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ACADEMIC INTEGRITY GAMES IN EDUCATION

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The paper investigates the promotion of academic integrity (AcadI) by implementing the method of gamification in the educational process. **The aim of the research** is to highlight the complex of games on AcadI as one of the prospective forms of work with youth at general secondary education institutions (GSEIs) and higher education institutions (HEIs). **Methods.** To achieve the goal, the following methods were used: theoretical (analysis, synthesis of scientific and pedagogical sources) and empirical (observation of the educational process). **Results and discussion.** Based on their own experience, the authors of the article highlight the system of AcadI games, which is considered as several educational game practices that help teachers educate students on aspects of AcadI, develop their knowledge about academic integrity, prevent scientific dishonesty, give them good citation practice, improve their ability to correctly cite sources and format their scientific work, etc. The system of AcadI games was used in the content of the Educational course "Methodology and Organisation of Professional Research and Academic Integrity" for students of the second (master's) level of higher education in the specialties 014 Secondary Education (Ukrainian Language and Literature), 014 Secondary Education (Language and Foreign Literature (English)) and 014 Secondary Education (Language and Foreign Literature (German)) at University of Hryhorii Skovoroda University in Pereiaslav (HSUP). It was based on 3 dominant learning approaches (storytelling, interactivity, and situational learning) and divided into 3 groups, namely: 1) situational games, 2) storytelling games, 3) interactive AcadI games through online learning tools ("You Quote It, You Note It", "Goblin Threat"), apps ("Dilemma Game"), and platforms ("Integrity Games Platform"). These AcadI games are used as a group, pair and/or individual tasks at practical lessons, individual tasks for self-study work, and as a preparatory element to an individual research work. **Conclusions.** It was attempted to highlight the system of Academic Integrity games, that is considered by authors as crucial and can be easily used for students, studying English as a foreign language, of all levels and specialties at HEIs, GSEIs, colleges and institutes, etc. The implementation of such games incorporates proactive action in building a culture of honesty/integrity and fostering ethical behaviour of youth in educational institutions.

The prospects of the research are seen in the pedagogical experiment of checking the effectiveness of the highlighted complex of AcadI games in teacher training at HSUP.

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ІГРИ З АКАДЕМІЧНОЇ ДОБРОЧЕСНОСТІ В ОСВІТІ

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У статті досліджується сприяння академічній доброчесності через впровадження методу гейміфікації в освітній процес. **Мета дослідження** – висвітлити систему ігор з академічної доброчесності як одну з перспективних форм роботи з молоддю в закладах загальної середньої освіти (ЗЗСО) та закладах вищої освіти (ЗВО). **Методи дослідження.** Для досягнення поставленої мети використано теоретичні (аналіз, узагальнення науково-педагогічних джерел) та емпіричні (спостереження за навчально-виховним процесом) методи. **Результати і обговорення.** На основі власного досвіду автори статті висвітлюють систему ігор з академічної доброчесності, яку розглядають як низку освітніх ігрових практик, що допомагають викладачам навчати студентів аспектам академічної доброчесності, розвивати їхні знання про академічну доброчесність, запобігати науковій недоброчесності, формувати належну практику цитування, вдосконалювати вміння правильно цитувати джерела та оформлювати свої наукові роботи тощо. Система ігор з академічної доброчесності була використана у змісті навчального курсу "Методологія та організація фахових досліджень і академічна доброчесність" для студентів другого (магістерського) рівня вищої освіти спеціальностей 014 Середня освіта (Українська мова і література), 014 Середня освіта (Мова і зарубіжна література (англійська)) та 014 Середня освіта (Мова і зарубіжна література (німецька)) в Університеті Григорія Сковороди в Переяславі (УГСП). Вона засновувалася на 3 домінуючих підходах до навчання (сторітелінг, інтерактивність та ситуативне навчання) і була поділена на 3 групи: 1) ситуаційні ігри, 2) ігри-розповіді, 3) інтерактивні ігри за допомогою он-лайн інструментів ("You Quote It, You Note It", "Goblin Threat"), додатків ("Dilemma Game") і платформ ("Integrity Games"). Ці ігри з академічної доброчесності використовуються як групові, парні та/або індивідуальні завдання на практичних заняттях, індивідуальні завдання для самостійної роботи та як підготовчий елемент до індивідуальної науково-дослідної роботи тощо. **Висновки.** У статті зроблено спробу висвітлити систему ігор з академічної доброчесності, яка, на думку авторів, є актуальною і може бути легко використана для студентів, які вивчають англійську мову як іноземну, всіх рівнів і спеціальностей у ЗВО, коледжах, інститутах тощо. Впровадження таких ігор є активною дією у формуванні культури чесності/доброчесності та вихованні етичної поведінки молоді в навчальних закладах.

Перспективи дослідження вбачаємо у проведенні педагогічного експерименту з перевірки ефективності зазначеної системи ігор з академічної доброчесності у підготовці вчителів на базі УГСП.

Ключові слова: академічна доброчесність, ігри, студенти, академічна культура, чесність, етика, навчальні заклади, он-лайн інструменти, платформа.

Introduction of the issue. To join the European educational and scientific space, Ukraine is actively modernising its educational system and has already adopted a number of regulations governing the activities of educational institutions to ensure academic integrity and prevent violations of its norms and rules. Compliance with the laws of academic integrity by all educational process participants is the main condition for involving Ukrainian education and science in global scientific communication. Hence, the problem of

ensuring the ethical culture of Ukrainian youth during their training in GSEIs and HEIs is important to study, especially in the context of innovative educational methods, forms, and technologies, for example through implementing the method of gamification, which is "is an effective tool for control of human behaviour without coercion, using positive incentives" [10: 439]. This reinforces the relevance of the study of the introduction of educational games to promote academic integrity values in educational institutions.

Current state of the issue. The analysis of current research and publications has shown that various aspects of this problem have been the subject of many scientific studies, in particular, academic integrity in the system of education and science (O. Kulyk [5], N. Serdiuk [7; 9], V. Savchuk [7], etc.). A wide range of problems on AcadI at GSEIs and HEIs has been studied, but insufficient attention is paid to methods, forms, and technologies of AcadI promoting, for example, as a method of gamification that is defined as one of the promising trends in the modern methodology of teaching young people in GSEIs and HEIs [6: 82].

Some aspects of using integrity games, as a certain tool to counteract violations of the principles of AcadI, in education were mostly studied by foreign scientists such as K. Gilliver-Brown, D. Ballinger [1], M. Goddixsen, A. Allard, A. Armond, C. Clavien, H. Loor, C. Schöpfer, O. Varga, M. Johansen [2]. Despite the study of individual aspects of this problem, the questions of the importance and use of AcadI games in education remain open.

Aim of the research is to highlight the complex of games on AcadI as one of the prospective forms of work with youth at general secondary education institutions and higher education institutions.

Research methods. To achieve the goal, the following methods were used as theoretical (analysis, synthesis of scientific and pedagogical sources) and empirical (observation of the educational process).

Results and discussion. We concur that today's youth must go beyond simply mastering the technological aspects of their future professions. They should also actively participate in meaningful interactions, establishing subject-subject relationships across various domains, as noted by A. Kalensky *et al.* [4: 104]. We firmly assert that such relationships should be rooted primarily in the principles of integrity.

Elevating the standard of Academic integrity among Ukrainian youth is achievable through their educational journey, which should prioritise the creation of a virtuous environment and the promotion of integrity, "which is aimed at understanding the meaning of academic virtues, awareness of their values, fostering respect for oneself and others, responsibility for learning results" [7: 104]. These foundational elements can be seamlessly integrated into the educational frameworks of both GSEIs and HEIs.

The analysis of educational and scientific sources has shown that a wide range of problems of higher and general secondary education have been studied. However, insufficient attention is paid to innovative forms that would contribute to the formation of a young, virtuous generation of Ukrainians and significantly expand the system of measures and tools to counter violations of the principles of AcadI in educational institutions. Among such modern tools, we define the games on AcadI as one of the prospective, creative, and motivational forms of curricular and extracurricular process in education.

To highlight the complex of games on AcadI as one of the prospective forms of work with youth at GSEIs and HEIs, we share our AcadI games implementation experience in teachers' training at University of Hryhorii Skovoroda in Pereiaslav.

A system of AcadI used at HSUP consists not only of documents covering the policy, standards, and procedures for maintaining AcadI, but also of the educational components (courses) that introduce students to the policy of AcadI and all the possible measures to prevent academic dishonesty. The preventive measures at HSUP include annual events on the implementation of AcadI in the educational and scientific activities of students; conducting informational work (in particular, seminars) on popularizing the principles of AcadI and ethics of higher education seekers; coverage of basic concepts, laws, information bulletins, and informative videos on

AcadI on the HSUP website (section "Academic Integrity") [7: 98]. Moreover, HSUP has powerful text-matching software (Unicheck, Strike Antiplagiarism, etc.) to highlight the texts, when match with resources from the databases, and help faculty to monitor text-matching, if happens, for further investigating whether it's plagiarism or not.

The HSUP experience in AcadI promotion proves the educational component "Methodology and Organization of Professional Research and Academic Integrity" to be an important element of the professional training of students of the second (master's) level of higher education as highly competent specialists and a necessary tool for countering violations of AI principles [9: 160]. The purpose of teaching this educational course is to form students' integral, general, and professional competencies in the unity of knowledge, activity, and value components, which will enable them to master the theoretical and methodological foundations, methods, technologies, and organization of research activities, form the theoretical and practical basis for effective, qualified research, preparation, design and presentation of qualification works [5: 19]. The authors believe this course to be very effective and significant for teachers' training.

Minding the fact that games have become one of the essential activities in modern teaching at institutions of higher education in Ukraine [8: 104] and based on their own experience, the authors have tried to identify the complex of AcadI games, that are used in the content of the educational course "Methodology and Organisation of Professional Research and Academic Integrity" for students of the second (master's) level of higher education in the specialties 014 Secondary Education (Ukrainian Language and Literature), 014 Secondary Education (Language and Foreign Literature (English)) and 014 Secondary Education (Language and Foreign Literature (German)).

These AcadI games are used in many educational modules at HEIs, namely in: curricular (practical lessons in the form of group, pair, and/or individual tasks; at self-study work, as "Check yourself" tasks or during a presentation preparation, etc.; at students' scientific work before and during writing reports, articles, scientific contest works, qualification works, etc.; during a pedagogical practice at school etc.), extracurricular (trainings, quests, different AcadI popularisation events, entertaining games, scientific contests, etc.), self-education of students.

The system of games on AcadI involves particular educational game practices that help teachers educate students on aspects of AcadI, develop their knowledge about academic integrity, prevent scientific dishonesty, give them good citation practice, improve their ability to correctly cite sources and format their scientific work, etc. Such games are nowadays built on different principles, for example storytelling, interactive, and comics [1] and others.

This system is based on 3 dominant learning approaches; they are storytelling, interactivity, and situational (context-based) learning. The list of the games fulfilling the system of AcadI games:

I. Due to a situational learning approach, there are such **situational games**:

- "Plagiarism Detective" is a game where students act as detectives tasked with identifying plagiarism in various written works (they should be provided with research papers, documents, or essays with a copied text, improper citations, or paraphrasing without attribution).

- "Citation Challenge" is a game where students, being provided by texts and information, must correctly identify the appropriate citation style (e.g., APA, MLA, Chicago) for different types of sources (books, journal articles, websites, or interviews) and match them.

- "Plagiarism Escape Room" is a game, where students are in a virtual room, and to escape they must complete

their tasks by avoiding plagiarism in given texts according to proper citation practices, techniques for paraphrasing, and strategies for conducting ethical research.

- "Ethical Dilemma" is a situational game when students (in groups) work with ethical dilemma scenarios related to AcadI (e.g. witnessing friends cheating on an exam or planning to submit someone else's work as their own etc.), discuss them, and try to be first in coming up with ethical solutions or courses of action.

- "Case Study Game-Competition" is a case study competition where student teams (given a case study describing a situation involving academic dishonesty) analyze and present solutions to real-life academic integrity cases.

II. Due to a storytelling approach, we use such **storytelling games**:

- "Sustainable Storytelling" is a game in which students (divided by individual secret drawing into 2 groups, into players-performers and players-obstructors) start to perform a task (writing a report or story) on a given topic (e.g. support for academic integrity in education or other), while everyone has to work hard (players-performers have to write without realizing that players-obstructors are doing their best to force cheating, inadequate cooperating, or enhancing uncertainty about citation rules). Successful completion of the game task is scored when the players-performers make good decisions (despite temptations from the players-obstructors) and demonstrate integrity.

- "Integrity Jeopardy!" is a quiz game, adapted from the popular American TV show "Jeopardy!", when students individually or in teams answer questions focused on academic integrity categories (as plagiarism prevention, citation rules, ethical decision-making, consequences of academic dishonesty, and famous plagiarism scandals, etc.) and earn points. A student or a team with the biggest score of points wins.

III. Due to the interactivity approach, we use **interactive AcadI**

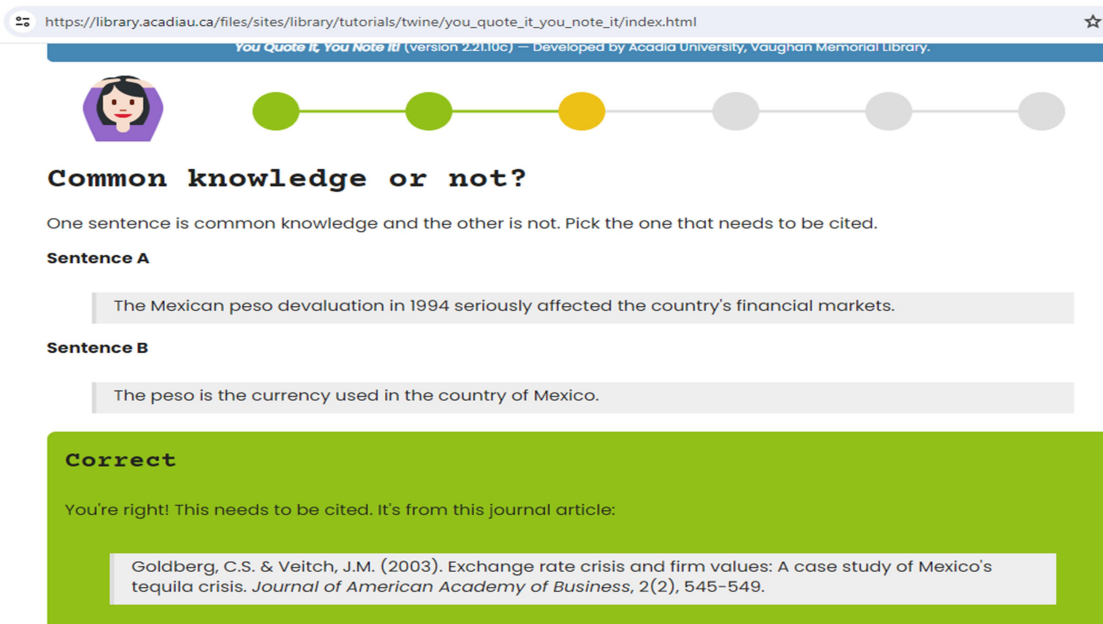
games through online learning tools, apps, and platforms, namely:

- **You Quote It, You Note It**, developed by Acadia University, Vaughan Memorial Library (<https://library.acadiau.ca/research/tutorials/you-quote-it-you-note-it-2.html>).

The information on the content of some basic concepts (citation, plagiarism, common knowledge, etc.), citation types (APA, MLA, Chicago, ASA), the reasons for proper citing, penalties for plagiarizing, and types of common knowledge (general, discipline-specific) are presented. It has a practice aspect, so students can try to identify plagiarism and check themselves with answers and explanations (Figure 1). It has tips for students and recommendations, for instance, Zotero usage, and useful resources for proper citing.

- **Goblin Threat**, a gamified online tool on plagiarism by Lycoming College (<https://www.lycoming.edu/library/plagiarism-game/>), where students find goblins and answer the questions, do tasks (Figure 2), read the answers, etc.

- **Dilemma Game App** (<https://www.eur.nl/en/about-eur/policy-and-regulations/integrity/research-integrity/dilemma-game>), developed by Erasmus University Rotterdam, is a game that focuses on integrity issues in academic research (problems of novice researchers and students, problems of collaboration, etc.). By downloading the app to a phone or laptop, students have the opportunity to practice solving scientific questions: once a month, they receive a dilemma to solve, they can read the statistics of answers from other app users or an expert's comment, they can solve individually or in groups, they can upload a dilemma and get help from others in solving it. Teaching academic integrity to undergraduate students through materials designed for researchers may be of interest to those students who aspire to become researchers.



https://library.acadiau.ca/files/sites/library/tutorials/twine/you_quote_it_you_note_it/index.html

You Quote It, You Note It (version 2.21.10c) — Developed by Acadia University, Vaughan Memorial Library.

Common knowledge or not?

One sentence is common knowledge and the other is not. Pick the one that needs to be cited.

Sentence A

The Mexican peso devaluation in 1994 seriously affected the country's financial markets.

Sentence B

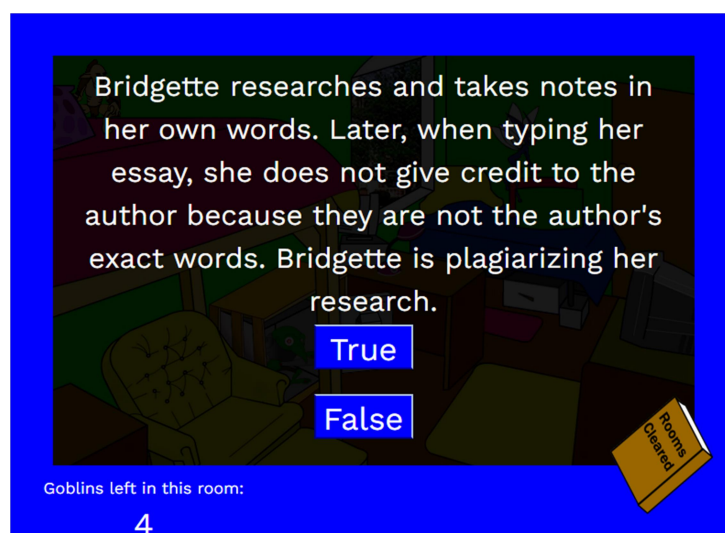
The peso is the currency used in the country of Mexico.

Correct

You're right! This needs to be cited. It's from this journal article:

Goldberg, C.S. & Veitch, J.M. (2003). Exchange rate crisis and firm values: A case study of Mexico's tequila crisis. *Journal of American Academy of Business*, 2(2), 545-549.

Fig. 1. The example of explanation at You Quote It, You Note It



Bridgette researches and takes notes in her own words. Later, when typing her essay, she does not give credit to the author because they are not the author's exact words. Bridgette is plagiarizing her research.

True

False

Goblins left in this room: 4

Rooms Cleared

Fig. 2. The example of the task at Goblin Threat

- **Integrity Games Platform** (<https://integgame.eu/>) is a free multi-lingual (English, French, Portuguese, Hungarian, and Danish) online tool, developed to enable training sessions where students engage personally with different ethical dilemmas on academic integrity [3: 2]. The platform has a strong emphasis on so-called grey-zone issues, related to citation, plagiarism, collaborative practice, and working with data, and contains a user guide for teachers, and an optional QUIZ designed partly to provide personalized

suggestions on what cases to play, and partly to spark curiosity about the topics covered [3: 3]. That's why it proposes 4 kinds of case games (the Collaboration Case, the Plagiarism Case, the Qualitative Data Case, the Quantitative Data Case). These cases simulate several realistic situations as dilemmas (the example of the dilemma from the Collaboration Case is given below in Figure 3), in which a student plays the main character with many tasks to fulfill, and his/her decisions have consequences (Figure 4).

Max helped me - so what?

The workload for your course is overwhelming and you are behind. If you do not improve your ongoing project, you will fail your exam.

The partner of a group member, Max, took the course last year and offers to help you with a draft for one of the main sections.

The draft is really good, it contains some brilliant parts that could highly improve the quality of your group work.

You only need to change a few words to make it fit perfectly within the overall project.

What do you do?

I do not use the text written by Max. I will rewrite the whole section from scratch, even though it will take a long time and will not be as good.

I use the text written by Max. As the text is written for us, it is not plagiarism, so I think it should be OK.

[← Back to the case introduction](#)

Fig. 3. The example of the dilemma №5 from the Collaboration Case.

This is what happened

CL3-2a

You and the group do OK in the exam. After all, the content and style of your work seemed to get a good reception by the supervisor.

In the end, your teacher agrees to supervise your bachelor project.

About your choice

You chose not to use the text written by your group member's partner, Max.

What kind of help would you have been willing to accept from Max? Would it be OK if Max read it through after you wrote it yourself?

This dilemma was about ghost authorship.

It was also about how much help you are allowed to get on assignments that are used to assess your learning.

[← Back](#) [Next \(to the start page\)](#)

Fig. 4. The consequence of the dilemma №5 from the Collaboration Case.

Each Case includes 7 dilemmas and a student playing a game can play: 1) through the case once, according to its own beliefs, and will only encounter 3 of these; 2) through a case twice, choosing different answers and reading the consequences, and will encounter 5 of these; 3) many times and try to choose all the dilemmas; 4) the chosen dilemma from the List of the Structure of Cases.

The platform has a dictionary of central concepts, which can be seen in the text of dilemmas. For example, the text of dilemma №6 from the Plagiarism Case has an underlined word "project" and the option of showing the concept content (Figure 5), which can be useful for beginners.

I have already written it

The deadline for the final assignment is tomorrow. To finish it, you only need to have a historical overview of your to

You have actually written one different course and you got You could save a lot of time by earlier work into the **project**, adjustments. This will allow you to complete the assignment through and do so before the deadline.

How do you proceed?

Project
Projects are larger assignments usually done with help from a supervisor.
Projects can be done individually or in groups. They are usually structured around a problem statement and contain some background sections with literature review, some analysis and a discussion.
In some places students write projects throughout their education, others do not write a major project prior to the bachelor project.

I use the earlier writing with minor adjustments.

I spend the time writing it again, even if this leads to me not having time to make the last spellcheck.

← Back to the case introduction

Fig. 5. The example of an inbuilt dictionary of main concepts

This website is included as a practical module of the educational course "Methodology and Organisation of Professional Research and Academic Integrity" to stimulate discussions during practical classes and mostly as part of the preparation for an AcadI exam. These Integrity Games are successfully used in the training process of students of the second (master's) level of higher education in the mentioned above specialties at HSUP. They were engaged in playing and we got only positive reflections.

Conclusions and research perspectives. The observation of the educational process at HSUP while implementing gamification gives the authors belief that the highlighted complex of AcadI games is crucial and can be easily used for students, studying

English as a foreign language, of all levels and specialties at HEIs, GSEIs, colleges, and institutes etc. These Academic Integrity games can be used to teach integrity values not only to students at all kinds of educational institutions but also to enhance the engagement and commitment of academic staff, management, and stakeholders, including employers and even parents. The implementation of such games incorporates proactive action in building a culture of honesty/integrity and fostering ethical behaviour in educational institutions.

The prospects of the research are seen in the pedagogical experiment of checking the effectiveness of the highlighted complex of AcadI games in teacher training at HSUP.

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