

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

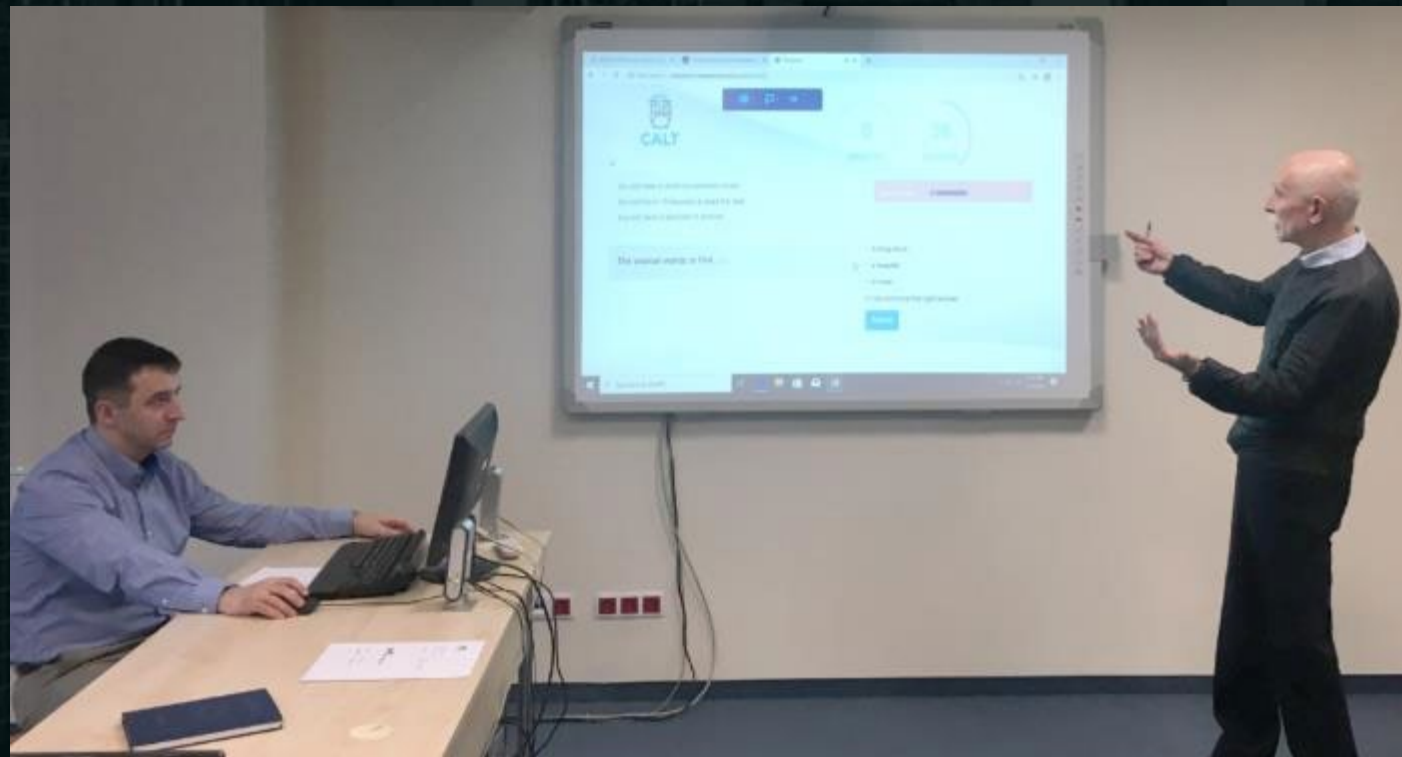




The CALT SCIENTIFIC PROJECT

was initiated
at the National Defence University
of Ukraine
in 2019

The collage includes several key elements: a group photo of project members holding certificates; a screenshot of a video conference with multiple participants; a presentation slide titled 'Comparison of CALT and PPT Methods' which includes a flowchart of 'ITEM SELECTION ALGORITHM' and two pie charts showing 'Reading (%)' and 'Listening (%)' results; and a portrait of a woman in a military uniform against a blue background with network graphics.





Reading



Listening



Speaking



Writing

WHAT IS CALT METHOD?



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

CAL T algorithm creates
a unique testing
experience for each
test-taker



The feedback principle

CAL T is a multilevel
language test
according to NATO
STANAG 6001

The CALT Algorithm



15 level-1 items

15 level-2 items

15 level-3 items

SUBBANKS

According to the topics

L1

General

L2

General

Military

L3

Military and job related

Science and technology

Ecology, culture and politics

According to difficulty

easy

medium

difficult

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)

TEST TAKER'S OFFICE



Register

Username (Personal ID number - must contain at least 8 characters)

Password (Must contain at least 8 characters)

Confirm Password (Type your password again)

Full Name

Email

CONSENT ON PERSONAL DATA PROCESSING

This website uses cookies and similar technologies. We use cookies to analyze traffic and improve your experience. By using our website, you agree to the use of cookies in accordance with our Privacy Policy. Learn more about how we process personal data in our Privacy Policy.

© 2021 NATO DEEP and the National Defence

5 REASONS to choose Computer Adaptive Language Testing (CAL T) program

- 1 Save your time & efforts with added flexibility
Individualized multilevel language testing according to NATO STANAG 6001 due to reducing a test length & the number of items and generation of the unique test.
- 2 Immediate feedback & items analytics
Get your accurate & reliable test results quickly in three language proficiency levels according to NATO STANAG 6001 requirements due to the fast scoring, reporting and access to results, and simple & streamlined items analytics.
- 3 Anywhere & anytime
Accessible test administration with minimal resource expenditure at any time, at any location.
- 4 Safe & secure testing
The program provides safety & security. Your personal data is protected.
- 5 Save your money & planet
CAL T without ink and paper, so it saves funds & natural resources.

student1 (John Smith)

Code of testing Code of testing (not obligatory)

Begin new reading quiz

Code of testing Code of testing (not obligatory)

Begin new listening quiz

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.*

Harley Queen

ITEMS Create New Item - Listening Create New Item - Reading

QUIZZES

Items Filter

0 Item's ID

0 Question

From time (item created):

2012-01-23 00:00:00

To time (item created):

2022-01-23 11:17:17

0 Creator ID

0 Reviewer ID

0 Instruction

Item type:

Reading

Listening

Is it active:

Active

Inactive

Items' level:

Level 1

Level 2

Level 3

Items:

Filtered items: 182

Order by: creation date

Id	Question	Audio file	Level	Type	Active	Accepted	Actions
466	(Created: 2021-10-13 12:42:59 by 242) The message of the speaker is that ...	level-3-466.mp3 Reviewer 1: 245 Reviewer 2: 243	3	🎧	✓	✓ 1. Velychko 2. Shynkarenko	📊
465	(Created: 2021-10-13 12:35:40 by 242) According to the speaker, the internet ...	level-3-465.mp3 Reviewer 1: 245 Reviewer 2: 243	3	🎧	✓	✓ 1. Velychko 2. Shynkarenko	📊
464	(Created: 2021-10-13 11:26:19 by 242) The speaker is ...	level-3-464.mp3 Reviewer 1: 245 Reviewer 2: 243	3	🎧	✓	✓ 1. Velychko 2. Shynkarenko	📊
463	(Created: 2021-10-13 11:18:51 by 242) According to the speaker, the best solution for Brexit is ...	level-3-463.mp3 Reviewer 1: 245 Reviewer 2: 243	3	🎧	✓	✓ 1. Velychko 2. Shynkarenko	📊
462	(Created: 2021-10-13 11:07:25 by 242) What was shocking about the case the speaker describes?	level-3-462.mp3 Reviewer 1: 245 Reviewer 2: 243	3	🎧	✓	✓ 1. Velychko 2. Shynkarenko	📊
461	(Created: 2021-10-13 11:03:31 by 242) According to the speaker, ...	level-3-461.mp3 Reviewer 1: 245 Reviewer 2: 243	3	🎧	✓	✓ 1. Velychko 2. Shynkarenko	📊
460	(Created: 2021-10-13 10:43:47 by 242) According to the speaker, political institutions and the church ...	level-3-460.mp3 Reviewer 1: 245 Reviewer 2: 243	3	🎧	✓	✓ 1. Velychko 2. Shynkarenko	📊

FILTER TOOLS, PDF TEST



Items Filter

0 Item's ID

0 Question

From time (item created):
2013-02-11 00:00:00

To time (item created):
2023-02-11 21:59:02

0 Creator ID

0 Reviewer ID

0 Instruction

Item type:

Reading

Listening

Is it active:

Active

Inactive

Items' level:

Level 1

Level 2

Level 3

Quizzes:

PDF

[Create PDF Quiz for Reading offline](#)

Filtered quizzes: 0

Order by: time of start

No	Test id	User	Started	Test type	State	Level	Right / wrong	Right / wrong	Right / wrong	Code of testing	More
No data available											

Quizzes Filter

- ITEMS
- QUIZZES
- USERS
- ITEM TOPICS
- SETTINGS
- ACCESS KEYS

Items' sublevel:

Easy

Medium

Difficult

Items' topic:

Everyday

Mil. & Job Rel.

Everyday, Soc.

Mil., Prof. & Pol.

Science & Tech.

Eco., Cul., Pol.

Create PDF Quiz for Reading offline

1 / 21 | 100%

Offline Reading Quiz

Level 1 Tasks

1) [task id: 473] This item was created for DEVELOPING PROCESS only! It is not real high-quality task! Do not worry!

It is place for future content of the LEVEL 1 SUBLEVEL 1 TOPIC ID 3 item. It is fake item created for developing and testing the program.

Select the answer:

I do not know the right answer

This is the right answer

This is the wrong answer

This is the wrong answer

This is the wrong answer

2) [task id: 139]

Read a short notice and answer the question. You have 3 minutes yo answer.

APPROVAL OF A NEW ITEM



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) Pearl'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



232	(Created: 2019-10-11 10:36:27 by 22)	Reviewer 1: 7 Reviewer 2: 8	3	2	4					
-----	--------------------------------------	--------------------------------	---	---	---	--	--	--	--	----------

Defence Education Enhancement Programme (DEEP)

4

39

MINUTES SECONDS

An Indian army led by a woman

The Supreme Court has ruled that there were no valid reasons for the Indian Army to keep its positions of command out of female reach.

The judgment was partly in response to complaints filed by women officers barred from roles that involved the active direction of military resources. The top court's Monday order extends a 2010 ruling of the Delhi high court that asked for permanent appointments of women in the Indian Army and Indian Air Force. Many were appointed after that, but they did not get leadership responsibilities that could have seen them ascend the hierarchy of power. Now that the court has intervened squarely in favour of gender equality, it is for the army to acknowledge the hollowness of the arguments advanced on its behalf by the government in its failed attempt to retain the status quo.

The government's most obtuse submission in court was its reference to physiological aspects, which it claimed would limit the ability of women to perform well in roles of command. That such an assertion could be made at all is appalling. There is ample evidence that the required skill sets were gender-neutral.

The Centre's resistance to women in command was also mounted on the assumptions that male soldiers were not ready to obey them and that the presence of females could have an adverse impact on group dynamics within army teams. Soldiers who are culturally hardwired to shield women are unlikely to let a woman lead a charge in a truly dangerous situation, according to them. None of these points is convincing.

The qualms that men in the army are said to have about women commanders can surely be overcome. What cannot be cast aside under any circumstance is the right of every woman to pursue a career of her choice and reach the top. Equality is a constitutional guarantee.

Read the text and answer the question.

You have 5 minutes to answer.

According to the text, the author feels that ...

- female officers can occupy command positions on par with male officers.
- the Indian Army has been resistant to the court's new ruling.
- women's psychological characteristics limit their ability to lead.
- male officers are resistant to obeying women in leadership roles.

Submit

Task Item Analysis

Task ID in the Database: 222

Total Amount of 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



Defence Education Enhancement Programme (DEEP)



Oleksandr Shapran (ID: 1)

? ITEMS

☰ QUIZZES

👤 USERS

⚙️ SETTINGS

🔑 ACCESS KEYS

System settings:

Enable key access to quiz:

- No
 Yes

Level 1 Reading Task Time (seconds):

180

Level 2 Reading Task Time (seconds):

300

Level 3 Reading Task Time (seconds):

300

Restricted access for all learners:

- No
 Yes

Restricted access for all test creators:

- No
 Yes

Save

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

