

# Improvement of Human Resources Performance in the Corporate Environment with Gamification Concept

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## **Abstract**

*Technological advances have influenced many aspects of human life. Appropriate use of technology will help improve the efficiency and effectiveness of a process and maximize its output. In this article the author wants to create the concept of gamification that companies use to improve the performance of human resources. In designing the gamification, the writer uses the MDA framework, namely Mechanics, Dynamics, and Aesthetics.*

**Keywords:** *companies, engagement, gamification, human resource, MDA*

## **1. Introduction**

Human resource is one of the company's assets that is very important and valuable in carrying out the company's vision and mission. Background, ability and diverse nature of human resources cause the need for special attention for the company so that later the company can direct employees to do work comfortably and have a bonding relationship.

There are many companies that lose money to go bankrupt due to mismanagement of HR. So many competent HR decided to leave their company due to lack of attention and appreciation and no room for growth.

To overcome this problem, the writer tries to provide a concept by utilizing technology, namely the gamification method that can be applied in a corporate environment.

Later every employee will use the system to report and confirm the development status of each given job. That way it is expected that management and the company can monitor each employee's work. So, the company can pay more attention and give appreciation to the achievements of its employees, where indirectly the use of the system is expected to improve HR performance rapidly.

Talking about targets, rewards, punishment, that is familiar to employees, and employees know what the key performance indicators at work are. Employees know what rewards will be obtained after successfully achieving the target and conversely what punishment will be obtained if they do not reach the target. By using the concept of gamification at work, employees can easily see the extent of performance at work so that employees can control the key performance indicators. Employees will focus on working to get points that ultimately reach the target of the company and get bonuses according to their achievements in the end.

## 2. Literature Review

### A. Companies

According to Molengraaff as quoted by R. Soekardono [1] the company is a total act that is carried out continuously to obtain income by trading goods or services.

Another opinion of Polak quoted by Abdulkadir Muhammad [2] which states that a new organization can be said to be a company if it is necessary to calculate profit and loss that can be recorded and estimated in its books.

The company as a place for employees to contribute in achieving the target, can apply the concept of gamification at work. In terms of evaluating the performance of human resources with the gamification process, namely by applying:

- Implementation of a point award system and determining the rewards for each of the tasks and responsibilities of the employee,
- The application of employee ranking based on employee achievement through leaderboard so that employees must show better performance to get higher ratings,

Providing recommendations to superiors regarding the results of performance appraisal through a leaderboard to increase class or salary increase, in other words it can be used as a reference as a key performance indicator of the employee.

### B. Gamification

Previous research uses a lot of gamification methods for various sectors, one of which is in the HR sector which can help improve the performance of human resources in a company.

Gamification itself is the result of the integration between the use of game elements and techniques from game design into non-game applications such as websites or desktops and internal training of organizations to encourage desired behavior [3] [4] [5].

Through his research, Castellani et al (2013) [6], entitled Game Mechanics in Support of Production Environments, gives an idea of how to apply gamification in a production environment such as helping superiors manage their team's performance. In the above research, using an approach with a gradual method of introducing game mechanics in the work environment to encourage awareness of aspects such as the level of performance, objectives, and related incentives.

Furthermore Epstein (2012) [7] in his research entitled Enterprise Gamification for Employee explained that gamification trends in the business world today refer to game mechanics that are applied in the work environment. The researcher also explained that designing a gamification program does not mean making games and does not involve aspects of playing games. The company uses game elements that are used specifically in the workplace environment to support employee engagement.

Another opinion about gamification was presented by Deterding in Han's research (2015) which defines gamification as the use of elements in game design in non-game contexts aimed at motivating and increasing user activity and retention.

So it can be concluded that gamification is taking elements of game design to be applied in non-game contexts that can be used in various sectors to increase user

engagement that can produce more reliable performance, incentives, transparency, and information. Other benefits of the use of gamification according to [8] are informative values, empathy values, persuasive values, economic values, and ideological values.

### *C. Human Resource Management*

Sutrisno stated that human resources are the only resources that have feelings, desires, skills, knowledge, encouragement, and work. That is what an organization uses to achieve its goals. So it can be concluded that human resources are the most important assets in an organization.

A company will not be able to develop if it does not have adequate human resources. So that HR performance is very important to support the achievement of company goals. The performance of human resources can decline in the company can be caused by, boredom because of doing repetitive and monotonous work. To avoid the decline in employee performance, it is necessary to apply the concept of gamification within the company that can provide motivation, pleasure and other interesting things so that human resources enjoy their work even if done repeatedly.

### *D. MDA Framework*

MDA Framework was presented as a formal approach to game design and game research. It is a framework created to further understand the concept of games beyond game design and game development [9].

The MDA Framework consists of three distinct components: Mechanics, Dynamics, Aesthetics. Mechanics sits at the top of the framework, representing the components of the game, data presentation and algorithms. Dynamics describes the run-time behavior of the mechanics acting on player inputs and each other's' outputs over time. Aesthetics refers to emotional responses and experiences when player interacts with the game.

## **3. Methodology**

### *A. Design Method*

The author uses the MDA framework as a reference for design analysis. By using this framework, it is expected to produce a system design that is in line with the company's needs in managing and monitoring HR. Of course, gamification is made to provide gaming experience in non-gaming activities.

The proposed gamification will be designed according to the user's characteristics. Richard Bartle [9] explained that there are four types of players in a game that can be seen in Figure 1 below.



Fig. I. Four Type of Players

Mechanics is a component that can move players to take action. The following components will be used in this system, including:

1. To do list, includes details of the work that must be done by employees with a period that has been determined by their superiors. This concept aims to facilitate the delegation of work and facilitate monitoring the status of work. So that a boss / management is expected to be able to manage employees better by looking at the portion of work provided
2. Points (Reward), meaning that every employee who has completed his work items will get points. This point will later be used as a portion of the management assessment of employees.
3. Levels, used as a means to show the development of each employee.
4. Goal (Goal), the purpose of using this game is to facilitate the delegation of work, easier to monitor the status of work, as a means of evaluating employee performance, as a means of giving appreciation to employees, record work history and store authentic evidence of employee output.

Dynamics is a component of the results of interactions between mechanics and players. Dynamics is a part of mechanics that can be seen by players. Here are some components that will be used as a proposed system design:

1. Storyline, is a way of using the system to be built. The flow that is used later starts from the supervisors of each employee to delegate work through the system, then the employee receives notification of the job disposition and can be seen on the dashboard. For every action taken by an employee on the system such as changing the status of the job and uploading the work output, the supervisor will also be notified. So that the dashboard will display information on the percentage of completion of the work.
2. Character, users of this system will be able to choose the avatar as desired. The avatars are grouped according to the rank of each employee, so only by looking at an employee's avatar can his position be known.

3. Aesthetics is the last component used in designing this game. Aesthetics talk about abstracts, sensations, fantasy, discovery, and expressions in the form of a display or user interface. By prioritizing user experience, it is expected that the system designed can accommodate all components of the aesthetics.

The functional requirements of the system to be built can be illustrated using the use case diagram in Figure 2 below. There are 3 types of users in this system with several functions obtained. The HRD Admin has the duty to add employee accounts and view employee demographics within the company. Then the superior user can delegate work, assign grades, and monitor the dashboard. The dashboard contains all the work of his team along with the progress of completing the work

Then employee users can update profiles, view job listings and deadlines, upload documents, update job status, and view the dashboard. This employee dashboard will contain the progress of completion of the work along with the points earned, as well as a to-do list of job details.



Fig. 2 Use Case Diagram

#### B. Data Collection Technique

Data collection is done by conducting observations and interviews directly to users so that the system is built right on target and can accommodate needs. In addition, by conducting interviews, it can simplify the process of implementation and roll out of the system being built.

### 4. Conclusions

By using available technology along with the use of the MDA framework, it is expected to produce a system that can improve the performance of human resources in a company. By providing playing experience in the scope of work can make employees not get bored and become excited again in doing their jobs. Below are some of the outputs that can be obtained from the use of the proposed system:

1. The division of work becomes clear and transparent so that no employees are overloaded.
2. Each work is monitored for development

3. Facilitate superiors to provide an assessment
4. Employees become enthusiastic in working because of the provision of transparent rewards.
5. Bosses can provide reports to management in real time.
6. Employee management is more effective
7. Management of work-related documents more regularly
8. Use of the system for daily work.

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