

The Effectiveness of Gamification in the Online and Offline Qualitative Marketing Research

Michał Ścibor-Rylski

Wydział Zarządzania, Uniwersytet Warszawski, Szurmowa 1/3, 02-678 Warszawa

mscibor-rylski@wz.uw.edu.pl

<https://orcid.org/0000-0002-0594-492X>

Received: 9 November 2021/ Revised: 11 December 2021/ Accepted: 14 December 2021/ Published online: 30 December 2021

ABSTRACT

Gamified market research tools help to increase respondents' engagement and obtain more in-depth results. Up till now the effects of gamification have been tested in the offline environment. The COVID-19 pandemic changed the world of the qualitative research and also triggered a need to replicate some previously presented effects. The article shows the results of two experiments proving the effectiveness of gamified approach to the qualitative advertisement and product concept testing in an online environment. The experimental groups with a narrative context added to a question regarding the first impression after viewing an advertisement or reading a product concept provided more elaborated answers to the open-ended questions than the control groups with a standard task. What's important, for the advertisement test the effect was significant for both online and offline conditions, whereas in the case of the product concept test only the online variant proved the superiority of the gamified task.

JEL classification: M310, M370, M300

Keywords: gamification, marketing research, online research

1. INTRODUCTION

The use of game elements in the marketing research helps to acquire and retain the respondents' attention making them more engaged in the process. There are numerous results proving the effectiveness of gamification used in brand, communication and customer experience studies (Ścibor-Rylski, 2019, 2020). Previous research was conducted mainly offline using a questionnaire with regular vs. gamified questions. The time of the COVID-19 pandemic forced a rapid change in how the marketing research was conducted – especially in the qualitative domain, where face to face contact dominated until 2020. Market research agencies have been running focus group and individual interviews online for over 1.5 years now and they needed to adapt proven tools to the new reality. A wooden table has been replaced with an online virtual co-working space provided by Miro or Mural platforms, paper questionnaires checking the first impressions in the process of evaluating the concepts of advertisements and products have been digitalized.

These new challenges in adapting the research methods to online requirements were an inspiration to replicate in a new, online environment some of the previous results showing the

superiority of gamified tasks in the advertisement evaluation as well as to compare online and offline effects of the use of gamification in the new research field: product concept testing.

The goal of this paper is to present the results of two experiments designed to recreate a natural market research situation of the advertisement and product concept evaluation. The main research focus was to compare the participants' effectiveness in two conditions: regular question and gamified one in offline vs. online formula.

The first experiment was designed as an online replication of an effect published last year (Ścibor-Rylski, 2020a). The second experiment used the same methodology and gamification approach but the marketing research area has been changed.

The main research question referred to the comparison of the effect sizes of the use of gamification in an online and offline variant of the study.

2. LITERATURE REVIEW

2.1. Gamification in the Marketing Research

Gorączka and Protasiuk (2020) distinguish three levels of gamification in the marketing research:

- Surveytainment: not related to any game mechanics, mostly graphical improvement of a questionnaire enhancing the respondent's experience of taking part in research.
- Soft gamification: the use of the game mechanics elements in research. The essential components of this level are: feedback, narration, challenge and competition.
- Hard gamification: the ultimate level of gamification in marketing research – it is basically running a study as a game. Specially designed board and narrative games are used in qualitative research and appealing online games increase the respondents' engagement in the quantitative approach.

All the levels of gamification mentioned above help researchers to increase respondents' engagement in the process – more appealing tasks make people more motivated. Harrison (2011) shows that the use of gamification leads to higher involvement and openness to discussion and sharing thoughts. Better motivation results in an increased completion rate and more positive experience – research participants consider the process more enjoyable (Triantoro, Gopal, Benbunan-Fich, & Lang, 2020; Zichermann & Cunningham, 2011). 'Soft gamification' of questionnaires results in more elaborated responses – adding a narrative context to a research question significantly increases the average number of generated items (e.g. brand associations or image traits) when compared to the regular approach (Puleston & Rintoul, 2012; Ścibor-Rylski, 2018, 2019).

Next crucial benefit of gamifying the marketing research processes is the depth of collected data (Bailey, Pritchard, & Kernohan, 2015). Applying 'hard gamification' makes respondents immerse in the research and induces a 'hot' behavioural state facilitating the process of recreation of the motivations and the reasons behind consumers' choices as well as emotional states. Playing a game makes people more efficient in recalling some elements from the past – e.g. detailed memories of their customer journeys (Ścibor-Rylski, 2020b).

2.2. Gamification Online

Gamification in the marketing research serves similar goals as in education – it is a tool to increase participants' engagement and motivation, transforming the flow of a not very exciting activity into a rewarding task that activates a dopamine loop: "challenge-achievement-reward loop

promotes the production of dopamine in the brain, reinforcing our desire to play” (Zichermann & Cunningham, 2011, p. 4). The research in the field of education proves that turning the process of learning into a game makes students more engaged and motivated (da Rocha Seixas, Gomes, & de Melo Filho, 2016; Homer, Jew, & Tan, 2018). The COVID-19 pandemic had a great impact on the learning process and also the use of a gamified approach to education. Nieto-Escamez & Roldán-Tapia (2021) present a review of the research aimed at enhancing online learning by improving participants’ motivation and engagement. In most cases, a gamified approach was considered effective and engaging, and also fun.

Year 2020 changed also the way in which companies run marketing research – especially in the qualitative approach. Online methods became everyday practice. The raising popularity of online focus groups and marketing research online communities (MROCs – Baldus, 2013) puts new challenges to the application of gamification in the qualitative field of the market research and also requires careful scientific verification of the effects of the use of gamified tasks in such an environment. The use of game elements in quantitative online surveys is already a subject of researchers’ focus (Downes-Le Guin, Baker, Mechling, & Ruyle, 2012; Bailey, Pritchard, & Kernohan, 2015; Puleston, 2011), but it is still an unexplored territory in the online qualitative research. The research presented in this paper may be considered as a first step to verify the effectiveness of gamification in this field.

3. DATA AND METHODS

3.1. The Research Goal and Operationalization of the Dependent Variable

The results of two experiments will be presented in this part:

1. Online replication of a study on the effectiveness of gamification in the communication research (Ścibor-Rylski, 2020a),
2. A study on the effectiveness of gamification in the product concept testing research both in online and offline conditions.

In both experiments, the same method of gamifying the task was used – a narrative context was included in the question about the first impression regarding an advertisement or a product concept. The participants in the offline condition were gathered in a lecture room. The online version was sent to the respondents as a Google Forms link. Both versions of the questionnaire were identical.

The dependent variable was defined as the research participants’ engagement reflected in their effectiveness. The indicator of the dependent variable was the number of words used by the participants in their statement about the first impression.

3.2. The Hypothesis and the Research Question

As a result of the literature review presented above, a general hypothesis was formulated:

Hypothesis: employing the gamification technique based on adding a context to a question improves engagement of the research participants, resulting in better effectiveness.

Additionally, due to a lack of previous studies regarding the use of online gamification in the qualitative marketing research, a research question was asked:

Research question: Is there any moderating effect of the condition (online and offline) of running marketing research on the effectiveness of gamification?

3.3. Research Methodology – Communication Research

The results of the original experiment proved the effectiveness of a gamified approach in qualitative advertisement testing in an offline condition (Ścibor-Rylski, 2020a). The experimental group with a narrative context added to a question regarding the first impression was more effective than the control group with a standard task. The number of words written by the participants was used as an indicator of the dependent variable. The average word count for the control group was $M = 37.77$, while the participants from the experimental group wrote ten more words on average ($M = 47.79$). The difference was statistically significant: $t(57) = 2.05$; $p < 0.05$; $d = 0.53$.

The online replication of this experiment was conducted via Google Forms among 67 students of the Faculty of Management of the University of Warsaw.

The participants were split into two groups:

- control (no gamified techniques were used)
- experimental (with a gamified question – a narrative context added).

As in the original research, the participants were asked to watch a commercial – a TV advertisement of Castorama – a DiY retailer (Castorama Polska, 2018). The ad lasted 45 seconds and its plot was focused on a story of two neighbours falling in love. The brand inspired the male character to accomplish a project – create a roof garden that helped him charm his female neighbour.

After watching the commercial, the participants were asked to fill out a form with only one question. Its content was different in the control and in the experimental group.

The control group was simply asked about their first impressions. They received the following instruction:

“Watch the commercial and write down what you think about it.”

In the experimental group, a narrative context was introduced to the question. It is considered as one of the components of ‘soft gamification’ (Gorączka & Protasiuk, 2020). They received the following instruction:

“Imagine you work for an advertisement agency and you are working on a new campaign. Your biggest rival working for a competitor’s brand has just created a new ad – somehow you managed to watch it before the official premiere. You need to react as soon as possible to design a relevant commercial as a response and not to fall behind. You want to share your thoughts with the creative team and your management. Watch the commercial and write down what do you think about it.”

No time limit was imposed. The next subchapter presents the results of the comparison between two groups. As in the original experiment, the indicator of the effectiveness of gamification was the word count in each participant’s statement.

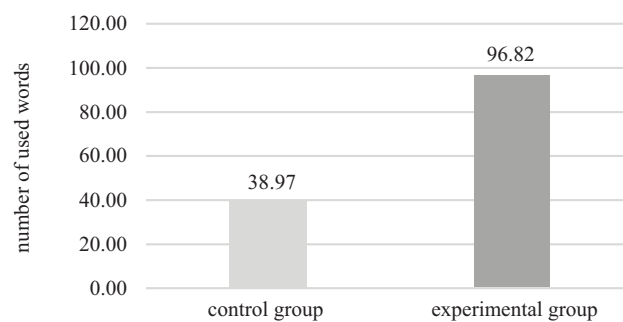
3.4. Results – Communication Research

The average word count of the statements was calculated in each group. The experimental group ($N = 28$) used more words: $M = 38.97$; $SD = 30.61$ compared to the control group ($N = 31$): $M = 96.82$; $SD = 76.77$.

T-test was used to analyse the significance of the difference. It revealed a statistically significant difference and an average effect size: $t(51) = 4.27$; $p < 0.001$; $d = 1.08$. The results are presented in Chart 1.

Chart 1

Differences in the average number of words used by the control and experimental groups



The group with the narrative gamification technique using an extended context generated significantly longer statements than the control group. The effect was replicated but what is surprising is the size of the effect. The results of the control groups in both online and offline conditions are similar, whereas there is a big difference in the case of the performance of the gamified groups. Also the size of the standard deviation in the experimental group in an online condition shows that there was no coherence in the length of the statements: some participants wrote very long first impressions (over 100 words, in some cases even 200 words) and some could be considered as standard observed in an offline experiment (40–50 words).

Such a surprising result was an inspiration to run another experiment focused on the comparison of the effectiveness of gamification used in two conditions: online and offline. This time, the research was focused on the product concept testing and gathering the consumers' first impressions.

3.5. Research Methodology – Product Concept Research

The experiment was conducted among 134 students of the Faculty of Management of the University of Warsaw.

Two independent variables were defined:

- research condition: online via Google Forms vs offline in a lecture room
- gamification: control group (no gamified techniques were used) vs experimental (with a gamified question – a narrative context added).

Table 1 summarizes the number of participants in each research condition.

Table 1

The number of participants in each research condition

	Control group	Experimental (gamified) group	Total
Online	N = 43	N = 32	N = 75
Offline	N = 28	N = 31	N = 59
total	N = 71	N = 63	N = 134

The participants were asked to read the concept – a detailed description of a fictional product: smartphone case with a built-in charger. The concept was built in a classic way: with consumer insight, benefit and reason to believe:

Consumer insight:

You are a busy person who constantly uses the phone in your work. Unfortunately, the battery cannot withstand a full day of intensive use. Power banks are a solution, but they are a tangle of cables and another item that you have to carry and remember to charge.

Benefit:

ChargeCase will appear on the market – a special case that extends the battery life of your phone. It is fully compatible with most phone models, and is also light and aesthetic. It can be personalized by selecting any graphic theme or photo. ChargeCase does not block the charging input, so you do not have to remove it when charging the phone and it charges simultaneously with it. Extends battery life by up to 100%.

RtB:

Modern cells used by ChargeCase allow you to store large amounts of energy in a very small, completely flat battery, so that the phone does not increase its size and you do not have to bother with the charging process.

After reading the concept, the participants were asked to fill out a form with only one question. Its content was different in the control and in the experimental group.

The control group was simply asked about their first impressions. They received the following instruction:

“Read the product description and write down what you think about it.”

In the experimental group, a narrative context was introduced to the question. The participants received the following instruction:

“Imagine you are a researcher participating in the design thinking process. You work in two teams that develop prototypes that are independent of each other. The participants of the second group have just finished the design session and sent you a ready idea for the product – your task is to provide them with your feedback, which will be used to optimize the concept. Read the product description and write down what you think about it.”

No time limit was imposed. The next subsection presents the results of the comparison between two groups.

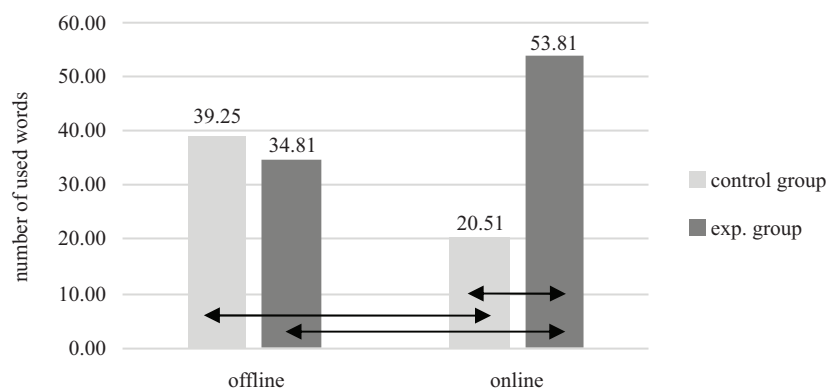
3.6. Results – Product Concept Research

The average word count of the statements was calculated in each group. In the offline condition, the average number of words in the control group ($M = 39.25$; $SD = 16.83$) was slightly higher than in the experimental group ($M = 34.81$; $SD = 17.46$). In the online condition, the average number of words in the control group ($M = 20.51$; $SD = 17.99$) was lower than in the experimental group ($M = 53.81$; $SD = 54.64$).

Two-way ANOVA was used to analyse the results. It revealed a statistically significant interaction effect with a medium effect size: $F(1, 130) = 12.30$; $p < 0,001$; $\eta^2 = 0.09$. The results are presented in Chart 2. The arrows indicate significant simple effects.

Chart 2

The interaction effect



The analysis of the simple effects:

The simple effect of the offline condition is not significant:

$F(1, 130) = 0.31; p = 0.58$. There is no significant difference in the words used by the control and the experimental group in the offline task.

The simple effect of the online condition is significant and strong:

$F(1, 130) = 21.52; p < 0.001; \eta^2 = 0.14$. In the online task, the experimental group used significantly more words than the control group.

The simple effect of the control group is significant and rather weak:

$F(1, 130) = 6.30; p = 0.013; \eta^2 = 0.05$. In the control group, the participants used significantly more words in the offline than in the online condition.

The simple effect of the experimental group is significant and rather weak:

$F(1, 130) = 6.02; p = 0.016; \eta^2 = 0.04$. In the experimental group, the participants used significantly more words in the online than in the offline condition.

Summing up – the gamification of the task was effective only in the online condition. What is surprising is that the control group performed better in the offline than in the online condition. The results pattern in the experimental group was reversed – the participants were more effective in the online task.

3.7. Discussion of the Results

The analysis of the results of both experiments partially confirmed the hypothesis. Gamified tasks make people more engaged and thus more effective, but there is evidence that this effect is moderated by the condition of the task, which answers the research question. In the case of online experiments, both in advertisement and in product concept research, the experimental group achieved higher word counts than the control group. When done offline, the effect was maintained but also impaired only for the advertisement test and there were no differences between the groups in the case of the product concept test.

Another interesting observation is the huge difference between the control and experimental group in the online variant of advertisement research. Comparing both experiments, the regular, not gamified groups both achieved a similar length of performance (average around 38 words), but in case of the experimental groups the differences are vast – online participants reacted to the gamified task with the average of almost 97 words compared to over 47 in the offline mode. Such a finding needs a thorough examination and replication, but one of the possible explanations might be the fact that people in the online variant were filling out the form in their free time without any mental limitations. Perhaps the gamified task was so involving as a role-playing experience that they allowed themselves to be carried away with the flow. The participants of the offline variant were asked to fill out the form during a lecture in a lecture room. Such an environment, the presence of other people and observation of their performance might limit the facilitation of the role-playing, narrative experience or even eliminate it in some types of tasks – like in the case of the evaluation of the product concept. The reason for the failure of the gamified task in this kind of assignment might be the specificity of concept testing and its verbal form. It is possible that in a more rigid offline condition, the participants were able to empathize with the role only when confronted with non-verbal material in a form of an appealing love story presented in the advertisement. Reading a product concept might not be such a strong trigger of narrative flow. This hypothesis needs further examination.

The presence of other people increases vigilance and arousal which might facilitate the performance of simple, psychomotor tasks using well-trained skills (Zajonc & Sales, 1966). A complex, narrative and individual assignment requiring full concentration and the use of imagination might result in the impairment of the performance of the experimental offline groups

in both commercial and product concept tasks (Baron, 1986). This result might have a big impact on the use of gamified techniques in focus groups – both offline and online.

The results of the control group in the product concept test experiment shows that in the case of online tasks the performance declines compared to the offline condition. It is a proof that the use of gamified techniques might be a solution to increase respondents' engagement, which is significantly lower when standard marketing research tasks are applied.

4. CONCLUSIONS

The new results in the field of the use of gamification in marketing research confirm that it is an effective tool to increase the participant's engagement. Online replication of the effect provided a result of great importance – the COVID-19 pandemic accelerated the process of digitalization of qualitative research. Proving that gamification works and is even more effective in online tasks opens new possibilities for market researchers. The next research step is to test gamified tasks in online, qualitative consumer communities. A safe environment, no time pressure and natural activity of writing opinions on the Internet make it a perfect environment for the use of gamification. Such communities usually exist several days, which does not create time pressure and allows the researcher to test different, more complicated and sequential gamified tasks – not only narrative but also those using challenge, feedback and competition.

Another important research direction would be an experiment designed to verify the hypothesis regarding the social inhibition effect – is online gamification effective only for individual tasks? How about online focus groups where the participants are aware of the presence of other people? These questions need to be answered in future research.

References

- Bailey, P., Pritchard, G., & Kernohan, H. (2015). Gamification in market research: Increasing enjoyment, participant Engagement and richness of data, but what of data validity?. *International Journal of Market Research*, 57(1), 17–28.
<https://doi.org/10.2501/IJMR-2015-003>.
- Baldus, B.J. (2013). *Engagement in online brand communities and marketing research online communities (MROCs)* (A dissertation). Michigan State University.
- Baron, R.S. (1986). Distraction-conflict theory: Progress and problems. *Advances in Experimental Social Psychology*, 19, 1–40.
- Castorama Polska. (2018, March 19). Potrzeby inspirują do zmian – wiosenny ogród na dachu [Video]. YouTube. Retrieved from <https://www.youtube.com/watch?v=uzpPuOSfaqk>.
- da Rocha Seixas, L., Gomes, A.S., & de Melo Filho, I.J. (2016). Effectiveness of gamification in the engagement of students. *Computers in Human Behavior*, 58, 48–63.
<https://doi.org/10.1016/j.chb.2015.11.021>.
- Downes-Le Guin, T., Baker, R., Mechling, J., & Ruyle, E. (2012). Myths and realities of respondent engagement in online surveys. *International Journal of Market Research*, 54(5), 613–633.
- Gorączka, A., & Protasiuk, M. (2020). *Gamification. Jak wygrać zaangażowanie respondentów?*. Warszawa: PWN.
- Harrison, P. (2011). *The researchification of games: Adopting a game designer's approach to market research*. ESOMAR Congress Miami.
- Homer, R., Hew, K.F., & Tan, C.Y. (2018). Comparing digital badges-and-points with classroom token systems: Effects on elementary school ESL students' classroom behavior and English learning. *Educational Technology and Society*, 21(1), 137–151.
- Nieto-Escamez, F.A., & Roldán-Tapia, M.D. (2021). Gamification as online teaching strategy during COVID-19: A mini review. *Frontiers in Psychology*, 12, 648552.
<https://doi.org/10.3389/fpsyg.2021.648552>.

- Puleston, J. (2011). Online research–game on!: A look at how gaming techniques can transform your online research. In *Proceedings of the 6th ASC (Association for Survey Computing) International Conference Shifting the Boundaries of Research* (pp. 20–50). Citeseer.
- Puleston, J., & Rintoul, D. (2012). *Can survey gaming techniques cross continents? Examining cross cultural reactions to creative questioning techniques*. ESOMAR Congress Shanghai.
- Ścibor-Rylski, M. (2018). Gamification as an effective method in the modern market research. *Marketing i Rynek*, 10, 36–44.
- Ścibor-Rylski, M. (2019). Gamification – the key to in-depth exploration of consumer behaviour in market research. *Annales Universitatis Mariae Curie-Skłodowska, sectio H – Oeconomia*, 53(1), 119–128. <https://doi.org/10.17951/h.2019.53.1.119-128>.
- Ścibor-Rylski, M. (2020a). Gamifying questions by adding context in the creative development marketing research. *Journal of Marketing and Consumer Behaviour in Emerging Markets*, 1(10). <https://doi.org/10.7172/2449-6634.jmcbem.2020.1.4>.
- Ścibor-Rylski, M. (2020b). Grywalizacja w służbie badań doświadczeń konsumentkich. In K. Mazurek-Łopacińska & M. Sobocińska (Eds.), *Badania marketingowe wobec nowych trendów w otoczeniu*. Wrocław: Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu.
- Triantoro, T., Gopal, R., Benbunan-Fich, R., & Lang, G. (2020). Personality and games: Enhancing online surveys through gamification. *Information Technology and Management*, 21, 169–178. <https://doi-org-10000b5k606c6.han.buw.uw.edu.pl/10.1007/s10799-020-00314-4>.
- Zajonc, R.B., & Sales, S.M. (1966). Social facilitation of dominant and subordinate responses. *Journal of Experimental Social Psychology*, 2(2), 160–168.
- Zichermann, G., & Cunningham, C. (2011). *Gamification by design: Implementing game mechanics in web and mobile apps*. O'Reilly Media.