Implementation of Gamification-based Reward and Recognition System to Increase Employee Motivation and Loyalty

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Abstract

This study aims to analyze the effect of gamification-based reward and recognition system implementation on employee motivation and loyalty. Data was collected from 100 respondents in specific industries through questionnaires, and analyzed using multiple linear regression. The results showed that the Challenge element in the gamification system had a significant and positive influence on motivation (B = 0.689, Sig. = 0.000) and employee loyalty (B = 0.208, Sig. = 0.005). The Point, Badge, and Board variables do not show a significant influence on employee motivation and loyalty. The correlation coefficient (R) of 0.839 for motivation and 0.730 for loyalty indicates a strong relationship between the independent and dependent variables. R Square of 0.703 for motivation and 0.532 for loyalty indicates that the model can explain 70.3% of variability in motivation and 53.2% of variability in loyalty. Adjusted R Square of 0.691 for motivation and 0.512 for loyalty indicates the model's good explanatory ability after considering the number of predictors. Based on these results, companies are advised to focus more on developing the Challenge element in gamification-based reward and recognition systems to increase employee motivation and loyalty.

Keywords: Gamification, Reward and Recognition, Employee Motivation, Employee Loyalty, Regression Analysis

Introduction

In a competitive business landscape, employee motivation and loyalty play a critical role in an organization's success. Traditional reward systems may not have a long-term impact, prompting the exploration of innovative approaches such as gamification (Wangoo Lee ,2024). Gamification, integrating game elements such as points and leaderboards into the work environment, has shown promise in increasing employee engagement and productivity (D. A. S. Rebacca,2024). Research shows that gamified training can improve employee motivation and performance, especially in sectors such as banking (Marcelo Magioli Sereno ,2024). Additionally, gamification has been found to reduce reward sensitivity and perceptions of unfair treatment, contributing to more positive employee experiences and loyalty (Wangoo Lee,2024). By leveraging gamification in reward and recognition systems, organizations can foster a more stimulating and motivating workplace culture, ultimately driving continued employee engagement and loyalty (Inna Balahurovska,2024). In a dynamic business landscape, retaining motivated and loyal employees is critical to organizational success (Angga Setiawan, 2024).

Studies emphasize the importance of factors such as a supportive work environment, opportunities for professional growth, fair compensation, and effective communication in enhancing employee satisfaction and loyalty (Moh. Sutoro, 2024). Employee loyalty is linked to long-term engagement and has a positive impact on retention rates, highlighting the importance of factors such as employee treatment, job satisfaction, leadership quality, and training and development programs in fostering loyalty (Dr. Harsandaldeep Kaur, 2024). In addition, modern management approaches emphasize the role of leadership in creating a positive work environment and utilizing strategic reward systems to motivate employees and drive performance (Inna Balahurovska, 2024). By aligning organizational strategy with effective reward and recognition systems, companies can foster a culture of motivation, loyalty, and high performance among their workforce.

Gamification has been extensively studied in various contexts, demonstrating its potential to enhance employee engagement, productivity, and loyalty. Research has shown that gamified approaches can significantly improve worker productivity and engagement (D. A. S. Rebacca, 2024), while also reducing consumer sensitivity to unfair reward measures and preferential treatment in loyalty programs (Wangoo Lee, 2024). Furthermore, the impact of gamification on training systems has been explored, revealing valuable insights into the outcomes of gamified versus traditional training methods in enhancing employee motivation and job satisfaction (Hyelda Ibrahim Kefas, 2024). Furthermore, the impact of employee satisfaction with HR practices, mediated by job dedication and moderated by gamified incentives, has been highlighted as an important factor in improving job performance in organizations (Sattwik Mohanty, 2024). By understanding these findings, human resource management practitioners can design innovative and effective gamification-based reward and recognition systems to enhance employee motivation and loyalty, ultimately leading to improved organizational outcomes. Gamification-based reward and recognition systems are increasingly recognized as an effective tool for enhancing employee motivation and loyalty (D. A. S. Rebacca, 2024).

Studies have shown that gamification strategies can significantly improve employee engagement and productivity in organizations (Puttam Lavanya, 2024). Furthermore, the implementation of gamified approaches in the workplace has been associated with creating a more motivated and productive workforce, ultimately leading to higher levels of employee engagement (D. A. S. Rebacca, 2024). Factors such as the design of gamification elements, integration of rewards, and alignment with organizational goals play a significant role in the successful implementation of gamification in the context of reward and recognition systems (Wangoo Lee , 2024). By analyzing data from various companies that have adopted gamification, this study aims to provide valuable insights into the effectiveness of gamification in enhancing employee motivation, loyalty, and overall engagement levels. Gamification has emerged as a strategic tool in human resource management, offering new insights into enhancing employee motivation and loyalty (Marcelo Magioli Sereno, 2024).

By incorporating game-like elements into non-game contexts, organizations can increase employee engagement, job dedication, and ultimately, productivity and job satisfaction (Sattwik Mohanty, 2024). Understanding the impact of gamification on various HR practices, such as recruitment, training, and development, enables the design of more effective reward and recognition programs, leading to a more motivated and productive workforce (Behzad Mohammadian, 2024). This study not only contributes theoretically by exploring the nuances of gamification in HR but also provides practical implications for designing innovative reward and recognition systems in organizations, especially in service-oriented sectors such as banking and tourism (Sattwik Mohanty, 2024).

Methods

This study will use a quantitative approach with survey methods and statistical analysis to evaluate the implementation of a gamification-based reward and recognition system in increasing employee motivation and loyalty. The quantitative approach was chosen to measure the influence of gamification elements objectively and to obtain data that can be analyzed

statistically. This study will use an explanatory research design to understand the relationship between the variables studied, namely the implementation of a gamification-based reward and recognition system (independent variable) and employee motivation and loyalty (dependent variable). Population, Employees from various companies that have implemented a gamification-based reward and recognition system. The sample will be taken using a purposive sampling method to ensure that respondents have experience with the gamification system. The number of samples taken will be determined based on the Slovin formula with a 5% error rate.

Results and Discussion

Descriptive Analysis

Demographic Characteristics of Respondents in this study include, Age of respondents, <25 years: 20%, 25-34 years: 40%, and 35-44 years by 25%, while, >45 years as much as 15%, while the gender of respondents involved in the study included Male: 55% and Female: 45%, with a duration of work <1 year: 15%, 1-3 years: 30%, 3-5 years: 25% and >5 years: 30%.

Interpretation:

Shows that the majority of respondents have a positive perception of the gamification elements in the reward and recognition system. Most respondents also showed high levels of motivation and loyalty. The diverse demographic distribution provides a representative picture of the wider population, so that the results of this study can be considered valid to conclude the impact of gamification implementation on employee motivation and loyalty

Reliability and Validity Test

The validity test was conducted using the confirmatory factor analysis (CFA) method. Validity Criteria:

• Bartlett's Test of Sphericity: Significance <0.05 indicates that the correlation between items is significant

Table 1. Validity Test

	Point	Badge	Board	Challenge	Motivation	Loyalty
Correlations						

Point	Pearson Correlation	1	,924**	,770**	,590**	,592**	,687**
	Sig. (2-tailed)		0,000	0,000	0,000	0,000	0,000
	N	100	100	100	100	100	100
Badge	Pearson Correlation	,924**	1	,733**	,572**	,564**	,665**
	Sig. (2-tailed)	0,000		0,000	0,000	0,000	0,000
	N	100	100	100	100	100	100
Board	Pearson Correlation	,770**	,733**	1	,658**	,574**	,607**
	Sig. (2-tailed)	0,000	0,000		0,000	0,000	0,000
	N	100	100	100	100	100	100
Challenge	Pearson Correlation	,590**	,572**	,658**	1	,827**	,596**
	Sig. (2-tailed)	0,000	0,000	0,000		0,000	0,000
	N	100	100	100	100	100	100
Motivation	Pearson Correlation	,592**	,564**	,574**	,827**	1	,583**
	Sig. (2-tailed)	0,000	0,000	0,000	0,000		0,000
	N	100	100	100	100	100	100
Loyalty	Pearson Correlation	,687**	,665**	,607**	,596**	,583**	1
	Sig. (2-tailed)	0,000	0,000	0,000	0,000	0,000	
	N	100	100	100	100	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

Based on the results of statistical data processing SPSS, it was found that all items have factor loadings > 0.05, indicating that the instrument in this study is valid.

Reliability Test

Reliability Criteria:

• Cronbach's Alpha value > 0.7 indicates that the instrument has good internal consistency.

Table 2. Reliability Test.

Reliability Statistics	
Cronbach's Alpha	N of Items
0,913	6

F Test Model 1

Tabel 3. F Test
ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	499,710	4	124,927	56,300	,000[b]
	Residual	210,800	95	2,219		

Total	710,510	99	

a. Dependent Variable: Motivation

b. Predictors: (Constant), Challenge, Badge, Board, Points

The F value of 56,300 indicates the strength of the regression model in explaining the variation in the dependent variable (Motivation). Significance (Sig.): The Sig. (p-value) of .000 indicates that the overall regression model is very significant. This value is much smaller than $\alpha = 0.05$, so we can reject the null hypothesis (H0) which states that all regression coefficients are simultaneously equal to zero.

F Test Model 2

Table 4. F Test Model 2

ANOVAª

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	270,669	4	67,667	27,019	,000ᵇ
Residual	237,921	95	2,504		
Total	508,590	99			

a. Dependent Variable: Loyalty

b. Predictors: (Constant), Challenge, Badge, Board , Point

F-Statistic: The F value of 27.019 shows the strength of the regression model in explaining the variation in the dependent variable (Loyalty). The Sig. (p-value) of .000 shows that the overall regression model is very significant. This value is much smaller than $\alpha = 0.05$, so we can reject the null hypothesis (H0) which states that all regression coefficients are simultaneously equal to zero.

T-test model 1

Table 5. T-test model 1

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	5135,852	2	3057,725	75,320	,000ᵇ
Residual	3750,788	77	40,732		
Total	9285,840	77			

a. Dependent Variable: Performance

b. Predictors: (Constant), Training, Inclusive Leadership

The constant value (intercept) of 3.492 shows the average value of employee Motivation when all independent variables are zero. The t value of 3.599 with sig. 0.001 shows that this constant is significant at the 0.05 level, meaning that this constant is significantly different from zero.

T-test model 2

Table 6. T-test model 2

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,364	1,031		3,263	0,002
	Point	0,273	0,154	0,349	1,773	0,079
	Badge	0,181	0,220	0,152	0,826	0,411
	Board	0,060	0,147	0,049	0,407	0,685
	Challenge	0,208	0,073	0,271	2,862	0,005

a. *Dependent Variable: Loyalty*

The constant value (intercept) of 3.364 indicates the average value of employee loyalty when all independent variables are zero. The significant t value (p = 0.002) indicates that this constant is significantly different from zero.

Coefficien determinan

Tabel 8. Coefficien determinanMotivation

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,839[a]	0,703	0,691	1,490

a. Predictors: (Constant), Challenge, Badge, Board , Point

The correlation coefficient (R) of 0.839 indicates a strong relationship between the independent variables (Challenge, Badge, Board, Point) and the dependent variable (Loyalty). This R value indicates the strength of the linear association between the variables in the model

Tabel. 9. Coefficient Deterninan Loyalty

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,730[a]	0,532	0,512	1,583

a. Predictors: (Constant), Challenge, Badge, Board , Point

The correlation coefficient (R) of 0.730 indicates a strong relationship between the independent variables (Challenge, Badge, Board, Point) and the dependent variable. This R value indicates the strength of the linear association between the variables in the model. This value indicates that there is a significant relationship between the gamification factors and the dependent variable

Based on the results of the ANOVA test, it can be concluded that the regression model involving the predictors Challenge, Badge, Board, and points has a significant effect on employee Motivation. The high F value and very low Sig. value ($p < 0.001$) indicate that this regression model significantly explains the variation in employee Motivation. Therefore, it can be concluded that the gamification elements (Challenge, Badge, Board, points) together make a significant contribution to increasing employee Motivation.

This supports the hypothesis that the implementation of a gamification-based reward and recognition system has a significant effect on employee Motivation.

Based on the results of the ANOVA test, it can be concluded that the regression model involving the predictors Challenge, Badge, Board, and points has a significant effect on employee Loyalty. The high F value (27.019) and very low Sig. value ($p < 0.001$) indicate that this regression model significantly explains the variation in employee Loyalty. Therefore, it can be concluded that the gamification elements (Challenge, Badge, Board, points) together contribute significantly to increasing employee Loyalty. This supports the hypothesis that the implementation of a gamification-based reward and recognition system has a significant effect on employee Loyalty.

From the results of the regression analysis, the Challenge variable has a significant and positive effect on employee Motivation. This means that an increase in the Challenge element in a gamification-based reward and recognition system significantly increases employee Motivation.

On the other hand, the Point, Badge, and Board variables do not have a significant effect on employee Motivation. Although Point has a positive coefficient, its effect is not statistically significant. The Badge and Board variables even have negative coefficients, but their effects are also not significant. Overall, these results indicate that the Challenge element is the main factor influencing the increase in employee Motivation in the context of a gamification-based reward and recognition system.

From the results of the regression analysis, the Challenge variable has a significant and positive effect on employee Loyalty. This means that an increase in the Challenge element in a gamification-based reward and recognition system significantly increases employee Loyalty. In contrast, the Point, Badge, and Board variables do not have a significant effect on employee Loyalty at the $\alpha = 0.05$ level. Although Point shows a positive effect approaching significance, its p-value (0.079) is still higher than $\alpha = 0.05$, so it is not considered statistically significant.

Overall, these results indicate that the Challenge element is the main factor influencing the increase. The regression model tested shows a strong and significant relationship between the independent variables and the dependent variable. R^2 of 0.703 indicates that the model can explain about 70% of the variation in employee Loyalty. The slightly lower Adjusted R^2 value (0.691) indicates that this model also considers the number of predictors well. With a standard error of the estimate of 1,490, this model has quite good prediction accuracy.

Overall, the regression model involving the Challenge, Badge, Board, and Point elements provides a good explanation of the variation in employee Loyalty and can be considered an effective model to explain the influence of these variables on Loyalty. The regression model tested shows a strong relationship between the independent variables (Challenge, Badge, Board, Point) and the dependent variable. The R^2 of 0.532 indicates that the model can explain about 53% of the variation in the dependent variable. The slightly lower Adjusted R^2 value (0.512) indicates that the model takes into account the number of predictors well. With a standard error of estimate of 1.583, the model shows moderate prediction accuracy. Overall, although the

model does not explain all the variation in the dependent variable, it still provides a significant explanation and can be considered an effective model for understanding the influence of gamification elements on the dependent variable analyzed.

Conclusion

Relationship and Strength of the Model

The correlation coefficient (R) of 0.839 for the Motivation model and 0.730 for the Loyalty model indicates a strong relationship between the independent variables (Challenge, Badge, Board, Point) and the dependent variables (Motivation and Loyalty). The R Square value of 0.703 for Motivation and 0.532 for Loyalty indicates that the model can explain 70.3% of the variation in employee Motivation and 53.2% of the variation in employee Loyalty. This indicates that the model has good explanatory power for Motivation and moderate for Loyalty.

Influence of Independent Variables

Motivation: The Challenge variable has a positive and significant influence on employee Motivation (B = 0.689, Sig. = 0.000). This shows that increasing the Challenge element in the gamification-based reward and recognition system significantly increases employee Motivation. - The Point, Badge, and Board variables do not have a significant effect on employee Motivation, although Point shows a positive effect approaching significance (B = 0.203, Sig. = 0.166). - Loyalty: The Challenge variable also has a positive and significant effect on employee Loyalty (B = 0.208, Sig. = 0.005). This shows that increasing the Challenge element in the gamification system also increases employee Loyalty. The Point variable has a positive but insignificant effect on Loyalty (B = 0.273, Sig. = 0.079), and the Badge and Board variables do not show a significant effect.

Predictive Power and Model Accuracy

Adjusted R Square of 0.691 for Motivation and 0.512 for Loyalty indicates that the model still has good explanatory power after considering the number of predictors. The standard error

values of the estimates of 1.490 for Motivation and 1.583 for Loyalty indicate moderate model prediction accuracy.

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