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NUMISGAMES. COMPUTER GAME-BASED KNOWLEDGE TRANSFER OF ROMAN COINAGE

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Abstract: In the winter semester 2023/24, the authors of this article taught the seminar “Playful Numismatics. Computer game-based knowledge transfer of Roman coinage”. The aim of the interdisciplinary course between the fields of Classical Archaeology/Ancient Numismatics and the Master’s profile Digital Humanities was to develop computer games using the RPG Maker MV application. The games impart knowledge about Roman coinage and relevant background information about the Roman world in a playful way and at a low-threshold level for a broad audience. This paper presents the workflow of the project and the project’s outcomes and discusses the potentials of serious games for teaching ancient numismatics in university context and to transmit knowledge about ancient coinage beyond academia to a non-specialist public audience.

Keywords: *numismatics, digital humanities, archaeogaming, Roman coinage, teaching.*

In the winter semester 2023/24, the authors of this article taught the seminar “Playful Numismatics. Computer game-based knowledge transfer of Roman coinage”²³. The aim of the interdisciplinary course between the fields of Classical Archaeology/Ancient Numismatics and the Master’s profile Digital Humanities was for students to develop computer games that transfer knowledge about Roman coinage using the RPG Maker MV application. Due to the objective, the games are defined as serious games, which, in contrast to “normal” games, are primarily designed for use in an educational, training or therapeutic context²⁴. Serious games also integrate educational content or simulations in order to teach certain skills or solve complex problems. The concepts and strengths of serious games are used to generate the greatest possible intrinsic motivation in players so that they voluntarily learn the didactic objectives while playing.

In the course, students learnt how to use the RPG Maker MV game engine²⁵ in addition to the specialist knowledge about ancient numismatics. This software makes it possible to create digital role-playing games (RPG) without any programming knowledge. The development is based on a WYSIWYG (what-you-see-is-what-you-get) editor, in which fantasy worlds can be designed using drag & drop (Fig. 1). Pre-installed graphics, so-called tiles, are available

²³ ALMA University of Tübingen, <https://alma.uni-tuebingen.de:443/alma/pages/startFlow.xhtml?_flowId=detailView-flow&unitId=39056&periodId=234&navigationPosition=studiesOffered,searchCourses> (29.05.2024).

²⁴ On the definition and use of serious games in the wider context of archaeology and cultural heritage, see MORTARA *et alii* 2014; VOSS 2019; MARIOTTI 2021.

²⁵ RPG Maker MV, <<https://www.rpgmakerweb.com/>> (accessed 29.05.2024).

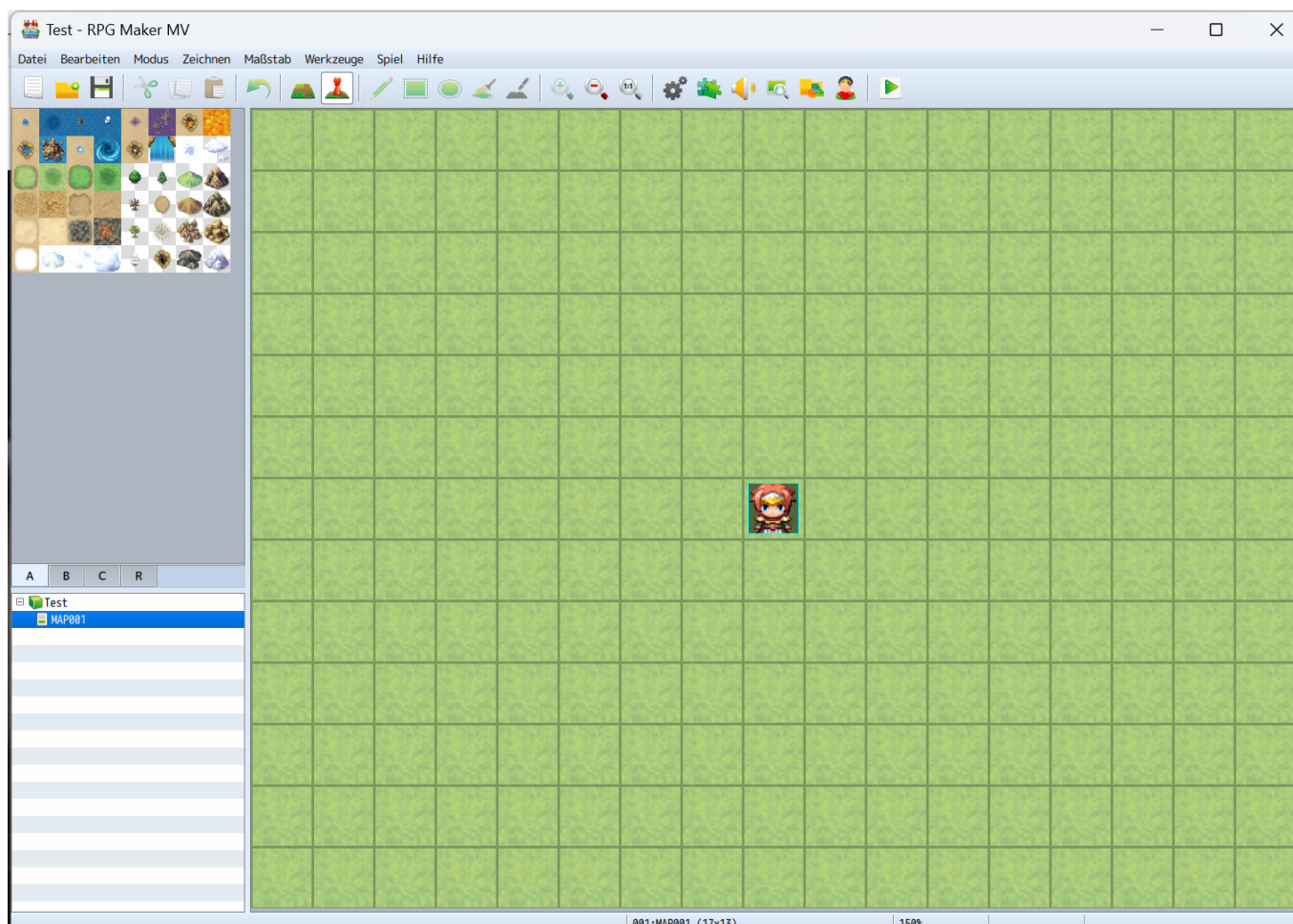


Fig. 1. RPG Maker MV drag & drop menu.

for this purpose, with which basic elements of a 2D scene such as grass, roads, forests and buildings can be displayed. To customise the scenes, users can create and integrate their own graphic lists, so-called TileSets. The popularity of RPG Maker in the game development scene has led numerous users to design and share their graphics sets, some of which are available under a Creative Commons licence. Particularly noteworthy are the RPG Maker forum²⁶ and the open-source websites Itch.io²⁷ and OpenGameArt²⁸, which were also used in the seminar.

In the scenes created, the preset characters can be moved directly using the WASD keys. To insert additional interactive elements into the scenes, RPG Maker offers a special event system that enables typical role-playing game elements such as object movement, text output, interactions and an inventory. These interactive elements make the scenes appear more lively and realistic and make it possible to embed puzzles typical for RPG games, such as search and combination riddles as well as logic and dexterity tasks. RPG Maker also has an integrated database that can be used to customise one's own game almost indefinitely. This includes the modification of player characters (PC), an NPC generator and a predefined combat system. For additional elements

that are not included in the RPG Maker's standard range of functions, it is possible to create own components using the widely used JavaScript scripting language and thus develop completely customised games. Once all the necessary scenes, scene changes and interactive elements have been implemented, the developed game can be imported to the desired target platform using an export function. RPG Maker supports export to the web as well as to Windows, Mac and Android devices.

Programming skills and Latin were not a prerequisite for participation in the seminar. Of the eleven participants, eight students came from Classical Archaeology and three students were enrolled in Digital Humanities. Overall, only three students already had active application experience in the field of computer science before the course began; only just under half of the course participants possessed a basic knowledge of ancient numismatics.

Over the semester, the course was divided into four blocks: 1) teaching of numismatic content and the software, 2) practical concept work, 3) implementation and 4) testing and debugging. In order to develop four different games, the course participants were divided into four teams. After two introductory sessions on Roman numismatics and monetary history, the RPG Maker MV tool was introduced. After the students were familiarized with the software's world and game design through practical exercises, the teams developed their individual game concepts. As a framework for

²⁶ RPG Forum, <<https://forums.rpgmakerweb.com/index.php>> (accessed 29.05.2024).

²⁷ Itch.io, <<https://itch.io/>> (accessed 29.05.2024).

²⁸ OpenGameArt, <<https://opengameart.org/>> (accessed 29.05.2024).

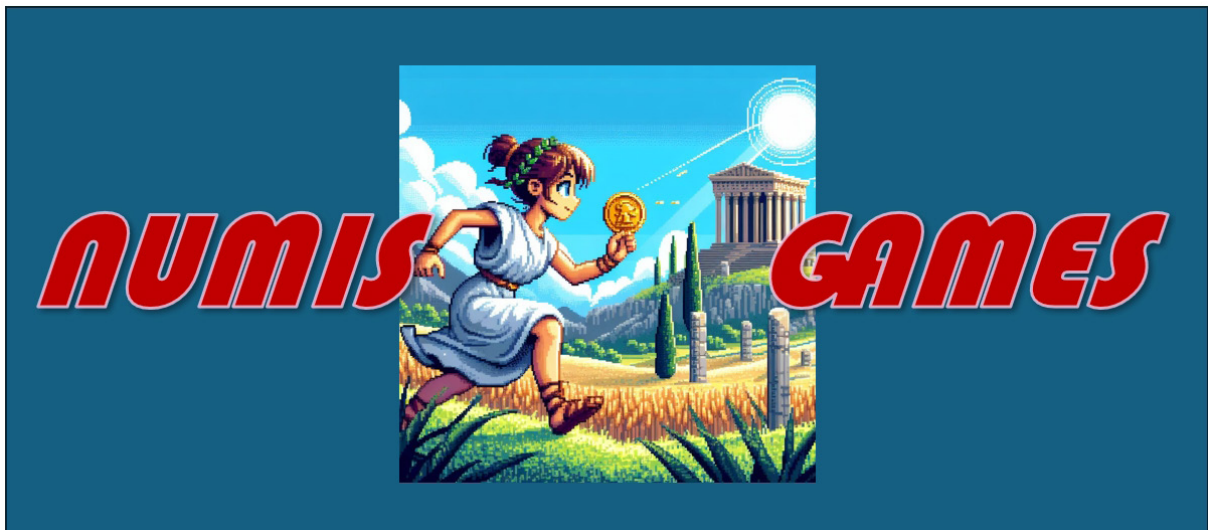


Fig. 2. Logo of NumisGames web portal.

storytelling and didactics, the teams were only given the requirement that the games should convey knowledge about Roman coinage and relevant background information about the Roman world in a playful way and at a low-threshold level for a broad audience—preferably in the same age generation and younger—in a game lasting around 30 minutes. The teams were completely free to decide on the content. The development process in the concept work phase took

phase was accompanied by continuous feedback. After final testing and debugging towards the end of the semester, the NumisGames web portal was created under the umbrella of the Tübingen Digital Humanities Center website, on which the future games were to be published²⁹.

The games were then technically embedded on the NumisGames web platform (Fig. 2) in such a way that the individual games can be played directly in the browser by



Fig. 3. Nero's New Coin. "So you want to mint a new coin? Well, there's a lot to think about."

place in stages, from paper prototypes to the development of technical prototypes with feedback loops in interaction with the teachers. In the same way, the implementation

²⁹ NumisGames, <<https://uni-tuebingen.de/de/264639>> (accessed 29.05.2024).



Fig. 4. Escape Room Mercurii. “A prophecy says that whoever tosses enough coins into the well will always find the way back home.”

accessing a linked URL. In order to increase excitement on the user side and to keep the NumisGames project active for a longer period of time, it was decided that a new game would be released in the middle of each month starting in May 2024.

The first game to be published was “Nero’s New Coin” by Dominik Finke, Jeff Kutten and Emil Schummers. In the game, the player takes on the role of Emperor Nero, who turns out to be a likeable and pitiable character in his battle against the windmills of court administration (Fig. 3). With a great deal of humour, the emperor’s fictional everyday life offers links to the present day and our (mostly negative) experiences with bureaucracy. After successfully completing several mini-quests (some of the tasks are deliberately grotesquely exaggerated, such as fetching a new office chair from the basement for a bitchy office administrator), Nero can finally have a new coin minted. In the course of the game, dialogues with key non-player characters (NPC) convey knowledge about the design of the portrait on Roman coins, the legends and the different metals from which the coins were made.

The game of the month for June is “Escape Room Mercurii” by Leonie Schaile. As the name of the game suggests, the player suddenly wakes up in a Roman rural town and has to solve several puzzles in order to return to reality from imprisonment in the dream world. The game is embedded in a setting with urban elements of ancient Italian character (e.g. forum, temple, building site, taberna). Mini-quests and puzzles—the players have to earn money in order

to sacrifice the coins in the temple—as well as the dialogues with various non-player characters (NPC) convey knowledge about the different denominations of Roman coins and life in a Roman rural town (Fig. 4).

“Tiro Charonis” by Man Cao, Anna Holle and Adelina Knauf is the game of the month for July. In the game, the player takes on the role of young Tiro, a classics student who gets knocked out by a falling bookshelf in the library. While unconscious, Tiro wakes up in the Roman underworld, whose various regions he must explore in order to return to reality with the help of the ferryman Charon. Various mini-quests are embedded in the level structure of the underworld (Elysium, Tartarus), in which coins interlock with well-known figures from mythology to vividly convey the educational content. The game is written in English and is also the only one of the four games to include the combat system of RPG Maker. Another special feature is that the avatars were drawn by the student Anna Holle herself (Fig. 5).

In “Broken Apollo” by Jette Gregorzewski, Susanne Lenkl, Mona Ruof and Vanessa Ziegelin, the game of the month for August, the player embodies the god Apollo, who informs Vulcanus about his wife Venus’ affair with Mars. Out of anger, Vulcanus hurls the player in the role of Apollo to earth and strips him of all his divine powers. As an ordinary mortal, the player must now survive in ancient Rome (Fig. 6) and earn money—also in order to offer Vulcanus a proper sacrifice at the end, which appeases him and allows Apollo to return to the gods.



Fig. 5. Tiro Charonis.

The four games have in common that they take up the topic of Roman coinage and present it from a student perspective to their own peer group. Through the deliberate choice of fictional stories in imagined historical reality and myth, the games are able to communicate specialist content in a language that goes beyond traditional formats of knowledge transfer (e.g. academic lectures, display cases in museums, classroom teaching, etc.) and is particularly well received by the target group. The technical and graphical framework of the RPG Maker MV software also means that the games visually break the transfer of knowledge down to another level and reproduce specialist content in an alienated way. The software processes simple 2D pixel art; in addition, the available image libraries do not contain any significant graphics that authentically represent the material culture of the Roman world. For this reason, the authors of this paper have deliberately decided to depict the Roman past in the games using the available graphics, which are predominantly in the fantasy genre due to the genesis of RPG Maker as fantasy role-playing engine. For example, the avatars do not appear in Roman garb, but rather correspond in appearance and costume to figures from the classic fantasy role-playing game milieu à la Dungeons & Dragons or appear in a steam-punk or anime look (e.g. the ferryman in “Tiro Charonis”).

The alleged stark contrast between setting (claim for historical reality) and style (visual realization) loses its significance during game play—much more so, the fun of playing the games and in-game motivation allow this aspect to fade

completely into the background. Info texts and dialogues from NPC avatars help players to mentally adapt any alien visual compositions to the Roman world; for instance, statues with medieval fantasy iconography in the game “Escape Room Mercurii” are explained as statues of Roman gods. Similarly, the games easily blend modern objects (e.g. the office administrator wearing glasses in “Nero’s New Coin” [see Fig. 3]; teddy bears for sale at a stall in the Basilica Julia in “Broken Apollo” [see Fig. 6]) with ancient time settings. It is precisely this fusion of different realities that makes the games so appealing, as such an approach offers players—especially those unfamiliar with the subject—an understandable introduction to the topic and orientation in the exotic past. The images of ancient coins integrated into the games are based on digital copies in the public domain, such as those from the Digital Coin Cabinet of the Institute of Classical Archaeology (IKMK Tübingen)³⁰. Due to the omnipresent alienation effect of the 2D pixel art in RPG Maker MV, the real coin images stand out visually in a particularly powerful way and leave a lasting impression due to the contrast between 2D pixel art and real (high-resolution) photography.

To summarize and look ahead, it can be said that NumisGames is an experimental project that presents the subject of ancient numismatics to the public in an innovative

³⁰ IKMK Tübingen, <<https://www.ikmk.uni-tuebingen.de/home?lang=en>> (accessed 29.05.2024).



Fig. 6. Broken Apollo. “Pay? With what?”

way. The combination of the use of new technologies and content design from the students’ own viewpoint for their peer group leads to a new perspective on Roman coinage and how the subject is being communicated. Bringing together the heterogeneous institutional expertise from the two fields of numismatics and computer science and the accompanying feedback proved to be the most challenging part of the project. The course instructors, the students actively involved in the seminar and—according to the qualitative feedback received so far—also the external testers and players with a specialist background were surprised that the fusion of fictitious ancient settings and modern objects, anime characters and imagined stories in a 2D pixel art application did not detract from the fun playing the game and the transfer of knowledge. The format of the seminar also turned out to be particularly suitable as an intramural teaching tool. As the participants of the seminar only received a brief introduction to the subject of ancient numismatics at the beginning of the semester, the students had to delve deeper into the subject matter on their own and acquire knowledge themselves. The aim of delivering a product at the end that would be received by their peer group created a particularly high level of motivation among the students to acquire knowledge about Roman coinage. With this short report, the authors wish to present new strategies for teaching ancient numismatics in university context and to transmit knowledge about Roman coinage beyond academia to a broad non-specialist public

audience and at the same time encourage other colleagues in the field to take up this challenge.

REFERENCE

MARIOTTI 2021

Mariotti, S., The use of serious games as an educational and dissemination tool for archaeological heritage. Potential and challenges for the future”, *magazén. International Journal for Digital and Public Humanities* 2(1), 119–138.

MORTARA *et alii* 2014

Mortara, M./Catalano, C. E./Bellotti, F./Fiucci, G./Houry-Panchetti, M./Petridis P., Learning cultural heritage by serious games, *Journal of Cultural Heritage* 15 (3), 318–325.

VOSS 2019

Voss, B., The archaeology of serious games. Play and pragmatism in Victorian-era dining, *American Antiquity* 84 (1), 26–47.