### A study on the classification criteria of competency-type game in arcade genre

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### Abstract

When judging a competency-type game, focus on the association between the process toward the goal and the result is important. User intentions should be reflected in the process, and user behavior should be reflected in the results. Coincidence in competency-type games is also in line with 'accidental interaction'. Accidental interaction does not target the completed outcome and does not bear in mind the inevitable ending. Users aim to win the game, but even if they lose as a result, they can feel interested and satisfied in the process. If coincidence itself is the process and result of the game and is the purpose, the user cannot feel any sense of efficacy. Therefore, it is important to implement the user's intention so that the user can have a positive experience in the process of revealing the user's behavior and collecting the user's behavior toward the result.

Keyword: arcade game, competency-type game, user's intention

# 1. Positive changes in the Korean arcade game market

As of 2023, the Korean arcade game market is set to introduce a "score compensation-type" arcade game, which is equivalent to a "redemption." According to Roh Jae-cheol and Go Jun-Ki (2016), "redemption" refers to the exchange of prizes of various items at the game center according to the number of tickets collected from the game machine.

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This way of operating game place is commonly found worldwide. In the case of the United States, there are some places that emit scores with paper tickets, and some places use IC cards, which are electronic media.

However, Korea is prohibited from producing such tickets. This is interpreted as the aftermath of the arcade game "Badayiyagi(Sea Story)," which was very popular in Korea around 2006. According to precedent cases, if gift certificates serve as a result of the game and consumers can collect them to get economic benefits, it can be interpreted as illegal gambling.

The regulatory free system called 'sandbox' of Korea gives indulgence first to such ticket discharge and judges later whether it is gambling or not. The Korean government is pushing to revise the law so that it can receive small prizes through tickets if the results are determined by user abilities and skills. Prior to the introduction of a full-fledged 'score compensation' arcade game, this study aims to derive the criteria of user's competence through examples of rejection and determination cases of the game classification.

# 2. Criteria for judging the competence type game of arcade genre

The American Amusement Machine Association (AAMA), stipulates that competence type game must meet the following user expectations.

- A player's skill can improve with practice and experience.
- A player's skill influences the outcome of the game.
- We will not knowingly manufacture, sell, support or acquire new amusement games in the United States that do not meet a standard of performance that allows a player a fair chance of succeeding with every game played.

According to this, an Competence type game or ability-type game is a game in which all users are given fair opportunities for success and can achieve their goals through practice and

experience. There is also similar definition related to competency-type games in Korea's game rating classification standards. The Game Rating and Administration Committee (GRAC) sets out the following rating criteria for all-user arcade games.

- The purpose of one game (gift, score, etc.) shall be achieved by the user's ability, and the purpose of the game shall not be automatically played or achieved by external devices.
- The scores, items, etc. used in the game shall not affect the next game and shall be initialized at the end of the first game.
- Additional games, extra event games, etc. should not be used to promote gambling spirit.
- The background screen and directing should not affect the progress and outcome of the game or encourage gambling spirit.
- Based on storing the number of games played and the process of the game, it should not affect the future progress or results.

What is unusual is that there is more criteria that lists and prohibits the ways in which results are determined by chance, than the way in which results are determined by ability. For example, the criteria that the background screen or directing should not affect the game was influenced by the "Sea Story." In "Sea Story," jellyfish, sharks, and whales appear one after another on the background screen before giving points. The video that started as a jellyfish may stop at the jellyfish, but if the shark and the whale appear safely, they will get a big score. Such directing is no longer available in accordance with the regulations.

In this way, criteria that prohibits the method in which results are determined by accident is found throughout the classification regulations. The following is an excerpt of only the part related to the entire usage arcade game from the speculative confirmation in Article 17 of the Classification Regulations(Table 1).

Table 1. Criteria in Article 17 of the Classification Regulations

1	L		Scores, game money, etc. obtained as a result of the game shall not be provided in cash or other tangible or intangible economic benefits through direct or indirect distribution processes.
2	1		The score should not be implied in stages before the outcome is fully determined.
	2		The game should not proceed automatically regardless of the user's ability or intention.
	3		Regardless of the user's ability, high scores should not be determined in advance, and scores should not be given by dividing them and winning consecutively.
3	2	1	You should not give a score corresponding to the input amount before starting the game.
		2	The game provider should not give points arbitrarily.
		3	Scores obtained in the practice game (Demo) should not be moved to the score in the main game before starting the main-game.
		6	Games subject to Casino law such as Horse racing, Bicycle racing (cycle sport), Yacht racing, Rotary, Bull wrestling, etc. should not be copied.
5	5		Depending on the user's game skills or abilities, interest or sense of achievement in the game process cannot be induced, and property benefits or losses should not be feared to the user depending on the business method.

If you enjoy playing games, you can question item 2-2. This is because the process of the so-called "negligent" game proceeds automatically. However, in the context of the entire game, the content of "Click $\rightarrow$ End" is only increased to "Click $\rightarrow$ Video $\rightarrow$ End" for peripheral quests that are not directly related to the final goal and result of the game. Therefore, it is not necessarily considered that this regulation has been violated because it is neglected, and it can be interpreted differently depending on the type and goal of the game.

At first glance, the last item No. 5 seems to be the standard for competency-type games, but distribution is not approved if it is likely to be operated as a gambling according to the

agreement between the provider and the user. However, it has implications in that it considers "interest in the progress of the game or a sense of achievement" important.

According to the above, the competence-type game referred to "a game in which the purpose is achieved by the user's ability, and an interest or sense of achievement in the game progress is induced according to the user's game skills or abilities." In the AAMA standard. can he said previous it that the competency-type game is a relatively ambiguous standard. recalling that "every user is given a fair chance of success and can achieve their goals through practice and experience."

Kim(2013) said that in order to maintain the framework of 'prohibition', it is possible to consider (a) clearly reducing the scope of prohibition or (b) clarifying the act subject to regulation. Korea's game regulations seem to take into account the direction of clearly writing "how the results are determined by chance." However, this method is considered inappropriate in that the types of processes are so vast in terms of progress and results, and that a "original game process" continues to break down the ban even if one is blocked due to the nature of the game. Therefore, it is worth considering how to clearly reduce the scope of prohibition, that is, how the results are determined by ability, and how to prohibit others.

# 3. Example of judging the competency type of arcade game

The current law classifies arcade games into two categories: "all users" and "not available to teenagers," and even if they apply as all users, they are considered gambling games if the results are determined by chance. As this study targets arcade games, the subjects of the study are limited to 'gambling game' and 'all user game. Among them, this paper will focus on 'pinball games' that are highly accidental in the process. Through this example, this research would like to derive GRAC's perspective on 'how results are determined by ability'.

#### 3.1 Cases of prohibition of distribution of pinball-type slot games

The game below is the structure of the 'Sea Story' arcade game. Although content was omitted in the editing process, it was simply expressed to visually reveal the prohibited reasons(Figure 1).

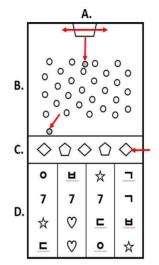


Figure 1. Sea Story Structure

- A. The ball is fired from the 'Anchor' moving from side to side at the top
- B. The ball fired from 'Anchor' hits the pin and moves
- C. 'Item Belt' exists where items flow at regular intervals from right to left
- D. Slot machine progressing

The process is as follows. When the game starts, the ball falls from a launch pad that moves left and right. The ball that fell from the top hits the pin and goes down. In the item belt, items flow from right to left at regular intervals and speeds. If the ball hits the item, the effect will be activated. Most items are 'spin',

and when the ball hits the spin, the reel of the lower slot machine rotates. In addition to spin, some items give points by the number of times the item is hit, and some items give points by themselves.

This game has no effect on the progress and outcome of the game other than the input of money. No availability or skill is required. You can't change the direction of the ball's progress on the pinball, and you don't know which item it will fit because the "Item Belt" keeps flowing. Even if left and right bars are attached to the pinball, it is not a competence-type game because it proceeds as a slot machine as a result.

# 3.2 Cases of prohibition of distribution of pinball-type bingo games

The game below is another example of an arcade game that is not licensed for distribution(Figure 2). Although there is content omitted in the editing process, it was simply expressed to reveal the reason for rejection.

The process is as follows. If you put in cash and press the start button, a total of 16 balls appear. When you pull the lever, the ball is fired, and the dropped ball hits the pin and enters the number space below. Depending on the number of squares with the ball in, the number of bingo plates at the top will be lit, and this bingo plate will be scored according to the completed line. The score depends on the number or location of the lines. Cash injection can also be seen as a kind of betting in that it receives a dividend score that is up to 200 times the amount of cash injected.

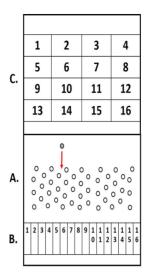


Figure 2. Construction of bingo game

- A. The ball falls from the top and moves between the pins
- B. Compartments about the same width as the diameter of the beads are listed from 1 to 16, and the fallen ball enters the compartment
- C. Bingo Plate Displayed

In this game, user does not affect the process and results of the game. No availability or skill is required. Even if the left and right bars of the pinball are moved, it is difficult to put the ball into the desired number, and what kind of bingo line will be formed is determined by chance. The game does not offer prizes or tickets except for the scores displayed on the screen. However, distribution was not allowed in that it could be used as a gamble if the provider and the user agree with.

#### 3.3 Pinball-type competency game distribution approval case

Looking at the contents so far, the Korean Arcade Act seems to have a strong rejection toward pinball game. In fact, quite a few types of pinballs have not been approved for distribution.

However, if there is sufficient evidence that it is an competence type game, it can be approved even if pinball is partially included. The game below is a rare arcade game in which pinball is licensed(Figure 3). It was simply expressed in the editing process to make it easier to understand the game principle.

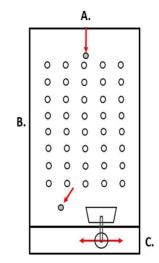


Figure 3. Approved Pinball game structure

- A. The ball falls from the top and moves between the pins
- B. Pins are regularly listed
- C. Move the physical basket integrated with the handle to receive the ball

The process is as follows. When the game starts and the user presses the button, three balls are fired at regular time intervals. At this time, the next three balls may start after the first three balls pass the end point. Therefore, there are not so many balls that it is difficult for the user to control. While the ball hits the pin and descends downward, the user can move the basket to the point where the ball is expected to fall. The goal of the game is to receive as many balls as possible in the basket. The basket at this time is integrally connected to the handle, so that the desired direction and speed can be directly implemented by hand. The width of the basket can cover a range of three or four pins.

This game directly affects the game's progress and results. It is still a coincidence that the direction of the ball changes while it hits the pin. However, the range of the expected travel path decreases to some extent while descending to the bottom, and the basket size allows errors in the range of three or four pins, so it is sufficient to receive the ball. If you intentionally avoid the ball, you may get 0 points. Therefore, it was classified as a game in which the results were determined according to the user's ability and distribution was approved.

#### 4. Conclusion

When judging a competency-type game, focus on the association between the process toward the goal and the result is important. User intentions should be reflected in the process, and user behavior should be reflected in the results. For example, when a ball is hit by a pin and falls in an accidental direction, it cannot be seen as a competence-type game if it becomes the result of the game itself. This is because there is no user intention and no user action. Inserting coins or pulling the lever is only a simple "start" signal, so this cannot be regarded as user behavior. On the other hand, if the user can move the basket and fill the basket with a target amount of balls, it can be seen as an competence-type game. This is because there is a user's intention to contain the ball, and the user's behavior of moving the basket is reflected in the results. At this time, it is difficult to determine the result with only one chance. The ball may protrude in the wrong direction, or it may unintentionally miss the basket handle and spill the ball. In this case, a problem arises in that the result of the game is determined regardless of the user's intention. Therefore, no matter how many times you spill the ball, you should be given a chance to make up for it.

Coincidence in competency-type games is also in line with 'accidental interaction'. Accidental interaction does not target the completed outcome and does not bear in mind the inevitable ending. Users aim to win the game, but even if they lose as a result, they can feel interested and satisfied in the process. If coincidence itself is the process and result of the game and is the purpose, the user cannot feel any sense of efficacy. Therefore, it is important to implement the user's intention so that the user can have a positive experience in the process of revealing the user's behavior and collecting the user's behavior toward the result.

Since this study studied the standards of competency-type games with only a few games, there is a limitation in that out-of-the-park games may exist. Therefore, it cannot be considered that the conclusions drawn are collectively used for all GRAC classifications and rejection cases. However, this study is expected to be helpful in the related arcade game study as a practical example of the competency-type game classification criteria.

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