How to Motivate Users to Continuously Participate in Virtual CSR Co-creation

Weisi Ye*, Yao Yu
2582872505@qq.com, 1657845641@qq.com

Zhejiang Gongshang University

Abstract: Previous studies have paid little attention to Corporate Social Responsibility (CSR) co-creation. In the era of digital economy, gamification mechanisms such as feedback can promote the co-creation of virtual CSR. In order to explore how enterprises can stimulate users to participate in virtual CSR co-creation, based on SOR theory, this paper collects data by questionnaire, checks data consistency by big data technology-data cleaning, and processes invalid and missing values, and makes empirical analysis on the processed data by SPSS and AMOS. The research shows that the emotional feedback and information feedback provided by the virtual CSR co-creation platform can promote the continuous participation of users; Green self-efficacy plays an intermediary role in it; Identity plays a negative regulatory role in the influencing mechanism. These conclusions not only deepen and expand the research of value co-creation and its applicable boundary, but also have certain significance for enterprise marketing practice.

Keywords: Virtual CSR co-creation; Feedback; Green self-efficacy; Moral identity

1 Introduction

The rapid development of the Internet and the increasing socialization of information media make it possible for consumers to actively participate in CSR activities. The form of CSR activities has gradually shifted from offline to online, attracting the public to participate in the social responsibility projects initiated by enterprises, which is called "virtual CSR co-creation". So far, some enterprises have cultivated a group of loyal users through virtual CSR co-creation, but there are also some enterprises whose virtual CSR co-creation is rapidly disappearing. The fundamental reason lies in whether it can trigger continuous participation and realize long-term social responsibility value co-creation. In order to achieve this goal, some companies are introducing gamification into co-creation projects to encourage people to participate in CSR co-creation in an entertaining way. Ant Forest, for example, has successfully connected people's environmental awareness with low-carbon behavior in the real world through game design, providing continuous motivation for millions of people to develop environmental habits. However, not all enterprises' gamification designs can successfully retain customers. For example, the "99 Charity Day" has been stagnating in the past two years. As an important part of gamification mechanism, feedback plays an important role in the co-creation process of users' social responsibility value, which can motivate users to participate externally and internally [1], [2].

Existing research on feedback mainly focuses on general consumption behavior. For example, according to the principle of feedback effect, the positive outcome evaluation of individual

MSIEID 2022, December 09-11, Chongqing, People's Republic of China

DOI 10.4108/eai.9-12-2022.2327580

behavior is fed back to the individual, which will promote and motivate the individual and strengthen the repetition of individual behavior [3]. Enterprises' feedbacks on consumers' post-purchase behavior will affect consumers' purchase behavior [4]. Based on the existing research, this study believes that the positive results of users' participation in virtual CSR co-creation will be feedback to users, forming a feedback effect and prompting users to continue to participate in virtual CSR co-creation. In the field of virtual CSR, the research on feedback effect is still in its infancy. Therefore, how to feedback the positive results of virtual CSR co-creation to users in order to effectively promote the continuous participation of users becomes the problem to be solved in this study. So based on SOR model, this study uses questionnaires to obtain data, and obtains effective questionnaires through big data technology-data cleaning, to explore the influence mechanism and boundary conditions of different feedback on users' continuous participation in virtual CSR co-creation, and to provide theoretical basis for enterprises to actively and effectively carry out virtual CSR activities.

2 Related works

2.1 Feedback design

Gamification mechanics are the rules that govern the interaction between users and game objects. Feedback design is a kind of gamification mechanism [5], which can be used to meet the motivation needs of users, bring positive user experience and enhance user performance [6]. Feedback is the process in which the outside world purposefully and consciously provides individuals with information about task operations or past behaviors [7]. Scholars have explored the influence of feedback mechanism from different perspectives, such as feedback timing and form of feedback [8], [9]; Types of feedback and information titer [10].

Feedback can be divided into many types in terms of content and form. From the source, feedback can be divided into internal feedback and external feedback. From the dimension of feedback valence, it can be divided into positive feedback and negative feedback. This paper studies the feedback provided by enterprises to users' participation in virtual CSR activities, which means that external motivations provide information about individuals' participation in virtual CSR activities consciously and purposefully, in order to induce their internal motivations. Based on the co-creation of virtual CSR, the feedback referred to in this paper is positive feedback and external feedback. Some scholars believe that incentive system should pay attention to users' information, emotion and social needs [11], [12] and provide feedback that resonates with the preferences of target users. Depending on the user's needs, feedback can provide information evaluation, emotional response, and social validation. In view of this, feedback is divided into information feedback, emotional feedback and social feedback [13]. Emotional feedback refers to the positive emotional responses that individuals experience from external stimuli [14]; Social feedback refers to the information that enterprises provide users with social evaluation of their behaviors, which is related to the public and visible information of users in the group [15]. Information feedback refers to the objective information received by users related to the co-creation of virtual CSR [16].

2.2 Green self-efficacy

Self-efficacy refers to an individual's subjective belief about whether he or she can successfully perform a certain behavior. Self-efficacy has been regarded as an important factor in predicting attitude, willingness and behavior in the study of user adoption, attrition and continuous engagement. Green self-efficacy is a concept put forward by scholars who introduce self-efficacy into the environmental field under the trend of global green development. It is a kind of self-cognition, specifically referring to the self-evaluation of an individual's ability to achieve environmental goals [17]. Existing studies on green self-efficacy mostly focus on the workplace. For example, Kim took self-efficacy as the mediating variable to explore the impact of employee motivation on green behavior [18]. The field of virtual CSR co-creation is rarely involved. Therefore, this paper explores the mediating mechanism of green self-efficacy in feedback and the willingness of continuous participation in virtual CSR.

2.3 Continuous willingness to participate in virtual CSR

The concept of virtual CSR co-creation is developed on the basis of the concept of CSR co-creation. Based on the theory of value co-creation, CSR co-creation advocates the process in which enterprises and various stakeholder groups jointly create corporate social value. The development of social media advocates consumers' participation in online communication and collaboration, and makes it possible for consumers to participate in virtual CSR co-creation. In this context, Korschun & Du defined the co-creation of virtual CSR as the process of making stakeholders actively participate in CSR activities through the strategic application of social media [19].

The ultimate success of co-creation depends on the continuous participation of users. Existing scholars mainly explore the continuous participation willingness of users from two aspects. Scholars who tend to be technology-oriented mostly use TAM model to explain users' intention to co-create continuous participation [20]. However, scholars who are inclined to the relationship orientation believe that co-creation is essentially a collection of people and relationships, and the interaction between participants is an important factor to encourage users to continue to participate [21]. However, the current theoretical research results on virtual CSR co-creation lag behind the practical level, and there is still no strong explanation for the formation mechanism of users' intention to co-create continuous participation. Therefore, from the perspective of enterprise feedback, this paper explores the intermediary mechanism and boundary conditions of feedback on the willingness to co-create continuous participation in virtual CSR.

2.4 Moral identity

Blasi defined moral identity as a kind of individual difference, which can reflect the core or importance of morality in a person's self-consciousness [22]. Its essence is a self-regulating mechanism, which requires individual behavior to be consistent with social moral quality, and then prompts individuals to produce prosocial behavior [23]. According to social cognition theory, moral identity is the key psychological mechanism for moral cognition to transform into moral behavior, which is activated by external situational factors. Individuals with different moral identities will have different degrees of activation and show different individual behavioral intentions. The higher the level of individual moral identity, the higher

the proportion of altruism in self-concept, the easier to stimulate prosocial motivation; The lower the degree of individual moral identity is, it indicates that the moral characteristics are deviated from the center in the self-concept, which is more likely to activate the egoistic attribute and reduce the degree of compliance with the moral norms.

3 Research model and hypotheses

3.1 Feedback and willingness to participate in virtual CSR continuously

As an important part of gamification mechanism, feedback is a process in which the outside world purposefully and consciously provides individuals with information about task operations or past behaviors [7]. Based on the research results of Hassan et al. [13], we divide feedback into emotional feedback, information feedback and social feedback. According to the feedback intervention theory, when users participate in the co-creation of virtual CSR, enterprises can consciously and purposefully provide information about individual task operations or past behaviors through feedback, and realize the insight of results and thus influence behaviors by establishing the connection between results and behavior changes. As an important part of gamification mechanics, feedback can influence green purchase intent through normative cognition [24]. As part of the feedback, points and MEDALS will further influence the attitude and behavioral intention of users by influencing their environmental protection knowledge and habits [25]. Therefore, feedback will have an impact on users' behavioral decisions.

When enterprises provide users with emotional feedback about their virtual CSR co-creation, users will experience positive emotions and evaluate, maintain or change their behavior based on this. After users receive positive emotional feedback, even if there is no logical explanation for emotional feedback, it will have a positive impact on the activity and its motivation, thus making emotional feedback a powerful motivational tool [15], and users are willing to continue to participate in virtual CSR activities. When users receive information feedback, they will get objective information about their participation in virtual CSR activities from the feedback, improve their understanding of their activities and behaviors and their possible consequences, and influence their subsequent behaviors through the results of their behaviors [26]. Through the information feedback received, users can understand their own efforts in virtual CSR activities, so that users can have a deeper understanding of virtual CSR activities and choose to continue to participate in virtual CSR activities. Social feedback is to provide users with their social evaluation information about virtual CSR co-creation. Since humans naturally need to socialize and interact, individuals often experience and expect social feedback in many areas of their lives. Individuals can be encouraged to make a higher commitment to some goals simply by sharing their lifestyle online with their friends [27]. Therefore, when users receive social feedback in participating in virtual CSR activities, the social feedback will make users feel each other's enthusiasm for virtual CSR activities, build friendship and trust, and continue to participate in virtual CSR activities. Therefore, we propose the following hypothesis:

H1: Feedback (emotional feedback (a), information feedback (b), social feedback (c)) positively influences users' continuous participation in virtual CSR co-creation.

3.2 The mediating role of green self-efficacy

SOR model is composed of stimulus, organism and response. Stimulus is a factor that affects the internal organism state of an individual, organism is a mental state that processes external information, and response is the final behavioral result [28]. SOR theory holds that an individual's internal state plays an intermediary role between external stimulus and behavioral response. In this study, when users receive emotional feedback, information feedback and social feedback in the process of virtual CSR co-creation, individual users process the feedback content with their existing abilities and experience to stimulate the change of their mental state, and then guide their behavioral decisions to change.

Green self-efficacy refers to an individual's evaluation of his/her ability to perform different activities to achieve green goals [17]. According to SOR theory, external stimuli of emotional feedback, information feedback and social feedback will induce changes in individual cognitive state when users participate in virtual CSR co-creation. According to the theory of feedback intervention, the feedback of individual behavior can enhance people's sense of self-efficacy that they can engage in a certain behavior. And perceptive behavioral control such as self-efficacy affects behavioral intention [29]. When enterprises provide users with positive emotional responses to their participation in virtual CSR activities, users will have positive emotions towards their virtual CSR activities, which will stimulate their cognition that they can better complete and realize virtual CSR activities, and thus generate higher sense of green self-efficacy. When users receive information feedback, they will obtain objective information about their participation in virtual CSR activities from the feedback, understand their efforts in virtual CSR activities, and believe that they can successfully carry out the following virtual CSR activities. When a user receives social feedback, he or she will think that his or her behavior is paid attention and appreciated by other users and his or her efforts are valuable. The user is confident enough to participate in virtual CSR activities, thus stimulating the user to change their cognitive status and improve their sense of green self-efficacy. Therefore, we propose the following hypothesis:

H2: Feedback (emotional feedback (a), information feedback (b), social feedback (c)) positively affects green self-efficacy.

Previous studies have found that green self-efficacy, as a kind of self-cognition, has a positive impact on green behavior [17]. Sniehotta et al. found that in the process of maintaining physical activity, those users with sufficient confidence have a stronger willingness to continue to participate and are more capable of achieving changes in healthy behaviors [30]. According to the resource conservation theory, green self-efficacy, as a cognitive and psychological resource of individuals [31], can have an impact on individual behavioral performance. Users with high green self-efficacy have rich psychological resources and believe that they can achieve their green goals. In this case, users will try to obtain resources from the platform provided by the enterprise and continue to participate in virtual CSR activities. Therefore, users with high green self-efficacy will positively understand the significance of virtual CSR activities, and then make full use of their internal and external resources to continue to participate in the creation of virtual CSR. According to SOR theory, when users receive emotional feedback, information feedback and social feedback, users will be capable of achieving green goals. With the improvement of green self-efficacy, users will choose and find a state that is balanced with their self-cognition, implement behaviors that can

shape and improve their self-image, and continue to participate in virtual CSR activities. Therefore, we propose the following hypothesis:

H3: Green self-efficacy positively affects the willingness of continuous participation in virtual CSR.

H4: Green self-efficacy plays a mediating role between feedback (emotional feedback (a), information feedback (b), social feedback (c)) and users' willingness to continuously participate in virtual CSR.

3.3 The moderating effect of moral identity

Moral identity is defined as an individual difference that reflects the degree to which morality is central or important to a person's sense of self. Individuals with different moral identities will have different degrees of activation, which will show different individual behavioral intentions. Virtual CSR co-creation is an altruistic activity, and users' participation in virtual CSR co-creation is a moral behavior. Users with high moral identity have stable moral control in their hearts, guide their behaviors according to high moral characteristics [32], show a more pious attitude towards moral behaviors, and are willing to increase the output of moral behaviors. Therefore, for users with high moral identity, regardless of their green self-efficacy, Users are more willing to increase their ethical behavior, thus demonstrating their willingness to continuously participate in virtual CSR activities, which weakens the impact of green self-efficacy on their willingness to continuously participate in virtual CSR activities. For users with a low level of moral identity, their moral control is weak and they will not deliberately maintain their moral image. Only when they believe that they can achieve green goals will they continue to participate in CSR co-creation. Therefore, we propose the following hypothesis:

H5: Moral identity regulates the relationship between users' green self-efficacy and their willingness to co-create and participate in virtual CSR.

To sum up, the theoretical model constructed in this paper is shown in Figure 1.

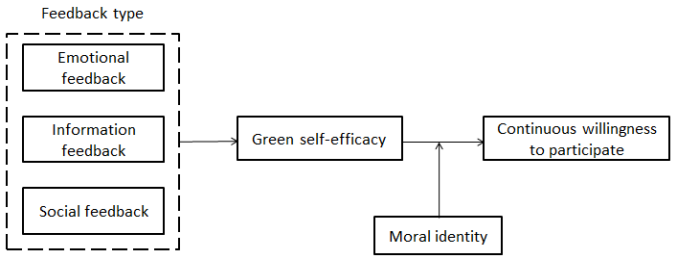

Fig.1. Research model

4 Materials and methods

4.1 Sample selection and data sources

In this study, the questionnaire survey method was adopted, and 161 questionnaires were produced and distributed for recycling. The invalid questionnaires were eliminated by big data

technology-data cleaning, and 152 valid questionnaires were found. See Table 1 for descriptive analysis of samples. In this study, users participating in Alipay Ant Forest were selected for investigation, because the platform's virtual CSR co-creation project has a large number of users with high levels of participation and activity, and can provide users with the possibility of long-term participation. SPSS 25.0 software and Amos 24.0 software were used for empirical analysis of the survey data, to test the scientifically and rationality of the research hypothesis and theoretical model.

Table 1. Sample descriptive statistics (N=152)

Sample characteristics	Classify	Frequency	Sample characteristics	Classify	Frequency
Gender	Male	69	Occupation	Student	104
	Female	83		Enterprise staff	31
Age	18-25	141		National organization staff	1
	26-35	11		Self-employed individual	13
Education	High school	3		Other	3
	College	11			
	Bachelor	42			
	Postgraduate	96			

4.2 Tool of measurement

In this paper, using the maturity scale of predecessors for reference, the core variables are scored by Likert scale 7, and after discussion with professors in combination with the research situation, appropriate corrections are made, and the corresponding reliability test is carried out by SPSS. Emotional feedback (EF) is based on the scale of Lin et al. [33], with four items, for example, "I feel very satisfied when I see the progress of my activities". The reliability coefficient of this scale is 0.924. According to the Hsu& Lu [34] scale, there are four items in the information feedback (IF), for example, "the information given by the platform helps me better understand my behavior". The reliability coefficient of this scale is 0.914. Social feedback (SF) is based on the Hamari & Koivisto [35] scale, with 4 items, for example, "I like other users' comments and my behavior". The reliability coefficient of this scale is 0.933. Green self-efficacy (GS) is based on the scale of Chen et al.[36], which consists of 5 items. For example, "I think I can successfully practice the concept of environmental protection". The reliability coefficient of this scale is 0.917. Continuous willingness to participation (CWP) in virtual CSR is based on Bhattacherjee's [37] scale, there are three items: for example, "I intend to continue to participate in ANT FOREST". The reliability coefficient of this scale is 0.808. The scale of Aquino et al. [23] is used as the basis for moral identity (MI), with 5 items, which describes 9 moral words (caring ", compassionate ", "just", etc.). The respondents are required to conduct self-assessment for these moral words. For example, "People with the above qualities make me feel good". The reliability coefficient of this scale is 0.863.

5 Results

5.1 Confirmatory factor analysis

Amos 24.0 was used to fit the structural equation model with 152 questionnaire data and the theoretical model. The fitness test indexes were as follows: X2 /df = 3.098, GFI = 0.968, CFI=0.989, IFI=0.989, RMSEA=0.118, indicating a good degree of fitting of the measurement model, so the model test can be carried out. Since self-reported data was used in this study, common method bias may exist. Therefore, single factor confirmatory factor analysis was used to test common method bias for all self-rated questions. The results showed that the model fit was poor, indicating that there was no serious common method bias problem in the model.

5.2 Descriptive statistical analysis

Table 2 reports the mean value, standard deviation and correlation coefficient of the variables in this study. The results show that emotional feedback, information feedback, social feedback, green self-efficacy, moral identity and willingness to continuously participate in virtual CSR are all correlated to some extent, which provides a good basis for the follow-up test of this study.

Table 2. Descriptive statistics and correlation analysis results

	Mean	S.D.	EF	IF	SF	GS	MI	CWP
EF	6.35	0.93	1					
IF	6.25	0.98	0.910**	1				
SF	6.29	1.03	0.869**	0.898**	1			
GS	6.26	0.84	0.817**	0.856**	0.782**	1		
MI	6.56	0.63	0.276**	0.274**	0.255**	0.198*	1	
CWP	6.52	0.64	0.865**	0.876**	0.800**	0.864**	0.473**	1

Note: *$p < 0.05$, **$p < 0.01$

5.3 Hypothesis testing

In this study, the structural equation model is constructed by AMOS, SPSS and PROCESS plug-in to test the hypothesis, and the results of the study partially support the hypothesis. Firstly, the structural equation model constructed by AMOS found that affective feedback significantly positively affected the willingness to participate in virtual CSR (β=0.495, P<0.01). Information feedback significantly positively affected the willingness of virtual CSR to participate continuously (β=0.666, P<0.01). The effect of social feedback on the willingness to continuously participate in virtual CSR was not significant (β=-0.049, P>0.05), possibly because the sample size was relatively small or the Ant Forest provided users with less social feedback. Since the main effect of social feedback is not valid, the mediating effect of green self-efficacy between social feedback and virtual CSR is also not valid. H1a, H1b is true, H1c, H4c is not true.

Secondly, affective feedback positively affected green self-efficacy (β=0.254, P<0.01). Information feedback significantly positively affected green self-efficacy (β=0.762, P<0.01). Social feedback positively affected green self-efficacy, but not significantly (β=0.012, P>0.05). H2a and H2b were valid, but H2c was not.

Furthermore, green self-efficacy significantly positively affected the willingness to participate in virtual CSR (β=0.416, P<0.01), H3 was established, and the direct effect of emotional feedback and information feedback on the willingness to participate in virtual CSR was decreased after the introduction of green self-efficacy (β=0.388, P<0.01; β=0.336, P<0.01). Therefore, green self-efficacy played a mediating role between emotional feedback and information feedback and users' willingness to continuously participate in virtual CSR. H4a and H4b were established. Through model 4 in SPSS PROCESS v4.1, the Bootstrap method was used to further verify the robustness of the mediation model, in which the number of models was set to 4 and the sample size was set to 5000. It is found that at 95% confidence level, the confidence interval for the indirect effect of green self-efficacy on the impact of emotional feedback and information feedback on the willingness to continue to participate in virtual CSR does not contain 0, and the intermediary effect is significant. However, the confidence interval of the indirect effect between social feedback and the intention of continuous participation in virtual CSR contains 0, and the mediating effect is not significant. The research results again support H4a, H4b, and do not support H4c.

Finally, Moral identity and the interaction between moral identity and green self-efficacy are introduced into the regression analysis model, that is,

$$Y=a_0+a_1X_i+a_2M_i+a_3X_iM$$

Y stands for CWP, X stands for GS, M stands for MI, a1, a2 and a3 stand for coefficients, and a0 stands for intercept. Hierarchical regression analysis was carried out by SPSS and SPSS PROCESS shows that the interaction coefficient is significant (β=-0.224, P<0.01), indicating that moral identity has a negative moderating effect, and H5 was established. The moderating effect of moral identity is shown in Figure 2.

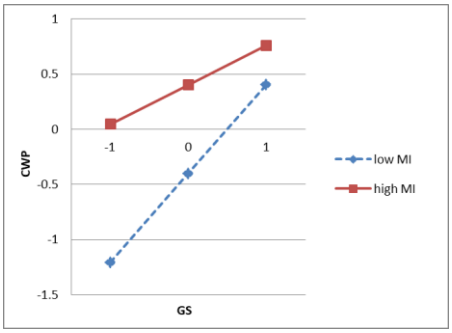

Fig.2. The moderating effect of moral identity

6 Discussion and conclusions

In combination with the development of the Internet and the era background of information media socialization, this study takes Ant Forest as the object to explore the influence of feedback (emotional feedback, information feedback and social feedback) on the intention of continuous participation in virtual CSR. First, feedback has a significant positive impact on the willingness to continuously participate in virtual CSR. Second, green self-efficacy mediates the impact of feedback on the willingness to continuously participate in virtual CSR.

Third, moral identity negatively moderates the relationship between green self-efficacy and the willingness to continuously participate in virtual CSR.

6.1 Theoretical implications

First, the research focuses on the co-creation of virtual CSR, which enriches the research in the field of value co-creation. Previous studies mainly focused on the co-creation of offline CSR, but rarely involved online CSR. Therefore, combining the characteristics of the new era, this paper explores the influence of feedback on the willingness to continue to participate in virtual CSR, which certificates the content of previous studies. Second, by introducing green self-efficacy into the study on the relationship between the continuous willingness of virtual CSR, this study promoted the crossover of literature in the field of psychology and management. Previous studies mostly focused on the impact of perceived usefulness and other variables on the willingness to participate in virtual CSR. This paper explores the "black box" of the willingness to participate in virtual CSR by introducing the variable of green self-efficacy. Thirdly, based on the perspective of moral identity, this study examines the moderating effect of moral identity on the relationship between green self-efficacy and the willingness to continuously participate in virtual CSR, and expands the research on its boundary conditions. The study of moral identity as a moderating variable not only expands the research Angle of moral identity, but also certificates the research content of continuous participation intention of virtual CSR.

6.2 Practical implication

First, research shows that when users participate in virtual CSR activities, if they receive emotional feedback and information feedback, they will be stimulated to better realize their own virtual CSR activities and continue to participate in the creation of virtual CSR. Therefore, when building a virtual CSR co-creation platform, enterprises need to give users emotional and information feedback from time to time, so that they can understand the significance of participation, increase their affirmation of their ability to achieve green goals, and make them more enthusiastic in the virtual CSR co-creation activities organized by enterprises. Second, focus on cultivating users' moral identity. Research shows that users with a high level of moral identity are more willing to continue to participate in virtual CSR co-creation regardless of whether they receive feedback and whether they have a high sense of green self-efficacy. However, users with a low level of moral identity will be willing to continue to participate in virtual CSR co-creation only if they have a high sense of green self-efficacy. Therefore, enterprises not only need to give users feedback when building the platform, but also need to cultivate users' sense of moral identity as much as possible, stimulate their enthusiasm for moral behavior itself, and continue to participate in the creation of virtual CSR.

6.3 Limitations and future directions

The research reveals the mechanism of the influence of feedback on the willingness of continuous participation in virtual CSR, but there are still some limitations. First, the sample size is small and only focuses on ant forest. In the future, the sample size can be expanded and tested with other platforms as research objects to improve the external validity of the model. Secondly, the research method has its own limitations, so the model can be verified by the situational experiment method in the future. Third, the study only explores the mechanism and

boundary conditions of green self-efficacy and moral identity in feedback and the willingness to continue to participate in virtual CSR. In the future, the mediation and regulation of this influence can be explored from other perspectives.

References

[1] Feng, Y., Ye, H. J., Yu, Y., et al.: Gamification artifacts and crowdsourcing participation: Examining the mediating role of intrinsic motivations. Computers in Human Behavior, vol.81, pp.124-136 (2018)

[2] Yang, C., Ye, H. J., & Feng, Y.: Using gamification elements for competitive crowdsourcing: Exploring the underlying mechanism. Behaviour & Information Technology, pp.1-18 (2020)

[3] Frömer R., Stürmer B., Sommer W.: The better, the bigger: The effect of graded positive performance feedback on the reward positivity. Biological Psychology, vol.114, no.2, pp.61-68(2016)

[4] Motyka S., Grewal D., Aguirre E., et al.: The emotional review–reward effect: how do reviews increase impulsivity. Journal of the Academy of Marketing, vol.46, no.6, pp.1032-1051(2018)

[5] Tang J., Zhao Y. C., Zeng Z., et al.: Examining the Effects of Feedback-giving as a Gamification Mechanic in Crowd Rating Systems. International Journal of HumanComputer Interaction, vol.37, no.20, pp.1916-1930(2021)

[6] Martinez, M. G.: Solver engagement in knowledge sharing in crowdsourcing communities: Exploring the link to creativity. Research Policy, vol.44, no.8, pp.1419-1430(2015)

[7] Kluger A. N., DeNisi A.: The effects of feedback interventions on performance: A historical review, a meta-analysis, and a preliminary feedback intervention theory. Psychological bulletin, vol.119, no.2, pp.254-284(1996)

[8] Mory, E. H.: Feedback research revisited. Handbook of Research on Educational Communications and Technology, vol.2, pp.745-783 (2004)

[9] Nelson, M. M., Schunn, C. D.: The nature of feedback: How different types of peer feedback affect writing performance. Instructional Science, vol.37, no.4, pp.375-401 (2009)

[10] Burgers, C., Eden, A., Engelenburg, M. D. V., et al.: How feedback boosts motivation and play in a brain-training game. Computers in Human Behavior, vol.48, pp.94-103(2015)

[11] Fang, J., Zhao, Z., Wen, C., et al.: Design and performance attributes driving mobile travel application engagement. International Journal of Information Management, vol.37, no.4, pp.269-283 (2017)

[12] Osatuyi, B., Qin, H.: How vital is the role of affect on post-adoption behaviors? An examination of social commerce users. International Journal of Information Management, vol.40, pp.175-185 (2018)

[13] Hassan L., Dias A., Hamari J.: How motivational feedback increases user's benefits and continued use: A study on gamification, quantified-self and social networking. International Journal of Information Management, vol.46, pp.151-162(2019)

[14] Custers, R., Aarts, H.: Positive affect as implicit motivator: On the nonconscious operation of behavioral goals. Journal of Personality and Social Psychology, vol.89, no.2, pp.129-142 (2005)

[15] Fishbach A., Finkelstein S. R.: How feedback influences persistence, disengagement, and change in goal pursuit. Philosophy (2012)

[16] Hattie, J. T., Timperley, H. The power of feedback. Review of Educational Research, vol.77, no.1, pp. 81-112 (2007)

[17] Chen Y. S., Chang C. H., Yeh S. L., et al.: Green shared vision and green creativity: the

mediation roles of green mindfulness and green self-efficacy. Quality & Quantity, vol.49, no.3, pp.1169-1184(2015)
[18] Kim S. H., Kim M., Han H. S., et al.: The determinants of hospitality employees' pro-environmental behaviors: The moderating role of generational differences. International Journal of Hospitality Management, vol.52, pp.56-67(2016)
[19] Korschun D., Du S.: How virtual corporate social responsibility dialogs generate value: A framework and propositions. Journal of Business Research, vol.66, no.9, pp.1494-1504(2013)
[20] Kaur, P.: Underpinnings of user participation in service provider hosted online communities. Service Science, vol.8, no.3, pp.249-262(2016)
[21] Bagozzi R. P., Dholakia U. M.: Intentional social action in virtual communities. Journal of Interactive Marketing, vol.16, no.2, pp.2-21(2010)
[22] Blasi, A.: Moral functioning:moral understanding and personality. Development, self, and identity, pp.335-347(2004)
[23] Aquino K., Reed A.: The self-importance of moral identity. American Psychological Association, vol.83, no. 6, pp.1423-1440(2002)
[24] Berger V.: Social norm-based gamification to promote eco-friendly food choice. Journal of Consumer Marketing, vol.36, no.5, pp.66-76(2019)
[25] Mulcahy R. F., Mcandrew R., Russell-Bennett R., et al.: "Game on!" Pushing consumer buttons to change sustainable behavior: a gamification field study. European Journal of Marketing, vol.55, no.10, pp.2593-2619(2021)
[26] Thondhlana G., Kua H. W.: Promoting household energy conservation in low-income households through tailored interventions in Grahamstown, South Africa. Journal of Cleaner Production, vol.131, no.10, pp.327-340(2016)
[27] Shiau, W. L., Dwivedi, Y. K., Lai, H. H.: Examining the core knowledge on Facebook. International Journal of Information Management, vol. 43, pp.52-63(2018)
[28] Song Z. J., Liu C., Shi R.: How Do Fresh Live Broadcast Impact Consumers' Purchase Intention? Based on the SOR Theory. Sustainability, vol.14, no.21 (2022)
[29] Onwezen M. C., Bartels J., Antonides G.: Environmentally friendly consumer choices: Cultural differences in the self-regulatory function of anticipated pride and guilt. Journal of Environmental Psychology, vol.40, pp.239-248(2014)
[30] Sniehotta F. F., Scholz U., Schwarzer R.: Bridging the intention-behaviour gap: planning, self-efficacy, and action control in the adoption and maintenance of physical exercise. Psychology &Health, vol.20, no.2, pp.143-160(2005)
[31] Hobfoll S. E.: The Influence of Culture, Community, and the Nested-Self in the Stress Process: Advancing Conservation of Resources Theory. Applied Psychology, vol.50, no.3, pp.337-421(2001)
[32] Jordan J., Mullen E., Murnighan J. K.: Striving for the moral self: the effects of recalling past moral actions on future moral behavior. Personality and Social Psychology Bulletin, vol.37, no.5, pp.701-713(2011)
[33] Lin A., Gregor S., Ewing M.: Developing a scale to measure the enjoyment of Web experiences. Journal of Interactive Marketing, vol.22, no.4, pp.40-57(2008)
[34] Hsu C. L., Lu H. P.: Consumer behavior in online game communities: A motivational factor perspective. Computers in Human Behavior, vol.23, no.3, pp.1642-1659(2007)
[35] Hamari J., Koivisto J.: "Working out for likes": An empirical study on social influence in exercise gamification. Computers in Human Behavior, vol.50, pp.333-347(2015)
[36] Chen G., Gully S. M., Eden D.: Validation of a new general self-efficacy scale. Organizational Research Methods， no.1, pp. 62-83(2001)

[37] Bhattacherjee A.: Understanding Information Systems Continuance: An Expectation-Confirmation Model. Mis Quarterly, vol.25, no.3, pp.351-370(2001)