3rd International Student Contest for Board and Digital Games Design

Under the auspices of the Region of Attica and the Secretary General for Greeks Abroad and Public Diplomacy, the General Secretariat of Digital Governance and Simplification of Procedures of the Ministry of Digital Governance, the National Centre of Audiovisual Media and Communication – EKOME and the Greek Association of Computer Engineers (EMYPEE), in cooperation with the Educators Group on Scratch Game, co-organize the 3rd International Student Contest for Board and Digital Games Design for students of Primary (Pre-school, Primary) and Secondary Education schools in Greece, Cyprus, and the Greek Diaspora. The contest invites students to reflect creatively on the school subject of their choice by engaging with game design, aiming to promote game design as an educational activity in the classroom.

Game-based learning and educational benefits

Nowadays, technological development has radically changed the environment in which children develop, learn, interact, and define themselves as individuals. From the beginning of their lives, they come across the digital world and quite early on they become familiar with digital media, which they handle with ease and comfort incomparable to that of any previous generation. These changes that the digital age has brought about have an influence on gaming as well, attested to by the growth of digital gaming in recent years. It is also worth noting that, although the development and popularity of digital games (educational and non-educational) has played a decisive role in the reception and establishment of game-based learning, the latter as a set of practices and related skills does not necessarily require a digital environment. The spread of digital technologies in school and general educational environments has facilitated the introduction of elements of game-based learning in education. Research on the educational effectiveness of games (a burgeoning field) has already highlighted the various resulting benefits in terms of motivation and skill development. Play and gaming can be described as a structured or semi-structured, individual- or group activity of a cooperative or competitive nature. Therefore, the targeted use of such activities in the educational process capitalizes on students' psychological predisposition to play, turning specific learning activities into pleasurable ones and focusing on intrinsic motivation. In this way, gamification strengthens not only the support of specific learning objectives, as they are set by the respective analytical educational program (curriculum), but also the development of critical thinking, collaborative problem-solving and creativity in terms of the process of analysis, synthesis and finding alternative solutions. In conclusion, game-based learning is a tool that fruitfully enriches educational activities: in the short term, it aims at increased engagement of students with the teaching subjects; in the long term, the formation of learning conditions it entails favor the acquisition of knowledge, through practical engagement (*learn by doing*).

Game-based learning and game design

Recognizing the modern trends around game-based learning and aiming to exploit them in the field of school education, EKOME and the co-organizers designed a contest that encourages the combination of the above elements in a creative process: game design, under the guidance of the teacher. The student contest aims to encourage connecting game-based learning practices with specific learning goals, through active involvement of the students with the teaching objects. At the same time, the contest aims to the development of students' digital and media skills, critical thinking, and creativity. It also familiarizes educators with innovative ways of teaching with the use of digital media. A significant benefit is also the cultivation of cooperative learning environment between teachers and students, in the context of an original creative process.

At the same time, students and teachers are challenged to familiarize themselves with aspects of game design (including plan, story, implementation stages and interface), a dynamic professional and at the same time academic sector, which is experiencing rapid growth in Greece and globally.

Content and Description

The school year 2022-23 will be the 3rd edition of the contest. Students are invited to create, with the support of their teachers, an original board game or α demo of a digital game, with content and/or objectives related to any school subject included in the school curriculum (e.g. History, Language, Biology, Physics, etc.).

(a) Board Game: Any game played on board, with the participation of one or more players. The main purpose is entertainment and, often, the acquisition of knowledge and mental exercise. The progression of the game can be based on either competition or cooperation between the players.

Many board games are purely educational in nature, such as trivia games. In other cases, board games can be indirectly educational in that they require strategy, cooperation, and combinatorial thinking to complete a game. Many board games provide educators with the opportunity to utilize or adapt them in such a way that they acquire additional educational value.

With the increasing trend towards the use of technologies, it is also increasingly common to transfer part of the interaction involved in the board game to a digital environment (eg. using touch screens or mobile devices). To the extent that the actual physical and social interaction around the board is preserved, and there is tangible interaction with physical objects in the game, the game can be considered augmented tabletop entry.

For the purposes of the contest, as a valid board game entry will be considered any of the following:

- A tabletop game for one or more players,

- A card game,

- A game that combines components/pawns/pieces from different, already existing board games, with the aim of creating a new one.

- Augmented tabletop, combining physical (paper, plastic, etc.) objects with digital applications (*e.g.,* using QR codes to incorporate a Quizlet-type application instead of paper question cards). In this case, the physical objects should still be an important part of the players' interaction with the game, and the gameplay should not be entirely transferred to some online form.

(b) Digital Game / interactive narrative: Many digital games have a direct educational character, while some others may have an indirect educational character, as they require strategy, cooperation, combinatorial and creative thinking ("out of the box") for their completion. Many digital games provide educators with the opportunity to leverage or adapt them in such a way that they acquire additional educational value.

Key features of a digital game:

• it allows players to enter data,

• it manages this data based on programmed, set rules,

• it provides one or more players with visual stimuli and information,

• there is constant interaction and feedback, the environment is changed by the actions of the players,

• it is played on a computer, on mobile devices that support digital games (mobile phone, tablet, GameBoy, etc.), or on consoles connected to TV (PlayStation, Xbox, etc.).

Interactive narrative games constitute their own category. Incorporating elements from literary storytelling, interactive narrative games can also be seen as interactive visual novels, in which the player-reader determines to a greater or lesser extent the development of the story. The player's interaction with the game is interrelated with the dynamics in the development of the plot, and therefore with the structure of the story/scenario.

For the purposes of the contest, a digital game will be considered any interactive application which requires input from the end user for the development of the story or plot, has a clear purpose, rules and win/lose/completion conditions. Recommended platforms for creating an interactive application with such features are: Twine, Ren'py, Scratch, Unity.

Specific objectives of the Contest

• Familiarization of students and teachers with methodology of game-based learning and development of game design skills in the wider context of ICT and digital skills. Student-centered approach to knowledge, promotion of an open learning environment through discovery and creative approach and problem solving, acquisition of digital skills, digital & technological literacy, media and information literacy.

• Familiarizing teachers and students with modern models and training tools, based on the expanded S.T.E.A.M. approach (Science, Technology, Engineering, Arts, Mathematics), and at the same time connecting these models with wider thematic and learning contents (*e.g.,* history), strengthening interdisciplinary and horizontal approaches.

• Students' practical understanding of engineering concepts, design, production, result analysis, control testing, planning and implementation of a multifaceted project.

• Cultivating intersubjectivity and interdisciplinarity, through design and development of original student approaches to topics arising from the curriculum, with the aim of creating games, tabletop and digital.

• Development and encouragement of student initiative, cultivation of critical thinking, engineering-design and computational thinking, as well as student creativity.

• Promotion of teamwork spirit through the application of innovative educational ideas and teaching practices, for the development of students' personality, boosting their self-esteem and self-confidence, through skills such as communication, cooperation, time management and distribution of activities.

Participation in the contest

The groups from each school unit (through the teacher in charge) will first need to register their participation interest in the online form: https://bit.ly/3BvPCYM.

After the completion of the projects:

To participate in the "Board Game" category, the following must be submitted:

1. Manual with: a) the description of the game (plot, characters, type of game), b) the instructions of the game (how to play, rules, number of players, purpose of the game, ages), c) the experience sought to be gained by the player/user (Player Experience Goals), d) the influences used to build the game, and e) the learning/teaching goals it serves. The manual can be submitted in word or pdf format.

2. Accompanying video of a test walkthrough of the game, where the rules and gameplay should be clearly presented. The accompanying video can be sent in .avi, .mp4, .mov, etc. format. via Wetransfer or Dropbox.

3. A prototype of the board game created by the students, in however simple form (eg. handwritten or photocopied board, with pawns and dice from other games, etc.).

The handbook should include the details of the teachers and students who contributed to its creation.

To participate in the "Digital Narrative Game" category, you should submit:

1. Manual with: a) the description of the game (plot, characters, type of game), b) the instructions of the game (how to play, rules, number of players, purpose of the game, ages), c) the experience sought to be gained by the player/user (Player Experience Goals), d) the influences used to build the game, and e) the learning/teaching goals it serves. The manual can be submitted in word or pdf format.

2. Playable demo for Windows and Macintosh operating system that will be created in Unity, Scratch, Ren'py or Twine environment (if it is online, the game link should be submitted).

3. Accompanying video of at least 5 minutes where the gameplay should be presented. The accompanying video can be sent in .avi, .mp4, .mov, etc. format via Wetransfer or Dropbox.

The handbook should include the details of the teachers and students who contributed to its creation.

Projects should be submitted electronically to email: gamescontest@ekome.media .

Especially for the board game, the prototype created in its physical form will be sent to the following address: National Center for Audiovisual Media and Communication - EKOME SA, Al. Pantou & Fragoudi 11, 17671, Kallithea, with the indication "For the Board and Digital Narrative Game Contest".

Submission deadline: May 5, 2023.

Terms and instructions for participation – Personal Data

A necessary condition for participation is that at least one teacher at the school unit be designated as head (cooperation between teachers of different subjects is encouraged). The teacher(s) should undertake the pedagogical support and guidance of the participating students.

The Contest takes place in accordance with the restrictions for the protection of Personal Data of Natural Persons of Greek Law 4624/2019.

The participation of students is voluntary. Necessary condition is the presentation to the school of a Declaration of Responsibility by the parents /guardian of the student that:

• they consent to the student's participation in the contest,

• they consent to the student's participation in the video recording of the test walkthrough of their game, and to the online sharing of this video with the contest organizers,

• they agree with the terms and conditions of the contest,

• they consent to the student's being photographed/filmed at events presenting and awarding the projects,

• they accept that the project of the student's team may be exhibited in events and/or presentations organized by the co-organizers of the contest within the framework of the promotion and communication of contest's aims, scope and implementation.

The written consent forms of the parents/guardians for the participation of the students will be kept in the records of the schools, which are also the Data Controllers of these personal data.

Submission of the project(s) by the responsible teacher should be accompanied by a certificate of collection of the consent forms for all students participating in the contest.

Submission of deliverables will be possible throughout the duration of the contest, with a closing date that of **May 5, 2023.**

A school unit may submit more than one entry, both for the board- and for the digital game categories.

The action is not involved in any way in the promotion of commercial products, there will be no income for the bodies organizing the contest or for others, from the submitted works (by marketing, advertising, etc.) and the participation of all students in all stages of the contest are free.

Participation in the action presupposes the explicit and unconditional acceptance of the Terms of the contest.

As far as copyrights are concerned, the provisions of Law 2121/1993 "Intellectual property, related rights and cultural matters" [Government Gazette 25/A/04-03-1993] apply, as applicable. Specifically (in Greek):

Article 1 «Copyrights»,   Article 3 «Property right»,

Educational materials for teachers and participating teams

To better inform and support teachers interested in participating with their students in the contest, **training days** will be organized on the fundamental principles and techniques of board- and digital game design. The role of the trainers will be undertaken by members of the Scientific and Organizing Committees, with expertise and knowledge of the subject.

Educational material and information on the creation of a game, board or digital, are available (in Greek) on the EKOME website. Particularly:

(a) Handbook on the International Student Contest for Board and Digital Games Design (Idea Publications, EKOME, 2021)

(b) Video tutorials on the creation of a digital narrative game Ren'py platform·

(c) Video tutorials on the creation of a digital narrative game through Twine platform.

(d) Online workshop for educators: Creating visual novel games.

(d) Online workshop for educators with special mention to Scratch.

Evaluation Process - Awards

Evaluation Committee consists of members of the Scientific Committee, the Organizing Committee, as well as EKOME executives.

In each general category (a. Board Game; b. Digital Narrative Game) prizes will be awarded to the teams that will be distinguished by educational level: Kindergarten Prize; Elementary Prize; Middle School Prize; High School Prize.

Basic evaluation criteria are: a) originality of the idea of the game, b) perfection of the design, c) combination of "fun" and "learning", as derived from the game, d) compatibility with the learning content, set by the group according to its statement, e) the plot.

EKOME will grant prizes for the groups of students who will receive the prize in each category. Conditions permitting, an award ceremony will be organized for the award-winning teams.

Scientific Committee:

Karpouzis Kostas (Assistant Professor, Department of Communication, Media and Culture - Cultural Informatics, Data and Computational Cultural Studies Lab [CID-CCS Lab] Panteion University)

Papadopoulos Spiros (Professor, Department of Architecture, University of Thessaly)

Siakas Spyros (Associate Professor, Department of Graphic Design and Visual Communication, University of West Attica)

Tsiavos Prodromos (Head of Digital Development, Onassis Cultural Centre/ Director of the European Public Law Organisatio (EPLO) Institute for Intellectual Property and Innovation)

Voulgari Iro (Laboratory and Teaching Staff Area of Specialization: Information and Communication Technologies in Education (ICT), educational technology, game-based learning (GBL)

Yannakakis Georgios (Professor and Director of the Institute of Digital Games, University of Malta (UM)

Organizing Committee:

Anastasovitis Eleftherios (Lead Instructor at VR GamesLab - CNST-Lab-University of Macedonia / Pyrseia Informatics / Research Assistant at Centre for Research and Technology, Information Technologies Institute / PhD Candidate, University of Macedonia)

Andriopoulou Irene (Head of Research, Studies & Educational Programs Department, Audiovisual Archives & Education R&D Directorate, EKOME)

Bagiartakis Vangelis (Physicist, Board Games Designer & R&D Consultant)

Chadjitheodorou Theodoros (Research, Studies & Educational Programs Department, Audiovisual Archives & Education R&D Directorate, EKOME)

Diagouma Vasiliki (Head of Communication & PR, EKOME)

Karasimos Athanasios (Assistant Professor in Computational Linguistics, Aristotle University of Thessaloniki (AUTh)

Kymionis Stelios (Head of Audiovisual Archives & Education R&D Directorate, EKOME)

Ladias Tasos (Researcher, WRO-Hellas/ Member of the contest' s ScratchGame Teacher Group)

Lampada Despoina (Digital Cultural Heritage Manager)

Papadopoulou Eirini (Department of Digital Governance and Interoperability, General Secretariat of Digital Governance and Simplification of Procedures, Ministry of Digital Governance)

Stouraitis Elias (Tutor & Research Program Manager at PALLADIO School / Dr. of Digital History (digital games and virtual worlds) Department of History, Ionian University, Greece)

Theodorou Athanasios (Audiovisual Archives Department, Audiovisual Archives & Education R&D Directorate, EKOME)

Tsita Christina (Research Assistant, Centre for Research & Technology Hellas (CERTH) / Phd Candidate, University of Macedonia)

Zachariadis Eftychios (Program Coordinator, Games Programming Lecturer at SAE Institute Athens)

Evaluation Committee:

Anastasovitis Eleftherios (Lead Instructor at VR GamesLab - CNST-Lab-University of Macedonia / Pyrseia Informatics / Research Assistant at Centre for Research and Technology, Information Technologies Institute / PhD Candidate, University of Macedonia)

Andriopoulou Irene (Head, Research, Studies & Educational Programs Department, Audiovisual Archives & Education R&D Directorate, EKOME)

Bagiartakis Vangelis (Physicist, Board Games Designer & R&D Consultant)

Gogoulos Giorgos (Teacher / Member of the contest' s ScratchGame Teacher Group)

Kaimakamis Athanasios (Computer Scientist, former teacher of Computer Science)

Karasimos Athanasios (Assistant Professor in Computational Linguistics, Aristotle University of Thessaloniki (AUTh)

Karpouzis Kostas (Assistant Professor, Department of Communication, Media and Culture - Cultural Informatics, Data and Computational Cultural Studies Lab [CID-CCS Lab] Panteion University)

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