

# Online Promotional Games: Impact of Flow Experience on Word-of-Mouth and Personal Information Sharing

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## Abstract

Viral campaigns widely use online promotional games. They are an innovative and a compelling way to capture the attention of the target audience, and encourage consumers to interact with brands. The goal is to offer consumers a content that influence customer behaviour. As more immersive games are developed, online promotional games possess a number of features that make them a compelling opportunity for the study of flow. Flow is a mental state of operation in which a person is fully immersed in what he or she is doing. In this way, this research proposes to evaluate the impact of online promotional games on the willingness to communicate personal and social data (word-of-mouth) in respect with an approach focused on flow. A study is carried out on a sample of French individuals from a mega base of e-mails for promotional offers. Respondents were invited to play to a branded online promotional game created for a viral marketing campaign. The results show that the flow experience depends on the balance between the perceived skill ability and the perceived challenge. Flow experience is positively related impact the decision to diffuse the message and to share personal information with the brand.

**Keywords:** viral marketing, promotional games, word-of-mouth, flow

## 1. Introduction

For many years, there has been increasing consumer resistance to traditional forms of advertising such as TV or newspaper ads. In response, marketers have turned to alternative strategies, such as viral marketing. To exploit the power of customer word-of-mouth, companies need to encourage consumers to talk about a brand or product. Online promotional games have become a key player in marketing and are used in viral campaigns. They offer opportunities for consumers to win a prize through luck and skills through Internet. In 2008, companies spent 1.86 million dollars in games, competitions and sweepstakes according to a report from Promo Magazine (Industry Trend Report, 2008). If they are an important part of promotional and advertising campaigns, few studies exist in this field (McDaniel, 2002). Previous studies examined either games of chance (i.e., sweepstakes) or skill (i.e., contests) (Ward & Hill, 1991). Yet, a specific form of online promotional game has emerged for many years that depends on both luck and the skill of the player. If the probability of winning primarily depends on chance, players can increase their odds of winning through their own skill. In this way, companies now have the ability to develop more interactive game mechanics that increase the player's participation. As more immersive games are created, the perceived intrinsic value of playing a game has become a major factor influencing players' behaviors.

From this perspective, online promotional games possess a number of features that make them a compelling opportunity for the study of flow. Flow is a mental state of operation in which a person is fully immersed in what he or she is doing (Csikszentmihalyi, 1990). Flow is particularly relevant in interactive situations such as online promotional games. Flow is an optimal state of experience in which one is completely absorbed and engaged in an activity. It is referred to as "the holistic sensation that people feel when they act with total involvement" (Csikszentmihalyi, 1975). Csikszentmihalyi originally identified the following characteristics of flow: a clear goal, feedback, challenges that match skills, concentration, focus, control, loss of self-awareness and time distortion. Although researchers generally agree on the conceptual definition of flow, there is some inconsistency in operational definitions (Hoffman & Novak, 2009). Researchers have used optimal experience theory to study

activities ranging from sports, games, music, hobbies, and human-computer interactions (Csikszentmihalyi, 1975; Csikszentmihalyi & LeFevre, 1989; Ghani, 1991; Ghani & Deshpande, 1994; Mannel et al., 1988; Trevino & Webster, 1992). The concept of flow is a natural measure for play-related experiences in game and has also been examined in online games (Chou & Ting, 2003; Hsu & Lu 2003; Rau et al., 2006; Wan & Chiou, 2006; Gureau, 2008).

In this context, we focus on the link between the flow experience and the willingness to communicate personal and social data online during the participation to an online promotional game. Social data refer to all the information that player transmit to the company about their friends (e.g., email address). Exploiting their social network, marketers have the opportunities to reach prospective customers. Personal data include all the personal information that player transmit to the company during the game (e.g., name and surname, address, telephone number, identification number). Thus, this research proposes to evaluate the impact of the participation in an online promotional game on word-of-mouth and information sharing in respect with an approach focused on flow. The first part of the study describes the conceptual framework. The second part outlines the methodology, and the third part presents results and a discussion.

## 2. Literature Review and Research Hypotheses

### 2.1 Online Promotional Games and the Flow Experience

Technological opportunities enable to develop more interactive social platform connecting people with their friends via word of mouth. Online promotional games are an innovative and a compelling way to capture the attention of the target audience, and encourage repeated interactions with brands. Websites are designed to create virtual experiences through the development of immersive technologies, providing opportunities to develop immersive game mechanics that increase players' participation. Participation in an online promotional game can also be viewed as form of consumption, combining active or passive participation by the individual with a connection to the environment characterized by a state of absorption. Research suggests that the psychological experience of gaming is the same than the flow experience as outlined by Csikszentmihalyi (Weibel et al., 2008).

A primary dimension of flow is the feeling of personal control over the situation or activity. People tend to feel and behave in more positive manner when they perceive more control over their environment (Csikszentmihalyi, 1990; Ghani & Deshpande, 1994). The experience of flow is a positive, highly enjoyable state of consciousness that occurs when our perceived skills match the perceived challenges. To generate a challenging experience, online promotional games require skill to succeed in these games. For instance, players increase their probability of winning if they guess (or solve by logic) the answer to a puzzle posed by the game. Therefore, players feel that the game is a genuine challenge and desire success. In this study, we focus on the effect of the balance between the perceived skill ability and the perceived challenge on the flow experience:

*H<sub>1</sub>: When the perceived challenge and perceived skill ability are high, the effects of participation on the flow experience will be higher than when the perceived challenge and perceived skill ability are low.*

*H<sub>2</sub>: When the perceived challenge and perceived skill ability are high, the effects of participation on the flow experience will be higher than when the perceived challenge is low and the perceived skill ability is high.*

*H<sub>3</sub>: When the perceived challenge and perceived skill ability are high, the effects of participation on the flow experience will be higher than when the perceived challenge is high and the perceived skill ability is low.*

### 2.2 The Flow Experience and the Word-of-Mouth

With the growth and evolution of the Internet, word-of-mouth has become an important phenomenon, and marketers have tried to exploit it using online promotional games in viral marketing campaigns. Through email referrals and online user forums, consumers share information far more easily than ever before (De Bruyn & Lilien, 2008). The most common version of intentional viral marketing campaigns occurs when consumers willingly become promoters of a product or service and spread the word to their friends. The goal of viral marketing is to use consumer-to-consumer communications as opposed to company-to-consumer communications (Krishnamurthy, 2001). Helm (2000) describes viral marketing as "a communication and distribution concept that relies on customers to transmit digital products via electronic mail to other potential customers in their social sphere and to animate these contacts in order to transmit the products". Previous researches on viral marketing identify the characteristics of viral message that may be sent by the receiver (Phelps et al., 2004; Dobeles et al., 2005; Chiu et al., 2007). Recently, Huang et al. (2012) in their study of behavior retransmission video showed the intention to transfer is only created when the video content is quite interesting. In this research, we concentrate on the gaming experience and we consider the flow experience as a major factor to explain why players proactively spread the word about the branded game they have experienced:

*H<sub>4</sub>: The flow experience has a positive effect of word-of-mouth.*

### 2.3 The Flow Experience and Personal Information Sharing

Customer information is a major source of value for companies. If marketers use online promotional game to exploits social networks by encouraging consumers to share messages with their friends, another objective of viral marketing campaign is to collect personal data. The consumer's decision to respond to a request for personal information is an important issue. Ward, Bridges and Chitty (2005) suggested that the context in which information is required could influence the consumer's answer toward the request. Previous researches have demonstrated that that a reward in exchange for participation in the survey can enhance cooperation. In this way, the value inherent to playing can explain the decision to share personal information. Consumers are likely to take the decision to provide their personal data (or not) if they perceived a great value in exchange. In this research, we consider the flow experience as a major factor to explain why players proactively share personal information during the game they have experienced.

*H<sub>5</sub>: The Flow experience has a positive effect on personal information sharing.*

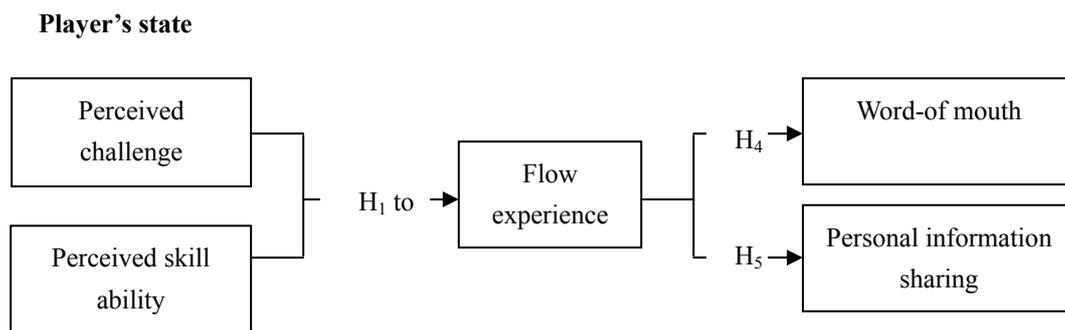


Figure 1. Conceptual framework

## 3. Methodology

### 3.1 Design and Stimulus

In this study, we analyzed the effects the impact of gaming experience on the willingness to communicate personal and social data (word-of-mouth) in respect with an approach focused on flow. To collect data, we have used a sample of individuals from a mega base of e-mails for promotional offers managed by a company engaging in marketing activities or advertising campaigns.

The online social game chosen for the study was a branded social game created for a marketing campaign in February 2012 for an important media group: after filling out an entry form, the participants were invited to play a branded social game. If they were successful in the micro-games, they could participate in the lottery for the best prize. The game invited the participants to answer questions about various topics. The game consisted in five steps that the players had to follow. At each step, they had to answer a quiz. If they answered correctly, they would win a certain number of points (20 points per questions). If they got enough points (80 points), they were eligible to participate in the lottery for the best prize. If they shared the game or transmit personal information, they could get additional points. The game was played over the course of a few minutes. After the gaming experience, the participants completed a self-administrated questionnaire.

The final sample was composed of 175 persons playing to the branded social game. 56% were female, and 44% were male (gender). The average age of respondents was 45 (age). 30% of respondents purchased at least one brand product over the last 12 months (brand customer).

### 3.2 Measures

*Independent variables:* Perceived challenge (cronbach's alpha = 0.89) was measured using a seven-point, three-item scale based on the existing scale of Mattwick and Rigdon (2004). The items were adapted to fit the context of the present study ("Playing this game challenges me", "Playing this game pushed me to perform to the best of my ability" and "Playing this game provides a good test of my skills"). Perceived skill ability (cronbach's alpha = 0.86) was measured using a seven-point, three-item scale based on the existing scale of Mattwick and

Rigdon (2004). The items were adapted to fit the context of the present study (“*I am extremely skilled at this game*”, “*I consider myself better at this type of game than most people*” and “*I have the ability to meet the challenges of this type of game*”). The concept of flow is difficult to operationalize. Thus we have chosen to rely on approach of Ghani and Desphande (1994). The two key characteristics of flow (cronbach’s alpha = 0.87) are concentration in the activity and enjoyment derived from the activity. Enjoyment was measured using a seven-point, seven-item scale based on the existing scale of Ghani et al. (1994) (“*Interesting/Uninteresting*”, “*Fun/Not fun*”, “*Exciting/Not exciting*”, “*Enjoyable/Not enjoyable*”). Concentration was measured using a seven-point, seven-item scale based on the existing scale of Mattwick et al. (2004). The items were adapted to fit the context of the present study (“*I was intensely absorbed when I played*”, “*I fully concentrated when I played*” and “*my attention was focused when I played*”).

*Dependant variables:* Word-of-mouth was a behavioral measure: during the game, players had the opportunity to earn points by inviting their friends to play. We transformed the measurement in a binary variable: (1): players e-mailed their friends and colleagues; (0): players didn’t e-mail their friends and colleagues. Personal information sharing was a behavioral measure: during the game, participants had the opportunity to earn extra points by answering questions about them. We transformed the measurement in a binary variable: (1): players shared personal information; (0): players didn’t share personal information.

*Covariates:* brand attitude (cronbach’s alpha = 0.95) was measured using a seven-point, three-item scale (e.g., “*I like this brand*”) based on the existing scale of Didellon (1997). To measure the implication level (cronbach’s alpha = 0.87), we used a seven-point, three-item scale based on the existing scale of Strazzieri (1994) (e.g., “*I particularly like to speak about these products*”).

#### 4. Results

##### 4.1 Cluster Analysis

Cluster analysis procedures were used to classify the respondents into four states according to the variation in their perceived skill ability and perceived challenge. ANOVA results indicate perceived skill ability ( $F = 169.73$ ,  $p = 0.00$ ), perceived challenge ( $F = 142.64$ ,  $p = 0.00$ ), were highly significant contributors to the cluster solution. The final cluster centers are reported in table 1:

Table 1. Cluster-State of player

	1	2	3	4
Perceived skill ability	4.47	1.58	2.52	4.13
Perceived challenge	4.87	1.64	3.71	1.71
N=	30	58	47	40

Perceived skill ability and perceived challenge are elevated in the first category (1). This contrasts with the second category (2) where participants reported levels of perceived skill ability and perceived challenge at the low point. In the third category (3), perceived challenge is elevated but the level of belief in his ability to succeed the game is at the low point. It contrasts with the last category (4) where participants report a high level of perceived challenge but a level of perceived skill ability at the low point.

##### 4.2 Impact of Player’s State on the Flow Experience

An ANOVA were used to test the effect of the state of player on the flow experience. Socio-demographics characteristics including sex, age and purchase rate, were used as covariates. Player’s state has an impact on the flow experience ( $F_{(1,174)}=27,42$ ;  $p = 0,00$ ).

To understand how the flow experience differs depending on the status of the player, post-hoc comparisons of means were conducted. When the perceived challenge and the perceived skill ability are high, the flow experience is significantly higher than when the perceived level of challenge is low and the perceived skill ability is high ( $p = 0.00$ ,  $d = 1.92$ ) or when the perceived challenge is high and the perceived skill ability is low ( $p = 0.00$ ,  $d = 0.93$ ) or when the perceived challenge and the perceived skill ability are low (2) ( $p = 0.00$ ,  $d = 2.01$ ). Finally, the flow experience depends on the level of perceived skill ability and perceived challenge. **H<sub>1</sub>, H<sub>2</sub> and H<sub>3</sub> are supported.**

Table 2. Pairwise comparisons

Dependent variable	Player's state (I)	Player's state (J)	(I-J)	S.E	Sig.
<b>The flow experience</b>	(1)	(2)	2,01	0,24	0.00
		(3)	0,93	0,25	0.00
		(4)	1,92	0,26	0.00
	(2)	(1)	-2,01	0,24	0.00
		(3)	-1,03	0,21	0.00
		(4)	-0,09	0,22	0.00
	(3)	(1)	-0,98	0,25	0.00
		(2)	1,03	0,21	0.00
		(3)	0,94	0,23	0.00
	(4)	(1)	-1,92	0,26	0.00
		(2)	0,09	0,22	0.00
		(3)	-0,94	0,23	0.00

#### 4.3 The Flow Experience and Word-of-Mouth

The logistic regression models the relationship between a set of independent variables and a dichotomous dependent variable. The chi-square test was significant ( $\chi^2 = 21.78$ ,  $p = 0.00$ ). The value of the Cox and Snell  $R^2$  and the Nagelkerke  $R^2$  showed that the independent variables explain the dependent variable: these values are 11.6% and 17.8%, respectively (Table 3). The results show that the flow experience has a significant effect on word-of-mouth ( $\beta = 0.51$ ,  $p = 0.00$ ). Covariates exert no direct effect. As expected, a player fully immersed in the online promotional game will generate more word-of-mouth than a player not immersed. **H<sub>4</sub> is accepted.**

#### 4.4 The Flow Experience and Personal Information Sharing

The chi-square test was significant ( $\chi^2 = 14.34$ ,  $p = 0.00$ ). The value of the Cox and Snell  $R^2$  and the Nagelkerke  $R^2$  showed that the independent variables explain the dependent variable: these values are 7.91% and 10.6%, respectively (Table 3). The results thus show that the flow experience has a significant effect on personal information sharing ( $\beta = 0.45$ ,  $p = 0.00$ ). Covariates exert no direct effect. As expected, a player fully immersed in the online promotional game will transmit more personal information than a player not immersed. **H<sub>5</sub> is accepted.**

Table 3. Impact of the flow experience on word-of-mouth and personal information sharing

	Personal information sharing		Word-of-mouth	
	$\beta$	P	$\beta$	P
<i>Constant</i>	-1.06	0.24	-5.09	0.00
<b><i>Flow experience</i></b>	<b>0.45</b>	<b>0.00</b>	<b>0.51</b>	<b>0.01</b>
Brand Attitude	-0.06	0.57	0.23	0.08
Implication	0.03	0.73	0.21	0.12
Sex	0.12	0.71	0.78	0.84
Age	0.00	0.95	0.00	0.80
Brand customer	0.41	0.30	0.19	0.68

## 5. Conclusion

Games such as sweepstakes and contests have long played an important role in promotional and advertising campaigns. Although previous studies have primarily investigated the decision to participate, which is linked to the attractiveness of the odds and the perceived probability of winning, it is also necessary to explore the value

inherent to playing. By playing a promotional game, players are provided a virtual experience with the brand. Participating in a brand game engages the consumer with the brand through interactive, entertaining media content. In this study, the flow experience during online promotional games was studied. The main purpose of this research was to know why consumers had an optimal experience while playing an online promotional game, and how the consequences of this experience could impact word-of-mouth and information sharing.

One of the main contributions is the use of the theory of flow experience to explain in what extend the game experience can impact player's behaviours. Today, online promotional games allow consumers to engage in the same experience while including the player in the game mechanics. Flow only occurs when the balance between challenges and skills exceeds the typical level of daily experience. Online promotional games that require skill provide a greater challenge than a traditional sweepstakes; therefore, during the activity, players have the feeling of encountering a real challenge that is associated with a certain skill level. Finally, the results show that the balance between perceived challenge and perceived skill ability affect the flow experience. Every flow activity provides a sense of discovery, a creative feeling of transporting the person into a new reality, which is a familiar concept for game players. We have also demonstrated that the level of flow experience can impact real behaviors in the context of an online promotional game. The results show that when the value of gaming experience increases, it is likely that the willingness to communicate personal data also increases. We note a similar result concerning the decision to recommend the game. This research has established the role of flow in predicting sharing behaviors.

From a methodological point of view, adapting the flow theory in the context of branded social game is an important contribution. If the flow experience has already been tested in the environment mediated by computer, this research examines the flow experience in the context of online promotional game. We have demonstrated that flow is a useful and practical tool to understand users' experience while playing a promotional game. From a conceptual point of view, we have decided to measure flow experience using two key characteristics (concentration and enjoyment), and we considered perceived challenge and perceived skill ability to be antecedents of flow. Ghani and Desphande (1994) have considered these variables to be predictors of flow experience, but other researchers have described flow as a multidimensional construct (Trevino & Webster, 1992; Huang, 2003). Researchers interested in this question should investigate the dimension of the flow experience.

Our results also have important practical implications for companies. From a managerial point of view, these results outline the importance for advertisers to use online promotional games in their marketing campaigns. To encourage viral spread, companies attempt to create captivating and compelling games. On social media, the main issue is to capture consumer's attention on social network. Companies have started to rethink their relationships with consumers and have adapted to the new online world. In this virtual world of social networks, entertainment is a key element. To encourage viral spread, companies attempt to create captivating and compelling games. Play is a part of the human experience and is present in all cultures. Online promotional games should no longer be considered a promotional tool, but as entertaining and enjoyable content. In this way, the perceived intrinsic value of playing a game has become a major factor influencing players' decisions

A second managerial implication is the importance to develop online promotional games offering a good balance between the perceived challenges of the task and his or her own perceived skills. To generate a flow experience, online promotional games should create game mechanics with a higher perceived control. Indeed, when challenge and skill are balanced and elevated above some critical threshold, the flow experience increases. It means that marketers should develop game's mechanics with an optimal level of challenge.

Moreover, we demonstrate that the request for collect personal and social data will be less perceived as an invasion of privacy when players are plunged into a flow state. The theory of optimal experience, developed by Csikszentmihalyi describes a mental state in which the attention is highly concentrated on a specific process. To encourage users to transmit personal data, companies need to involve consumers. Finally, by linking flow theory to online promotional games, this study illustrates the practical relevance of flow theory in improving our understanding of the online experience. Marketers should develop more interactive experience to collect data.

## **6. Limitations and Futures Researches**

Before discussing directions for future research, it is important to consider the limitations of the study. First, we investigated a specific kind of game: online promotional games. We have investigated a specific kind of online branded games. In our study, players' objectives were to participate in a quiz in order to win a prize. This form of social games are less complex than others forms. Future researches should replicate the same experiment using other forms of game mechanics, such as contests. Second, this study examined online promotional games using only a single brand. Given the fact that we used real brand games, it was difficult to perform an experiment with

many promotional games for many brands. Finally, we suggest that future studies examine the effect of promotional games by analyzing other game mechanics or other brands. Third, the question of privacy concerns should be studied. Indeed, we focused on the value of playing. In the context of a viral campaign, the programs require the collection of data, especially personal data. Today, many consumers are more and more concerned when a company request their personal data. It would be interesting to study in what extend a higher privacy concerns can impact the flow experience. Futures researches should integrate this dimension in their model.

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