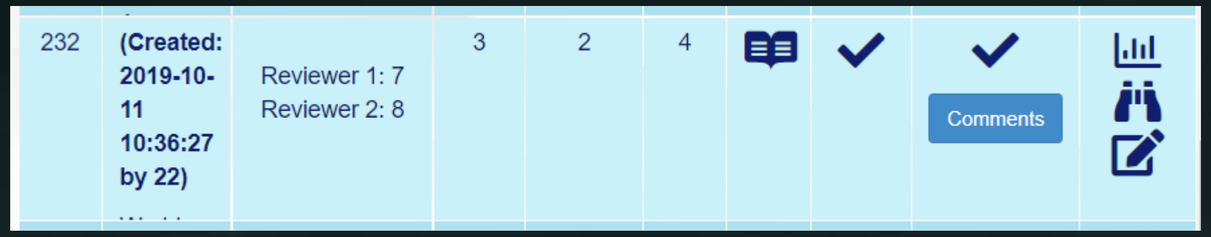


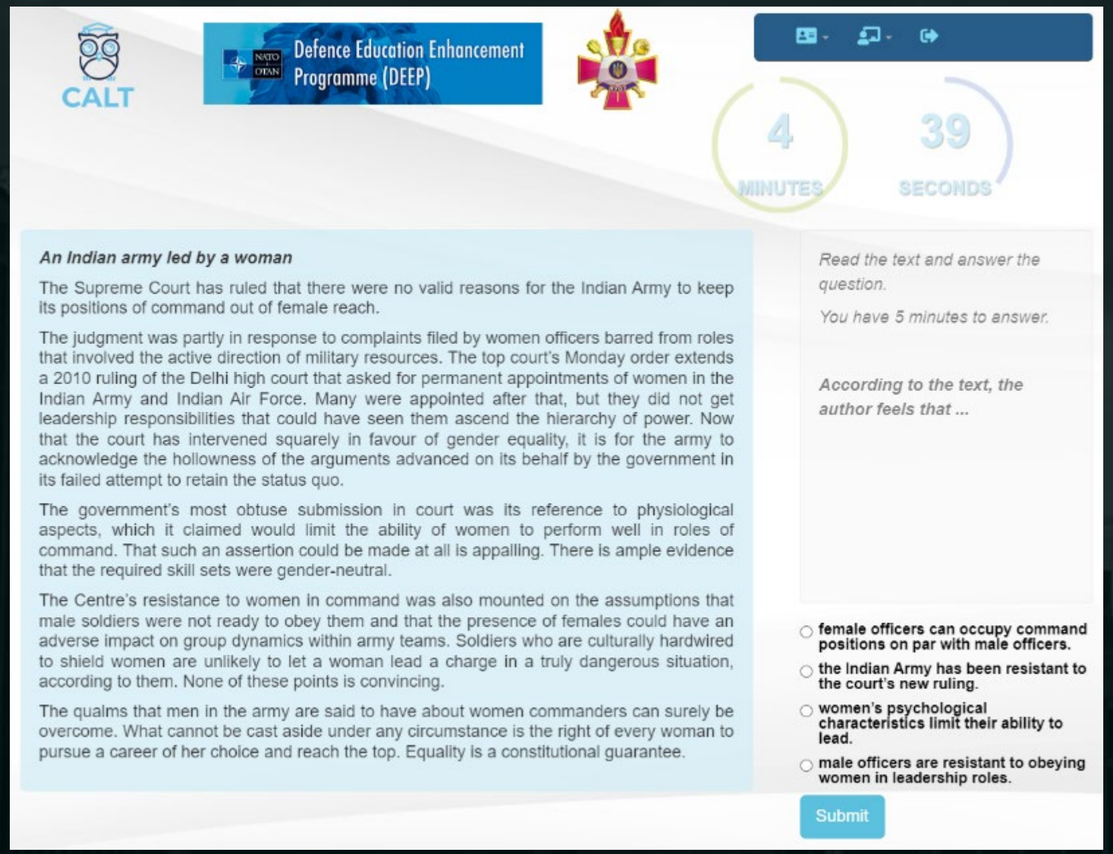
APPROVAL OF A NEW ITEM

CALT

232	**(Created: 2019-10-11 10:36:27 by 22)** World Values Survey data from 56 countries and 75,934 participants were analyzed to explore the	Reviewer 1: 7 Reviewer 2: 8	3	2	4		✓	✓ Comments	
231	**(Created: 2019-10-11 10:34:54 by 22)** Emma Watson has said she felt "stressed and anxious" about turning 30, saying that there's an	Reviewer 1: 7 Reviewer 2: 8	3	2	4		✓	✓ Comments	
230	**(Created: 2019-10-11 10:32:59 by 22)** The past decade has not been kind to the emerging world, as growth has fallen from an average	Reviewer 1: 7 Reviewer 2: 8	3	2	4		✓	✓ Comments	
229	**(Created: 2019-10-11 10:31:00 by 22)** Peart's death hit me like a punch to the gut, and my first inclination was to reach out to an old buddy	Reviewer 1: 7 Reviewer 2: 8	3	2	4		✓	✓ Comments	

ITEM EDIT





Task Item Analysis

Task ID in the Database: **222**

Total Amount ot the Answers: **26**

Task Level: 3

Task Difficulty: 57.69 %

Discrimination Index: 0.32

Task Item Content:

Gender pay gap is the result of many factors, including occupational segregation, bias against working mothers, and direct pay discrimination. Additionally, such things as racial bias, disability, access to education, and age come into play. Consequently, different groups of women experience very different gaps in pay. Employer practices — such as using prior salary history in setting current pay and prohibiting employees from discussing their wages — compound the problem. The gender pay gap shrank between 1980 and 2000 as attitudes changed and large numbers of women entered the workforce, but since then the gap has largely stalled. Closing the gender pay gap will take action from individuals, employers, and policymakers.

A Table of the Answers (quantity)

Text of the answer	0	0+	1	1+	2	2+	3	All
poor former income.	0	0	0	0	1	5	9	15
I do not know the right answer	0	0	0	0	1	2	1	4
maternity leave.	0	0	0	0	1	0	0	1
low employment rate.	0	0	0	0	4	0	2	6
Sum	0	0	0	0	7	7	12	26

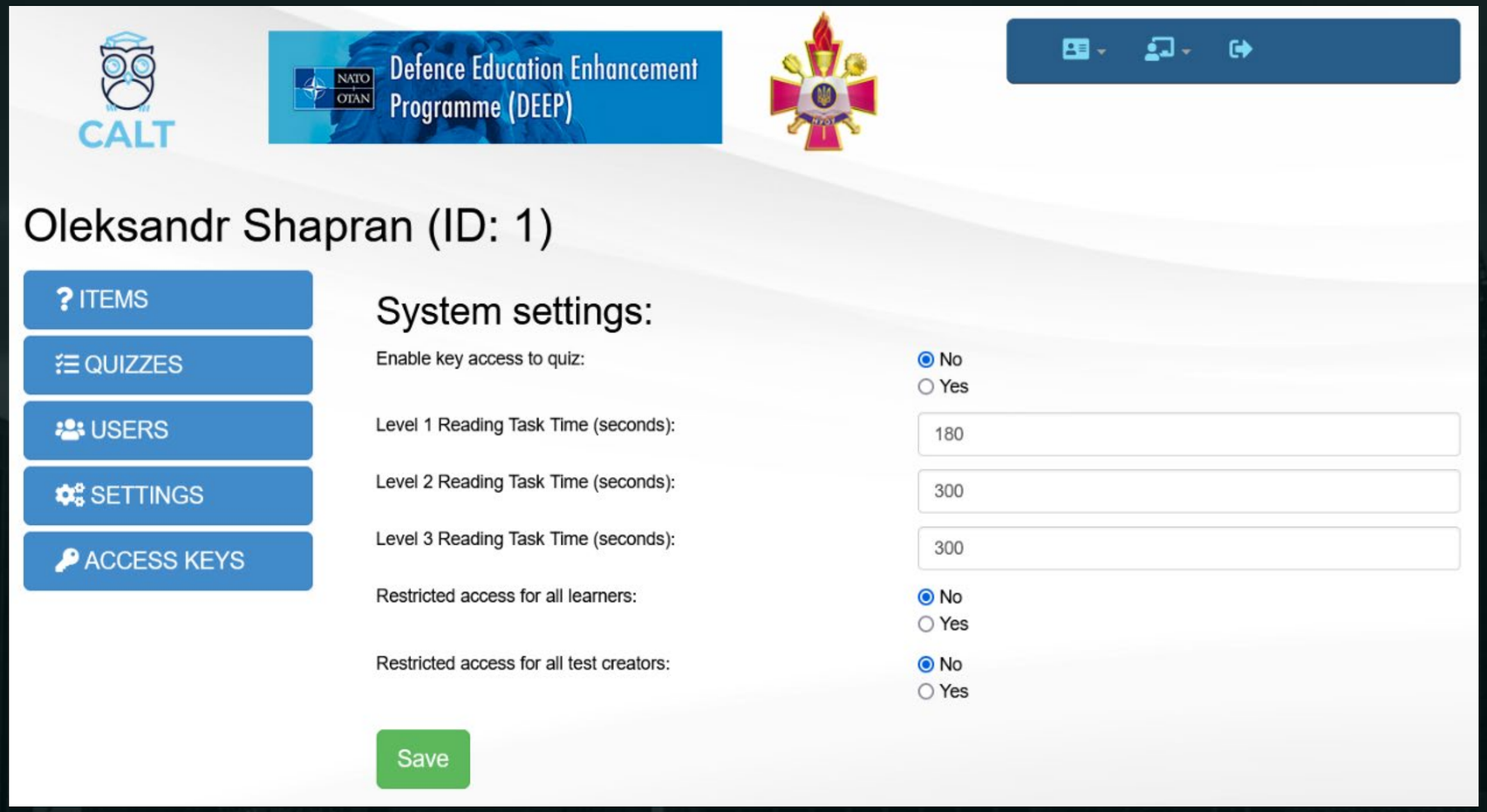
A Table of the Answers (percentage)

Text of the answer	0	0+	1	1+	2	2+	3	All
poor former income.	0.00 %	0.00 %	0.00 %	0.00 %	14.29 %	71.43 %	75.00 %	57.69 %
I do not know the right answer	0.00 %	0.00 %	0.00 %	0.00 %	14.29 %	28.57 %	8.33 %	15.38 %
maternity leave.	0.00 %	0.00 %	0.00 %	0.00 %	14.29 %	0.00 %	0.00 %	3.85 %
low employment rate.	0.00 %	0.00 %	0.00 %	0.00 %	57.14 %	0.00 %	16.67 %	23.08 %

A Table of the Answers [Level without pluses] (percentage)

Text of the answer	0	1	2	3	All
poor former income.	0.00 %	0.00 %	42.86 %	75.00 %	57.69 %
I do not know the right answer	0.00 %	0.00 %	21.43 %	8.33 %	15.38 %
maternity leave.	0.00 %	0.00 %	7.14 %	0.00 %	3.85 %
low employment rate.	0.00 %	0.00 %	28.57 %	16.67 %	23.08 %

ADMINISTRATOR'S OFFICE



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