The two-edged sword of gaming: The benefit of gaming in territory education

Mok, Edwin K.M.
Department of Finance, Chinese University of Hong Kong

- Gamification is the use of game elements in non-game contexts (Deterding et al., 2011.).
- 71% studies show positive learning results from the use of gamification (Majuri, 2018.).

1. Story (Fantasy)
2. Choice
3. Rewards
4. Rapid Feedback
5. Interaction

Adding Game Elements to class \( 1, 3, 4, 5, 7 \)

Wanna know some examples of gamification? Yes 12

Wanna know more about the meanings of game elements? No

Who wants to be a Millionaire

PaGamO

codeSpark Academy

- Responses form 180 students form FOUR classes.
- In contrast to their responses in exercise format, 19% of students choose taking even the expected value is negative.
- Results help students to learn how behavioural bias affect investing decision.

Gamification is an effective way to engage students and increase their engagement.

Keep students towards the subject.

Foster feelings of enthusiasm towards the subject.

Strengthen students' understanding on subject-knowledge, by putting themselves into other people’s shoes.

2. Foster feelings of enthusiasm towards the subject.
3. Keep students’ attention in the class, and increase their engagement.

Example in the class

The expected value (EV) is calculated by multiplying each of the possible outcomes by the likelihood each outcome will occur and then summing all of those values.

Invest: $2 Success: $3 Fail: $0

\[ EV = 0.5(3) + 0.5(0) = 1.5 \]

98% students know that they should not invest, as EV is less than their investment.

If you are interested in gamification in learning, please contact me at:

edwinmok@cuhk.edu.hk
9839-2947 (WhatsApp)

1. Get started with two to three activities.
2. Make the scenario simple.
3. Give a story: Students respond favourably to questions related to the real world.
4. Foster interaction with students and among students.

Wanna know more about the cons or games of gamification?

Wanna know about the bright side?

Pros

Cons

1. Limits are defined in certain types of questions, like coding and proof.
2. Time-effectiveness is doubtful, the problem is severe in territory education with course duration of only 13 weeks.
3. Resistance from students on the reward system, as it is similar to attendance.

Responses form 180 students form FOUR classes.

In contrast to their responses in exercise format, 19% of students choose taking even the expected value is negative.

Results help students to learn how behavioural bias affect investing decision.

Wanna know about the cons or games of gamification?

Wanna know about the bright side?

1. Strengthen students' understanding on subject-knowledge, by putting themselves into other people’s shoes.
2. Foster feelings of enthusiasm towards the subject.
3. Keep students’ attention in the class, and increase their engagement.

Examples

What is the greatest dynasty in the past?

⇒ Paraphrase to:
⇒ Which dynasty in the past would you most like to live in, and why?

1. Story: Narrative can help students to process information and provide a meaning to their studies.
2. Choice: Students feel something is at risk when they have to make a decision. It can increase their attention on the class and engagement with the subject.
3. Rewards: Variable rewards are scheduled into the learning experience to provide extrinsic motivation for students to solve the problem at hand.
4. Rapid Feedback: When the time between action and feedback is short, students are more excited to learn and participate.
5. Interaction: Interaction among students leads to greater learning satisfaction.

1. Story
2. Choice
3. Rewards
4. Rapid Feedback
5. Interaction

Adding Game Elements to class \( 1, 3, 4, 5, 7 \)

Wanna know more about the meanings of game elements? No

Example in the class

The expected value (EV) is calculated by multiplying each of the possible outcomes by the likelihood each outcome will occur and then summing all of those values.

Invest: $2 Success: $3 Fail: $0

\[ EV = 0.5(3) + 0.5(0) = 1.5 \]

98% students know that they should not invest, as EV is less than their investment.

If you are interested in gamification in learning, please contact me at:

edwinmok@cuhk.edu.hk
9839-2947 (WhatsApp)

1. Get started with two to three activities.
2. Make the scenario simple.
3. Give a story: Students respond favourably to questions related to the real world.
4. Foster interaction with students and among students.

Wanna know more about the cons or games of gamification?

Wanna know about the bright side?

Pros

Cons

1. Limits are defined in certain types of questions, like coding and proof.
2. Time-effectiveness is doubtful, the problem is severe in territory education with course duration of only 13 weeks.
3. Resistance from students on the reward system, as it is similar to attendance.

Responses form 180 students form FOUR classes.

In contrast to their responses in exercise format, 19% of students choose taking even the expected value is negative.

Results help students to learn how behavioural bias affect investing decision.

Wanna know about the cons or games of gamification?

Wanna know about the bright side?

1. Strengthen students' understanding on subject-knowledge, by putting themselves into other people’s shoes.
2. Foster feelings of enthusiasm towards the subject.
3. Keep students’ attention in the class, and increase their engagement.

Examples

What is the greatest dynasty in the past?

⇒ Paraphrase to:
⇒ Which dynasty in the past would you most like to live in, and why?

1. Story: Narrative can help students to process information and provide a meaning to their studies.
2. Choice: Students feel something is at risk when they have to make a decision. It can increase their attention on the class and engagement with the subject.
3. Rewards: Variable rewards are scheduled into the learning experience to provide extrinsic motivation for students to solve the problem at hand.
4. Rapid Feedback: When the time between action and feedback is short, students are more excited to learn and participate.
5. Interaction: Interaction among students leads to greater learning satisfaction.

1. Story
2. Choice
3. Rewards
4. Rapid Feedback
5. Interaction

Adding Game Elements to class \( 1, 3, 4, 5, 7 \)

Wanna know more about the meanings of game elements? No

Example in the class

The expected value (EV) is calculated by multiplying each of the possible outcomes by the likelihood each outcome will occur and then summing all of those values.

Invest: $2 Success: $3 Fail: $0

\[ EV = 0.5(3) + 0.5(0) = 1.5 \]

98% students know that they should not invest, as EV is less than their investment.

If you are interested in gamification in learning, please contact me at:

edwinmok@cuhk.edu.hk
9839-2947 (WhatsApp)

1. Get started with two to three activities.
2. Make the scenario simple.
3. Give a story: Students respond favourably to questions related to the real world.
4. Foster interaction with students and among students.

Wanna know more about the cons or games of gamification?

Wanna know about the bright side?

Pros

Cons

1. Limits are defined in certain types of questions, like coding and proof.
2. Time-effectiveness is doubtful, the problem is severe in territory education with course duration of only 13 weeks.
3. Resistance from students on the reward system, as it is similar to attendance.

Responses form 180 students form FOUR classes.

In contrast to their responses in exercise format, 19% of students choose taking even the expected value is negative.

Results help students to learn how behavioural bias affect investing decision.

Wanna know about the cons or games of gamification?

Wanna know about the bright side?

1. Strengthen students' understanding on subject-knowledge, by putting themselves into other people’s shoes.
2. Foster feelings of enthusiasm towards the subject.
3. Keep students’ attention in the class, and increase their engagement.

Examples

What is the greatest dynasty in the past?

⇒ Paraphrase to:
⇒ Which dynasty in the past would you most like to live in, and why?