

# Helping Dwight: how gamification can improve CSR communication effectiveness?

Gamifying CSR communication

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## Abstract

**Purpose** – The main purpose of this study is to check the potential impact of gamification on communicating CSR issues.

**Design/methodology/approach** – The examination was conducted concerning the correlations between income/education level and communication effectiveness with and without gamification application. For the need of this study the survey was prepared, containing inter alia narration resting on helping Dwight to deal with the problems with adjusting to work environment, the problem often avoided in corporate social responsibility (CSR) communication research, especially gamified.

**Findings** – Findings show that gamification can help in this area, but depending on the author's goal (spreading the news is the most relevant one).

**Originality/value** – Although the gamification gained substantial interest over the last decade, the results of applying the same into CSR communication are still very rare.

**Keywords** Sustainability, CSR communication, Corporate social responsibility, Gamification

**Paper type** Research paper

## 1. Introduction

Sustainable development is a critical aspect that businesses must consider in their operations (Li, Li, Choi, & Sethi, 2020). A variety of environmental issues pose an enormous threat to sustainability. They include deforestation, air pollution and global warming (Wang & Yao, 2020). To address these worldwide climate concerns, specialists should strengthen the awareness of environmental sustainability (Brożyna, Mentel, Ivanová, & Sorokin, 2019). Effective communication of sustainable initiatives is very important for corporations due to increasing pressure from stakeholders (Wolf, 2014), including clients, suppliers, employees and even the government. Corporate social responsibility (CSR) is not only a growing trend, but it is becoming part of our day-to-day reality (Lin, Padliansyah, & Lin, 2019). However, although CSR is often associated with environmental sustainability, it also concentrates on other aspects connected with, among others, ethics, volunteering and some legal responsibilities regarding, e.g. employee's sexual harassment (Randy Evans & Davis, 2011). Sustainable well-being (Costanza *et al.*, 2016) is one of the topics in the mentioned area that would benefit very much from further research. Communication improvement of this part of corporate social responsibility can be a very promising aspect to investigate. One of the ways to do that can be by implementing gamification.

Scholars describe gamification as the use of game design elements in contexts other than games (Deterding, Dixon, Khaled, & Nacke, 2011). Although the definition is relatively new, games have long been an important part of human history. This (not only) business



phenomenon is gaining importance on the market and there is a high probability that companies will increasingly use such solutions (Lamphun, Lamphun, Patompak, & Chitpong, 2019). Gamification has clearly been gaining importance since 2011 (Hamari, Koivisto, & Pakkanen, 2014; Koivisto & Hamari, 2019; Nacke & Deterding, 2017) and the number of its uses in several fields, including HR (Küpper, Klein, & Völckner, 2021), marketing (Hofacker, De Ruyter, Lurie, Manchanda, & Donaldson, 2016), or finance (Wanick & Bui, 2019) increases. However, the literature on the use of gamification in corporate social responsibility activities is still relatively scarce. A very interesting action in this area is CSR communication – assumed to provide an effective post-crisis strategy to mitigate the negative impact of the crisis on the corporation and thereby realize the CSR benefits (Ham & Kim, 2020) – which can be very advantageous for companies considering current situation caused by the current economic situation. In the case of gamification, there is a large gap between the theory and its confirmation in research (Alsawaier, 2018), so I expect this study's results will find practical application.

Opponents of gamification often refer to it as “pointification” (Esteves, 2017). This name usually describes the use of one or more mechanisms, usually without thorough analysis. Most often these are points and a leaderboard, sometimes with the addition of badges. This does not mean that some mechanisms are better or worse than others, but each has a specific purpose. It is worth considering the introduction of, e.g. narrative (Jaguš, Botički, & So, 2018; Sung, 2017) or personalization (González, Toledo, & Muñoz, 2016; Göbel, Hardy, Wendel, Mehm, & Steinmetz, 2010). Some lesser-known mechanisms can enrich gamification solutions and, when used in the right way, help to engage players more and for a longer period. One can often see a behavior change during the period of gamification's impact, but after this time, old habits return (Sardi, Idri, & Fernández-Alemán, 2017; Wemyss, Cellina, Lobsiger-Kägi, De Luca, & Castri, 2019). However, there are cases when one may reinforce a change in behavior (Barata, Gama, Jorge, & Gonçalves, 2017; Tu, Hsieh, & Feng, 2019). Therefore, we should pay attention to what causes the formation of a permanent habit. The area of long-term gamification effectiveness remains underexplored.

## 2. Related work and research questions

So far, the topic of gamifying CSR communication has not been well investigated. The literature concerning this area is very new and incomplete, even compared to some other gamification fields like the gamification of education, which is much better investigated (Chapman & Rich, 2018; Van Roy & Zaman, 2018; Klock, Gasparini, Pimenta, & Hamari, 2020). Even though the researchers did not focus on the communication aspect, gamification had been widely used in the broader CSR area, e.g. for describing behavior change interventions on household electricity savings (Wemyss *et al.*, 2019) or strategies on how to motivate the millennial generation; the latter of which – along with employee benefit schemes – proved effective in positively influencing employee engagement (Bhattacharya & Gandhi, 2020).

Among the first works to describe gamification and CSR communication relations was Timothy Coombs and Sherry Holladay's “Two-Minute Drill: Video Games and Social Media to Advance CSR” (2015). Their first conclusion can be a good starting point for further discussion.

“Especially young stakeholders follow corporations on social media because of some incentives such as coupons and other discounts. I believe gamification is a potential solution to the CSR promotional communication dilemma” (Coombs & Holladay, 2015, p. 140). This quote suggests that there could be some space for gamification in the CSR communication area. However, scholars argue the age factor may be wrongly assumed, as an average gamer is estimated to be 34 years old (Allaire *et al.*, 2013). Therefore, connecting gamification primarily to social media and thus stating that it can influence mainly younger stakeholders

is a bold claim. Coombs and Holladay's second conclusion is that "gamification is not the only answer to the CSR promotional communication dilemma. Many stakeholders are not "gamers" and are unlikely to be engaged by the gamification of CSR. However, gamification is an excellent option for stakeholders with an interest in or willingness to play games because communications CSR is a way that can create awareness while minimizing the possibility of a boomerang effect" (Coombs & Holladay, 2015, pp. 140–141). It is a very interesting conclusion, because, on the one hand, there are many people who do not identify themselves as "players" (Shaw, 2012) and others who just do not like playing most games. However, on the other hand, Facebook and other social networking services (SNSs) (Hamari & Koivisto, 2013) implement gamification in their business solutions with indubitable effectiveness. Therefore, the CSR promotional communication dilemma should be a crucial element of research on the marketing of information concerning social responsibility topics.

As it comes to further research, Maltseva, Fieseler, and Trittin-Ulbrich (2019) examined how gamification can increase CSR communication effectiveness. The authors distributed three different questionnaires to examine their thesis. All of them were in the form of the survey but concerned different topics: combating deforestation, preserving bird habitats and reducing the ecological footprint of food. The research could help to understand how this kind of CSR communication can be gamified effectively. Despite the ambivalence of the study's results, the authors believe that the research adds new insights to the literature both on corporate social responsibility communications and on gamification research. The authors conclude that according to research findings, gamification may not be a suitable tool to educate about sustainability issues. Moreover, research results showed that the gamified framing was not more interesting to the participants answering the survey about the deforestation problem than conventional, non-gamified framing. The interesting hypothesis is that gamification causes cognitive fatigue and people just do not have the energy to keep doing anything. However, according to Maltseva, Fieseler and Trittin-Ulbrich, it seems that gamification – due to its association with fun and good time (visible in all three experiments) – made the communicated issue not as important as the authors wanted. The problem could sound trivial when presented in a fun way. Perhaps, it means that serious environmental problems contrast with the form in which they are administered, which results in dissonance and a negative outcome of the study. Noteworthy, the CSR communication dilemma makes it difficult to disclose this kind of information and gamification can make it even more problematic. Therefore, we should investigate this topic and find appropriate solutions, so that the gamification of CSR communication does not backfire someday.

Although the topic has not been investigated enough, some studies confirm that gamification of CSR communication is possible (Gnauk, Dannecker, & Hahmann, 2012; Khan, Yadav, Beena, & Kumar, 2019; Wanick & Bui, 2019). The following study will cover the effectiveness of gamifying CSR communication. Noteworthy, most of the literature focuses on environmental issues, not the people-related challenges that concern, e.g. ethics or problems with adjusting workplaces to young generations. There is very little data concerning gamifying CSR communication for addressing people-related problems such as that of millennials at the workplace (Bhattacharya & Gandhi, 2020). Among other things, this research will focus on this exact problem.

For the purpose of this study, I divided effectiveness into three factors: survey engagement (if people are more engaged in filling a survey, they should remember more and maybe even make some actions concerning the issue, even though they do not believe in it 100%), problem's perception (what do they think about the problem? Do they think that the issue is important?), and tendency to recommend it to a friend (maybe they did not engage and do not take the problem seriously, but if they send the survey to a friend, maybe they will). All those components should help improve CSR communication effectiveness.

Moreover, the data on how to implement gamification in this area is scarce. Except for the abovementioned information, we cannot determine which social or demographic groups are more or less susceptible to gamification in this particular case. In this research, I adopted a division according to income level and education level.

After the literature review, there still remain many gaps in the gamification of CSR communication. To fill the gaps, I aimed to answer the following research questions (RQs).

*RQ1.* What impact does gamification have on the survey effectiveness?

*RQ1a.* What impact does gamification have on the survey participants' engagement?

*RQ1a.* What impact does gamification have on the survey participants' perception of the problem?

*RQ1a.* What impact does gamification have on the survey participants' tendency to recommend the questionnaire to a friend?

*RQ2.* How does gamification affect different income level groups?

*RQ3.* How does gamification affect different education level groups?

### 3. Methodology

The study sample was based on an online survey of 206 respondents (65% women) who were recruited online via Facebook. Respondents were Polish citizens willing to complete the survey. In total, 66% of participants were between 23–27 years old during the study. [Table 1](#) in the result section provides more information regarding the group sample.

Category	Sample	
	Gamified	Non-gamified
<i>Gender</i>		
Male	41	31
Female	62	72
<i>Age</i>		
18–22 y.o	15	27
23–27 y.o	73	62
28–32 y.o	10	10
33–37 y.o	2	3
Below 18	2	0
Above 37	1	1
<i>Education level</i>		
Elementary education	3	1
Secondary education	18	34
Higher (bachelor or engineer)	41	41
Higher (master)	41	27
<i>Income Level</i>		
below 1000 PLN	13	32
1000–2999 PLN	26	31
3000–3999 PLN	26	16
4000–4999 PLN	14	10
5000 PLN and more	24	14

**Table 1.**  
Sample characteristics

**Source(s):** Own elaboration

I randomly divided the participants into experimental and control groups: 103 participants each. However, the dynamics and the way I introduced gamification mechanisms differed between the groups. Narration (helping Dwight to cope with stress at work), points (questions were the same, but no information about points was given in the control group) and feedback (related to points) were introduced. In the next section, I provide more details regarding gamification usage. Noteworthy, mechanisms used are an interesting research area. Moreover, the implementation of other gamification mechanisms (e.g. leaderboards) could probably bring completely different results.

The survey asked about gender, age, education and income level. Next, the participants received a text to read based on the “Report 2020: Deloitte Millennial Survey [Polish survey results].” Later, they received questions about the text, checking whether they had read the text carefully. At the end of the survey, participants evaluated how they perceive the problem of adapting the workplace to the millennials’ needs and to what extent would they be willing to recommend filling out the questionnaire to a friend.

I tested the results using the Kolmogorov–Smirnov test and when I found that samples did not come from a population with a specific distribution, I conducted Mann–Whitney test and Spearman correlation. The Mann–Whitney U test examined the problem’s perception, survey engagement and tendency to recommend it to a friend to check statistical significance. Then, I examined correlations between the participants’ characteristics (income and education level), problem’s perception, survey engagement and the tendency to recommend it to a friend for experimental and control groups of  $N = 103$  each. I conducted all calculations in this study via SPSS.

In the survey, the participants could indicate their monthly income level in PLN from the following choices: (1) below 1000 (2) 1000–2999 (3) 3000–3999 (4) 4000–4999 (5) 5000 and more. As it comes to education level, the options were: (1) Elementary education (2) Secondary education (3) Higher (Bachelor or Engineer) (4) Higher (Master).

I conducted surveys on November 9–11. The participants did not report any problems with understanding the instructions. However, some of them asked about the purpose of the study as it was incomprehensible to the participants (because they did not have access to the questionnaires of the second group). No participant reported technical issues.

After gathering unofficial feedback from some participants, I may state that narration was probably the most engaging gamification mechanism. Although further examination is required to confirm it, its further investigation may contribute to improving CSR communication effectiveness. In this survey, I introduced the narration using additional “slides” in the beginning (Figure 1) with the text “You are the CEO of a company that helps people like Dwight adjust to new working conditions. Dwight has just changed jobs and is feeling very stressed out. He asks you for help. By taking part in the survey (with a quiz) you will help him find a solution to the problem.” After that respondents answered questions concerning their gender, age, income and education level. Next, Dwight appeared again on a screen with the text: “Dwight is very happy to meet you and counts on your help. On the next slide, you will see the text, read it, and answer the attached questions. Dwight will really be grateful to you.” After answering the questions attached to the text, the slide with immediate feedback appeared. It had the information from Dwight on how many points did the participant receive and the text concerning the level of Dwight’s appreciation. After questions regarding the problem and the tendency to recommend the survey to a friend, there was an additional slide featuring a happy Dwight expressing gratitude for the participant completing the survey. Although the narration was selected for consistency with the workplace, if another theme was implemented, then a larger group of respondents could identify themselves with the problem and thus the effects would be clearer.

Jesteś prezesem firmy pomagającej osobom takim jak Dwight dostosować się do nowych warunków pracy. Dwight właśnie niedawno zmienił pracę i czuje się bardzo zestresowany. Prosi Cię o pomoc. Biorąc udział w ankiecie (z quizem) pomożesz mu znaleźć rozwiązanie problemu



Source(s): Own elaboration using interankiety.pl software

Figure 1.  
Narration outlook

#### 4. Results

I divided the study results into two groups. Table 1 shows sociodemographic variables in the sample characteristics.

First, I conducted the Kolmogorov–Smirnov to see if samples came from a population with a specific distribution. After examining data (N = 206) of survey participations' engagement, problem's perception and tendency to recommend the questionnaire to a friend, I calculated the following results accordingly: 0.217, 0.269 and 0.204. These results signified that none of the data samples came from a population with a specific distribution.

Then, I focused on examining the correlation of the gamification factor with the following elements as visible in Table 2 below.

These calculations signify that gamification can serve as a tool for making surveys more engaging, but the topic must be analyzed further.

Factor tested with gamification effect	Spearman's rho	
	Gamified group	Non-gamified group
<i>Income level</i>		
Stimulation	-0.021	-0.094
Problem's perception	0.192	0.18
Tendency to recommend	-0.034	0.274**
<i>Education level</i>		
Stimulation	0.133	-0.066
Problem's perception	0.181	0.095
Tendency to recommend	-0.063	0.018

Table 2.  
Correlation for income and education level (gamified and non-gamified group)

Note(s): \* Correlation significant at the 0.01 level (two-sided)

Source(s): Own elaboration

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Afterward, I examined the correlations between participants' characteristics (income and education level) and problem's perception, survey engagement and the tendency to recommend it to a friend.

First, I tested the relationship between income and the number of points scored on the quiz. The results showed a correlation of  $-0.021$  for the experimental group and  $-0.094$  for the control group. It follows that the number of points obtained in the quiz did not depend on the income level, both in the group completing the questionnaires containing gamification mechanisms and in the group without these mechanisms. Therefore, I may conclude that gamification did not affect the correlation of the income level with the correctness of the answers to the questionnaire.

Then, I examined the correlation between the income level and the assessment of the problem's significance (the necessity for companies to adapt to millennials' needs). The correlation for the experimental group was  $0.192$  and for the control group  $0.18$ . Thus, similarly, the gamification mechanisms used in the survey did not influence significantly the change of this correlation.

Next, I calculated the correlation between the income level and the willingness to recommend the survey to a friend. In the experimental group, this correlation was  $-0.034$ . In the control group, it was  $0.274$ , which was the only correlation significant at  $0.01$  level. Based on the data above, I may state that the implementation of gamification mechanisms (narration and points) may weaken the correlation between the respondents' income level and willingness to recommend a survey to a friend. This may result from the fact that in general, higher-income people may have a better understanding of how companies are adjusting to millennials' needs. Employees of large companies can easily see differences resulting from, e.g. age ranges among employees, but also those resulting from the boss's management style. In very few cases, they were willing to recommend the survey to a friend. The introduction of appropriate gamification mechanisms may increase the overall recommendation chance, also making it interesting for people with lower income levels. However, looking at the correlation between the income level and the assessment of problem's significance, I may assume that recommending a survey to friends by people with lower incomes has more to do with gamification than with noticing the problem. If one has fun completing the survey, they will recommend it to their friends, even if they do not understand the content or consider the topic irrelevant. It is crucial to highlight that these are only assumptions, because further analysis of Spearman correlation's results is required.

Next, I examined the correlation between the education level and the abovementioned effectiveness components: problem's perception, survey engagement and the tendency to recommend it to a friend. First, I examined the correlation between the education level and the number of points scored on the quiz. For the experimental group, it was  $0.133$ , and for the control group  $-0.066$ . Then, I examined the correlation between the education level and the perception of the problem's significance. The result for the experimental group was  $0.181$ , and for the control group, it was  $0.095$ . Following the assumption (Maltseva *et al.*, 2019) that gamification may even lower the respondents' sensitivity to the problem, I may state that less educated people perceive the questionnaire as a fun game and not a tool drawing attention to a given problem. However, I did not test the difference between the correlations (like in the income part), and thus, it needs further exploration.

Finally, I counted the correlation between the education level and the tendency to recommend the survey to a friend. In the experimental group, the result was  $-0.063$  and in the control group  $-0.018$ . I did not identify any correlations in educational level as significant but, as highlighted earlier, this aspect requires further analysis.

After conducting the first part of the research and describing the results, one should check how it can help to answer the research questions. The RQ1 (What impact does gamification have on the survey effectiveness?) was divided into three sub-questions

(What impact does gamification have on the survey participant's engagement/problem perception/tendency to recommend the questionnaire to a friend?). After conducting Mann-Whitney U test, I examined the asymptotic significance (two-sided test) values for every factor. I found statistical significance only in recommendation tendency ( $U = 6308.5$ ,  $p = 0.014$ ). Stimulation outcomes resulted in  $U = 5914$ ,  $p = 0.133$  and perception of the problem's results were  $U = 5163$ ,  $p = 0.721$ . According to RQ1, gamification can influence CSR communication, but in this particular case, only in terms of spreading the news, not necessarily understanding it or engaging with the survey. Regarding the problem's perception, it had a very high  $p$  value, which can confirm that due to the component of fun, one cannot raise a serious issue in a playful framing (Maltseva *et al.*, 2019). I observed that stimulation's  $p$  value was pretty close to the statistical significance level. This may mean that a longer survey and/or a larger study sample could lead to more significant results. Moreover, the person who wants to improve CSR communication can have different agenda, depending, e.g. on the company's goals or characteristics of a CSR issue (or even the project itself). Hence, we should distinguish these factors and prioritize them accordingly when aiming to achieve specific goals.

Regarding RQ2 and RQ3 (How does gamification affect different income/education level groups?), the results are more complex. Considering income groups, gamification did not significantly change the engagement and problem's perception. However, there was a small adjustment in the tendency to recommend the survey to a friend. Given that a significant difference is visible between the groups, it could help to reduce the correlation between income level and the tendency to recommend the survey. However, this idea requires further analysis, and I cannot decidedly state that gamification changes this correlation. Future research could explore whether when taking the same number of participants within every income level range for both experimental and control group, there is a bigger probability that gamification increased the tendency to recommend for those participants that were earning less money, rather than decreased it for those earning more. Regarding the education level, the results can bring awareness to some of the aspects, but I found no significance in those correlations.

## 5. Conclusions

Given the described results, there is no hard proof that gamification can help significantly in CSR communication. However, there remains a light at the end of the tunnel.

After examining the results, I reached the following conclusions.

- (1) Conclusion 1: Gamification can slightly improve CSR communication effectiveness, especially when it comes to spreading the news.
- (2) Conclusion 2: Gamification has the potential to reduce the correlation between income level and the tendency to recommend a survey to a friend, but further tests are required.
- (3) Conclusion 3: The significance in correlations with gamification effectiveness and education level was not found, but to check the actual change between those, further tests are needed.

Below, I present descriptions concerning each conclusion.

Conclusion 1: Gamification can slightly improve CSR communication effectiveness but it depends on author's goal author. If it is connected with recommendations to a friend there is a chance that gamification will help to increase communication's effectiveness. However, based on this study, we may assume that gamification can be a useless tool in the case of bringing somebody's attention to a serious problem.



Conclusion 2: Gamification has a potential to reduce the correlation between income level and tendency to recommend a survey to a friend. This area of gamifying CSR communication has not been well examined, so it constitutes an important output of this research. This is one of the first pieces of information concerning income level and gamified CSR communication relations. It might also show (but more research is required) that gamification can reduce some inequalities regarding income level groups like in the case of targeting. However, without further tests, I cannot confirm it.

Conclusion 3: I did not find significance in correlations with gamification effectiveness and education level, but to check the actual change between those, further tests are required. This is an interesting path for further investigation.

## 6. Limitations and further research

The first limitation was the research method. If the sample had been larger, the results probably would have been more specific. The number of participants was good enough for conducting a pioneering study, but for the repetition or expanding this research the sample should be bigger. The next limitation was the calculation methodology. Another method instead of (or in addition to) Mann–Whitney U test and Spearman correlation, could probably lead to a more precise examination. That is very visible in the case of Spearman correlation which requires further tests. Another limitation related to naming. Perhaps, other authors could disagree with dividing CSR communication effectiveness into three factors presented in this study, depending on the interpretation of the word “effectiveness.” Moreover, the method of measuring engagement by counting points scored in the quiz is questionable, but, again, this is more of a naming issue rather than methodology neglect.

Regarding further research, we should confirm the conclusions stated above on another (preferably larger) sample. The aspect mentioned in this study a few times – the choice of gamification mechanisms – is very interesting in this type of research. The survey in this study contained two mechanisms, namely points and narration. What would have happened with the results if I introduced more mechanisms? Furthermore, the potential of implementing more mechanisms and doing it in a different way (e.g. a different narration) is practically limitless.

The research problem presented to the participants concerned workplaces not being adjusted for millennials’ needs. As mentioned in the literature review, most of the similar studies concentrate on environmental issues rather than people-related ones. It would be interesting to investigate the differences in gamifying communication of two types of problems, namely one concerning environmental and the other – people-related issues.

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