

Research Article

Integrity Hero: An Innovative Gamified Model for Academic Integrity and Plagiarism Prevention Among First-Year University Students

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Abstract: There is an assumption that many first-year university students have a misconception regarding academic integrity leading to cases of accidental plagiarism arising out of their lack of understanding of citing, referencing, and paraphrasing concepts. This research explores Integrity Hero, an innovative and interactive gaming platform designed to raise awareness regarding academic integrity among university students via engaging activities involving exploring, word games, and ethical dilemmas. Gamification facilitates active learning along with instant feedback, which helps in enhancing learning and retention. The research shows an improvement in awareness related to plagiarism and promotes ethical conduct among students.



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1. INTRODUCTION

The concept of academic integrity forms one of the pillars of higher education, but institutions face increasing cases of academic dishonesty. According to recent bibliometrics, there is an indication that much of the plagiarism by first-year students happens out of ignorance, due to poor time management or fear of failure and lack of basic knowledge of academic writing skills like paraphrasing and correct citation (Ahmad & Fauzi, 2024).

Traditionally, the way forward towards teaching students about integrity has been using passive inductive lectures and rule books in which integrity was seen as a form of punishment than

something to be learned (Masripah & Usman, 2025). Moreover, traditional educational approaches have always relied on control booklets, non-engaging introductory talks, and mandatory compliance sessions, all of which are ineffective in creating an active learning experience for learners or instilling knowledge about ethics (Bakogiannis & Papavasiliou, 2026; Khan et al., 2021). In light of the fact that these approaches may fail to capture students' attention and teach them about ethics, gamification has become popular in learning activities (Pelizzari, 2024).

Thus, this innovation aims are; first, to increase the awareness; for helping first-year university students understand and identify academic integrity in its complexity, especially when it comes to dangerous instances of plagiarism such as plagiarism by direct copying, patchwriting, self-plagiarism, and collusion (Khan et al., 2021). Second, to improve the engagement of students; by going above and beyond traditional didactic methods and immersing students into a stimulating gaming environment where they collect points, badges, and even earn a certificate at the end of the game, thus increasing their intrinsic motivation (Murillo-Zamorano et al., 2021; Zeybek & Saygi, 2024). Third, to encourage self-learning; by providing a secure gaming environment where students get immediate feedback about mistakes from mini-games to correct their mistakes before submitting assignments (Ge et al., 2025; Song & Vermunt, 2021).

2. METHODOLOGY

This innovation was developed based on the course code Introduction to Information Skills, which includes topics related to citation practices, referencing styles, and plagiarism prevention. The learning tool was designed using web-based and is compatible with any electronic devices. This innovation incorporates interactive elements to create a more engaging learning experience. Features such as navigation buttons, game-based activities, and user-friendly interfaces encourage active participation among students.

The innovation focuses on facilitating first-year students understand the concept of plagiarism, its dangerous plagiarism types, plagiarism reasons, and plagiarism prevention. Furthermore, the tool also integrates with real-time feedback mechanisms that allow students to assess their knowledge on citation and referencing techniques correctly while using information sources. This innovation aims to enhance student engagement, improve comprehension and concentration, and promote the practical application of academic integrity principles.

3. FINDINGS

Figure 1 presents the interface of the game. This game starts with the student enters their name in the box for final certificate. The certificate will trigger the excitement of the students towards the game they played. Welcoming interface is designed in interactive way to attract the students to keep continue with the games with assisted by Prof. Byte, the main character. Then, the students will click the Start Adventure! to begin and explore the games.

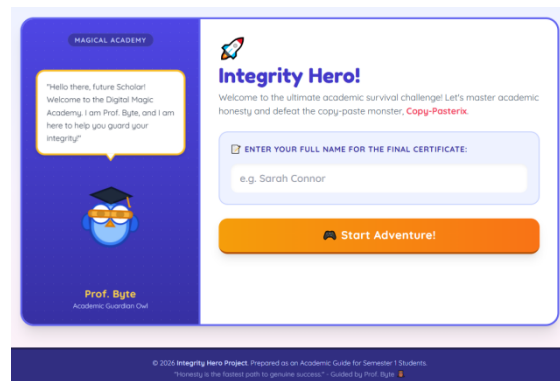


Figure 1. The interface of Integrity Hero!

Before starting the games, students need to understand the concept of plagiarism by reading the information provided, as illustrated in Figure 2. In this plagiarism academic briefing, there are understanding plagiarism, the four dangerous plagiarism types, why do students plagiarize?, perfect plagiarism prevention, and the tips. After reviewing and reading the notes, then the students may play the games. Let's beat the monster.

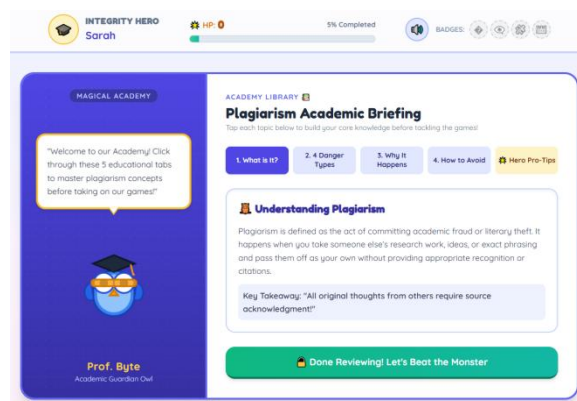


Figure 2. Plagiarism Academic Briefing.

The first game starts with guess the word by cracking the integrity codes as shown in Figure 3. There are five questions for this game, the student needs to read the clue hint provided to guess the word by guessing the alphabets. The students will get the answer by guessing the word. The sound of buzz will appear when guessing the wrong alphabets, and the right alphabets as shown in Figure 4 with the falling of confetti. In addition, the students learn new knowledge and aware of the terminology used relevant and related to the topic discussed and as well to defeat the monster, Copy-Pasterix.

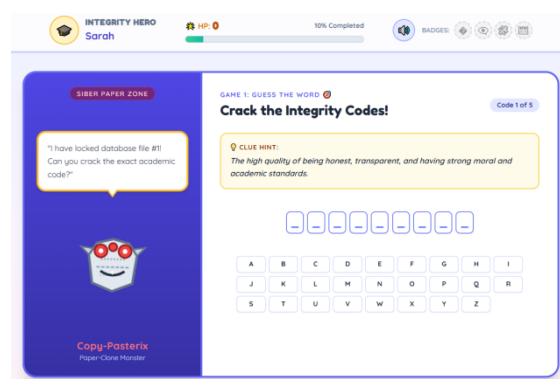


Figure 3. Game 1 (Guess the Word).

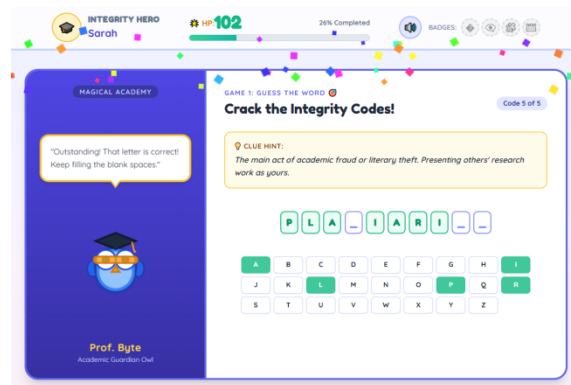


Figure 4. Example of guess the word games.

Figure 5 presents the second game with fast-paced integrity check by Do You Know Plagiarism? The game has five questions to be answered, either it is Yes or No. The student needs to read thoroughly the statement, then decide either it is plagiarism or not. In this game, students are capable to test their understanding of the plagiarism by the scenarios or situations.

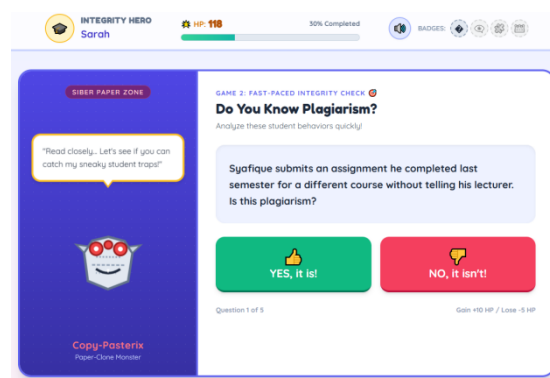


Figure 5. Game 2 (Fast-paced Integrity Check).

Figure 6 illustrates the third game which is mix & match definitions. The students have to tap a term on the left, then select its matching definition on the right. This game teaches the students to understand the definition for each of related term used in this topic.

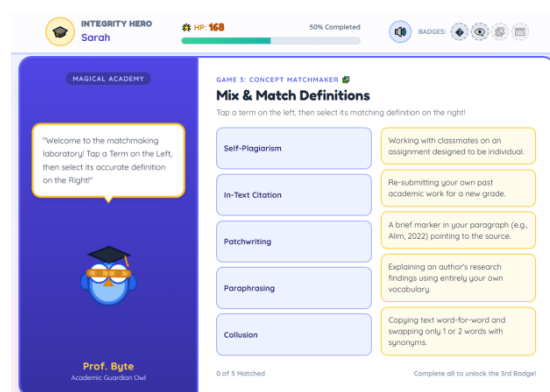


Figure 6. Game 3 (Concept Matchmaker).

Figure 7 presents the last game is citation detective, where the student has to inspect each citing problem and choose the correct answer to the five questions provided. This game is related to the master referencing and APA formatting. Through this game, the students are able to identify the citation errors and well apply the reference and APA formatting. When the students answered it correctly, the Prof. Byte, the main character provides the briefing explained the answer indirectly to the students as shown in Figure 8.

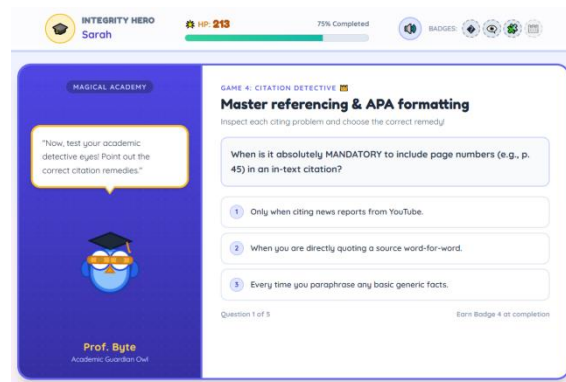


Figure 7. Game 4 (Citation Detective).

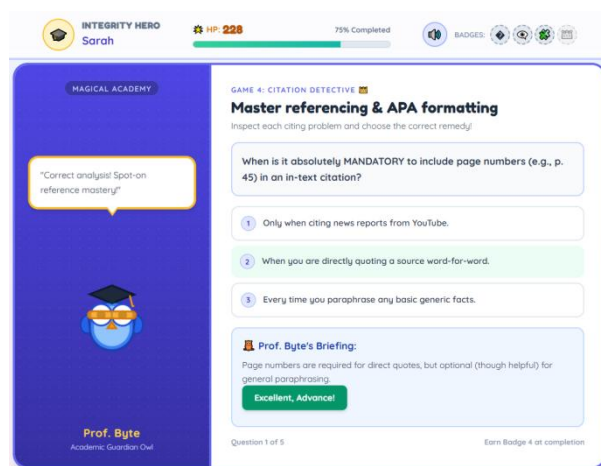


Figure 8. Example of Master Referencing and APA Formatting.

After completing the games, the students will receive the certificate of Academic Integrity. It shows the evidence of successful in understanding and learning the topic. The students earned the badges and total scores throughout the games. The students may download or print the certificate, and as well they may play the game again as shown in Figure 9.

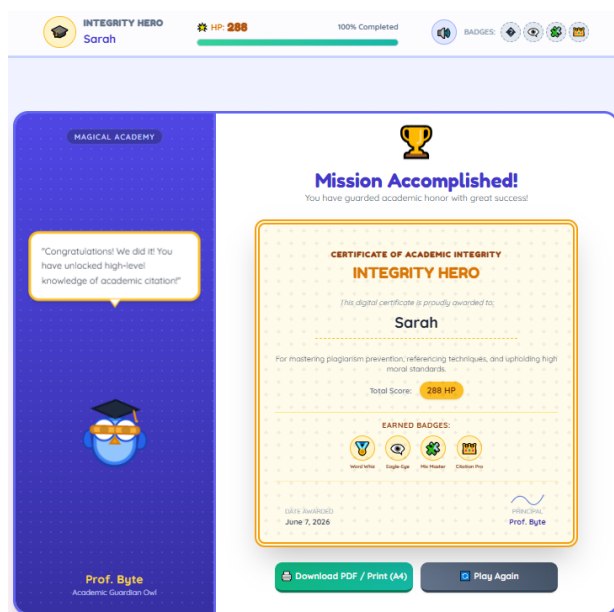


Figure 9. Certificate of Academic Integrity.

Figure 10 illustrates the game dashboard. The student may view the name, Hero Points, the sound, the badges, and showing of the progress of the game. This game dashboard acts as tracking for the player.



Figure 10. Game Dashboard

4. DISCUSSION

Integrity Hero is an educational game designed to strengthen students' understanding of academic integrity and plagiarism prevention through interactive and engaging learning activities. The game adopts a gamified approach that allows students to explore concepts, practice skills, and apply their knowledge through a series of activities. Unlike traditional learning approach, Integrity Hero encourages active participation by combining educational content with game-based experiences.

The game is organized into briefing and four types of activities, before the students starting the game. Students begin their journey by learning the concept of plagiarism, the types of dangerous plagiarism, reasons of plagiarize, plagiarism prevention, and the tips. This fundamental is crucial for assisting first-year university students develop responsible academic practices from the beginning of their studies.

The students are freely to navigate the learning materials and activities at their own pace. The core of the game consists of 1. Guess the Word, students solve the key academic terms by using a responsive, playful digital keyboard, 2. Fast-paced Integrity Check, students face real-world scenarios and decide whether a student's action is plagiarism by selecting a simple Yes or No answer, 3. Concept Matchmaker, students match plagiarism terms with their correct definitions in a friendly, card-matching style, and 4. Citation Detective, students act as citation detectives, identifying and fixing incorrect APA reference formats. Moreover, the end of the games, there is mission accomplished certificate available for downloading act as an evidence of completed activities.

4. CONCLUSION

The Integrity Hero serves as a groundbreaking example of a platform that allows first-year university students to develop advanced skills in citing sources and self-regulation in a fun and supportive online setting. In order to promote a culture of academic integrity on university campuses, it is crucial to consider integrating gamification applications like Integrity Hero in early transition orientation and LMS courses.

This innovation is a notable step forward in dealing with academic integrity and plagiarism issues in higher education institutions. Instead of relying on the usual and old-fashioned compliance model, which uses threats as motivation, the new model considers academic integrity to be a kind of literacy activity for students in the process of transformation (Zhao et al, 2024).

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