EuroScitizen Working Group 2 | Identifying needs and opportunities to improve the contribution of formal education to public literacy on evolution

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Abstract



EuroScitizen is a COST Action and involves a research network whose aim is to identify strategies to raise levels of scientific literacy about evolution in Europe. EuroScitizen comprises five working groups (WG) and this poster summarizes the current achievements of WG2 on Formal education.

WG2 aims to identify the needs and opportunities to improve the teaching of evolution since the first school years in distinct countries and enhance the contribution of formal education to European public scientific literacy on this important topic. To achieve these goals, we are studying: *i*) the school curricula and *ii*) textbooks of the participating countries; *iii*) teachers' content knowledge, pedagogical content knowledge, attitudes and beliefs about teaching evolution and effective methodologies and strategies to empower teachers about evolution education; and *iv*) strategies to promote evolution understanding in elementary school students.

This poster presents some of the current achievements of WG2, such as: *i*) publication of a paper about the development and validation of a framework for the assessment of school curricula on the presence of evolutionary concepts (FACE); *ii*) comparison of the content of most adopted textbooks in the schools of 8 countries, from the 1st to the 9th grade, about the presence of evolution Big Ideas; *iii*) identification of teachers' best practices in evolution education and teacher' training actions about evolution education; and *iv*) the publication of a study about the evolutionary concepts that elementary school students most often used after a pedagogical intervention. The next steps of the WG2 are also presented.

Results

Curricula analysis project

Nature of Science

Studving Evolution

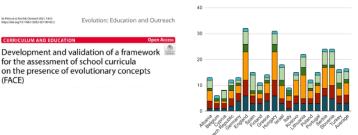
 Mechanisms of Evolution

History of Life

Evidence for Evolution

ACHIEVEMENTS

FACE: framework for assessment of school curricula for the presence of evolutionary concepts



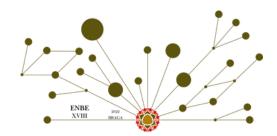
COMING SOON

Publication of the comparative analysis of 18 european countries showing great differences in the coverage of evolution in distinct school curricula and the absence of some evolution key ideas

NEXT STEPS

Contact police makers to discuss these results

Contact emavrikaki@primedu.uoa.gr



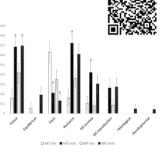
Elementary school students' project

ACHIEVEMENTS

Published study showing that elementary school students can learn evolution by natural selection and struggle more with the concept differential reproduction



Following Darwin's footsteps: Evaluating the impact of an activity designed for elementary school students to link historically important evolution key concepts on their understanding of natural selection



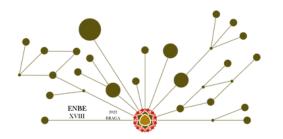
COMING SOON

Validation of an instrument to evaluate elementary school understanding of natural selection in 5 languages: English, Greek, Italy, German, Portuguese and Spanish.

NEXT STEPS

Comparative analysis of students' understanding of natural selection between 3rd and 5th graders in 6 countries

Contact lucia.vben@udc.es

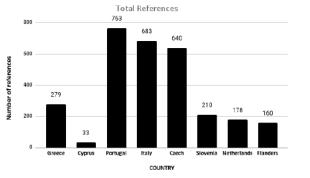


Results

Book analysis project

ACHIEVEMENTS

Comparison of the contents of the best selled textbooks from 👎 the 1st to the 9th grade for the presence of evolution big ideas in 8 countries



COMING SOON

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Submission of the paper to an international peer reviewed journal.

NEXT STEPS

Didática e Tecnologia na Formação de Formadore

Comparison of the results of textbooks and curricula analysis

dep

Contact korfiati@ucy.ac.cy

Teachers' empowerment project

ACHIEVEMENTS

Identification of teachers' best practices on evolution education.

Teachers training actions about evolution education On-line teacher training action on COVID 19 as an SSI. International meeting to discuss evolution education.

REUNIÃO INTERNACIONAL SOBRE ENSINO E APRENDIZAGEM EM EVOLUÇÃO INTERNATIONAL MEETING ABOUT EVOLUTION EDUCATION 11 MARÇO 2022 19H00 - 20H30 E v 🛞 K E 🥮 🔤

Submission of the paper to an international peer reviewed journal analysing the teachers' best practices on evolution education.

NEXT STEPS

Development and evaluation of teacher training actions

Contact bento.cavadas@ese.ipsantarem.pt

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