The effect of training through Gamification on the implementation of the human resources scorecard

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Abstract

To effectively implement Gamification as an effective tool in organizations, studying the impact of training through Gamification on the implementation of the human resources scorecards will be doubly important. The research measurement tool was a questionnaire that consisted of two parts. The validity of the questionnaire was determined by referring to the theoretical and experimental bases of the research. Cronbach's alpha coefficient was used for its reliability, which was obtained in the case of Gamification at 0.905 and the score card of human resources at 0.929. Pearson's correlation coefficient and Friedman's test were also used. Finally, the obtained results showed a significant relationship between Gamification and the human resources scorecard, and the human resources scorecard as a strategy can have a positive effect on Gamification.

Keywords: Gamification; HR score card; Education
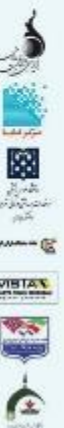
1. Introduction

More than half of the organizations in advanced countries have achieved new capabilities in the strategic management of their human resources by applying the results obtained from developing human resources strategies. Therefore, in the new era, managers are expected to design, formulate and implement complex strategies by following the concepts of strategic and system-oriented and using the intellectual capital of the organization in the form of intangible assets that include the capabilities and competencies of resources. Is human; protect and support, so organizational success is achieved [1].

In the meantime, human resources play an effective role as a strategic factor to achieve superior organizational goals. Through designing, formulating, and implementing human resources strategies focused on the needs and demands of the beneficiaries as well as the environmental conditions, excellent organizations guarantee that their human resources plans and activities are in line with the realization of the vision, goals, and core strategies organization [2].

Seyyed Javadin, (2012) in the latest ideas related to human resources planning, this concept is a secondary process of the task process of human resources procurement in human resources management, which is responsible for measuring and determining the quantity and quality of the required human resources has raised.

Strategic planning of human resources is a process during which senior executive and operational managers design it according to the nature of human resources and organizational goals. The most important feature of this process is the nature of the working group, where belief and belief in the organization's strategy are formed, and the people involved in this process find a sense of belonging and ownership towards it.

Gamification means doing things with games, but something that does not have a game aspect. The science of using game elements in non-game fields is called Gamification. By using this knowledge, the attractiveness of games can be introduced to other tasks, from boring activities to educational classes. In this way, the audience is stimulated with natural stimuli. One of the methods used for teaching and learning in the electronic world is

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Gamification. If this educational method is used, the materials can be presented excitingly and practically for education [3].

Aparico and Werbach (2012) identified three critical aspects of proper Gamification implementation: 1. Understanding the target audience, 2. determining what the player should do, and 3. using appropriate game elements. To motivate the players in the same activity, they stated [4].

With the passage of at least four decades since the emergence of the human resources scorecard in America and Europe, not only has this concept not been fully implemented in Iran, but even according to some thinkers and researchers, personnel management in many public and private companies is still is the ruler In Iran, there are no signs of changing the content, philosophy, and functions of human resources management. Tayeb believes that human resource management in Iran is the same as employee management, which has taken on a solid local and indigenous color by emphasizing the functions of recruitment and selection. Social-political considerations take precedence over work interests in its implementation [5]. In this regard, training through Gamification can have a positive and significant impact on performance by implementing the human resources scorecard.

2. research method

2.1. Research hypotheses and variables

Primary hypothesis: There is a significant relationship between HR scorecard and Gamification.
Sub-hypotheses:
- There is a significant relationship between the human resource score card and employees' understanding.
- There is a significant relationship between the human resources score card and the job descriptions of employees.
- There is a significant relationship between human resource score cards and game elements.
- There is a significant relationship between human resource score cards and knowledge management.
Variables:

To achieve the strategic integration of human resources, human resources macro strategies are divided into six categories of training and empowering employees, motivation, performance management, salaries and rewards, management of employee relations and culture, and recruitment and career development path. Also, the criteria related to Gamification are divided into four categories: perception, task description, knowledge management, and game elements.

2.2. Validity and reliability of the questionnaire

The validity or validity of the test is the ability of the tool in question to measure the trait that the test is designed to measure. Questionnaire questions are of the closed-answer type in the mode of a multi-level Likert scale. For the face validity of the questionnaire and the accuracy of the quantity and quality of the questions, the questionnaire was distributed among several experts and specialists. After the necessary corrections, it was again handed over to the supervisor and the person in charge of training and research of the company in question, and finally, to be sure of the obtained results, the questionnaire was distributed to the research sample.

All Cronbach's alpha coefficients are higher than the minimum acceptable value (0.7), which indicates the reliability and validity of the variables measured in the research. Cronbach's alpha of the entire Gamification questionnaire is 0.905, and Cronbach's alpha of the whole human resource score card questionnaire is 0.929. Because the reliability is higher than 0.7, the questionnaire has acceptable reliability.

The data has been analyzed inferentially and descriptively using the SPSS20 method. In the descriptive role, a frequency table was prepared and compiled for each of the factors corresponding to the impact of the implementation of the organizational excellence model and human resources strategy. In the inferential part, considering the determined questions, parametric statistical tests such as Pearson's correlation coefficient, one-sample t-test, and Friedman's trial have been used.

The Kolmogorov-Smirnov statistical test is proposed as follows:

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$\begin{cases} H_0: \textit{The data is expected (the data comes from the expected population)} \\ H_1: \textit{The data are not normal (the data did not come from a expected society)} \end{cases}$

According to the analysis, all significant coefficients are greater than 0.05. Therefore, the null hypothesis (H0), which is the normal distribution of the desired variable, is not rejected. And all two main research variables and their dimensions have a normal distribution.

Table 1. One-sample Kolmogorov-Smirnov test

Management of employee relations and culture	Recruitment and career development path	payroll and bonuses	performance management	motivation	Training and empowering employees	Game elements	knowledge management	job description	perception	Research variables
۳۶	۳۶	۳۶	۳۶	۳۶	۳۶	۳۶	۳۶	۳۶	۳۶	number of samples
۴٫۶۲۵۰	۴٫۵۷۶۴	۴٫۵۶۹۴	۴٫۷۲۹۲	۴٫۶۱۸۱	۴٫۷۵۰۰	۴٫۷۵۰۰	۴٫۵۹۰۳	۴٫۵۸۳۳	۴٫۶۳۸۹	Average
۰٫۱۲۳	۰٫۱۰۵	۰٫۰۶۱	۰٫۰۷۰	۰٫۰۷۷	۰٫۰۶۲	۰٫۰۶۲	۰٫۱۴۶	۰٫۰۸۷	۰٫۱۱۳	P value

The correlation coefficient between the human resources scorecard and Gamification is equal to 91%; this correlation is positive and high, which is significant at the 95% confidence level (p<0.05). There is a positive and meaningful relationship between the human resources scorecard and Gamification.

Table 2. Calculation of Pearson's correlation coefficient, between Gamification variables and human resources scorecard

p-level	Pearson	Number	Variable
۰٫۰۰	۰٫۸۹۰	۳۶	Perception & human resources scorecard
۰٫۰۰	۰٫۷۹۶	۳۶	job description & human resources scorecard
۰٫۰۰	۰٫۷۷۹	۳۶	knowledge management & human resources scorecard
۰٫۰۰	۰٫۸۴۷	۳۶	Game elements & human resources scorecard

Table 3. Calculation of Pearson's correlation coefficient, between the variables of HR scorecard and Gamification

p-level	Pearson	Number	Variable
۰٫۰۰	۰٫۷۰۵	۳۶	Training and empowering employees & Gamification
۰٫۰۰	۰٫۸۶۱	۳۶	Motivation & Gamification

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۰,۰۰	۰,۴۹۹	۳۶	performance management & Gamification
۰,۰۰	۰,۸۷۶	۳۶	payroll and bonuses & Gamification
۰,۰۰	۰,۹۰۰	۳۶	Recruitment and career development path & Gamification
۰,۰۰	۰,۸۸۱	۳۶	Management of employee relations and culture & Gamification

According to the Friedman test in Table 7, the chi is equal to 36.231, with a degree of freedom of 3; it is significant at the 95% confidence level (p<0.05). That is, there is a substantial difference between the priority of these components. By referring to the average ranks column, it is clear that the game elements criterion with an average rank of 3.19 is the highest priority, followed by the perception criterion with an average rank of 2.39, the knowledge management criterion with 2.24, and the task description criterion. They are located on 2/18.

Table 4. The results of Friedman's test, the constituent components of Gamification

Ranks

	Mean Rank
Game elements	3.19
job description	2.18
knowledge management	2.24
Perception	2.39

Test Statistics^a

N	۳٦
Chi-Square	36.231
Df	3
Asymp. Sig.	.000

a. Friedman Test

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According to the Friedman test in Table 8, the chi double is equal to 57.046, with a degree of freedom of 5, which is significant at the 95% confidence level (p<0.05). That is, there is a substantial difference between the priorities of these components. By referring to the column of average ratings, it is clear that employee training and empowerment is the highest priority with an average rating of 4.51, followed by performance management with an average rating of 4.32, management of employee relations, and culture of 3.19, motivation 10.3, recruitment, and career development path 2.99, and salary, and bonus 2.89.

Table 5. The results of the Friedman test, the components of the human resources scorecard

Ranks

	Mean Rank
performance management	4.32
Motivation	3.10
Training	4.51
payroll	2.89
career development	2.99
Management of employee relations	3.19

Test Statistics[a]

N	٣٦
Chi-Square	57.046
Df	5
Asymp. Sig.	.000

a. Friedman Test

3. Conclusion

In the current research, statistical analysis has been done with SPSS software, showing that the primary research variables and their dimensions have a normal distribution. Pearson's correlation test shows a positive and significant relationship between the criteria. The research gap can be

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summarized in the following cases: the emergence of the concept of Gamification and human resources scorecard (especially in Iran), the lack of internal resources, the lack of research, based on the effect of training through Gamification on the implementation of the human resources scorecard, and the small number Internal research was done based on Gamification and human resources scorecard.

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