

# Raising accessibility, diversity, and inclusivity in tertiary education via 3D teaching and learning aids

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# Today

- 4 EU+ project – SEED – 3 MultiAccess
- Research
- Future

# 4EU+ Project 3MultiAccess

▪ *Aim:* To investigate the use and effect of 3D resources in teaching phonetics, phonology, practical pronunciation in English, French, Danish, German and Spanish

▪ *Partners:*

the University of Warsaw (Poland), Heidelberg University (Germany), Charles University (Czechia), and University of Copenhagen (Denmark)

October 2023 to September 2024

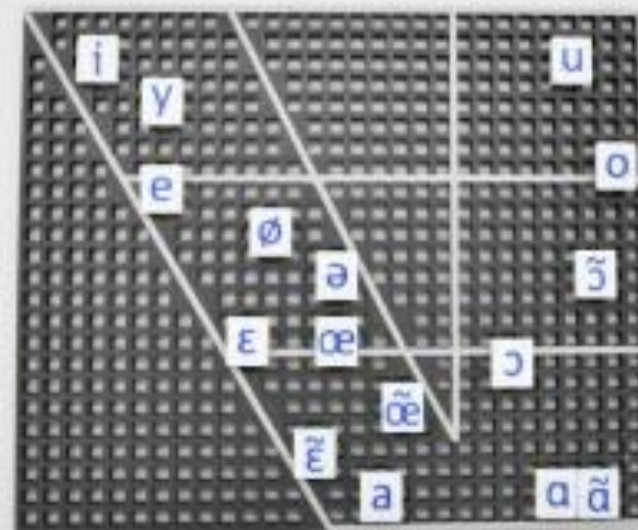
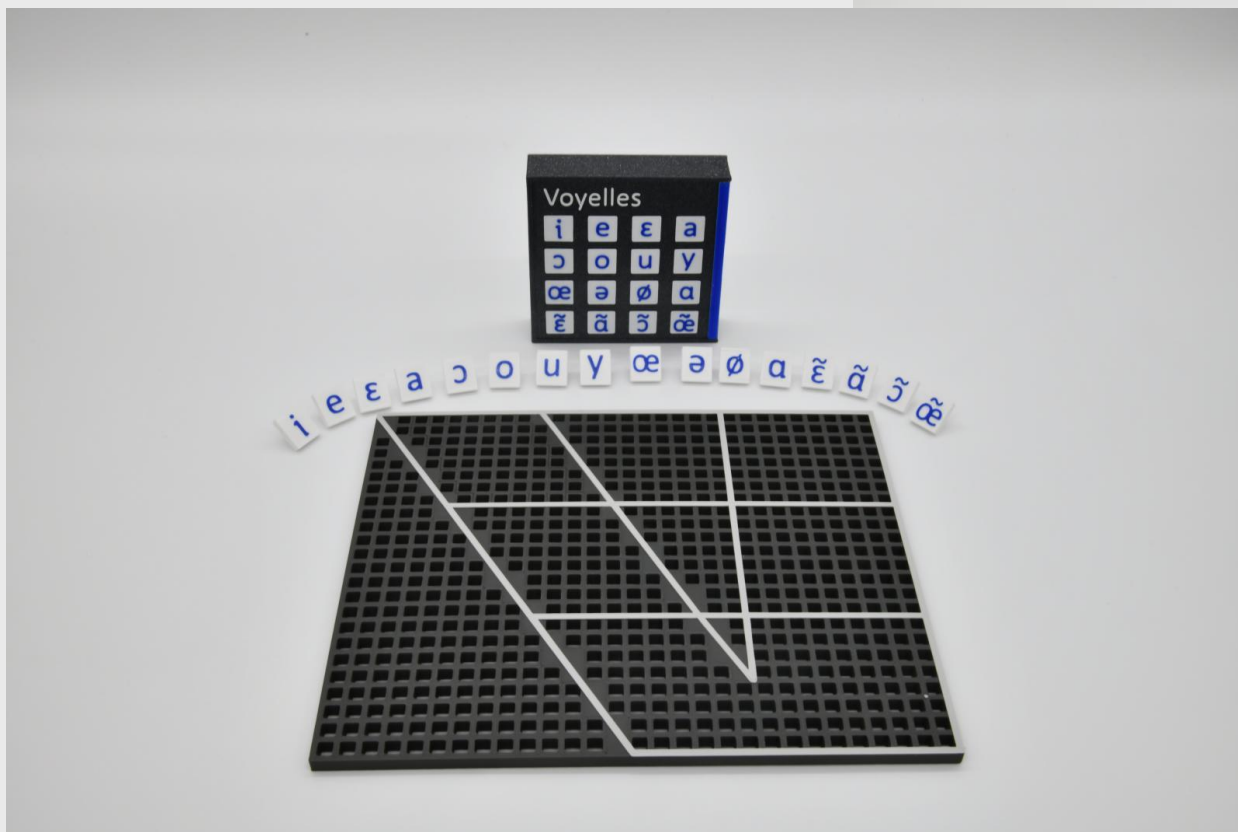
<https://4euplus.eu/4EU-714.html>

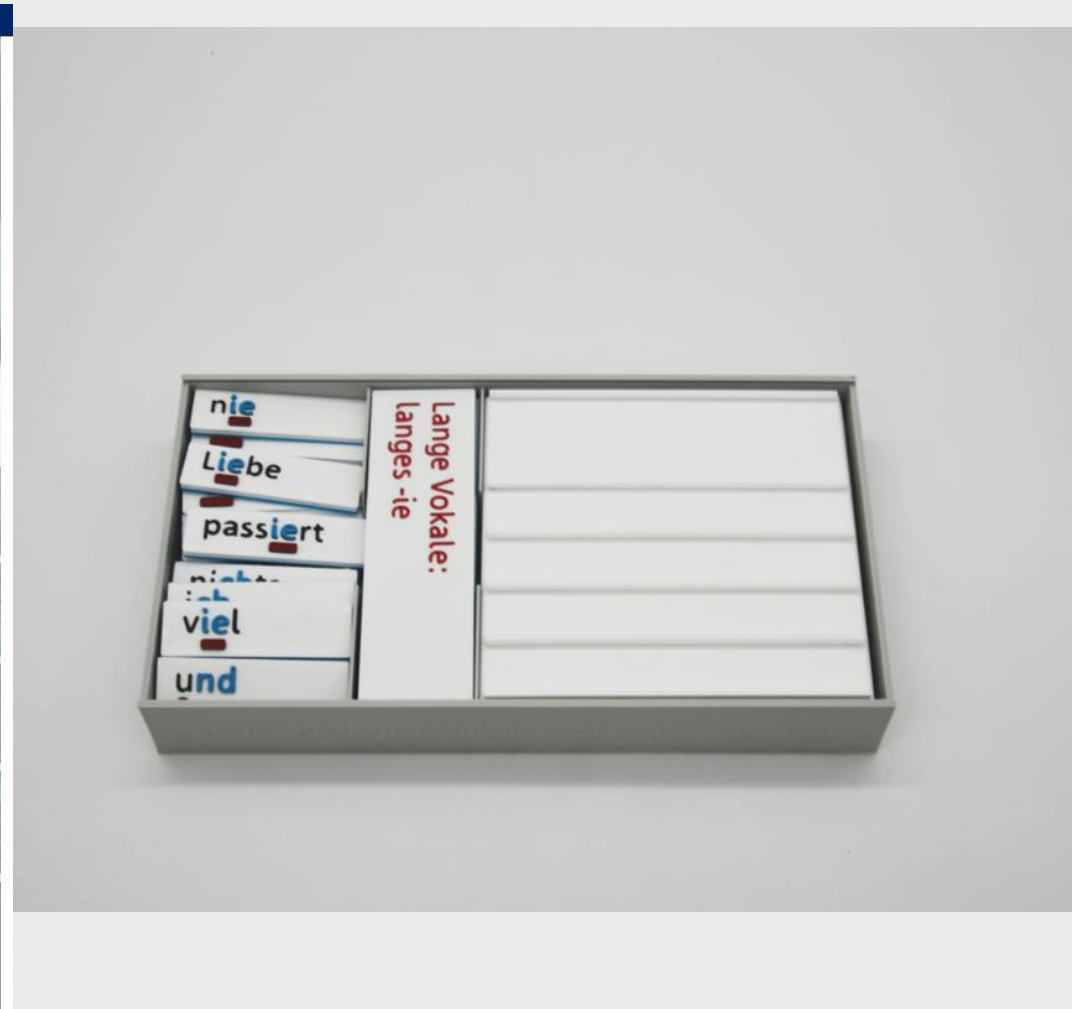
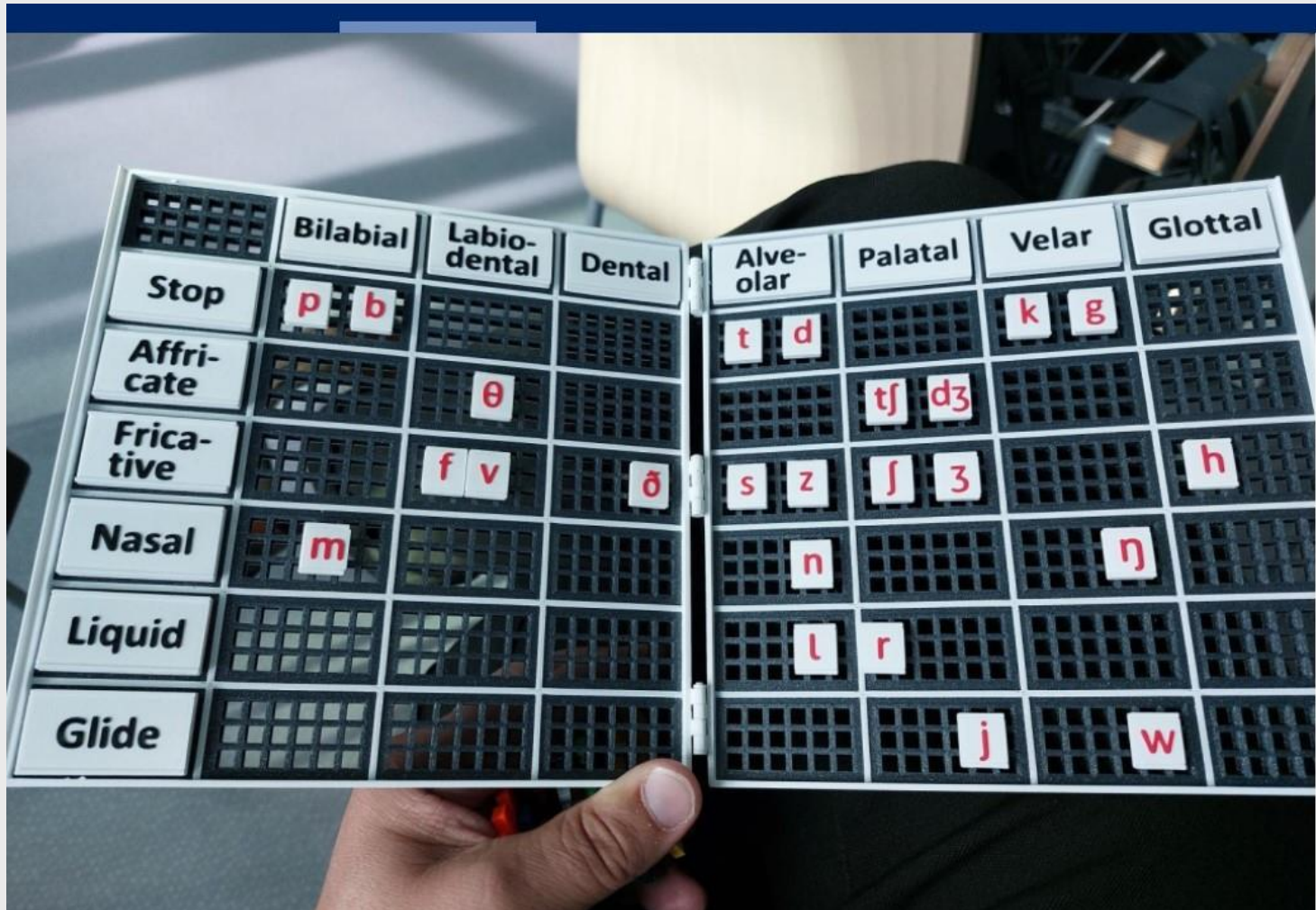
50 000 EUR

## Project team members

- Agata Ambroziak, PhD candidate, University of Warsaw
  - Zuzanna Mrozicka, MA (volunteer)
  - Julia Witkowska, BA student, University of Warsaw
  - Karolina Czopek, PhD candidate, University of Warsaw
  - Dr. Agnieszka Kaldonek-Crnjaković, University of Warsaw (project leader)
  - Dr. Tomáš Klinka, Charles University
  - Paweł Kmiecik, Office for Persons with Disabilities, University of Warsaw
  - Dr. María del Mar Martín de Nicolás Moreno, Heidelberg University
  - Wiktoria Peryt, Office for Persons with Disabilities, University of Warsaw
  - Sławek Rzepecki, Office for Persons with Disabilities, University of Warsaw
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- Dr. Ruben Schachtenhaufen, University of Copenhagen
  - Sarah Thome, Heidelberg University
  - Dr. hab. Anna Wojtyś, University of Warsaw

# So far designed & produced ...





# Research questions & participants

To what extent does the multisensory approach facilitated by the use of 3D resources enhance university students' learning experiences in phonetics, phonology, and practical pronunciation of different languages and in other language-related skills?

- Participants – students at the partner universities

# Research

- Data collection: questionnaire (student participants), interviews (student and teacher participants)

## Questionnaire:

- Part 1: background information, including

5. I learn best ... (You can tick more than one.)
  - when the material/information is presented visually.
  - when I can touch things.
  - when the material/information is presented orally.
  - when I can move.

## Part 2

To what extent do you agree with the following statements?

7-point Likert-like scale (*1-strongly disagree, 7-strongly agree*)

The following statements consider **the 3D resources you used in the course** (15 statements):

(4) Using the 3D resources was distracting.

(8) Using the 3D resources was an effective way of learning.

The following statements consider **3D resources in general** (13):

(19) Grammar-related content in a foreign/second language should be supported by 3D resources in the foreign/second language classroom.

(28) 3D resources improve the quality of language-related courses.



### Part 3 – open questions (5)

4. What didn't you like about the design of the 3D resources?

5. Would you suggest any changes to the design of the 3D resources?

5.I learn best ... (You can tick more than one.)

Predominately **visual**: 21 (55%)

**Audio-visual**: 9 (24%)

Kinaesthetic-tactile: 2 (5%)

Multitype 3 senses: 2

Multitype 4 senses: 2

# Results

So far 44 participants (phonetics, practical pronunciation – English, Spanish)

At the end of the project approx. 200

(S 1-15) Resources used in the class  $M=5.24$   $SD=1.25$

$p < .000$   $d=0.31$

(S 16-28) 3D resources in general  $M=4.85$   $SD=1.22$

1	2	3	4	5	6	7
strongly disagree	disagree	disagree somewhat	neither disagree nor agree	agree somewhat	agree	strongly agree

# 1. Did you find the 3D resources useful? Did they enhance your learning? Why?

“They were really engaging and more "immature" than regular teaching methods. I guess my inner child really liked using dominoes.”

“they did enhance my learning and were very useful since I could absorb knowledge by figuring it out on my own”

“Yes, the 3D resources were useful, but not too much (maybe because the topic was relatively easy). It is to be expected, that the use of the 3D resources increases with the difficulty of the topic. Yes, they enhanced my learning, because they are a novel way of learning.”

2. If you believe that 3D resources could be used in other language-related courses at the university, which courses would you suggest?

“It could be for example introduction to linguistics.”

“Yes, definitely. They would be found useful when it comes to learning grammar and vocabulary in class.”

“Japanese with kanji reading”

## 5. Would you suggest any changes to the design of the 3D resources?

“less colourful, less disturbing”

“vivid colors, pleasant to touch”

“I have a disability and they are very small so I couldn't see them well.”

# Future

- Erasmus +
- Key Action 2: Capacity building in Higher Education
- Strand 2 - Partnerships for transformation in higher education

<https://erasmus-plus.ec.europa.eu/programme-guide/part-b/key-action-2/capacity-building-higher-education>

**Call for partnership – looking for partners** (please check the eligibility criteria)

Deadline 8 February at 17:00:00 (Brussels time)

Between EUR 400,000 and EUR 800,000 per project

Thank you for listening