



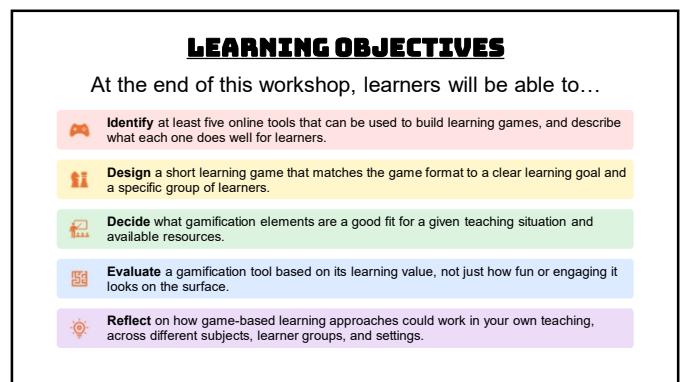
3



4



5



6



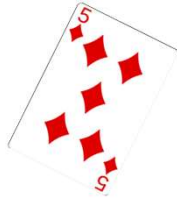
7



8

WHAT IS GAMIFICATION?

**GAMIFICATION IS
THE USE OF GAME
DESIGN ELEMENTS IN
A NON-GAMING
CONTEXT.**



Sources:

- 1) Sanchez, E., Oostendorp, H., Fijheer, J., & Lavoué, E. (2019). Gamification. , 1-11. https://doi.org/10.1057/9781137449566_0013.
- 2) (2022). GAMIFICATION IN EDUCATION: Российская наука: актуальные исследования и разработки. Сборник научных статей. Всероссийской научно-практической конференции. В 2-х частях. Часть 1. https://doi.org/10.17748/2075-9908-2014-6-6_2-314-317.

9

WHAT ARE GAMING ELEMENTS?

<https://anzahpe.dougsresentation.com/8/>



10

KIMI

Type "/" to quickly access skills

+ Agent

K2.6 Thinking

11

WANG ET AL. 2024 GAME ELEMENTS

- | | | | |
|--|---------------------------------|--------------------------------------|------------------------------------|
| 1. Integration with educational objectives | 10. Freedom to fail | 19. Peer rating | 28. Board games |
| 2. Game rules | 11. Task with challenging goals | 20. Storyline | 29. Hierarchy |
| 3. Rapid feedback | 12. Prize or bonus money | 21. Clues | 30. Virtual identity |
| 4. Fairness | 13. Leaderboard | 22. Virtual helper | 31. Integration with software apps |
| 5. Points or scoring | 14. Adaptation to difficulty | 23. Puzzles | 32. Virtual treasure |
| 6. Teamwork | 15. Experiential activities | 24. Social network | 33. Virtual reality |
| 7. Competition | 16. Educational tools or props | 25. Progress bar | 34. Health score |
| 8. Time pressure | 17. Performance status feedback | 26. Badges | 35. Check in |
| 9. Increasing difficulty | 18. Virtual currency or chips | 27. Customization or personalization | |

12

SOME IMPORTANT *DESIGN PRINCIPLES*

- Integration with training goals
- Clear and fair game rules
- Rapid feedback
- Team-based competition
- Challenging goals
- The degree of difficulty and pressure of gamification

13

SOME IMPORTANT GAME *MECHANICS*

- Points
- Prizes
- Leaderboard



14

VIDEO GAME GENRES

- Action
- Adventure
- Puzzle
- Role-playing
- Simulation
- Strategy
- Sports
- Board / card game
- Casino game
- Party Games
- Social deduction games
- Trivia Games

15

EXAMPLE 1

- Tool:** Gimkit.com
- Genre:** Action game
- Mechanics:** 2D Platformer, answer MCQs for energy
- Objective:** Recall Kern's stages of curriculum development
- Audience:** ANZAHPE workshop attendees



16

EXAMPLE 2

- Tool:** Sporcle.com
- Genre:** Puzzle / Trivia game
- Mechanics:** click the appropriate part of the image
- Objective:** Recognize parts of the brain on a midsagittal cut
- Audience:** 2nd year medical students in a neuroanatomy class



Scan this, then press

PLAY QUIZ

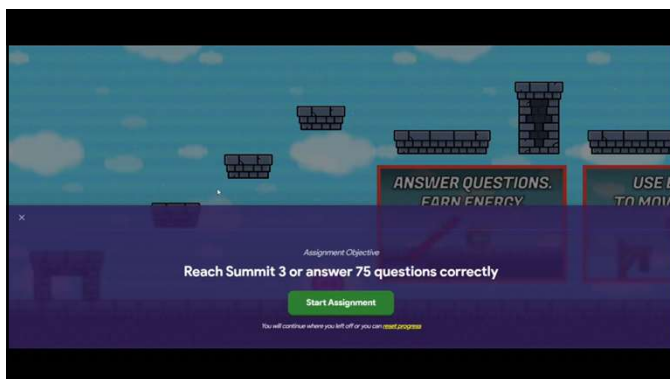
17

THOUGHTS?

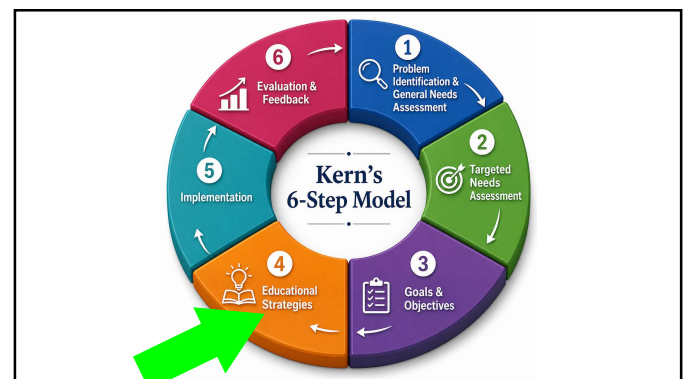
- Example 1

- Example 2

18



19



20

GAMIFICATION CAN SUPPORT BOTH TEAM-BASED AND INDIVIDUAL LEARNING

Individual:

- Boosting individual motivation and engagement online.
- Improving individual performance and knowledge.
- Personalized pathways and player types.

Team-Based:

- Building group cohesion and teamwork.
- Large classes needing active, social in-class work.
- Tasks where competition + collaboration matter

21

RECALL VS APPLICATION

Your main goal

- Memorize terms/facts

- Long-term retention of course content

- Evaluate or train procedures/skills

- Foster transfer, problem solving

Your main goal

Recall

Recall with spaced, repeated assessments

Application

Application with process data

Gamified Examples

- Kahoot/Quizizz-style quizzes

- Bi-weekly online gamified quizzes

- Gamified procedural assessments, simulations

- Gamified activities focusing on process performance

22

RAPID FEEDBACK IS USUALLY BETTER

delayed feedback helps to curb shallow "guess-and-check" strategies or to manage cognitive load.

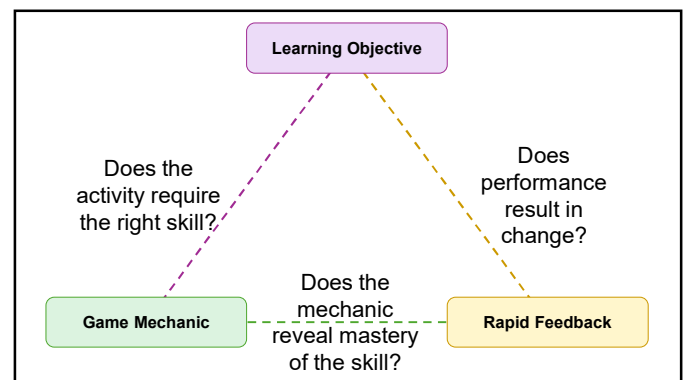
Rapid Feedback

- Skill polishing and performance improvement.
- Formative quizzes and language learning.
- Reducing cognitive load & supporting strategies.
- Engagement and motivation in class.

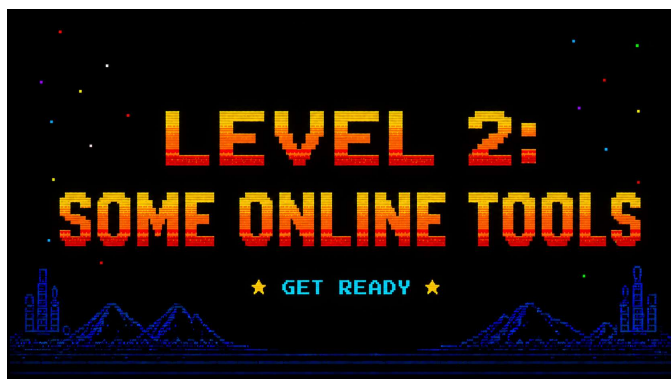
Delayed Feedback

- Curbing "gaming the system."
- Avoiding overload or annoyance.
- Preventing demotivation from negative-only feedback.

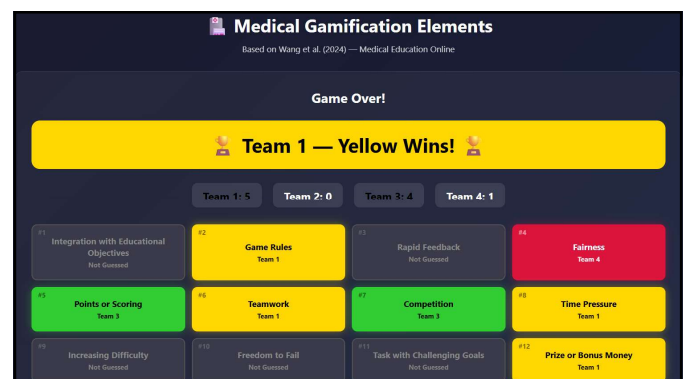
23



24



25



26

Kimi.com

27

KIMI

Type "/" to quickly access skills

+ Agent

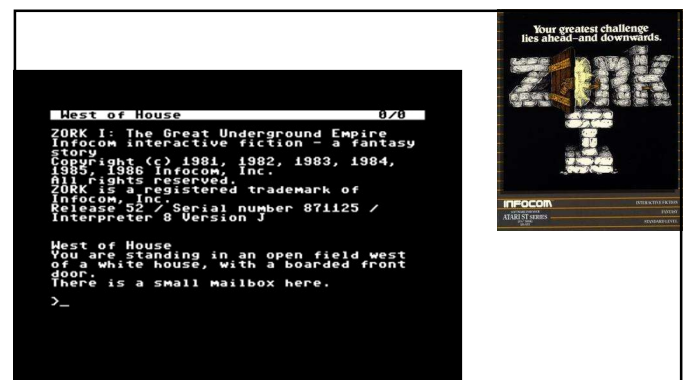
K2.6 Thinking

28

RECOMMENDED FOR THIS WORKSHOP:

- Use the prompt template provided
- Try a Zork-Type Text Adventure, Card Game, or Social Deduction Game
- Keep the game short – 1-2 minutes
- Keep the play simple
- Your audience is us – design either for 3 teams, or for 24 people

29



30

Instructions (KIMI):

1. Open the template or one of the example prompts
2. Replace all the text in RED font with your specific changes
3. Copy the entire text of your prompt
4. Paste it in the text box on Kimi.com
5. Make sure the model is set to K2.6 AGENT
6. Press the black Up Arrow button (⬆)
7. Kimi may think for several minutes, and then you'll see your game
8. Download the file
9. Please give a copy to Doug and he'll share it with the group

31

2. Replace all the text in RED font with your specific changes

I am building a web-based educational game for a workshop. Please create a complete, self-contained, single HTML file with embedded CSS and JavaScript. Please use the following guidelines:

1. Topic & Learning Goal
 - SUBJECT: [e.g., Gamification, Health professions education, New Zealand history]
 - **Specific learning objective:** [e.g., "Players will match antibiotic names to their mechanisms of action"]
 - **Content to test:** [Paste your glossary, terms, questions, or facts here. Example: Penicillin / Cell wall synthesis; Tetracycline / Protein synthesis; etc.]

2. Target Audience
 - **Who is playing:** [e.g., first-year medical students, 10th-grade history students, adult learners]
 - **Approximate age / level:** [e.g., 18-22 years old, beginners]

32

3. Copy the entire text of your prompt

I am building a web-based educational game for a workshop. Please create a complete, self-contained, single HTML file with embedded CSS and JavaScript. Please use the following guidelines:

1. Topic & Learning Goal
 - SUBJECT: Gamification
 - **Specific learning objective:** Player will recognize when to use different gamification elements
 - **Content to test:** A nursing student has been struggling compared to his peers / Game designed for individual play, Students in an anatomy class need to memorize a long list of terms quickly / Quiz game, A professor wants to improve the cohesion of her group of learners / Team-based game, Health professions students need to understand how to perform a procedure / Simulation game.

2. Target Audience:

33

4. Paste it here:

KIMI

Type "/" to quickly access skills

+ Agent

K2.6 Thinking

34

4. Paste it here:

KIMI

I am building a web-based educational game for a workshop. Please create a complete, self-contained, single HTML file with embedded CSS and JavaScript. Please use the following guidelines:

1. Topic & Learning Goal
 - SUBJECT: Gamification
 - **Specific learning objective:** Player will recognize when to use different gamification elements
 - **Content to test:** A nursing student has been struggling compared to his peers / Game designed for

+ Agent

K2.6 Thinking

35

5. Make sure the model is set to K2.6 AGENT

KIMI

I am building a web-based educational game for a workshop. Please create a complete, self-contained, single HTML file with embedded CSS and JavaScript. Please use the following guidelines:

1. Topic & Learning Goal
 - SUBJECT: Gamification
 - **Specific learning objective:** Player will recognize when to use different gamification elements
 - **Content to test:** A nursing student has been struggling compared to his peers / Game designed for

+ Agent

K2.6 Thinking

36

5. Make sure the model is set to K2.6 AGENT

KIMI

I am building a web-based educational game for a workshop. Please create a complete, self-contained, single HTML file with embedded CSS and JavaScript. Please use the following guidelines:

1. Topic & Learning Goal
 - SUBJECT: Gamification
 - **Specific learning objective:** Player will recognize when to use different gamification elements
 - **Content to test:** A nursing student has been struggling compared to his peers / Game designed for

+ Agent

K2.6 Thinking

37

6. Press This Button

KIMI

I am building a web-based educational game for a workshop. Please create a complete, self-contained, single HTML file with embedded CSS and JavaScript. Please use the following guidelines:

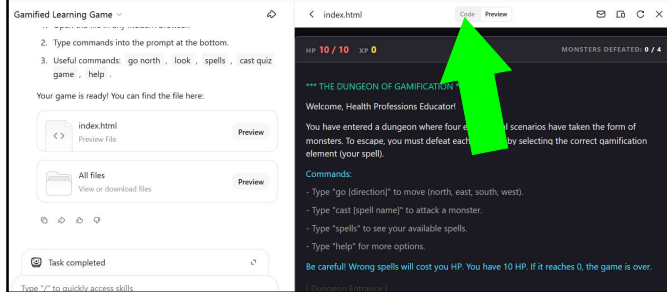
1. Topic & Learning Goal
 - SUBJECT: Gamification
 - **Specific learning objective:** Player will recognize when to use different gamification elements
 - **Content to test:** A nursing student has been struggling compared to his peers / Game designed for

+ Agent

K2.6 Agent

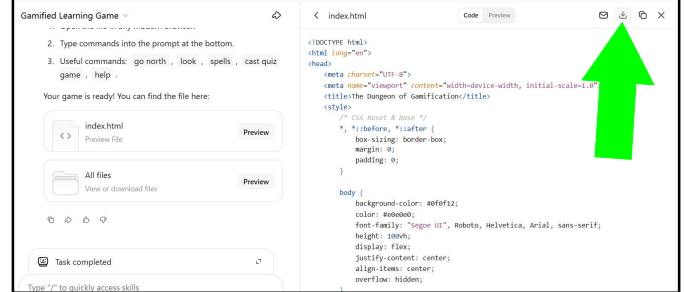
38

7. Kimi may think for several minutes, and then you'll see your game



39

8. Download the file



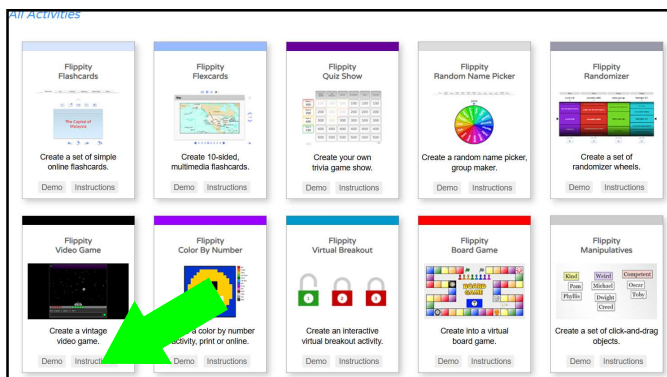
40

9. Please give a copy to Doug and he'll share it with the group

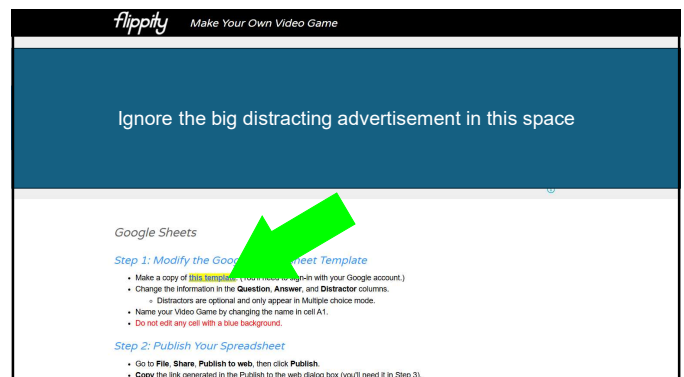
41

Flippity.net

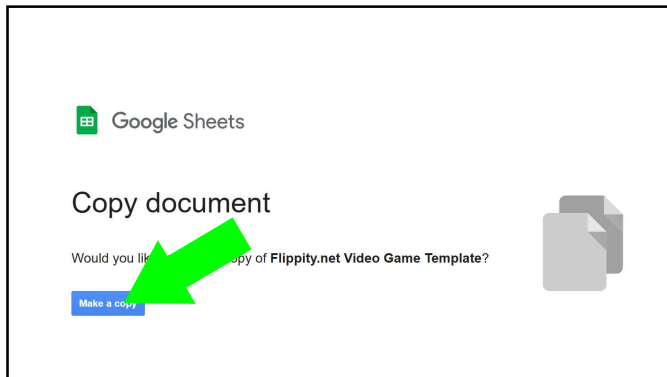
42



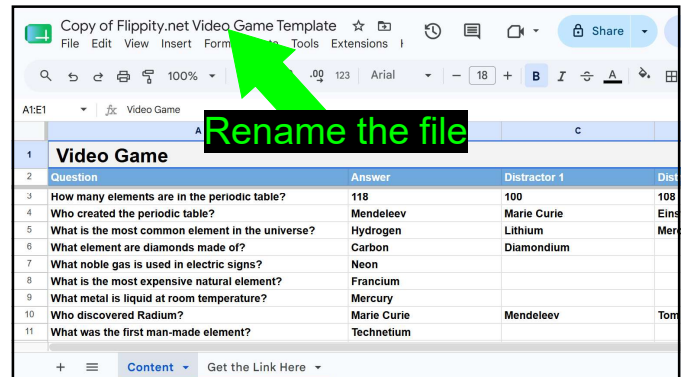
43



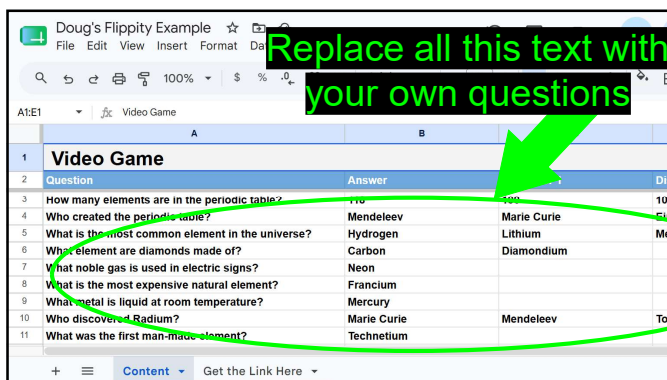
44



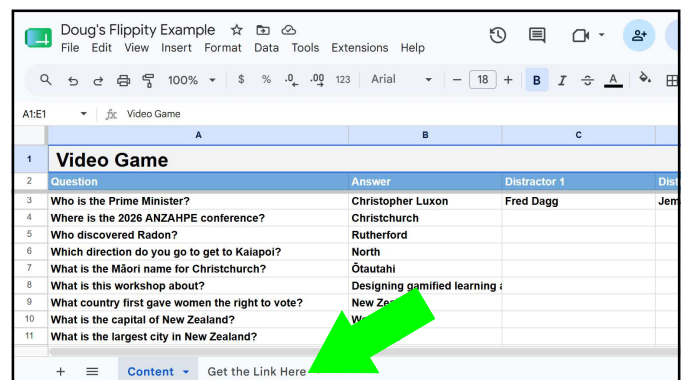
45



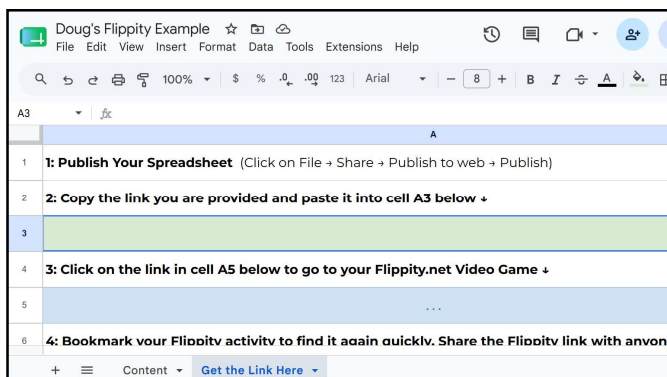
46



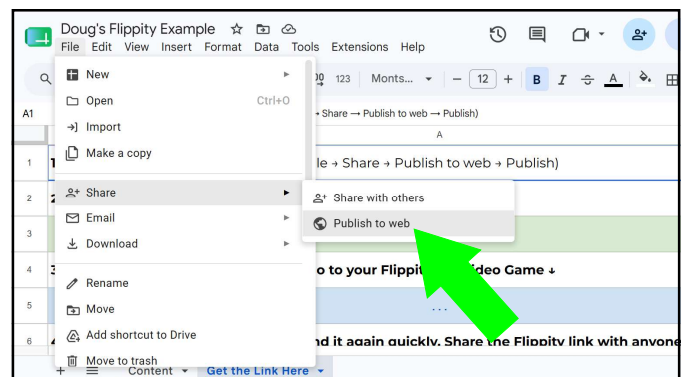
47



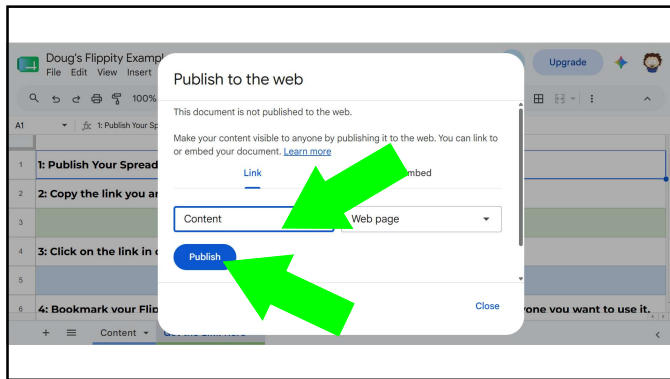
48



49



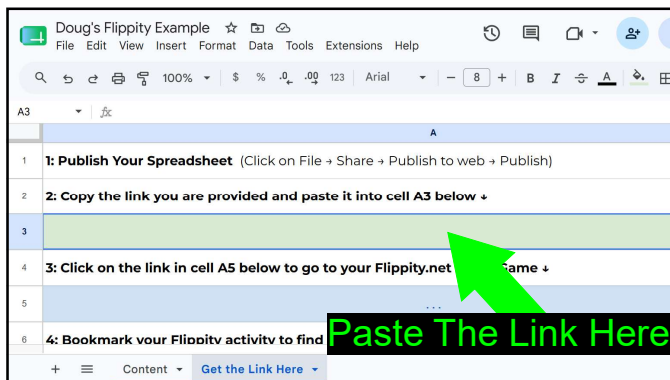
50



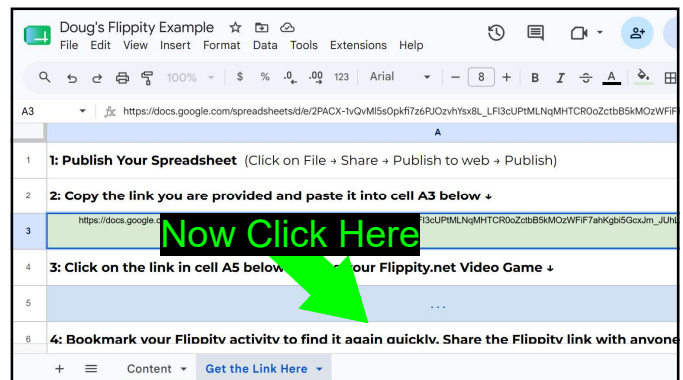
51



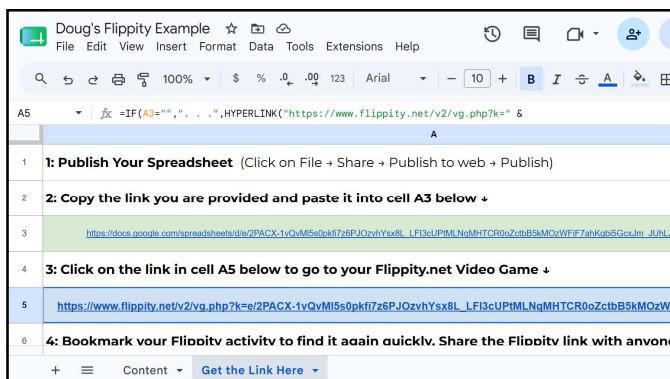
52



53



54



55



56



57



58

**SIMILAR TO OTHER
"FILL IN THE BLANKS"
SITES**

- [Blooket](#)
- [Kahoot!](#)
- [BookWidgets](#)
- [Sporcle](#)
- [Flippity](#)
- [Quizlet Live](#)
- [Genially](#)
- [Wordwall](#)
- [Gimkit](#)

59

Easy as 1-2-3

Create a customized resource with just a few words and a few clicks.

1

Pick a template.

2

Enter your content.

3

Play your activity on any device, or print it.

60

Standard templates

Anagram Drag the letters into their correct positions to unscramble the word or phrase.	Spin the wheel Spin the wheel to see which item comes up next.	Open the box Tap each box in turn to open them up and reveal the item inside.
Unjumble Drag and drop words to rearrange each sentence into its correct order.	Matching pairs Tap a pair of tiles at a time to reveal if they are a match.	Quiz A series of multiple choice questions. Tap the correct answer to proceed.
Group sort Drag and drop each item into its correct group.	Match up Drag and drop each keyword next to its definition.	Flash cards Test yourself using cards with prompts on the front and answers on the back.
Speaking cards Deal out cards at random from a shuffled deck.	Complete the sentence A cloze activity where you drag and drop words into blank spaces within a text.	Find the match Tap the matching answer to eliminate it. Repeat until all answers are gone.

Sort by: Recommended Alphabetical

61

0:03 GO! ♥♥♥ 0

Strategy

Puzzle

Action

Role-playing

Board / card game

Adventure

Casino game

Party Games

Social deduction games

Trivia Games

Sports

Simulation

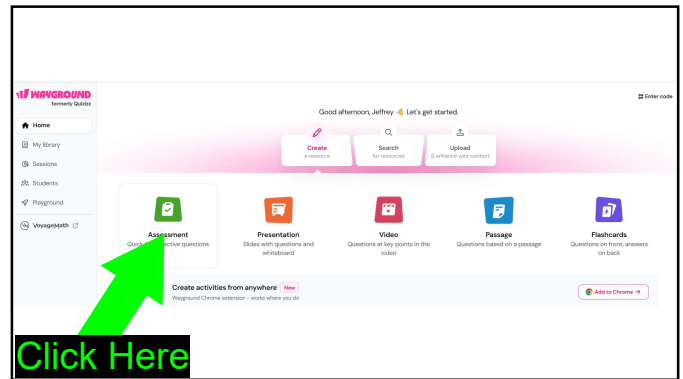
Video Game Genres

Share

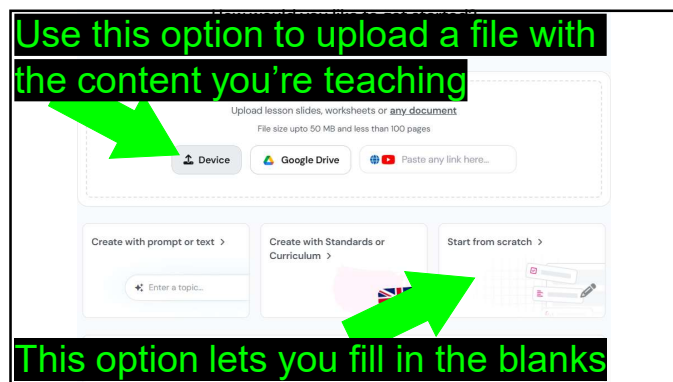
62

Wayground.com

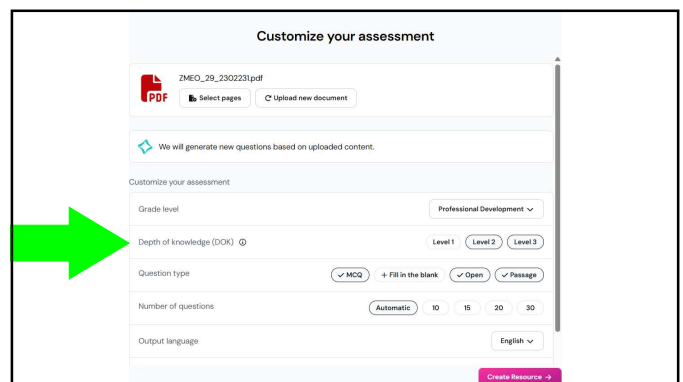
63



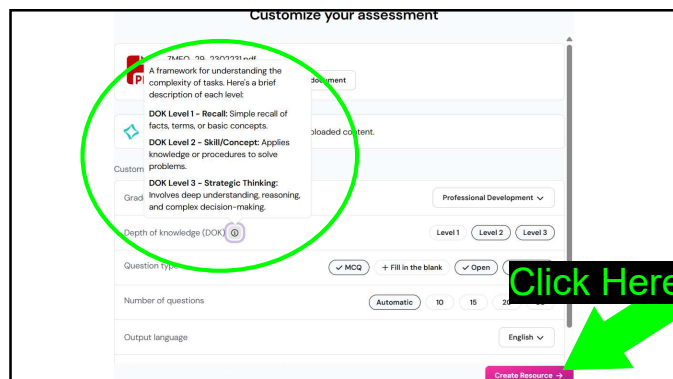
64



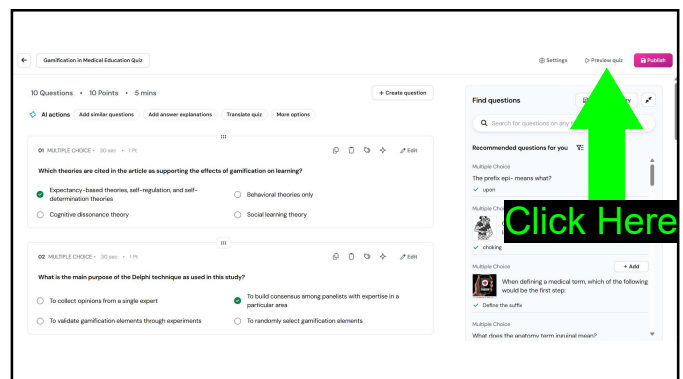
65



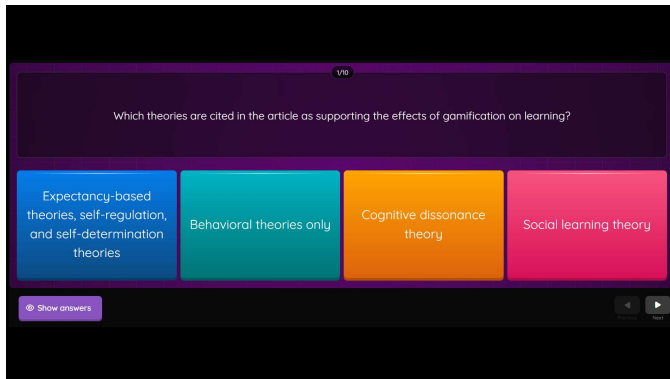
66



67



68



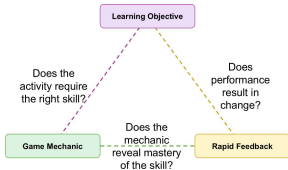
69



70

EACH TEAM:

- What is a topic that you want to teach?
- What is the target audience?
- Come up with a simple learning objective
- Choose one tool:
 - [Flippity.net](https://flippity.net)
 - [Kimi.com](https://kimi.com)
 - [Wordwall.net](https://wordwall.net)
 - [Wayground.com](https://wayground.com)
- Think about your game mechanics
- Build your game!



71



72



73

DISCUSSION

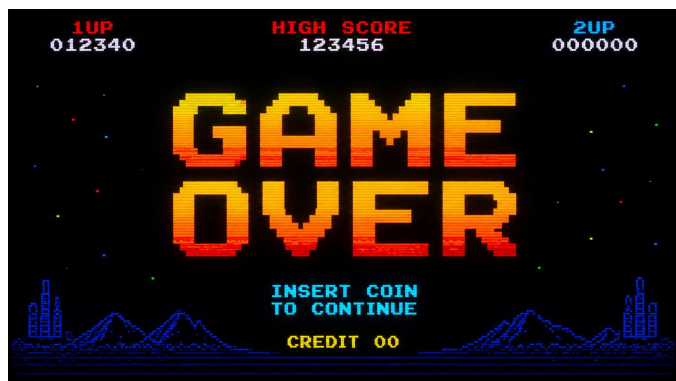
- Did the various games have educational value?
- Were the games engaging?
- Is it feasible to use games like this?
- How might you adapt these tools to your own teaching setting?

74

SELECTED REFERENCES

1. Almazan N, Nakajima H, Ota M, Mura Y. Increase in acetyl CoA synthetase activity after phenobarbital treatment. *Biochem Pharmacol*. 1975;24(10):1725-1727. doi:10.1016/0006-2952(75)90015-1.
2. Wang Y, Maier T, Meike R. Low Latency Feedback: Contrasting Training Outcomes of Immediate versus Delayed Feedback in Speedwriting Super Mario Bros. *Proc ACM Hum-Comput Interact*. 2024;8(CHE PLAY):322-1-322-14. doi:10.1145/3651762
3. Chen X, Yang S, Liu D, Chen Z, Ai Y, Ai Y. Gamification as an Innovative Approach for the Assessment of Procedural Knowledge. *Electronics*. 2021;10(5):1573. doi:10.3390/electronics10051573
4. Chen CY, Wang LC, Chen JA, Kwei BS. Interactive learning with Disagreed Online Critics and Discounted Reinforced Student Motivation and Performance. *International Journal of Information Technology*. 2020;18(1):387-400. doi:10.26233/2020.18181
5. Gopalakrishnan S, Perera R, Azevedo D, Pontes-Souza P, Gonçalves D, Abreu AM. The impact of educational gamification on cognition, emotions, and motivation: a randomized controlled trial. *J Comput Educ*. Published online July 10, 2025. doi:10.1007/s00033-025-02000-3
6. Garcia-Lopez JM, Acosta-Gonzalez E, Ruiz-Ladinos EP. Investigating the Impact of Gamification on Student Motivation, Engagement, and Performance. *Educational Sciences*. 2023;13(9):813. doi:10.3390/educ13090813
7. Hendrick W, Baker K, Newton A, Harkiss, Dale J. Gamification in Learning using Quizzes Application as Assessment Tools. *J Phys Conf Ser*. 2021;1783(5):052111. doi:10.1088/1742-6596/1783/5/052111
8. Katsourakis G, Romano M. Constructive alignment of learning mechanics and game mechanics in Serious Game design in Higher Education. *International Journal of Serious Games*. 2020;7(4):75-88. doi:10.17083/ijsg.v7i4.361
9. Kohn AA, Snyder C, Lunn S, Dale S, Pomeroy A, Rastall J. From Board Games to Box Trainers: Gamified Feedback in Laparoscopic Training for Medical Students. *Journal of Surgical Research*. 2023;314:647-655. doi:10.1016/j.jss.2023.07.060
10. Hatanenmaki H, Salonen N, Saito P, et al. Benefits of gamification in medical education. *Clinical Diabetes*. 2022;30(3):79-87. doi:10.1093/cdi/ciab015
11. Li C, Pyun LH, Chu SHW. Utilizing gamified formative assessment to support English language learning in schools: a scoping review. *Innovation in Language Learning and Teaching*. 2025;19(2):188-204. doi:10.1080/1757122.2024.2352789
12. Petrov-Glavan M. Gamifying Online Tools in Promote Reinforced-Based Learning. *The International Review of Research in Open and Distributed Learning*. 2019;20(2). doi:10.19173/irrod.v20i2.3812
13. Sailer M, Hesse L. The Gamification of Learning: A Meta-analysis. *Educ Psychol Rev*. 2020;32(3):771-12. doi:10.1007/s10648-019-09488-w
14. Sailer M, Sailer M. Gamification of in-class activities in flipped classroom lecture. *Int J Educational Tech*. 2021;52(1):75-90. doi:10.1111/ijet.12946
15. Singhal R, Singh A, Chopra D. Gamification for Improving gamification into medical education. *MedEdPublish*. 2019;9:214. doi:10.1089/med.2019.0007.01.1
16. Simons L, Vansteir N. Analyzing the Impact of Gamification Techniques on Enhancing Learner Engagement, Motivation, and Knowledge Retention: A Structural Equation Modeling Approach. *Educ*. 2024;20(9):111-124. doi:10.34103/educ.22.9.3563
17. Song L, Liang J, Wang J, et al. Gamification in Learning: A Meta-analysis. *Educ Psychol Rev*. 2020;32(3):771-12. doi:10.1007/s10648-019-09488-w
18. Johnson JJ, Rodriguez A. The Gamification of Learning and Training: Strategies in Gamification-Based Assessment and Formative-Based Assessment: Their Impact on Motivation for Learning. *International Journal of Science and Technology*. 2020;10(2):578-590.
19. Universidad Nacional de San Agustín de Arequipa. Perú. Misión-Gamify: Impact of the Use of Gamified Online Tools. A Study with Interest and Curiosity in the Educational Context. *IAEST*. 2024;14(1):123-140. doi:10.18178/jan.2024.14.1.2023
20. Guo H, Guo C, Guo A. Investigating the Effectiveness of Gamification on Group Cohesion, Habits, and Academic Achievement in Collaborative Learning Environments. *Technol*. 2024;6(1):124-136. doi:10.1007/s11266-024-00462-7
21. Vassou M, Gargis A, Saito A, Harkiss, Dale J. Gamification in Learning: The Effect of Assessment on Gamification. *The Impact of On-Demand Help & Feedback Availability on Learning for Students Who Game the System*. In: *Proceedings of the 14th Learning Analytics and Knowledge Conference*. 2024;14:1-11. doi:10.1145/3655555.3655559
22. Vassou M. GAMIFICATION IN EDUCATION. *HSEI*. 2019;6(5):23-314. doi:10.17748/20275-9958-2014-6-5-234-317
23. Wang YF, Hu YF, Peng RT, Kuo LT. Gamification in medical education: Identifying and prioritizing key elements through Delphi method. *Medical Education Online*. 2024;26(1):2302231. doi:10.1080/10872861.2024.2302231
24. Wang YF, Hu YF, Peng RT, Kuo LT. Gamification in medical education: Identifying and prioritizing key elements through Delphi method. *Medical Education Online*. 2024;26(1):2302231. doi:10.1080/10872861.2024.2302231
25. Xu M, Luo Y, Zhang Y, Xu R, Chen H, Zou X. Gamification learning in medical education. *Front Public Health*. 2023;11:113582. doi:10.3389/fpubh.2023.1113582
26. Yuan J, Chatterjee J, Hsieh K, et al. The 5 degrees of curriculum integration in medical education in the United States. *J Educ Biol Health Prof*. 2024;21:15. doi:10.3353/jebhp.2024.21.15
27. Gamification. In: *Designing Engaging Learning Experiences*. Routledge; 2020. doi:10.1081/9781315134468.ch013
28. List of video game genres. In: *Wikipedia*. 2026. Accessed June 14, 2026. https://en.wikipedia.org/w/index.php?title=List_of_video_game_genres&oldid=1358516822

75



76