

Estonian Literary Museum



Augmented Reality Technologies: Practice-based Learning in Higher Education

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Let's spell it out!

Topic Outline



Background and Aim of the Research

Educational Purposes

A Step-by-Step Algorithm

Lepbook "Incredible Lesya Ukrainka"

Board game "Fantaziarium (Imaginarium)"

SWOT

Conclusions

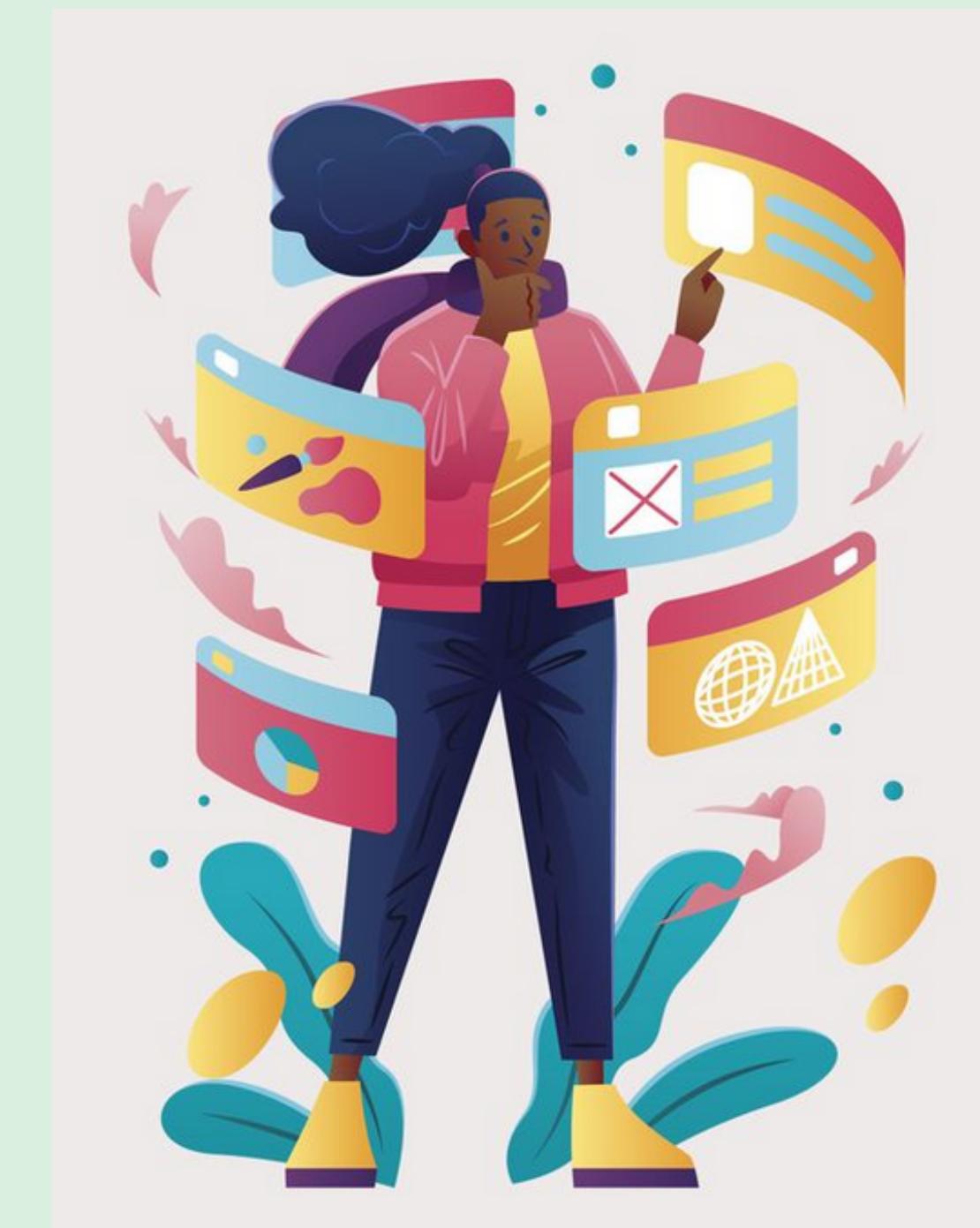
Background

- high-speed information progress of society as the new challenge to the educational modernization;
- wide popularity of AR in higher education;
- forming the digital competence of teachers-philologists;
- educational technologies which help to organize the student-centered and practice-oriented learning;
- a variety of educational AR applications in different subjects and even AR books for children.



The aim of the research

is to elucidate the peculiarities of the creation and use of the AR technologies in the format of studying the discipline "Methodic of teaching literature" for effective professional training of students-philologists.



Educational Purposes

What the appointment of AR in educational process?

- to modernize the learning process in the context of digitalization;
- to provide learning by action position and become dynamic sources of information;
- to build students' knowledge in real life situation;
- to bring the targeted information at the appropriate moment;
- to provide multiple means of presentation, expression and engagement;
- to improve the knowledge both in professional subjects and in English.

AR as one of the most interesting emergent technologies for education, being a powerful and motivating tool which can involve several senses of the student by means of the proper combination of sound, sight and touch.

*Antonia Cascales
(Cascales et al., 2013)*

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Important Quote

“

A Step-by-Step Algorithm

How to create AR in the professional training of students-philologists?

Step 1

For AR creation download application Unite on Android.

Step 2

Creation your own project.

Step 3

Upload your target image.

Step 4

Choose which AR effect will be applied to the image marker.

Step 5

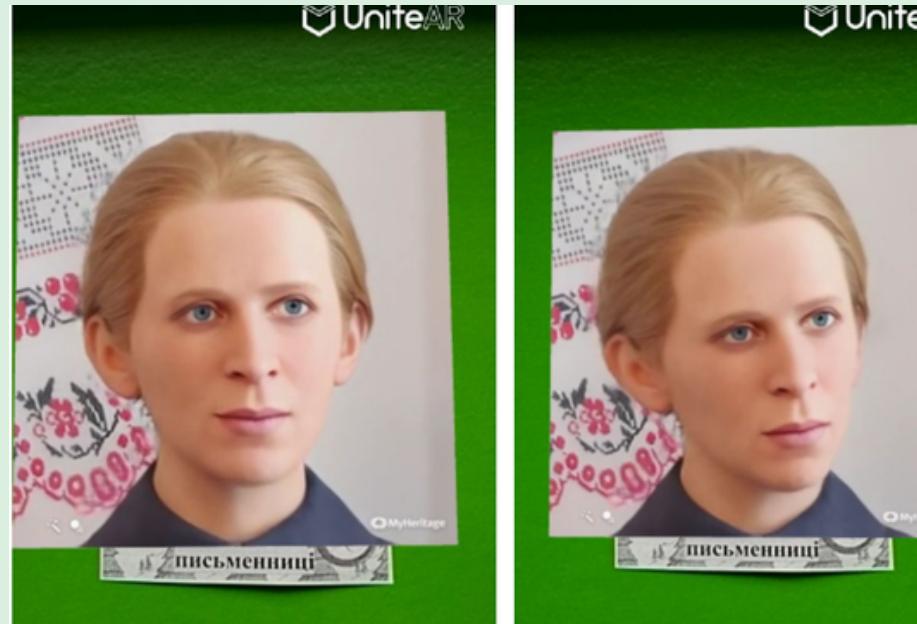
After downloading certain content, align its position relative to the base image-marker.

Step 6

New marker images can be added to the same project and specific educational content can be superimposed on them.

LEPBOOK "INCREDIBLE LESYA UKRAINKA"

Where can be used AR during the studying the discipline "Methodic of teaching literature"?



AR animation in the rubric
"Biography of the writer"



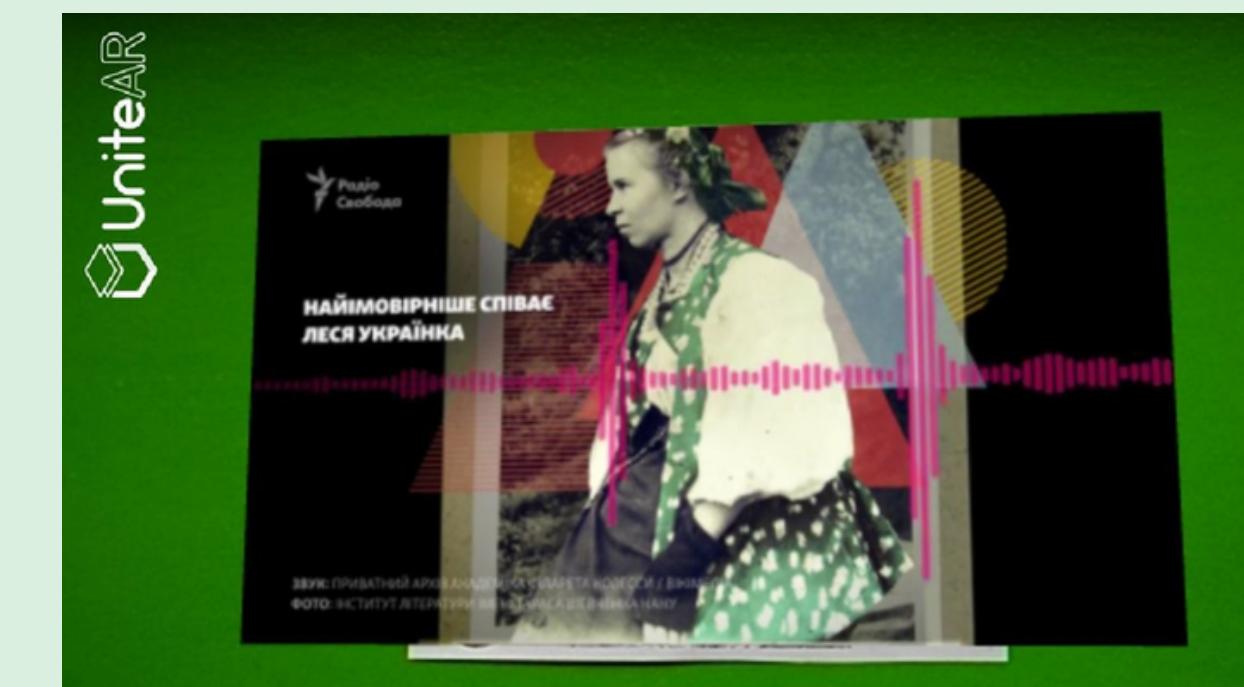
AR link button in the rubric
"Surrounding of Lesya Ukrainka"



The video demonstration of AR
in the rubric "Poetic pause"



Modern illustrations in the rubric "Lesya Ukrainka in the 21st century"



AR audio content in the rubric
"And you know. . ."

The peculiarity of creative professional activity is that its experience cannot be transferred by informing or illustrating, but its only acquired during the personal students' involvement in creative practice-based work.

Olha M. Kutsevol
(Kutsevol, 2006)

“



Important quote

“

A board game "Fantaziarium (Imaginarium)"

1. TO DEFINE THE THEME AND AIM OF THE GAME.

Students-philologists have chosen to create a game to section "Folk and literary tales", which is studied on the lessons of Ukrainian literature in 5th grade.

2. TO IDENTIFY THE SUBJECTS OF LEARNING.

They are the 5th grade students who have age 10-11 years old.

3. TO CREATE THE GAME MECHANICS.

Game mechanics was based on Bloom's taxonomy: knowledge "All-Knowing"), comprehension ("Paths of comprehension"), application ("Time to act"), analysis ("Erudite"), evaluation ("Walking Encyclopedia"), creation ("Flight of Fantasy"). One more group of cards was also created as bonus ("Chance").

4. TO MAKE THE RULES OF THE GAME.

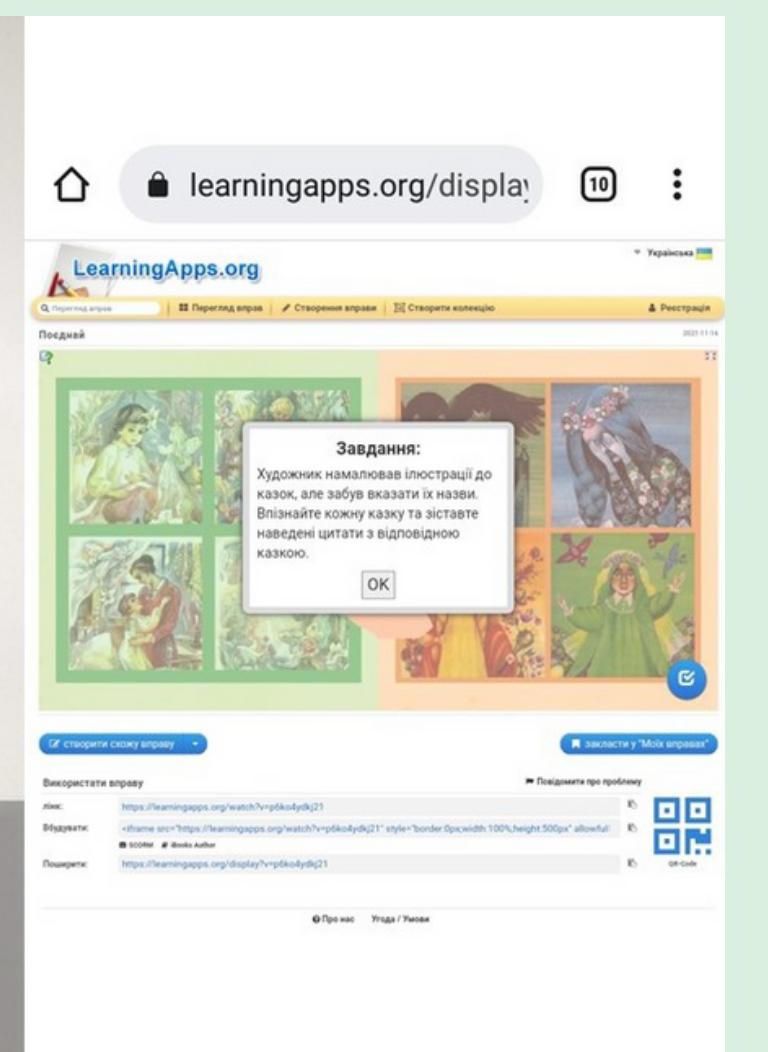
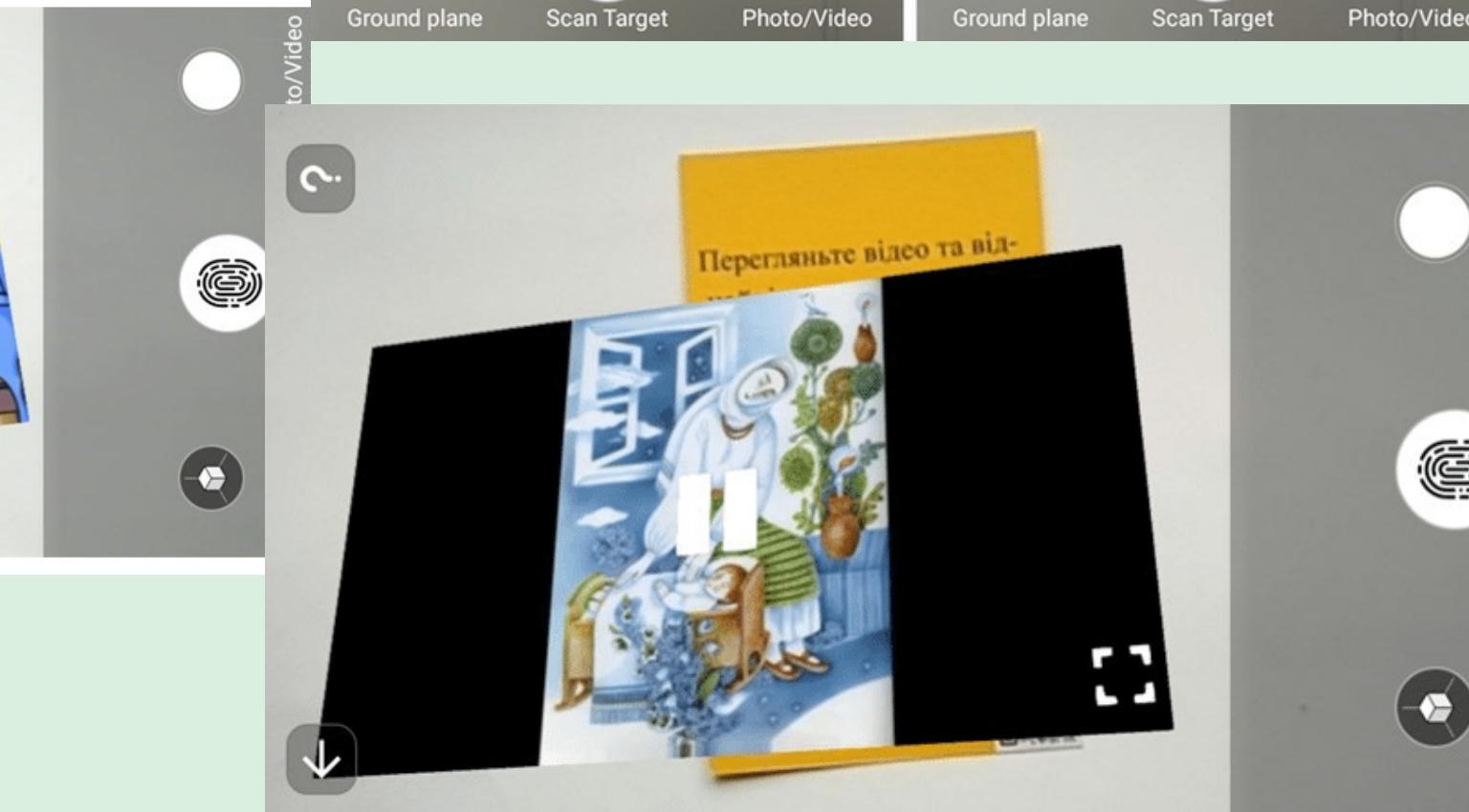
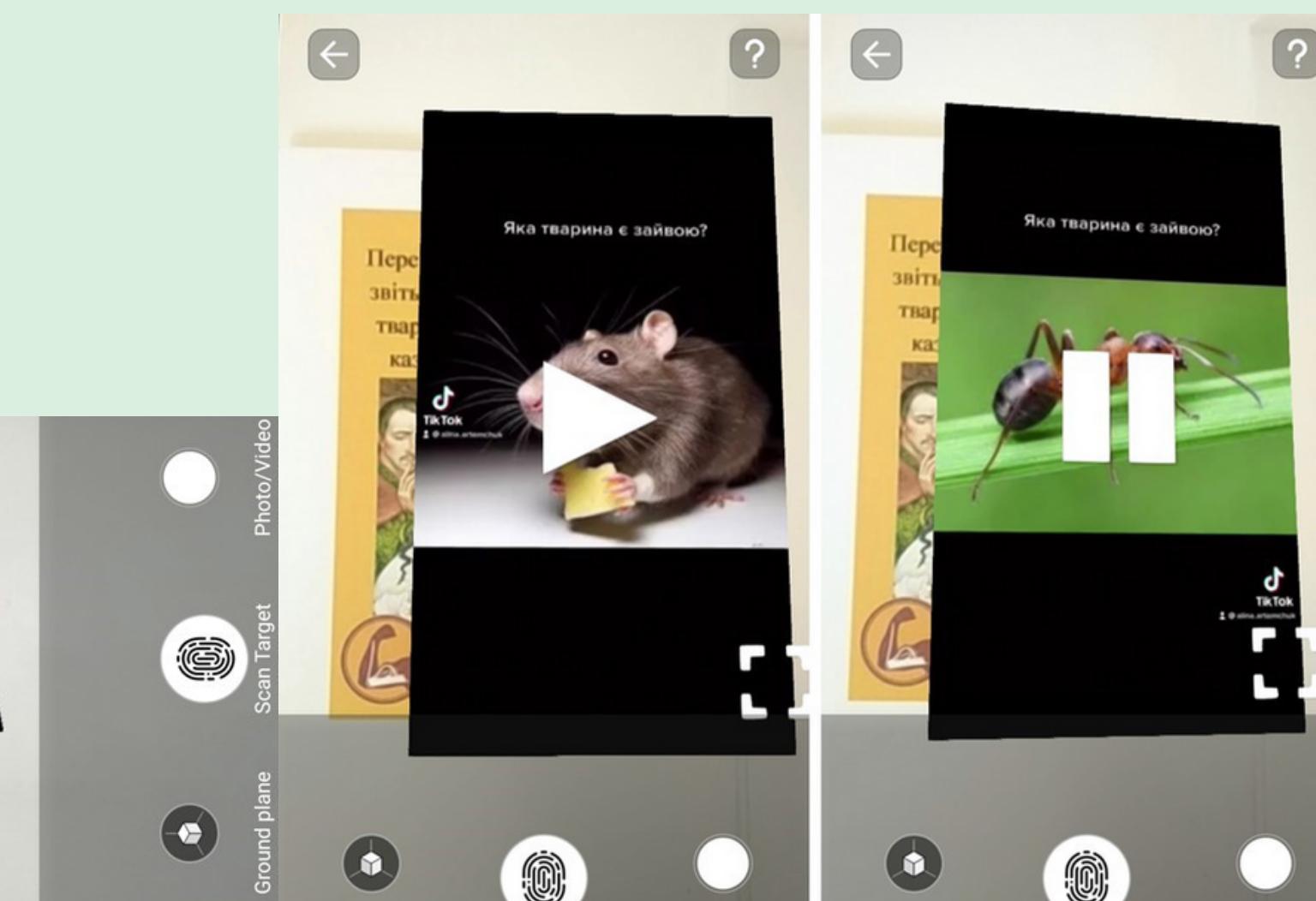
Students-philologists indicated in the rules the duration of the game (45-90 minutes), number of teams: 2-6, number of team members: 3-6, game props, goal, algorithm of player's actions, conditions of the game completion.

Cards with the image, as in fig. 1, denote encrypted information in the form of AR. A player need to use the UniteAR mobile application to read it.



Fig. 1. Graphic image on the game card to denote AR.

The example of the game card with AR.

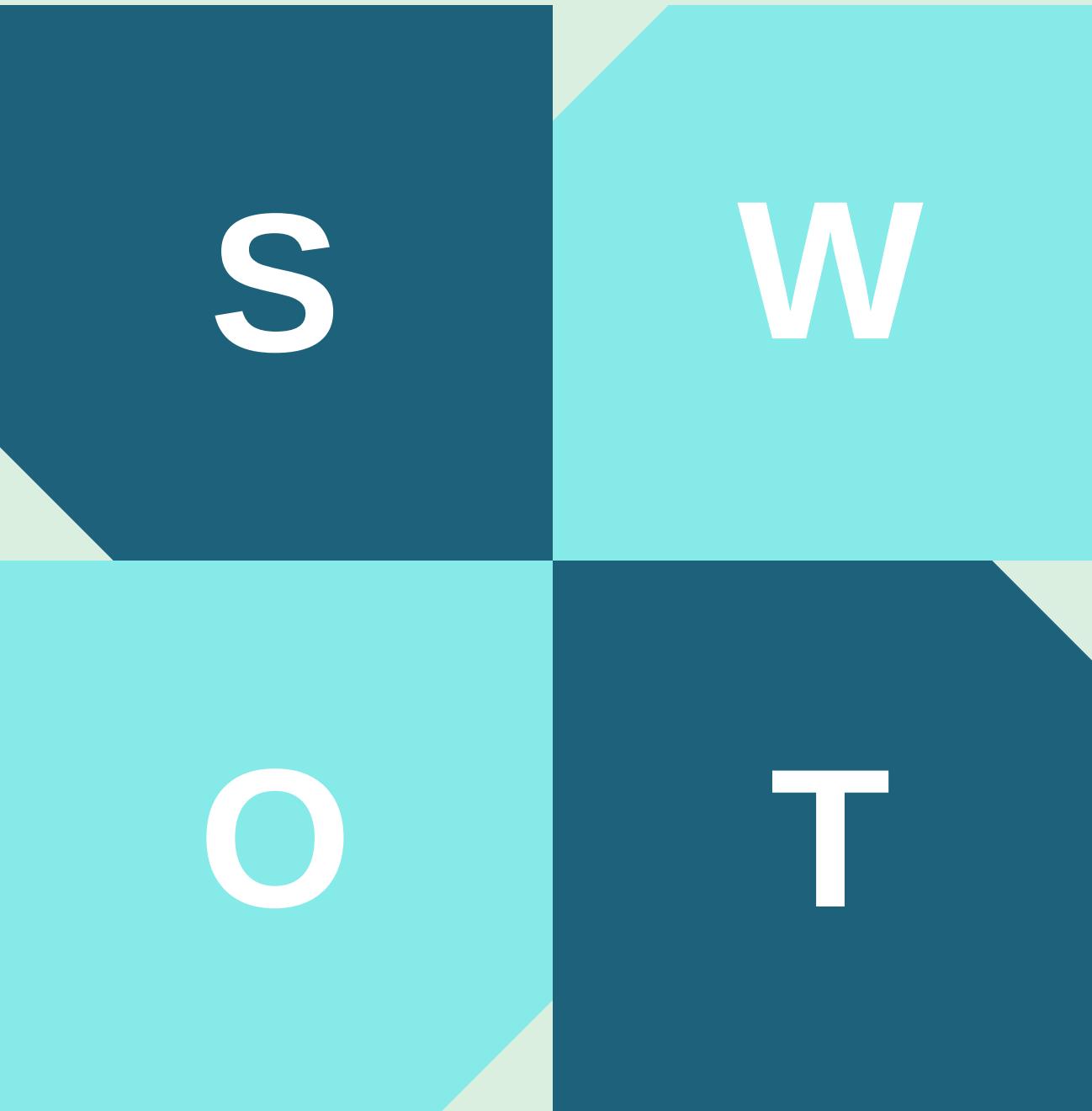


STRENGTHS

- involvement of students in individual and group work, practice-based learning;
- improvement of digital and info-inclusion;
- organizing interesting and exciting learning process;
- making strong emotional impact on students;
- visualizing the interactive learning materials with animation, instructions, links, video content, illustrations etc.;
- interaction with virtual projection in real time.

OPPORTUNITIES

- to use AR technologies in lessons of Ukrainian literature at secondary school;
- to use the visualized content for students' research work.



WEAKNESSES

- the lack of 3D models of Ukrainian literature writers;
- the lack of AR books which are included to the curriculum of Ukrainian literature at secondary and high school;
- the lack in some students of modern mobile devices and their limited access to the Internet.

THREATS

- the cost of AR application;
- the use of AR depends on Internet;
- the use of AR can become as a spectacular training, but loose its effectiveness;
- the low level of students' knowledge of English.

Conclusions



With the help of AR technologies, the usage of a lepbook and the board game permits students to improve the assimilation of theoretical material, allows to deepen it and contributes to its better illustration, which in turn increases students' cognitive activity and develops their creative thinking. Using a mobile phone or tablet allows students to reproduce AR on the marker images which are placed on a lepbook or on the cards of board game anywhere and anytime. The only condition is the availability of the Internet.

Thus, AR technologies help in the practice-based learning of the future teachers-philologists and their self-improvement during preparation for educational activities.

A decorative background on the left side of the slide features several stylized, blue-toned leafy branches. These branches have long, thin stems with clusters of oval-shaped leaves, some with visible veins. The overall aesthetic is organic and modern.

**Thank you
for your
attention!**