

Practice	DIGITAL SCHOOL (psifiako scholeio)
Source/Link	https://dschool.edu.gr/
Country/region/city	Greece - At National Level
Time frame	The digital school and photodentro repository, were developed by the ITYE "DIOPHANTOS" in the framework of the project "Expansion and Exploitation of the Digital Educational Platform, Interactive Books and Learning Objects Repository" (Digital School II) of the OP "Human Resources Development, Education and Lifelong Learning" of the NSRF 2014-2020, co-funded by the European Union (EKT) and the Greek State.
Sector	<input checked="" type="checkbox"/> VET <input checked="" type="checkbox"/> School education <input checked="" type="checkbox"/> Higher education <input checked="" type="checkbox"/> Continuing vocational training <input type="checkbox"/> Other (spec. _____)
Target group	For Greek teachers and students of Primary, Secondary, General and Vocational Lyceum (EPAL). The digital platform(s) and repository is open to and all interested parties under the Creative Commons CC BY-NC-SA license.
Short description	<p>In order to collect, organize, make widely available and efficiently search and use digital educational content in the school community, ITYE DIOPHANTOS has developed and operates on behalf of the Ministry of Education an integrated digital infrastructure, which includes a series of systems and e-services for teachers, students and all interested parties. The services are available through the main page "Digital School - Digital Educational Content" at: dschool.edu.gr</p> 
Methodologies and animation techniques used	<p>At the several services are available for the teachers, students, trainees and anyone interested:</p> <ul style="list-style-type: none"> • Photodentro Interactive School Books (or Photodentro e-books) at ebooks.edu.gr is the official digital space of the Ministry of Education & Religious Affairs (YPAITH) for the availability of digital versions of schoolbooks to all, teachers, students, parents/guardians and anyone interested. It is a modern online digital library which contains all textbooks for Primary, Secondary, General and Vocational Lyceum

(EPAL) in various digital formats. Link (in Greek): <http://ebooks.edu.gr/ebooks/>

- **Photodentro - National Educational Content Aggregator for Primary and Secondary Education.** It is the central e-service of the Ministry of Education for the unified search and distribution of digital educational content to schools. It is open to everyone, students, teachers, parents and any other interested party. In Photodentro - Educational Content Aggregator you can search in a uniform way and from a central point, digital educational material for school education, which is either in the "Photodentro" repositories of the Ministry of Education or in other, "external" repositories or educational portals. In other words, it provides a central 'catalogue' of the Ministry of Education's digital educational material for school education. Photodentro promotes the use of open educational resources (OER) for schools, implementing the national strategy for digital educational content. Link:

- STORAGE OF OPEN EDUCATIONAL RESOURCES Photodentro:

BASIC PHOTODENTROS:



Photodentro > Learning Objects (Photodentro LOR) is the Panhellenic Repository of Learning Objects for primary and secondary education. Photodentro is open to everyone, students, teachers, parents and anyone interested. It is the first of the digital repositories of Open Educational Resources of the "Photodentro" family and is a central e-service of the Ministry of Education and Culture for the organization and distribution of digital educational content to the school community. It hosts learning objects (i.e. autonomous and reusable units of digital material that can be used for teaching and learning) such as interactive simulations, visualizations, experiments, investigations, images, educational games, 3D maps, exercises and others. It includes ~9.000 learning objects, including 6.500 learning objects of the enriched interactive textbooks as well as collections of selected objects developed in the framework of various actions of the Ministry of Education or other institutions. The learning objects cover a wide range of subjects (Mathematics, Geography, Chemistry, Biology, Physics, Physics, Aesthetics, Religious Education, History, ICT, English, French, German, Literature) from primary school to secondary school. LOR Photodentro LOR

implements the national strategy for digital educational content and promotes the use of open educational resources (OER) for schools. Link: <https://photodentro.edu.gr/lor/>

Photodentro Educational Videos (or Photodentro video) is the Panhellenic Educational Videos Repository for Primary and Secondary Education (Ministerial Decision 131377/C2, 19-08-2014) and is one of the Open Educational Resources repositories of the "Photodentro family". It hosts collections of educational videos of short duration (up to 10 minutes), which serve teaching objectives of school education and can be integrated within educational activities to support teaching and learning. It is addressed to teachers and students of primary and secondary education, parents, researchers in the field of education. It is open to all (no user registration required). All videos are freely available under the Creative Commons CC BY-NC-SA license. Link: <http://photodentro.edu.gr/video/>

Photodentro > Educational Software (Photodentro EDUSOFT) is the Panhellenic Educational Software Repository for primary and secondary education. It hosts educational software and packages with educational activities for local download. Link: <https://photodentro.edu.gr/edusoft/>

TEACHERS' PHOTODENTROS:



"Photodentro/e-yliko users" is the User Educational Material Repository for Primary and Secondary Education. It is one of the repositories of the Ministry of Education and Religious Affairs of the Photodentro "family" and is available at <http://photodentro.edu.gr/ugc>. On this site, teachers and members of the wider educational community can post their own learning objects or search for learning objects of other users. Members of the repository can be teachers of primary and secondary education (permanent, substitute, part-time and private school teachers) who have an account in the Panhellenic School Network (PSN).

"Photodentro Open Educational Practices" (Photodentro Open Educational Practices) is the Panhellenic Repository of Open Educational Practices for Primary and Secondary Education. The aim of the repository is to collect, organise and make available Open Educational Practices proposed by the educational community, mainly concerning the use of digital educational content in the learning process, as well as innovative teaching interventions and actions with additional pedagogical value in comparable cognitive fields or in interdisciplinary fields, such as Environmental Education - Education for Sustainable Development. All Open Educational Practices are freely available

under the Creative Commons CC BY-NC-SA license. Link: <http://photodentro.edu.gr/oepl/>

“Photodentro Learning Scenario” (or Photodentro LS) is the Greek National Learning Scenario Repository of the Greek Ministry of Education for Primary and Secondary Education. The environment for writing and managing learning scenarios of the Photodentro Learning Scenario Repository (Photodentro LS Designer) gives you the opportunity to:

- Design and author learning scenarios with activities, starting from reusable model forms (templates) and following specific pedagogical directions and suggestions.
- Immediately publish your learning scenarios in the Photodentro Learning Scenario Repository.
- Start from an available Learning Scenario that you will find in the Photodentro Learning Scenario Repository, copy it to your personal workspace, edit it, adapt it to your needs, and publish your own version in the Repository.
- Save and organize your learning scenarios in your personal workplace.

Link (EN): <https://photodentro.edu.gr/lis/?&locale=en>

“Photodentro i-create” is the Panhellenic Repository of Student Creations of Educational Broadcasting for Primary and Secondary Education. It is one of the repositories of Open Educational Resources of the "Photodentro" family of repositories of the Ministry of Education, Research and Religious Affairs, designed and developed by ITYE "DIOPHANTOS". It hosts student digital and audio-visual works created in the framework of international and national competitions of Educational Broadcasting. It is available at <http://photodentro.edu.gr/i-create/>.

"Photodentro Culture" is the Thematic Aggregator of Educational Cultural Content that provides a unified search of selected digital resources from cultural collections, mainly from museums. It brings together and provides unified search of thousands of selected digital resources from cultural collections held either in the European cultural content portal "Europeana" (europeana.eu) or in digital repositories of museums or other institutions. All digital resources have been subject to additional pedagogical/educational post-editing to facilitate their use in the educational process. Link: <http://photodentro.edu.gr/cultural/>.

The service **"Photodentro Quality Stamps"** is an e-service developed to support and facilitate the quality assurance process of Digital Educational Content / Open Educational Resources for Primary and Secondary Education. It is supported by the digital repository "Photodentro Quality Seals" available at photodentro.edu.gr/seals. The repository hosts (a) "Quality Seals" of Open Educational Resources, (b) "Sealers" institutions that hold and possess the Quality Seals, and (c) "Seals" of Open Educational Resources that have been conducted with these Quality Seals. A Quality Seal signifies that a learning object has successfully "passed" a quality assurance process, such as a specific

development, validation, assessment or audit process. Three (3) types of Quality Stamps are supported:

PROCESS: describes a well-defined quality assurance process followed to design, develop, evaluate or validate the item being stamped.

EVALUATION CRITERIA: describes a set of specific evaluation criteria (qualitative and quantitative) against which the item being sealed is evaluated and scored.

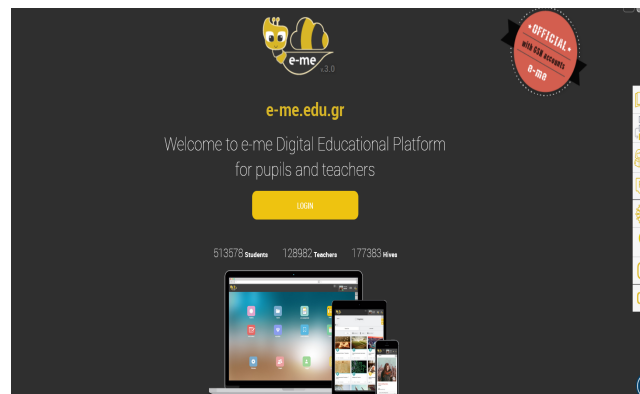
SOURCE NAME: indicates a reliable/authoritative source of open educational resources.

Link:

<https://aggregation-service.photodentro.edu.gr/i-ethniki-ypodomi-gia-to-psifi-ako-ekpaideftiko-periechomeno-tis-protovathmias-defterovathmias-ekpaidefsi/i-ypiresia-fotodentro-sfragides-poiotitas/>

Digital solutions used

e-me has a modern and friendly environment, which simulates the form of modern smart devices (tablets and mobile phones) and at the same time secure, allowing only authenticated users (teachers and students) using their @sch.gr accounts.



e-me provides a "space" for:

- The creation of **collaborative learning environments (hives)**,
- **communication and social networking** between students and teachers,
- **organising, storing and exchanging files**,
- the **creation of digital educational material**,
- the **interconnection and exploitation of open resources** from the Photodentro repositories and elsewhere, while providing **digital 'tools'** to support teaching and learning. e-me includes the following tools and applications:
 - Profile & Contacts
 - File storage and sharing environment for students and teachers in the cloud
 - Creation of (co-)workspaces (Hives) by teachers and students (blos, wall, assignment area, forum, apps)
 - e-portfolio
 - e-me content. Tool for easy development of interactive learning objects or educational digital resources in general. Supports the creation of exercises of various types, quizzes, interactive exercises, quizzes, interactive exercises, quizzes, videos, chronologies, memory games, etc.

- e-me assignments
- T4E - Accelerated Training of Teachers in Distance Education
- e-me blogs
- Contact (e-me connect). Modern communication via audio and video calls and messages real-time communication.
- my Photodentro. Interface with the Photodentro Repositories, for selection of learning materials and creation by students and teachers personal repository of digital educational material.
- Calendar
- Connection to services of the Panhellenic School Network: WCS e-mail, WCS e-mail, e-mail news, blogs and WFP Teleconferencing.
- Dictionaries

Link:

https://auth.e-me.edu.gr/?eme=https://e-me.edu.gr/&cause=no-token&eat=6611fa7ff851e3d6d3d1059f4121ecca&lang=en_US

Contents/issues on which methodologies and animation techniques are applied

Digital Educational Platform e-me (<https://e-me.edu.gr>) is a modern, collaborative, social and extendable digital platform for students and teachers. It provides K-12 community with a safe digital working and collaboration space and is available from the Greek Ministry of Education and Religious Affairs (MoE) as an asynchronous learning platform for Greek schools.

e-me is a personal learning environment and supports:

- the creation of private and public **collaboration spaces** (hives),
- **communication** and **social networking** among students and teachers,
- the **organization, storage and exchange of files** on the cloud,
- easy **creation of digital educational content**,
- **assigning and monitoring of tasks**,
- display of work via **collaborative and personal blogs**,
- the **use of open educational resources** from Photodentro repositories and more, and further provides **digital “tools”** to support teaching and learning.

It is available in two editions, the official “e-me” (login with GSN account) and the “e-me for all” edition. e-me addresses all students and all teachers (permanent, adjunct teachers on temporary contracts) of Primary and Secondary Education. For accessing official e-me the user needs a Greek School Network (GSN) account. For accessing “e-me for all” any user, even out of the educational community, can register.

The main, **official edition of e-me** Digital Educational Platform, which is directed to all students and teachers and - compared to the other editions - has the most recent and complete functionality of e-me.

ONLY users with a Greek School Network (GSN) account can access the official edition of e-me, assuring this way that all the users are certified.

In the official edition of e-me we also provide user support as well as other services that have been referred previously.

By using the official edition of e-me you find yourself in a safe environment where you can cooperate with other certified users from the educational community. Link: <https://e-me.edu.gr>

	<p>"e-me for all" is directed to everyone who wishes to use the e-me Digital Educational Platform but doesn't have or wants to use a Greek School Network (GSN) account. It is free and open to everyone: students, teachers, researchers, educators, public and private sector personnel, and others. Access to the platform is given through user registration. "e-me for all" has the same functionality as the official e-me, but it doesn't provide the same level of security as its users are not certified. Moreover, it doesn't provide equivalent services and user support, like the ones offered by the official edition of e-me. https://4all.e-me.edu.gr</p>
Technical equipment	Internet connection, tablets, smartphones, laptops
Experiences, findings, results, lessons learnt (Project internal view)	<ul style="list-style-type: none"> o e-me supports the approach of equal student-teacher relationship. Following this design principle, e-me was implemented as a democratic platform, in which everything any teacher can do, can also do it for every student or student. o A key principle in the design of e-me was to support the smooth transition to the "digital world". Therefore, the aim is first of all for the digital platform to serve and upgrade what is already happening in school or out of school, by students and teachers. o Central to the design was that, for a public, national infrastructure such as digital educational platform e-me of the Ministry of Education and Training, a sustainable and flexible expansion model is required and evolution. The aim was to emphasize the development and evolution of a basic 'framework' that serve as a scalable repository for tools and applications, which can then be developed by third parties. o The pedagogical design of e-me emphasizes the development of soft skills, such as collaboration, communication, extroversion, change management, leadership, innovation, flexibility, etc. (soft skills), as well as the cultivation and development of attitudes and (attitudes).
Strengthen	<ul style="list-style-type: none"> - Photodentro hosts learning objects (i.e., autonomous and reusable units of digital material that can be used for teaching and learning) such as interactive simulations, visualizations, experiments, investigations, images, educational games, 3D maps, exercises and others. - Is the official digital space of the Ministry of Education & Religious Affairs (YPAITH) for the availability of digital versions of schoolbooks to all, teachers, students, parents and anyone interested. The provided platforms are modern digital libraries/repositories/ tools which contain OERs and tools for Primary, Secondary, General and Vocational Lyceum (EPAL) in various digital formats. - In e-me hive are registered 513.578 Students, 128.982 Teachers, created 177.383 Hives - All textbooks for Primary, Secondary, High School, General High School and High School in digital pdf format. - School "student books" in open, digital html format

	<ul style="list-style-type: none"> - Interactive school textbooks: books in html or pdf format, enriched with digital interactive learning objects. - Search within the pages of the enriched books for active icons that lead to and open directly simulations, experiments, exercises, educational games, videos, maps, visualizations, etc. through the "Photodentro" repositories. - Textbooks with 18-to-38-point fonts for blunt students. - Student schoolbooks in iBook format. - The Curricula of Primary and Secondary Education (Interdisciplinary Integrated Curriculum Framework (IUSF) and Analytical Curricula (ASF)). - Guides or other manuals for teachers and parents.
Weaknesses	<ul style="list-style-type: none"> - Some learning objects require the installation of additional software to work. For example, objects developed in Java, Flash, ShockWave, Unity or Imagine Logo require the installation of the corresponding software to function. - Flash technology is no longer supported by Adobe itself, and that as of 12/1/2021 the ability to use the Adobe Flash Player add-on software in browsers was discontinued.
Other relevant information	<p>In addition to the systems and services for searching Open Educational Resources for Primary and Secondary Education from a central point, the National Infrastructure for Digital Educational Content also includes five (6) digital repositories containing over 11,500 Open Educational Resources for Primary and Secondary Education.</p> <p>The "Photodentro Interactive School Books" (Photodentro ebooks) repository was developed by the ITYE "DIOPHANTOS" in the framework of the project "Expansion and Exploitation of the Digital Educational Platform, Interactive Books and Learning Objects Repository" (Digital School II) of the OP "Human Resources Development, Education and Lifelong Learning" of the NSRF 2014-2020, co-funded by the European Union (EKT) and the Greek State.</p>
Comments	<p>The case of Digital school and the relevant services included and explained here, are a good practice of methodologies, tools and repositories, online collaborative objects, OERs as helpful tools for teachers/ tutors and involved students. Photodentro is more than a repository: it is the National Aggregator of Educational Content, gathering metadata from collections of digital resources held in digital libraries and repositories of other institutions (museums, libraries, audiovisual archives, Europeana, etc.) that could be used in the learning process.</p> <ul style="list-style-type: none"> - The UpDATE consortium can make use of the guidelines, methodologies, online learning material and tools provided for the training course in vocational training.
A contribution by	DAISy research group – Hellenic Open University (Greece)