

# ARETE

## Call for Teacher Coordinators

Primary school (Geometry and  
Geography)

**November 2020 – June 2022**



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## 1 OVERVIEW OF THE CALL

European Schoolnet is recruiting **8 primary school teachers (pupils of 4<sup>th</sup> grade – aged 8-11 – as of September 2021) to coordinate, in their country, the teachers participating in piloting of interactive augmented reality (AR) solutions for geometry and geography** provided by CleverBooks (ARETE Pilot 2), and to participate in the pilot themselves. 8 primary school teacher coordinators (with a focus on either geography or geometry topics) will be recruited from the following countries (one teacher per country):

*Table 1. Pilot 2 country coverage and language of materials to be tested*

No	Country	Language
1	Greece	Greek
3	Italy	Italian
3	Malta	English
4	Poland	Polish
5	Portugal	Portuguese
6	Romania	English
7	Serbia / Croatia / North Macedonia	Serbian / Croatian / English
8	Spain	Spanish

## 2 THE RESPONSIBILITIES OF SELECTED ARETE PILOT 2 TEACHERS

First and foremost, teacher coordinators will participate in the piloting activities as regular teachers. Together with the other teachers selected to participate in ARETE Pilot 2, they will be requested to:

- Carry out administrative duties necessary for the pilot’s implementation (including the distribution and collection of appropriate consent forms and information sheets for children participating in the pilot, and overseeing the implementation of anonymous identification codes, under the guidance of the ARETE team).
- Team up with another primary school teacher from their schools who will participate in the ARETE pilot evaluation activities.
- Participate in the pilot study (either in the control or intervention group<sup>1</sup>).
- Oversee the implementation of evaluation instruments with their students (students should complete three pseudonymous paper-based tests over the course

<sup>1</sup> Control and intervention groups will only be decided after the first round of evaluation instruments has been applied. ARETE Pilot 2 teacher coordinators will be automatically assigned to intervention groups.

of the pilot: a pre-test, a post-test and a retention test); collect and send both digital and paper versions of the tests to the pilot coordinators.

- Help researchers by grading open ended questions in their own languages that appear in the evaluation tests. In return, they will be provided with a brief evaluation report containing research results specific to their classroom.
- Fill in the qualitative online surveys (pre- and post- intervention respectively) covering pedagogical aspects, e.g., on student motivation and classroom engagement, barriers and facilitators for AR use, and experiences with AR-enhanced teaching and learning.
- The teachers allocated to the intervention group, will be required to share a brief paper survey with their students, ideally at the time of reassessment, aiming to measure the students' interest/enjoyment, perceived competence and value/usefulness of the piloting activities.

**Note:** A control group design will be employed to measure the effectiveness of the pilots' intervention. This means that, in each team of two teachers per school, there will be: [1] one teacher in the intervention group, who will implement the free of charge CleverBooks applications (either Geography or Geometry) and educational materials during the 2021-2022 school year and undergo evaluation with their students, and [2] one teacher in the control group, which will only have access to the CleverBooks application and educational materials at the end of the pilot during the 2022-2023 school year, but still pass through all evaluation activities during the 2021-2022 school year. With the exception of Pilot 2 teacher coordinators, who will be automatically assigned to the intervention group, control and intervention groups will only be decided after the first round of evaluation instruments has been applied, so there will be no way of knowing, at the selection stage, which teacher belongs to which group.

### 3 THE RESPONSIBILITIES OF SELECTED ARETE PILOT 2 TEACHER COORDINATORS

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In addition to the above-mentioned responsibilities applicable to all the participating teachers in ARETE Pilot 2, selected teacher coordinators will be requested to:

- Support the dissemination of the ARETE call for Pilot 2 teachers.
- Coordinate and monitor the national implementations of the ARETE pilot study in 11 schools (10 + teacher coordinators' own school) in their country/group of countries (2 classrooms per school). ARETE Pilot 2 teacher coordinators will be automatically assigned to intervention groups.
- Deliver at least 2 online training sessions for the teachers in their country, participating in ARETE Pilot 2.
- Provide feedback on the setup and content of the ARETE training platform, mobile app and other ARETE outputs.
- Develop 1 learning scenario in relation with piloting activities by the end of the pilot.
- Participate in the 3 face-to-face workshops in in the [Future Classroom Lab](#)<sup>2</sup>, with travel and expenses covered by the ARETE project.

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<sup>2</sup> Workshops may be organised online, depending on possible travel restrictions imposed during the implementation of the programme.

- Participate in a face-to-face interview (aimed at clarifying the pedagogical implications of AR application in education) conducted with the teacher coordinators which will be organized during the one of the face-to-face workshops in Brussels. The interview guidelines are developed based on relevant literature and focus on the teachers' experiences, evaluations and lessons learnt during the intervention.
- Attend the 2 teacher coordinators online meetings.

## 4 ARETE PILOT 2 TEACHER SELECTION CRITERIA

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- **Be actively involved in teaching geometry (mathematics) or geography topics in primary education (with students in grade 4 of primary school – aged 8-11 – as of September 2021).**
- **Interest and/or experience in the use of (AR) technology in education:** teachers will be required to demonstrate their interest and/or experience in the use of technology in education, with a particular focus on the use of augmented reality (AR) in education. Previous experience in collaborative local/national/international projects is desirable, but not a must for pilot teachers.
- **Very good digital skills:** teachers should have experience in using a range of digital tools for content creation and feel comfortable with using mobile applications in their teaching.
- **Proficient knowledge of English (understanding, writing, reading and listening):** teachers should feel comfortable to communicate in English in order to successfully carry out pilot instructions and collaborate with the researchers.
- **Good Internet connection** at school and at home both in terms of stability and available bandwidth as well as frequent access to technical infrastructure (i.e., tablets, mobile phones) since teachers need to be able to regularly connect online for their work. Good Internet connection is important for multi-user functionality of both apps (they can work offline too but without an option for simultaneous multi-user interactions).
- **Selected Pilot 2 teachers will be engaged in the project between January 2021 and June 2022.**

In addition, teacher coordinators must have:

- **Excellent management and organisational skills:** teachers should have proven experience in organising and facilitating (teacher) communities. Previous experience in the framework of other regional/national/international projects is a must. Experience in the field of technology in education (ideally, with a focus on Augmented Reality) and/or in piloting educational content is an advantage.
- **Proven experience in creating educational content, disseminating, sharing and providing training of resources, methodologies and or other educational activities to other teachers.**
- **Availability to participate in three face-to-face workshops and online meetings:** in order to fulfil their tasks, teachers need to attend three face-to-face workshops in the Future Classroom Lab at EUN premises in Brussels/or online, depending on travel restrictions (if face-to-face, these workshops may take place on Fridays and Saturdays) and two online meetings.
- **Availability to be engaged in the project between November 2020 and June 2022:** in order to carry out their tasks, teachers will have to be able to participate in the project

for the entire duration of the given timeframe. Please note that the selected teachers will be subject to a review in one “checkpoint” during this period.

## 5 STUDENTS’ PROFILE

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All the teachers participating in ARETE Pilot 2 research activities (including teacher coordinators) should be teachers of students of a particular profile.

### Inclusion Criteria:

- Primary school students, in grade 4 as of September 2021 (aged 8-11 in September 2021)
- Teachers and pupils in their class must have access to Android or iOS tablets/iPads/smartphones.

### Exclusion Criteria:

- Significant visual impairment e.g. on the blind register

## 6 BENEFITS FOR THE TEACHERS PARTICIPATING IN ARETE PILOT 2

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- **Access for themselves and their class (up to 30 students per class) to cutting edge educational products: an app and a workbook for teaching geometry and an app, a workbook and a map of the world for teaching geography in primary school** (the CleverBooks Augmented reality toolkit).
- **Unique insight into classroom progress following the pilot’s implementation:** At the end of the pilot, each teacher in the intervention group will receive a brief evaluation report containing research results specific to each participating classroom.
- **Access to training materials for implementing augmented reality in the classroom:** Every teacher’s participation in ARETE Pilot 2 will contribute to developing new technologies and digital tools for education. Pupils will learn STEM concepts, improve digital skills using an ICT solution/mobile app. All necessary materials and software will be provided free of charge.
- **Certificate of participation:** All the teachers participating in ARETE Pilot 2 will be awarded with a certificate of participation at the end of the pilot.

## 7 IN ADDITION, THE FOLLOWING BENEFITS ARE APPLICABLE TO THE TEACHER COORDINATORS ONLY

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- **Stipend for their work**
  - €100 / day for up to 10 days of work (max. €1,000)
- **Travel and accommodation costs covered to participate in 3 face-to-face workshops in the Future Classroom Lab in Brussels<sup>3</sup>**, with transportation, meals and accommodation covered by the project (these days are considered training and not remunerated).

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<sup>3</sup> Workshops may be organised online, depending on possible travel restrictions imposed during the implementation of the programme.

- An opportunity to build a **close community of practice of teachers** active in AR education, who will meet, discuss and exchange regularly about their work among themselves as well as with ARETE partners from industry and research.
- ARETE Teacher Coordinators will receive **continuous support** for the duration of the project from European Schoolnet and the other pilot organisers. Teachers will have a unique professional development opportunity by receiving training on AR in education and on pilot-specific AR tools and methods.

## 8 TIMELINE

Indicative dates	Process / Milestone	Indicative tasks for teacher coordinators
October – November 2020	Selection of <b>8 teachers coordinators</b> for ARETE Pilot 2	Sign contract
November 2020 – January 2021	Pilot teacher recruitment	Support the dissemination of the call for Pilot 2 teachers
November 2020 – August 2021	Training platform development	Provide feedback on the design and content of the ARETE training platform
January /February 2021 <i>[date tbc]</i>	1 <sup>st</sup> Teacher Coordinator online meeting	Attend online ARETE Pilot 2 training and implementation strategy
February/March 2021 <i>[date tbc]</i>	1 <sup>st</sup> workshop in Brussels/online	Attend in person ARETE Pilot 2 training and scheduling of activities
March 2021 <i>[date tbc]</i>	Pilot teacher meeting – Phase I	Deliver min. 1 online or face-to-face training for national pilot teachers equipping them with skills and knowledge for implementing pilot
March – June 2021 <i>[date tbc]</i>	Pre-test evaluations	Pre-test evaluation for: teachers and students
October – November 2021 <i>[date tbc]</i>	2 <sup>nd</sup> workshop in Brussels	Attend in person ARETE Pilot 2 training and implementation strategy
September 2021 – June 2022	Pilot implementation	Coordinate and monitor pilot implementation Support national pilot teachers with Piloting activities: intervention group teachers administer CLB-AR apps (geography or geometry); control group teachers continue as normal in class (without CLB-AR apps – geography or geometry) Post-test evaluation: for teachers and students
January 2022 <i>[date tbc]</i>	2 <sup>nd</sup> Teacher Coordinator online meeting	Attend online

Indicative dates	Process / Milestone	Indicative tasks for teacher coordinators
		Discuss pilot progress and the creation of learning scenarios
January 2022 – February 2022 [date tbc]	Pilot teacher meeting – Phase II	Deliver min. 1 online or face-to-face meeting for national pilot teachers to share progress on pilot implementation and plan next steps
March 2022	3 <sup>rd</sup> workshop in Brussels	Attend in person Focus groups ARETE Pilot 2: progress and next steps

Legend:

Teacher coordinators' project support tasks
Teacher coordinator's meetings (organised by the ARETE project team)
Piloting activities (Pilot 1)
Timeline localisation

## 9 ABOUT ARETE PILOT 2 – CLEVERBOOKS (GEOMETRY, GEOGRAPHY)

ARETE Pilot 2 focuses on learning geometry and geography through visualization and interaction. The aim of this pilot is to test the efficiency of Augmented Reality application for STEM education as a tool that helps to improve pupils' test-score by up to 33% and increase retention rate by up to 100% while developing 21<sup>st</sup> century skills and focusing on personalized learning through kinetic, audio and visual educational approaches. A pre-test post-test control group design will be employed to measure the effectiveness of the pilots' intervention.

*CleverBooks* is an app that can be launched on a tablet or mobile phone through a collection of flash cards/printouts. With the *CleverBooks* app, students are expected to develop critical thinking, creativity, visualisation skills and improve cognitive development by viewing geometric 2D and 3D shapes from all angles; listening to voiceover for all the shapes and interactions made by kids; seeing sides of 3D shapes unfold into 2D shapes; and more.

## 10 ABOUT ARETE PROJECT

ARETE is a European Commission-funded project that aims to support existing European interactive AR technologies' effort to enhance current technologies and develop new highly usable technologies and contents. Particularly, ARETE will revolutionise and push AR through **three unique and comprehensive pilot studies (Pilot 1: English literacy skills, Pilot 2: STEM and Pilot 3: Positive Behaviour Intervention) to validate the technology in real life settings**. To bring together the basic principles of AR in education with the technological concept, ARETE aims to establish a sustainable competitive ecosystem of European technology and solution providers for AR interactive



technologies, through a targeted community engagement process within the education field, which will be deployed, demonstrated and evaluated via the pilot studies around Europe.

**This call is for teacher coordinators for Pilot 2 - STEM, coordinated by European Schoolnet with main contributions from CleverBooks, Julius-Maximilians-Universität Würzburg and University College Dublin.**

## 11 WHAT WILL HAPPEN IF YOU DECIDE TO TAKE PART IN THIS RESEARCH STUDY?

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If selected, you will be one of over 170 teachers participating in this pilot from across Europe. You will receive free products and free software for participating in the project. For the research purposes there will be standardized assessment conducted to collect the data from teachers and students at a class level (no personal information will be collected) after the use of STEM-based products with Augmented Reality. This data will be compared with the similar assessment conducted in a control group who did not use Augmented Reality solutions for learning STEM. The goal of this research is to understand whether Augmented Reality supports STEM education at the primary school level and helps to keep interest in STEM subjects longer as well as retain the information long term. The efficiency of Augmented Reality as a new tool will be tested.

## 12 HOW TO APPLY?

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- By **23<sup>rd</sup> October 2020**, teachers are invited to apply for the call through the following link <https://www.surveymonkey.com/r/ARETE-Open-Call-for-Teacher-Coordinators-Pilot-2>
- Pilot 2 teacher coordinators are invited to team up with another teacher from their school (a 'team member', who will participate in the ARETE Pilot 2 in the control group) in order to apply to this call. The involvement of the 'team member' will only begin in January 2021.
- The selected teachers will be officially informed by a confirmation email sent by European Schoolnet.

### Important:

- The final selection of teachers will be validated by the Ministries of Education in the corresponding countries. EUN will not enter any detailed discussions or exchanges with any applicant as to why their application was not successful.
- Selected teachers will be responsible for getting any permissions from the school necessary for their involvement in the ARETE Pilot and the completion of the tasks outlined above.
- To carry out the activities between January 2021 and June 2022, the selected teachers will be requested to sign an agreement with EUN [**November 2020**].

### Any questions?

Please contact Martyna Bajorinaite at [martyna.bajorinaite@eun.org](mailto:martyna.bajorinaite@eun.org) and Adina Nistor at [adina.nistor@eun.org](mailto:adina.nistor@eun.org).