

Historical Game Consulting: A Modular Syllabus

Historyczny konsulting gier – sylabus modułowy

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Abstract: This is the sixth in a series of articles created as part of the project titled *Historical Consultancy for Games* by the Games Research Association of Poland, funded by a grant from CRPK. Building on previous articles, it presents a modular course syllabus for history students, designed to develop competencies useful in game consulting. The modular approach means that, rather than a single unified program, there is a collection of autonomous several-week blocks from which various configurations of topics and tools can be selected. These modules cover working with visual, textual, and numerical materials, gathering information through fieldwork, as well as working with project documentation.

Keywords: historical consultant, game development, historical games, digital games, non-computer games, university education

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Introduction

In the face of the dynamic development of the gaming industry, there appeared a need to build a stronger foundation for the role of historical consultants. Contemporary games often strive to achieve a high level of authenticity and historical accuracy, which not only enriches the players' experience, but also constitutes the unique educational value of these products. Therefore, the necessity to educate specialists capable of acting as consultants may become an indispensable element of the educational offer of history departments. Especially because grant programs offering funds for making games with cultural, heritage and educational values are becoming increasingly popular. This article aims to present a modular syllabus for a course on historical game consulting, designed in response to the growing demand for this type of specialists.

Unlike game design courses, the proposed syllabus focuses on competences that can be developed on the basis of the academic expertise and resources of history departments. The key idea is to prepare students to be mediators between the historical world and the game world, capable of transforming complex knowledge into resources useful for game development. The proposed syllabus has been divided into modules, each of which focuses on a different historical and research aspect. These modules, divided into five-week cycles, combine theoretical classes with practical exercises. Each module contains a detailed description of the expected learning outcomes, methods of verifying students' progress, and a list of recommended literature. The aim is to provide flexibility in teaching that allows the course to be tailored to particular needs, while developing critical and analytical skills necessary in the work of a historical consultant.

As we know from the entire project (see Mochocki & Kot, 2024a, 2024b), as well as from consultations of this paper with game industry specialists (Piotr Pacynko, Bartosz Odorowicz), it is clear that the key competence of a game historian-consultant is familiarity with games: knowledge of the market, understanding games as a medium, orientation in the design and production process. The absence of modules devoted to this topic does not mean that we do not appreciate its importance. We

decided to skip this topic, because thousands of pages of syllabuses (see Ferdig et al., 2021; Çatak et al., 2022) and manuals (e.g. Fullerton, 2024) for game development have already been written in recent years. By contrast, there is a lack of edu-material for this unique section of hist-game consulting, which lies at the intersection of the classic competences of a historian, and the documentation and tools for communication with the development team. The inability to convey historical knowledge in a way that is easy to accept and use in game production is one of the most serious problems in cooperation with a consultant, which is why we focus on this particular area.

Module: Architecture (5 weeks)

The aim of the module is to familiarize students with elements of the history of architecture and prepare them to conduct independent research aimed at collecting material for the development team to create architectural elements in the game world. During the classes, students become familiar with theoretical knowledge in the field of the history of architecture, which is needed to carry out the assigned research. Then, students will gain knowledge about practical possibilities of conducting research and collecting sources: architectural drawings and iconographic materials.

Table 1. Learning outcomes for the module

Effect symbol	Description of the effect	Education method	Verification method
KP_W02	The student is able to independently plan a research plan regarding architectural sources and to competently conduct the search and identify the sources needed for the development team.	Participation in the seminar, exercises	Active participation in classes, including participation in discussions. Presentation of a plan for an independent inquiry on a specific task.

KP_U05	<p>The student is able to competently present a set of sources for research on the history of architecture. Based on the knowledge acquired during classes, the student is able to identify places where one can look for sources for research and collect a sufficient number of sources. The student is able to provide research results to the development team in an organized manner.</p>	<p>Participation in the seminar, independent preparation of a research plan</p>	<p>Assessment of a self-prepared research plan. Evaluation of the proposed set of sources for the development team and the way they are presented.</p>
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Week 1

Introduction to the History of Architecture for Game Development.

- In this module, students will learn the fundamentals of architectural history, with a focus on how architecture can shape the representation of urban and rural spaces within game worlds. The course primarily focuses on the history of Polish architecture, but if students are researching architecture from another country or region, certain elements of the course will need to be adapted to fit the specific context.
- Students will also explore how to create documentation on architectural history tailored to the needs of the gaming industry. This includes understanding the expectations of game developers regarding the format and delivery of materials used in game production. While the module focuses on Polish architecture, it can be modified to cover other areas, such as ancient architecture, depending on the setting of a specific game project.
- Additionally, students will be introduced to the requirements of game development teams when it comes to both reconstructing historical buildings and designing development spaces that reflect the architectural style of a particular era. This includes the layout of buildings, the appearance of streets, and even the creation of historical city maps.

Week 2

In the course, students will become familiar with the unique characteristics of various architectural styles and types of buildings, as well as urban spaces, which they can apply in their research.

- Key elements of architectural styles will be covered, including Romanesque, Gothic, Renaissance, Baroque, Classicist, Art Nouveau, and 20th-century architecture.
- Students will explore the history of architecture in Poland, examining the typical styles of different eras and regions, as well as the appearance of urban and rural buildings characteristic of these periods.
- The course will also focus on the role of architecture and cityscapes in the creation of historically themed game worlds, using selected examples to demonstrate how these elements contribute to immersive design.
- Virtual whiteboards, such as Miro or Mural, will be used as primary tools for team collaboration, allowing students to work together effectively.

Week 3

Discussion of the most important types of materials that students will encounter during research.

Studies on architectural styles: These include research on specific architectural styles, the history of architecture in Poland, or a particular city or geographical region. Monographs of specific buildings, especially castles, palaces, churches, and public buildings, will also be covered.

Architectural drawings and iconographic sources: The course will discuss the availability and potential use of these materials in game creation. Students will learn about the key types of architectural history sources they will encounter in their work, including:

- **Architectural drawings:** These include building projections found in scientific publications and monument catalogs. Such drawings are essential for creating 3D models of real buildings or designing fictional structures that represent specific architectural styles, such as a Gothic church, a medieval castle, a baroque palace, a nobleman's manor, or a tenement house.

- Photographic documentation: Photos capturing the current condition of a building, including architectural details, decorations, and interior designs, as found in scientific monographs. This material can be used to add fine details to 3D models, ensuring historical accuracy.
- Historical iconographic sources: Paintings and engravings, especially cityscapes (vedutes) that depict buildings, streets, and urban spaces within everyday life contexts, are important resources. Notable examples include the works of Bernardo Bellotto (Canaletto), which illustrate 18th-century Warsaw. Similar sources are available for most Polish cities. These materials help teams understand how buildings and streets were integrated into daily life, providing the opportunity to include additional elements such as pedestrians, vehicles, market stalls, street surfaces, and city lighting in the game world.

Week 4

The focus of this week's classes is on the practical aspects of researching. Students will gain hands-on experience in carrying out research and collecting relevant documentation. Key places for library searches include:

- Libraries in faculties of art history at universities and architecture faculties at technical academies.
- Historical museums, such as the Museum of Warsaw, the National Museum in Warsaw, and National Museums in other cities; as well as collections of iconographic sources, like the Room of Engravings at the University Library in Warsaw.
- Independent preparation of photographic documentation, if the building of interest is still preserved.

Week 5

This final week will focus on assessing and applying the knowledge gained throughout the module. The objective of these classes is to verify the students' understanding and ability to apply the skills learned in previous sessions. Students will demonstrate their practical research abilities by planning an independent research project. For example, they will conduct a search on a selected building or city, applying their knowledge of architectural history and documentation techniques.

Literature

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Module: Military History of the 20th century (4 weeks)

The aim of this module is to familiarize students with the specifics of conducting research to provide development teams with accurate materials on vehicles and other military equipment from the 20th century. Military vehicles and equipment are integral elements of many popular games, particularly simulators and FPS games. The audience for such games often includes a large group of military enthusiasts who place significant value on the accurate representation and use of military technologies in gameplay. As a result, the precise depiction of vehicles and equipment, such

as those from World War II, can be a crucial advantage for game developers. This module prepares students to design effective research plans and compile a comprehensive set of materials for development teams, ensuring the authenticity and historical accuracy of military content in games.

Table 2. Learning outcomes for the module

Effect symbol	Description of the effect	Education method	Verification method
KP_W02	The student is able to independently prepare a research plan focused on the history of 20th-century military technology and to competently conduct the search, identifying the sources needed by the development team.	Participation in the seminar, exercises	Active participation in classes, including participation in discussions. Present a plan for independent research for a specific task.
KP_U05	The student can present a well-organized set of sources related to 20th-century military technology. Drawing on acquired knowledge, the student can identify relevant locations for source collection and gather sufficient materials. The student can present research findings to the development team in a structured manner.	Participation in the seminar, independent preparation of a research plan	Assessment of a self-prepared research plan. Evaluation of the proposed set of sources for the development team and the way they are presented.

Week 1

An Introduction to the History and Specifics of 20th-Century Vehicles and Military Equipment. In the first classes, students will learn about the specifics of gathering historical documentation related to various vehicles and military equipment, as well as the methods and resources available for collecting such documentation. When researching a specific vehicle, such as a particular model of a World War II aircraft, students will focus on the following elements:

- Technical data and hardware specifications: These are essential for accurately reflecting the vehicle’s performance and characteristics in the game engine;

- History of usage and utility versions: This information provides context for how the equipment was employed during its service, allowing for a more historically accurate contextualisation;
- Technical drawings and projections: These documents illustrate technical details necessary for creating accurate 3D models of the vehicle;
- Painting schemes: as above;
- Photographic documentation showing specific details of the vehicle: as above.

Week 2 and 3

Introduction to Sources on 20th-Century Military Technology

- Monographs: The primary materials for research are monographs on specific military vehicle models. These monographs provide detailed histories of the vehicle's use, technical specifications, descriptions of different variants, technical drawings for creating 3D models, painting schemes, and historical photographs, often including images of equipment preserved in museum collections.
- Adaptation of Literature: The sample literature presented focuses on Polish vehicles and military equipment of the 20th century. Depending on the course's focus and language, the instructor may adapt the literature to suit the needs of the class.
- Literature Collections: Extensive collections on military technology are available at the Central Military Library in Warsaw and the Main Library of the Academy of Military Arts in Rembertów.
- Photographic documentation: Information from monographs can be enriched with photographic documentation from online collections. These include historical photos and detailed images used in military modeling, such as „Walk Around” photo series showing preserved equipment in museums. For Polish equipment, students can also research in the National Digital Archives: <https://www.nac.gov.pl/>. Examples of online collections of military aircraft photographs:
 - Airplane Pictures: <https://www.airplane-pictures.net/>;
 - Jet Photos: <https://www.jetphotos.com/>.

- **Museum Exhibits:** Students can search for preserved military vehicles in museums, such as the Polish Army Museum or the Air Force Museum in Dęblin.
- **Archival Research:** In special cases related to the production and use of Polish military equipment, students may conduct specialized archival research at institutions like the Central Military Archives in Rembertów.
- **Presenting Research for Development Teams:** Students will learn how to organize and present the materials collected during research for use by game development teams. For example:
 - Technical data should be entered into Excel files, which can be directly integrated into the game engine.
 - Technical drawings, photographs, and descriptive data must be presented in various formats depending on the needs of the development team.
- **Prototypes and Experimental Weapons:** Students will also explore the research needed to gather information about prototypes of experimental weapons. Monographs focused on these topics will be the primary sources. Such weaponry often appears in games based on alternate history or fictional worlds featuring 20th-century technology.

Week 4

The objective of the final class is to assess students' understanding of the material covered in previous lessons and their ability to apply it in practice. For the final task, students will plan and present the results of their independent research on a specific topic, such as a selected military vehicle model. This task will require them to showcase their skills in gathering, organizing, and presenting information, reflecting their ability to conduct research effectively in a game development context.

Literature

Nooks series: *Typy Broni i Uzbrojenia*, *Wielki Leksykon Uzbrojenia Wrzesień 1939*, *Okręty Polskiej Marynarki Wojennej*

Magazines *Militaria* and *Nowa Technika Wojskowa* containing articles devoted to a given equipment model.

Monographs of military equipment published by:

- AJ Press Publishing House (e.g. Aviation Monographs series);
- Militaria Publishing House: <http://militaria.net/en/>;
- Kagero Publishing, <https://sklep.kagero.pl/>;
- Osprey Publishing: <https://www.ospreypublishing.com/UK/>.

Module: Medieval Military (5 weeks)

The aim of this module is to familiarize students with the knowledge of medieval military history, with a particular focus on weaponry, and to prepare them to conduct independent research for creating military components in games. The course emphasizes the importance of interdisciplinary approaches, utilizing sources from various scientific disciplines such as archaeology, history, art history, and museology. Students will be taught to critically evaluate these diverse sources while considering the specific requirements and methodologies of each discipline. Special attention will be given to the formal and functional variability of medieval militaria over time and across regions, examining how weapons differed based on their intended use and their association with various social classes of the medieval period. In addition, the module will introduce students to the needs of the game industry (gamedev), focusing on providing materials for accurate reproductions of medieval weaponry and for creating a cultural environment that reflects the era in question.

Table 3. Learning outcomes for the module

Effect symbol	Description of the effect	Education method	Verification method
KP_W01	The student has advanced knowledge of history and understands its connections with complementary disciplines such as social communication and media studies, and cultural and religious studies.	Participation in lectures and exercises	Active participation in classes, including participation in discussions.

KP_U01	Through in-depth analysis of historical facts, the student can identify and select relevant information for the creation of creative products. Students can effectively search for, select, and evaluate historical information from various sources, ensuring its credibility and usefulness for game development.	Participation in lectures and exercises	Assessment of a self-prepared research plan.
KP_U06	The student is skilled in conducting thorough field research, including visits to museums, archives, and historical sites. S/he can utilize artifacts and other historical sources to enhance and enrich game content.	Participation in lectures and exercises	Assessment of the proposed set of sources and the method of their presentation.

Week 1

The introductory class will cover basic research methods in contemporary weaponology. Students will explore the formal and chronological aspects of offensive weapons used in medieval Western-Central Europe, including categories such as long melee weapons, short melee weapons, pole weapons, blunt weapons, projectile weapons, firearms, and war machines. Basic typologies commonly used by weapons experts will be introduced.

While the focus will be on typologies that classify weapons, examples will also illustrate how advancements in military technology impacted the material culture of the medieval world, such as how the introduction of firearms influenced European architecture.

Students will also learn how to identify and create documentation of historical military items for the gaming industry, with attention to gamedev expectations regarding reference materials used in game development.

Week 2

This class will provide students with an understanding of the formal and chronological aspects of protective gear from medieval Western-Central Europe, covering categories such as armor, helmets, and shields.

A discussion will focus on the possibility of injuries during medieval military operations, documented through anthropological analyses of human remains from old battlegrounds. These studies provide insight into the effectiveness of various forms of body protection gear.

Similar to Week 1, students will become familiar with taxonomies for classifying military items. They will also learn to evaluate and document these items for potential use in game development.

Week 3

The focus will shift to the broader scope of military equipment in medieval West-Central Europe, with an emphasis on horse harnesses, equestrian and transport gear (e.g., wagon trains), camp equipment, bridging equipment, signaling devices, and war banners.

Students will be introduced to various sources that expand our understanding of the material culture developed for medieval military operations beyond just weapons. Discussions will explore the significance of non-military elements of medieval material culture in military tasks.

Students will also learn to identify and document these military artifacts for potential use in game development.

Week 4

Students will explore the formal and functional differences in medieval military equipment through two key topics:

- **Weapons from Other Regions:** This topic will cover weaponry from Byzantium, Russia, Persia, the Great Steppe, and China. By examining regional diversity in weapon design, students will gain insight into how these differences influenced battle outcomes. Key historical examples will include battles from the Crusades, the Teutonic-Prussian and Teutonic-Rus wars, the Polish-Mongolian wars, the Hussite wars, and the Hungarian-Turkish wars.
- **Varied Purposes of Military Equipment:** The second topic is how military equipment was used for different purposes, including combat, tournaments, ceremonial events, hunting, and entertainment.

Week 5

The final class will be divided into two stages:

- Stage 1: Students will participate in exercises demonstrating their understanding of medieval weapon taxonomies. They will evaluate formal and chronological examples of artifacts.
- Stage 2: Students will present the results of their research, showcasing specific documented military artifacts they have selected. The presentation will be a key part of the evaluation, with an emphasis on the accuracy of identification, the broader military context, and the artifact's potential use in game design.

Literature

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Module: Heraldry (5 weeks)

The aim of this module is to introduce students to the fundamentals of heraldry and prepare them to conduct independent research in order to provide material for development teams to create and interpret heraldic elements in game worlds. Theoretical sessions will cover the basics of the history of heraldry, with a focus on Western European and Polish traditions, particularly those related to knights, municipalities, and local governments. Students will learn the language of blazoning – the methods used in modern heraldic language to describe coats of arms – as well as ancient and contemporary rules for designing a coat of arms. The practical component will focus on teaching students the basics of research and the collection of iconographic materials, especially from contemporary sources. Students will also learn how to assess these materials in relation to heraldic principles. Additionally, the practical sessions will emphasize

how to create coat of arms descriptions independently and prepare materials suitable for games, adhering to the latest heraldic standards.

Table 4. Learning outcomes for the module

Effect symbol	Description of the effect	Education method	Verification method
KP_W02	The student is able to independently prepare a research plan involving heraldic sources and materials, and to competently conduct the research and identify the sources needed for the development team.	Participation in the seminar, exercises	Active participation in classes, including participation in discussions. Present a plan for independent research on a specific task.
KP_U03	The student is able to effectively incorporate authentic historical elements into the mechanics and narrative of games, ensuring a balance between historical fidelity and playability. S/he can design games that educate by presenting historical content in an engaging and accessible way, supporting the learning process through interactivity.	Group exercises, case study discussion	Assessment of contributions to the discussion; assessment of the delivered task.
KP_U05	At an advanced level, the student transforms the collected data into document forms useful for development teams, such as reports, visual presentations or data sheets. This skill includes organizing, structuring and presenting data in a way that is understandable and useful to game developers.	Field exercise, case study	Evaluation of the field activities report; correct visualization and interpretation of the source/coats of arms as part of the final task.

Week 1

Introduction to Heraldry – Theory and Practice. Students will be introduced to the theory of heraldry, covering fundamental topics such as the role of heralds and knights’ tournaments in the development of coats of arms. Key concepts will include the structure of a coat of arms (shield

and emblem), as well as additional elements like mantling (lambrequins), crests, and mottos. Students will learn both historical and contemporary principles for creating and describing (blazoning) coats of arms, with particular focus on adhering to the rules of alternation, distinguishing between heraldic colors and metals, and understanding the concept of tinctures and the use of heraldic ordinaries in descriptions. They will also explore different types of coats of arms and understand the distinction between seals and coats of arms. Additionally, the course will cover the symbolic role of coats of arms (heraldic semiotics).

As part of group exercises, students will practice blazoning selected coats of arms (case studies).

Week 2

Heraldry of knights and nobles: historical development and available sources. Students will explore the key stages in the development of heraldry, with explanations of the social and economic factors influencing its evolution. The course will highlight the differences between the heraldry of Western and Polish knights, which stem from distinct inheritance rules, and will trace the transition from knightly to noble heraldry. The guidelines for presenting heraldry – such as in family armorials or on personal artifacts – will also be explained. Selected examples will illustrate the evolution of blazoning language, with reference to the model proposed by Józef Szymański in the 1990s, compared to contemporary practices.

Familiarizing students with sources for knights' and nobility's heraldry. Students will be introduced to various sources of knights' and nobility heraldry, such as sphragistic material (seals), armorials, and sepulchral monuments (gravestones and epitaphs). They will also examine heraldic elements in architecture, everyday artifacts, and objects featuring coats of arms.

In the practical part of the course, students will participate in a virtual tour of old armorials (links in the bibliography).

Week 3

During these classes, the origins of municipal coats of arms will be discussed, with a focus on the differences between knightly heraldry and local

government heraldry. The stages of development in local government heraldry will be examined, highlighting how economic, social, and political factors have influenced changes in heraldic imagery. Particular attention will be given to the changes in Polish local government heraldry after 1990, and the major transformations within communes, counties, and voivodeships.

The course will also cover basic sources, such as sphragistic materials (seals), coats of arms on public buildings, religious institutions, and structures such as „welcome signs” or greeters. An important discussion will cover the evolving role of coats of arms in the modern era, where logos are increasingly used by local governments as a form of visual identification.

In the practical part of the course, students will work in groups to assess the accuracy and appropriateness of several sample local government coats of arms.

Week 4

Field activities – coats of arms in urban space – the example of Gdańsk. Students will prepare photographic and drawing documentation and complete task cards with a specific questionnaire. The tasks will be performed in groups.

A walk along the trail of public and administrative buildings such as town halls: the Old Town’s Town Hall – heraldic friezes on the building and inside, the Main Town Hall, the Artus Court, city gates: coats of arms on the Upland and Green Gates. Photographic documentation and discussion about similarities and differences. Coats of arms in the space of the Main City of Gdańsk.

Coat of arms in the sacred space – St. Mary’s Church, photographic documentation of the coats of arms of Gdańsk patricians.

The classes will also include a case study (team work) – creating descriptions of the indicated coats of arms and joint assessment of the correctness of this blazoning. Preparing sample coat of arms description cards for a game project.

Week 5

Summary classes – verification of knowledge and task completion. The aim of the class is to verify knowledge acquired in previous classes and

its use in practice. Students will work on a case study, their task being to design knights' and local government's coats of arms in accordance with heraldic theory. They will also, based on the acquired knowledge, use Internet databases (see Bibliography) to conduct an iconographic research for the selected (indicated) coat of arms.

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Module: Military History: The Art of War, Battles, and Campaigns (5 weeks)

The goal of this module is to introduce students to military history from antiquity to the 21st century, focusing on the principles of warfare, the

characteristics of various types of weapons, military formations, leaders, and battlefield conditions in each historical era.

Both board games and digital games frequently explore the theme of military conflict, allowing players to take on roles at different levels of involvement. This ranges from the perspective of a civilian or ordinary soldier (tactical level) to that of a commander-in-chief overseeing all forces or a national leader at war (strategic level).

Players of strategy games and war-themed games often expect a high degree of realism in how conflicts are represented, whether in historical recreations or fictional settings. This includes: weapons and equipment (their appearance, functions, performance, and features); military formations (the look, equipment, tasks, and tactics of different units); leaders (the command styles of prominent figures, with attention to their most significant battles); warfare strategy (the overall management of conflict using state resources, including human capital, strategic materials, industrial capacity, and geopolitics). Accurately and realistically recreating the dynamics of military conflict can enhance the player's experience, foster a more engaging game, and potentially provide educational or popularizing value.

This module prepares students to conduct the necessary research, compile a comprehensive set of materials for a game development team, and to translate the complexity of a military conflict into game language.

Table 5. Learning outcomes for the module

Effect symbol	Description of the effect	Education method	Verification method
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KP_W02	The student can independently plan a research strategy for historical sources related to the military of a selected period and can competently conduct the research, identifying the sources needed by the development team.	Participation in a seminar, exercises	Active participation in classes, including participation in discussions. Present an independent research plan for a specific task.
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KP_U05	<p>The student can effectively present a comprehensive set of sources for military history research. Drawing on the knowledge gained in class, s/he can identify where to find historical materials, gathering a sufficient number of relevant sources. S/he can organize and present the research findings in a clear and structured manner to the development team.</p>	<p>Participation in the seminar, independent preparation of a research plan</p>	<p>Assessment of a self-prepared research plan. Evaluation of the proposed set of sources for the development team and the way they are presented.</p>
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Week 1-2

Introduction to Military History. In these sessions, students will explore key military issues across various historical periods. The focus will be on understanding the principles of warfare, the types of weapons and their battlefield functions, the organization and structure of military units, and the command systems employed in different eras.

- **Symmetric and Asymmetric Wars:** Understanding the two main types of warfare and their distinctive combat strategies;
- **The Art of War:** Exploration of warfare at tactical, operational, and strategic levels. Key principles of war as outlined by Claus von Clausewitz, including massing, purpose, economy of forces, simplicity, surprise, unity of command, aggressivity, and maneuver;
- **Weapons and Technology:** Overview of the evolution and characteristics of various weapons (infantry, cavalry, artillery, armor, navy, and aviation) and how their use has changed over time;
- **Analysis of the systems required to conduct war effectively,** focusing on command structures, logistics, and resource management.

By the end of these sessions, students will have a solid conceptual foundation for analyzing battlefield conditions and how armed forces are deployed in conflict. This knowledge is crucial for their future analysis of specific armed conflicts.

Week 3

Introduction to Military Sources – Part 1. This week focuses on working with source texts and research studies to understand the specifics

of gathering historical documentation on military activities. The key materials are monographs: detailed studies of specific battles, campaigns, or wars. These provide an overview of military objectives, preparations, orders of battle, the course of actions, and the decisions of commanders.

Primary sources, in particular letters and memoirs of commanders, offer insight into their decision-making tools, situational awareness, and challenges.

Workshops or exercises are the recommended teaching method. Students will work in teams on selected historical conflicts or battles, focusing on:

- Understanding the background, conditions, and course of the conflict/battle using monographs and primary sources,
- Identifying, describing, and analyzing key moments of the conflict, e.g. leadership decisions. (possible tools: Map.Army, HistoricalMap-Chart.net for creating battle – and campaign maps),
- Presenting alternative outcomes through a decision tree model, exploring what might have occurred if different decisions had been made in key moments (possible tools: Miro/Mural).

A historical game, like any other game, allows the player to make decisions and experience the consequences. Even with accurate historical settings and mechanics, players should have the freedom to make different choices than those known from history. The ability to create alternate outcomes for historical events is valuable for historical consultants working in game development, as it enhances player engagement and replayability.

Selected topics by historical era (based on popularity in games):

- Antiquity:
 - Army Organization: Greek and Macedonian phalanx, Roman legion, war elephants.
 - Campaigns and Battles: Second Punic War, Chaeronea 338 BC, Gaugamela 331 BC, Cannae 216 BC, Alesia 52 BC, Pharsalus 48 BC, Teutoburg Forest 9 AD.
- Military History of the Middle Ages:
 - Army Organization: Knights, castles, infantry, early firearms, Ayyubid Muslim military (Saracens).

- Campaigns and Battles: Agincourt 1415, Grunwald 1410, Chojnice 1454, Hattin 1187.
- Military of the First Polish Republic and its Opponents:
 - Army Organization: Hussars, dragoons, Cossacks, Swedish army post-Gustav Adolf reforms.
 - Campaigns and Battles: Kirchholm 1605, Beresteczko 1651, Warsaw 1656, Vienna 1683.
- Napoleonic Revolution:
 - Army Organization: Corps and division systems, artillery development, logistics, establishment of permanent headquarters.
 - Campaigns and Battles: Marengo 1800, Austerlitz 1805, Iława Pruska 1807, Borodino 1812.
- Military of East Asia:
 - Army Organization: Samurai, ashigaru, Chinese crossbowmen, chariots, Mongol military strategy and organization.
 - Campaigns and Battles: Sengoku Jidai period, Sekigahara 1600, Three Kingdoms era in China, Legnica 1241.

Week 4

Introduction to military sources – part 2: 20th century. Continuation of work with monographs and source texts and studies on one of the selected issues (workshops or exercises analogous to Week 3).

The following topics were selected based on the popularity of individual topics in the gaming industry.

- World War I:
 - Army organization: mass armies, artillery power, industrial war, role of railways, use of war gasses, new weapons: war gasses, aviation, submarines;
 - Campaigns and battles: implementation of the Schlieffen Plan 1914, Gallipoli 1915, Somme 1916, Verdun 1916, Cambrai 1917, Battle of Jutland 1916.
- World War II:
 - Army organization: blitzkrieg doctrine, aviation power, development of underwater weapons, major landing operations;

- Campaigns and battles: Polish campaign of 1939, French campaign of 1940, Barbarossa 1941, war in North Africa 1940-1942, Stalingrad 1942-1943, Kursk 1943, Battle of the Atlantic 1939-1945, Midway 1942, landing in Normandy 1944, Market-Garden 1945.
- Vietnam War:
 - helicopters and the mobility revolution, special forces combat, air war.
- Persian Gulf War:
 - technological and information advantage of Western countries (C4I systems), the power of aviation and guided weapons.
- War on Terror:
 - operations in Iraq and Afghanistan; asymmetric actions.

Week 5

Final Classes and Knowledge Verification. The goal of this final session is to assess the students' ability to apply the knowledge they have gained throughout the module. They will put their learning into practice by completing a comprehensive group task. Each group will independently complete the following tasks:

- Planning and conducting a self-designed research on a campaign or battle that has not yet been covered in class (e.g., the American Civil War 1861-1865, the Battle of Warsaw 1920, the German Offensive in the Ardennes 1944).
- Identifying the most characteristic elements of the chosen campaign that should be incorporated into the game (implemented in the mechanics or engine), e.g. terrain conditions, key formations and combat units, and employed principles of warfare that defined the conflict.
- Presenting a decision tree that maps out the historical course of events during the campaign or battle, as well as alternative courses based on different strategic or tactical decisions.

Everything should be delivered in the form of a presentation and accompanying documentation specifically tailored for use in the making of a historical game. Tools such as Excel or Google Sheets (for preparing tables detailing the strength, morale and special abilities of individual

units), Miro or Mural (useful for presenting decision trees, with optional inspiration from graphics or videos), and Map.Army, HistoricalMapChart.net, or even Canva (for creating campaign field maps or maps of selected battles, depicting their progress, troop locations, and key terrain features) should be helpful in these tasks.

Literature

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Module: Field research (5 weeks)

Field research can be done to obtain materials that are key to creating authentic and immersive game worlds. The surveyed experts indicated that the importance in the role of a historical consultant is not only in providing factual knowledge, but also in obtaining unique information from various sources – often difficult to access (ANON-2,

Nowak, Odorowicz; see Mochocki & Kot, 2024b). This type of knowledge is invaluable for the game development process, as it allows for a better representation of the historical realities, which in turn affects the game's reception by players. The proposed module aims to develop students' skills in conducting field research and effective cooperation with experts. Students will acquire basic knowledge on how to effectively navigate museums, archives and how to gain access to private collections. The course will also cover the principles of field research and the basics of experimental archeology, which will enable students to better understand historical material culture and the processes of its reconstruction. Course participants will learn how to identify key artifacts, how to analyze their significance in historical context and how to effectively use various sources of knowledge available in cultural institutions.

Thanks to practical and field exercises, students acquire the ability to effectively document and present the results of their field research, which is crucial because, according to experts, superficial presentation of historical data may lead to misunderstandings and negative reactions among players (ANON-3, in Mochocki & Kot, 2024b). This module, using documentation tools and visual presentation programs, will help students develop these competencies, preparing them for the role of a consultant who not only understands but is also able to convey the complexity of historical narratives in the context of the game (Pacynko, game industry consultant for this paper). Students will also develop skills related to documenting and visualizing acquired field information. They will practice techniques for creating research flashcards that will help them organize and quickly refer to collected data, and they will learn how to present research results in an accessible and attractive way for game development teams. Additionally, the module develops key social competences, such as the ability to communicate and cooperate with experts from various fields, including curators, archaeologists, historians and reenactors. Students will learn how to conduct professional conversations and interviews, how to establish and maintain relationships with representatives of cultural institutions, and how to work in an interdisciplinary team.

Table 6. Learning outcomes for the module

Effect symbol	Description of the effect	Education method	Verification method
KP_W02	The student is able to effectively identify, search and evaluate material sources, such as museum exhibits, archives, items found in private collections, or via reenactors and archaeologists. S/he is able to select the most valuable and relevant sources that best support the goals of game design.	Field exercise, brainstorming, discussion	Active participation in field exercises and group discussions; evaluation of the field research report, containing documentation of selected sources and their justified selection; correct interpretation of the source as part of the final task.
KP_U05	At an advanced level, the student transforms the collected data into document forms useful for development teams, such as reports, visual presentations or data sheets. This skill includes organizing, structuring and presenting data in a way that is understandable and useful to game developers.	Field exercise, case study	Evaluation of the field activities report; correct visualization and interpretation of the source as part of the final task.
KP_K05	The student is able to respond flexibly to changing work conditions and professional requirements while conducting field research, such as unexpected changes in the availability of resources, the need to cooperate with various stakeholders, and dynamic schedules. S/he is able to prioritize tasks and manage time effectively to maximize productivity and achieve research goals despite emerging challenges.	Simulation, field practice	Assessment of a dynamic fieldwork project (simulation of field research); active communication within the team during fieldwork.

Week 1

Introduction to field research and its importance in historical consulting.

- This course will discuss the role and significance of field research within a historical context and its impact on creating immersive game worlds.

- Through a review of case studies, students will examine examples of how field research has been effectively used in game designs to enhance the authenticity of the presented world.

Methods of finding and obtaining sources in the field:

- Students will explore various methods for identifying information sources, including expert consultations and analyzing open-access databases such as Europeana, Polona, Archive.org, DPLA, and DigitalMuseum.
- They will learn formal procedures for obtaining necessary consents and permits, along with ethical considerations involved in working with historical materials and engaging with collection owners.

The class also covers various methods of field research:

- **Observation:** Students learn how to plan and conduct observations, noting key details and creating accurate descriptions that can later be used in reports.
- **Interviews and Consultations:** How to formulate effective questions, conduct interviews, and analyze the gathered information to ensure it is valuable for game development teams.
- **Analysis of Visual Materials:** How to analyze photos, drawings, maps, artifacts, and other visual materials to understand the historical and cultural context of the object or phenomenon under study.
- **Research on Material Sources:** Procedures for accessing archives and museum collections, as well as effective methods for searching and cataloging historical materials.
- **Reconstruction of Tools and Artifacts:** Students will learn how to use replicas of historical tools and practice basic production techniques, such as ceramics, weaving, or making weapons from flint, to gain a hands-on understanding of historical practices and their potential applications in game design.

Week 2 and 3

Methods of processing and documenting information, including:

- **Organization and structuring** – techniques for categorizing information, creating databases, and organizing data according to the requirements of research reports:

- Spreadsheets (MS Excel or Google Sheets): Practical exercises will involve creating tables to organize data based on criteria such as location, source type, and date. Students will learn to use basic spreadsheet functions, pivot tables, and formulas.
- Tropy: An open-source tool for managing large collections of documents, including notes, photos, and other research materials. Students will practice creating and assigning tags and categories to each item in the database, categorizing by topics, dates, places, and source types.
- Zotero: Introduction to bibliography management using Zotero, allowing students to organize and cite their sources efficiently (if not covered in another module).
- Creating notes and index cards – techniques for structuring, hierarchizing, and reviewing information regularly:
 - Notion or Evernote: Popular tools for creating notes, databases, lists, and index cards. Discussion will include the use of built-in artificial intelligence models to organize information.
 - Anki or MS OneNote: Anki for creating digital flashcards and MS OneNote for integrating with the Office suite, inserting tables, drawings, and links to other documents.
 - Practical Exercise: In pairs, students will brainstorm and use a selected note-taking program and flashcard application to organize information provided by the teacher, facilitating its future use.
- Creating reports and presentations – how to structure content, present logical arguments, and communicate findings effectively:
 - Office Tools (MS Word, MS PowerPoint) or Prezi/Canva: Creating a sample report based on previously organized data. The report will include an introduction, methodology, data analysis, and recommendations for a development team. Citations and bibliography will be generated in Zotero. Students will then create a short visualization of their report in the form of a presentation.
- Digital tools for data visualization – basic techniques for using digital tools for data visualization, particularly in historical research:
 - Nodegoat and QGIS: Introduction to open-source map programs, with students learning basic mapping techniques.

- LIDAR: Students will learn about laser scanning technology to create accurate 3D models. They will scan an object using a 3D scanner or a phone with LIDAR capabilities and virtualize the scanned object for use in research reports.
- Discussion of key archives and museums in Poland – the resources of major Polish archives and museums:
 - Central Archives of Historical Records, Warsaw: Collections of documents on the history of Poland and Lithuania from the Middle Ages to the 19th century, including court records, royal documents, and sources on everyday life, economy, and military.
 - National Archives, Krakow: Documents related to architecture, urban planning, and social and economic aspects of urban life, spanning from the Middle Ages to modern times.
 - State Archives, Wrocław: Valuable sources on Silesian history, reflecting Czech, German, and Polish influences, ideal for games set in multicultural settings.
 - State Archives, Gdańsk: Focused on trade, maritime economy, and daily life in large ports, including merchant files and documents related to maritime trade.
 - National Museum, Warsaw: Collections of paintings, sculptures, artistic crafts, and archaeological artifacts.
 - Polish Army Museum, Warsaw: Extensive military history collections, including weapons, uniforms, documents, and military iconography.
 - National Museum, Krakow: Collections of painting, sculpture, applied arts, and graphics.
 - Archaeological Museum, Poznań: Artifacts from prehistory, antiquity, and the Middle Ages, particularly from Greater Poland.
 - Malbork Castle Museum: Specializing in medieval weapons, armor, and architectural monuments.

Week 4 and 5

Students will apply the acquired knowledge and skills in a comprehensive research project that covers all stages of the research process, from fieldwork to documentation, analysis, and presentation of the results.

Task: A group of students, guided by their instructor, will choose one of the following locations for conducting field research:

- Museum: To create documentation of an exhibit, such as knight's armor, along with its historical context.
- Archive: To analyze historical documents, such as medieval manuscripts.
- Private Collection: To inventory and describe a historic item, such as a piece of furniture, weapon, or artwork.

It is recommended, following the suggestion of Odorowicz, that the research task be conducted in the students' own region (e.g., in the Pomeranian Voivodeship, at the Armored Museum in Kłanin and the „Gryf” Museum, to document 20th-century military equipment; or at the Fisheries Museum in Hel, to document the possibilities of reconstructing a fishing village).

Students will document a selected object or historical documents using various techniques: Photography and field notes (to describe the state of preservation, technical details, and historical context); LIDAR technology (if available) to create a three-dimensional model of the object or selected structure; consultations with experts, such as interviews with curators, archivists, or private collection owners.

During fieldwork, students will use previously learned tools, e.g. OneNote to structure notes and photos into logical thematic sections; Zotero for managing bibliographies; Tropy to categorize and analyze the collected data. Students will further organize the data into flashcards, tables, and charts to facilitate analysis and prepare for presentation.

At the next stage, students will organize the collected materials into spreadsheets (MS Excel, Google Sheets), creating tables based on selected criteria. They will conduct both qualitative and quantitative analysis of the data, identifying key elements that could be useful in the game development process.

Finally, students will create a comprehensive report that includes: A short introduction outlining the purpose of the research; a description of the research techniques used; a presentation of the main findings, supported by photographic documentation and, if available, 3D models; conclusions and recommendations for the game development team on how to incorporate the collected data into the game. As an annex to the report, students will prepare a visual presentation of their results using a selected digital tool.

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Module: Historical Problem-Space (5 weeks)

The module on drafting game concepts based on historical settings is grounded in a modern approach to analyzing and designing historical

games, as proposed by Jeremiah McCall in his work on the analytical framework known as the Historical Problem Space (HPS). HPS is a tool designed for comprehensive analysis of historical games, viewing them as dynamic systems that not only represent historical events but also actively engage players in decision-making within a historical context. It operates on the premise that, to fully understand the historical content of a game, it must be seen as a closed system where players make decisions and take actions within the constraints and objectives set by the game’s designers.

This learning module explores the HPS concept, providing students with the opportunity to apply it both in analyzing existing games and in designing new ones. For historical consultants, HPS serves as a valuable tool for critically evaluating how historical games convey historical content. It helps consultants advise on the historical accuracy of the game’s presentation of events within the interactive medium. By using HPS, consultants can gain a deeper understanding of the mechanics behind historical games and the impact of design choices on the player’s perception of history. This enables them to assess which elements of a game can be adjusted to better reflect historical realities while maintaining the game’s appeal and engagement for its audience.

Table 7. Learning outcomes for the module

Effect symbol	Description of the effect	Education method	Verification method
KP_W01	The student understands how historical games communicate historical content within interactive systems such as games. S/he is able to analyze and design historical problem-spaces in games, using an interdisciplinary approach combining history with social communication, media and culture studies. The student understands the impact of design decisions on the presentation of historical events in games and is able to effectively advise on issues of historical accuracy.	team work, case study, student portfolio	Assessment of team work based on a case study – students create an early concept for a historical game, taking into account all HPS components. Assessment covers teamwork, the innovativeness of the approach, and historical accuracy.

KP_U01	The student conducts an in-depth analysis of historical games using HPS, selects appropriate historical facts and critically evaluates their application in creative projects, including game development. S/he is able to effectively search, select and evaluate historical information from various sources to ensure its credibility and usefulness for historical narratives in games.	brainstorming, SWOT analysis, student portfolio	Assessment of the ability to select facts in brainstorming and create a SWOT analysis based on a selected historical game; assessment of the collection of all work done by the student in the module (including game analysis reports, concept documents, notes).
KP_K04	The student clearly and convincingly presents his or her ideas, research results and recommendations in the HPS setting and is able to address them to various audiences, including development teams, investors and the academic community.	portfolio presentation	Assessment of the student's presentation of his/her portfolio to the student group.

Week 1

Introduction to Historical Problem-Space (HPS) – the basic concepts and components of the HPS framework:

- Definition and importance of HPS: Understanding what the Historical Problem Space is and why it is crucial for analyzing historical games.
- Key HPS elements: Exploring essential components of HPS, such as player agent, gameworld, goals, resources, obstacles, tools, and genre conventions.
- Role of the game designer as a developer-historian: Discussing how a game designer's decisions shape the presentation of history in games and their impact on historical representation.
- Comparing traditional historical approaches and HPS: Highlighting the differences between the conventional historical approach and the HPS model.

Group Task: Students prepare a short report analyzing a selected historical game through the lens of HPS.

Analysis and interpretation of historical sources using HPS – how to apply the HPS framework to the interpretation of historical sources:

- Interpreting historical sources in terms of HPS components: How to break down historical sources and map them to the elements of HPS.
- Analyzing examples from historical games: Examining how historical sources were transformed into HPS elements in existing games.
- Creating historical documentation for HPS: Learning the principles of documenting historical content within the framework of HPS for use in game design.

Group Task: Based on a case study, students analyse a historical source using the HPS framework and provide suggestions for how it could be integrated into game design. This will include recommendations on how to transform the source into game mechanics, goals, and player interactions.

Week 2–4

Designing a game using the HPS template:

- creating a game concept based on a selected historical event, incorporating HPS components;
- determining how genre conventions influence the shaping of the problem-space in the concept of the new game;
- defining the role of the player as a historical agent in the game, including setting goals and defining tools.

Task – conducting a SWOT analysis and developing an early concept for a historical game based on HPS.

Implementation of HPS in a game project – students will gain practical experience in integrating HPS with tools for game creation and data visualization:

- how to use game development tools (e.g., Unity, Unreal Engine) in conjunction with HPS;
- employing data visualization and 3D modeling tools (e.g., LIDAR, QGIS, open-source mapping tools) in the context of HPS;
- practical workshops on implementing selected HPS elements in a game prototype.

Task – creating a simplified game prototype based on the early concept from the previous task, incorporating data visualization tools.

Week 5

Presentation and evaluation of projects – group presentation of student projects and reflection on the application of HPS in practice.

- presentation of game prototypes using HPS (each student presents their portfolio),
- discussion on the challenges and benefits of using HPS in designing historical games,
- evaluation of projects by peers and the person conducting the classes,
- module summary – how HPS can influence future industry projects.

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Methodological guidelines for instructors

Based on the above considerations, and taking into account the learning outcomes and module content, the authors recommend that educators of consultants follow these methodological guidelines:

- Emphasize interdisciplinarity: combine history with fields such as social communication, media studies, culture, and religion

studies. Students should understand that being a historical games consultant requires not only solid historical knowledge but also the ability to communicate historical content in a way that is attractive and accessible to a broad audience.

- Introduce diverse examples and case studies: use general history examples and case studies to demonstrate how different disciplines collaborate in the game development process (Odorowicz).
- Invite guest specialists: bring in experts from other fields (e.g., media studies, sociology, anthropology).
- Use student-activating teaching methods: group work, design workshops, case study analysis, and simulations (Odorowicz).
- Develop the ability to create, analyze, and critically evaluate alternative scenarios for historical events and processes. Students should understand that a multi-variant course of gameplay is a positive trait of the designed game, but it must remain within the bounds of historical plausibility.
- Foster critical thinking and independent problem-solving: encourage students to think critically and solve problems independently.
- Use modern digital tools: integrate digital tools for visualizing historical data, 3D modeling, and data analysis. Organize hands-on workshops where students can use these tools and gain practical experience in applying them to create immersive and authentic gaming experiences.
- Train students to critically analyze historical sources: help students develop the ability to evaluate various historical sources for their reliability and usefulness in game development. As one of our expert consultants states: “a professional historian-consultant does not use wikipedia, but is able to create such a wikipedia on a given topic” (Pacynko).
- Involve students in work on projects, in which they practice comparing different sources and deciding which are most relevant for constructing the game world.
- Develop their communication and presentation skills: focus on both oral and written communication. Historical consultants need to present their ideas and research results clearly and persuasively to development teams and other stakeholders. Organize

presentation sessions where students can practice showcasing their projects through reports and multimedia presentations.

- Provide ongoing feedback and reflection: regularly evaluate student progress through continuous feedback, not just final grades. Pay attention to the creative process as well as the final outcome. Using a portfolio format, where students collect their works, notes, concept docs, and reports throughout the module, can facilitate this ongoing evaluation.
- Encourage active engagement in research: motivate students to actively pursue both basic and applied research in their field of study.

Institutional Factors

History departments are slow to respond to the gaming industry's growing demand for historical consultants for several reasons:

- lack of permanent cooperation between historians and the gaming industry;
- current academic career model: the current system does not motivate academics to introduce innovations;
- reluctance to change the student education model;
- the perceived “unscientific” nature of the game industry;
- institutional obstacles.

History faculties typically focus on partnerships with educational and cultural institutions (e.g., schools, museums, archives) because these are the primary employers of history graduates. Cooperation with the gaming industry or other business sectors is often neglected, as profit-driven endeavors are not seen as central to the academic mission. In academia, career progression depends on publishing research in scholarly journals rather than contributing to commercial projects. As a result, there is little incentive for historians to engage with the gaming industry or stay current with its trends.

Polish history faculties, like many others, prioritize research over teaching. The primary goal for many historians is to advance their academic careers by achieving notable research results, which are required

for doctoral and professorial promotions. Teaching, though important, is often seen as a secondary task, and there is less emphasis on innovating teaching methods or engaging with new audiences, such as those in the gaming community.

Many professional historians are primarily focused on scientific research, with the popularization of knowledge playing a secondary role. For them, research is about discovering truth, not about creating engaging or profitable content. Historians typically write for other specialists, rather than for a general audience, and the commercial success of their work is of little concern. When a game creator hires a historian as a consultant, the historian often treats it as an incidental activity rather than a significant part of their career.

The educational profile of history faculties is largely theoretical, designed to prepare students for academic careers. Most programs prioritize deep knowledge of historical subjects over practical skills that could be applied in the job market, such as consulting for games. There is a prevailing belief that theoretical education is superior to practical, job-oriented training, which contributes to the disconnect between academia and industries like gamedev.

Many historians hold a dismissive view of historical games, seeing them as a form of entertainment that trivializes historical knowledge. They believe that truth and entertainment are incompatible, and that games cannot convey history accurately. This perception is often exacerbated by the fact that historians who occasionally act as game consultants typically do not play games themselves. As a result, they often lack an understanding of the medium's unique requirements and cannot effectively communicate with game developers about how to present historical knowledge in a way that balances accuracy with engaging gameplay.

Conclusion

Breaking the current patterns of thinking and acting among academic staff is a challenging task. Striking a balance between the Humboldtian model of the university (focused on research) and the modern university

that emphasizes cooperation with the socio-economic environment (the entrepreneurial university) offers history faculties a path toward institutional changes that could lead to closer collaboration with economic entities, wherever possible and where reliable historical knowledge is needed. History faculties have the necessary human capital (the skills and competencies of researchers) to establish meaningful partnerships with the gaming industry and propose education programs that align with the labor market's demands.

In this article, we propose modules on architecture, heraldry, various aspects of military history, fieldwork, and workshops on the Historical Problem-Space (HPS) scheme. These suggestions, of course, do not cover all thematic areas that could be useful to consultants. In addition to heraldry and architecture, which serve as examples of working with visual historical material, it would be valuable to add a module on historical costumes, and another one on interior design and furnishings. From the perspective of „history through numbers and parameters,” such as technical data of vehicles in the module on 20th-century military history, one could easily imagine modules on economic history that teach the processing of historical data into spreadsheets. In parallel with – or even instead of – a course on adapting historical settings into the HPS framework, instructors could introduce another module based on other templates used for designing game worlds (e.g. the „worldbuilding template,” see Kot and Mochocki, 2023) or for designing games as a whole (such as the GDD – game design document).

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(Note: due to the modular structure of this paper, there are multiple module-specific bibliographies in particular sections)

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Historyczny konsulting gier – sylabus modułowy

Abstrakt: Jest to szósty z serii artykułów powstałych w projekcie pt. *Konsulting historyczny gier* Polskiego Towarzystwa Badania Gier, realizowanego w ramach grantu z CRPK. Na podstawie poprzednich tekstów przedstawia propozycję modułowego sylabusa kursu dla studentów historii nastawionego na szkolenie kompetencji przydatnych w konsultingu gier. Modułowość oznacza, że zamiast pojedynczego programu jest zbiór autonomicznych, paratygodniowych bloków, z których można stworzyć różne konfiguracje tematyki i narzędzi. Obejmują pracę z materiałem wizualnym, tekstowym, liczbowym, zbieranie informacji w terenie, a także pracę z dokumentacją projektową.

Słowa kluczowe: gry historyczne, groznawstwo, produkcja gier, historia, dziedzictwo, konsulting
