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Online Flow Experience and Perceived Quality of a Brand Website: InPascani.ro Case Study

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Abstract

The aim of this paper is to study the relationship between customers' online flow experience and the perceived quality of a brand website. First, we reviewed flow and perceived quality studies in the literature, and distinguished the flow construct from other similar concepts. Second, we proposed a conceptual diagram for a better understanding and a visual representation of the relationships between the two sets of variables. Third, we identified in the literature, scales for measuring online flow and perceived quality, and ran a factor analysis, followed by a reliability analysis of the scales used. In order to address our research problem - how can the flow theory be used to increase the perceived quality of a brand website - we used a quasi-experimental design. The first phase of our study consisted of selecting a brand website: www.inpascani.ro, and establishing a task scenario. The second phase involved data collection. Through an email marketing platform we sent 890 emails containing an invitation to participate in the study. The sample used was nonprobabilistic. The opening rate of emails containing the invitation was 32.5%, with a 10% click rate on the link to participate in our study. At the end of this second phase, June 24, 2013 - July 3, 2013, we received 67 answers, of which 62 were valid. In order to test our hypotheses, we conducted a series of bivariate correlations for testing the relationship between the two sets of variables, and a simple linear regression analysis to examine the causal relationship between online flow state and the perceived quality of a brand website. We found that flow is an important construct that can be used by marketers in order to increase the perceived quality of a brand website. Finally, we discussed the limitations of our study and offered suggestions for future research.

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1. Introduction

In the last few years, given the expansion of the Internet and the growth of online markets, scholars and marketers have focused on the study of online customer behavior. The Internet is an important medium for a brand in terms of communicating with customers. We consider it important for brand managers to develop brand websites that are of a high perceived quality, in order to achieve their marketing objectives, and to induce to customers to engage in a compelling, positive experience. The main function of a brand website is to inform customers and to build the brand, rather than to facilitate online trading. Brand websites represent the most durable communication activity on the Internet (Karson & Korganondar, 2001) and allow brand managers to control what information will be presented, in what order, and for how long (Bezjian-Avery, Calder & Iacobucci, 1998). As a result, developing an effective brand website is extremely important for marketing specialists and for a company's activities in an online setting.

Scholars have applied flow theory (Csikszentmihalyi, 1975) to online environments in the study of consumer behaviour (Hoffman & Novak, 1996; Novak, Hoffman & Yung, 2000) in order to better understand users' experiences and behaviour in virtual worlds.

The aim of this study is to enhance the understanding of online flow experience outcomes by studying their relationship with the perceived quality of a brand website. The research objectives of the study are as follows: (1) to investigate the relationship between Internet self-efficacy and online flow state; (2) to study the relationship between perceived challenge and optimal experience, or online flow; (3) to examine the relationship between the time spent by a user on a brand website and online flow; (4) to investigate the relationship between telepresence and online flow; (5) to explore the relationship between the online flow state and the perceived quality of a brand's website.

The paper is structured as follows. First, we review flow and perceived quality studies in the literature, and distinguish the flow concept from other similar concepts. Based on this revision, hypotheses regarding the relationship between flow antecedents, online flow state, and the perceived quality of a brand website are then formulated. Afterwards, we summarize the research methodology and present the study results and the main findings. Finally, we discuss the limitations of our study and offer suggestions for future research.

2. Literature review

2.1. Flow theory

According to flow theory, "...optimal experience or flow is the holistic sensation that people feel when they act with total involvement" (Csikszentmihalyi, 1975, p. 36). Individuals may experience flow every day, in different activities, in offline and online environments (e.g. playing soccer, reading, singing, playing a game on the computer, surfing on a website).

Csikszentmihalyi (1988) argues that, for flow to occur, the individual needs to have (1) a clear goal and (2) immediate feedback. The most important antecedents of flow are (3) a balance between perceived skills and challenges (Csikszentmihalyi, 1988). Csikszentmihalyi (1988) proposes as flow dimensions: (4) concentration, (5) mergence of activity and awareness, (6) sense of control, (7) time distortion, (8) loss of self-consciousness, and (9) autotelic experience.

In order to clarify our conceptual background, is important to distinguish between online flow and other related concepts such as peak experience and peak performance. Peak experience is "...a generalization for the best moments of the human being, for the happiest moments of life, for experiences of ecstasy, rapture, bliss, of the greatest joy" (Maslow, 1971, p. 48). Both flow and peak experience may involve high levels of enjoyment, but peak experience is "all or nothing", while flow "varies in intensity" (Walker et al., 1998). Peak performance involves a high level of performance, but it is not necessarily accompanied by enjoyment – as a result, it differs from flow.

In 1992, Trevino and Webster used the flow construct in their studies of computer mediated communications (CMC), and later, of human-computer interaction (Webster et al., 1993; Ghani & Deshpande, 1994). This was an early stage in the study of using flow constructs in online environments. Hoffman and Novak (1996) are considered to be the first scholars to apply the concept of flow to Internet usage. Their contribution is important because they defined flow in computer mediated communication, and proposed a process model of Web navigation involving

antecedents and the consequences of flow. In their opinion, the flow state is “...the process of optimal experience preceded by a set of antecedent conditions necessary for this experience to be achieved and followed by a set of consequences that occurs as a result of the process” (Hoffman & Novak, 1996, p. 57).

Hoffman and Novak (1996) defined online flow as “...the state occurring during network navigation which is: (1) characterized by a seamless sequence of responses facilitated by machine interactivity, (2) intrinsically enjoyable, (3) accompanied by a loss of self-consciousness, and (4) self-reinforcing” (p. 57). Hoffman and Novak (1996) argued that online flow can have positive marketing outcomes, such as: increased perceived behaviour control, positive subjective experience, increased learning and increased exploratory behaviour.

As noted before, the most important antecedents in online and offline flow models are user's perceived skills and the perceived challenge.

The user's perceived skills is one of the most important antecedents of online flow. We believe that *Internet self-efficacy* is a better surrogate for *user's perceived skills* in an online environment. Bandura (1997) considers *self-efficacy* “...as the belief in one's capabilities to organize and execute the courses of action required to produce given attainments” (p. 3). *Self-efficacy* is expected to affect task effort, persistence, expressed interest, and the level of goal difficulty selected for performance (Torkzadeh, Chang & Demirhan, 2006). According to Hsu & Chiu (2004) *Internet self-efficacy* is the beliefs in one's capabilities to organize and execute courses of Internet actions required to produce given attainments. So, we propose the following hypotheses:

Hypothesis 1. Internet self-efficacy is correlated with the online flow state experienced by users while surfing a brand website.

Ghani and Deshpande (1994) consider *user's perceived challenge* as the level of perceived complexity provoked by the activity. In our model, we consider that there is a relationship between user's perceived challenge and online flow, while surfing on a brand website.

Hypothesis 2. Perceived challenge is correlated with the online flow state experienced by users while surfing a brand website.

In our model, telepresence - “...the extent to which one feels present in the hypermedia, rather than in the immediate physical environment” (Hoffman & Novak, 1996, p. 61) - is an antecedent of online flow. Thus, we propose:

Hypothesis 3. Telepresence is correlated with the online flow state experienced by users while surfing a brand website.

In our conceptual model, we propose a relationship between online flow and the *time users spend on a brand website*. Many scholars (e.g. Hoffman & Novak, 1996) argued that a customer in a flow state will spend a long period of time on a website, due to time distortion. The time spent on a brand website is the actual time spend by an individual during a browsing session on a brand website. So, we infer the following hypothesis:

Hypothesis 4. Time spent by a user on a brand website is correlated with the online flow state experienced by users while surfing that brand website.

2.2. Online flow and perceived quality of a brand website

Many flow studies focus on optimal experience consequences or outcomes. For example, online flow is positively related to an increased amount of learning (Hoffman & Novak, 2009). It also influences attitudes toward online purchasing (Korzaan, 2003), brand attitudes (Mathwick & Rigdon, 2004; Sanchez-Franco, 2006) and attitude toward a website (Luna, Peracchio & de Juan, 2003). In other studies, flow has been found to influence behavioural intentions in the form of online purchase intentions and revisit intentions (Luna, Peracchio & de Juan, 2003),

intention to use the Web (Agarwal & Karahanna, 2000; Sanchez-Franco, 2006), and intention to play an online game (Hsu & Lu, 2004). Another outcome of flow experience is increased exploratory behaviour (Novak, Hoffman, & Yung, 2000; Koorzan, 2003) and perceived behavioural control (Hoffman & Novak, 1996).

However, there is a lack of studies in the flow literature that focus on evaluating the relationship between the online flow state and the perceived quality of a brand website (PQBW).

Perceived quality is considered by scholars to be an important construct because it is a significant factor in terms of corporate marketing and financial performance (Buttle, 1996), and a way to differentiate a company from its competitors (Parasurman et al., 1988). In an online environment it is extremely important for marketers to understand how customers perceive and evaluate a brand website in order to deliver a superior service.

Aladwani and Palvia (2002) defined *perceived quality of a website* as the "...users' evaluation of a website's features meeting users' needs and reflecting overall excellence of the website" (p. 469).

Depending on their focus, studies for evaluating the perceived quality of a website have their origins in online retailing services and website design (Cristobal, Flavián & Guinalú, 2007).

For example, in a study of online retailing services, Zeithaml et al. (2002) proposed 5 dimensions of perceived quality with regard to a website: (1) information availability and content, (2) ease of use or usability, (3) privacy/security, (4) graphic style, and (5) reliability.

In another study that focused on website design, Loiacono et al. (2002) proposed WebQual™ scale to assess website quality, containing 12 dimensions: (1) informational fit-to-task, (2) interactivity, (3) trust, (4) response time, (5) ease of understanding, (6) intuitive operations, (7) visual appeal, (8) innovativeness, (9) emotional appeal, (10) consistent image, (11) online completeness, and (12) better than alternative channels.

After a critical literature review, we concluded that the instruments proposed for measuring perceived quality of a website differ in terms of origins and the number of suggested dimensions. In our study aimed at measuring the perceived quality of a brand website, we used 5 dimensions: (1) design quality, (2) content quality, (3) perceived ease of use, (4) novelty, and (5) perceived usefulness.

To sum up, in our opinion, users' evaluation of a website's features can be affected by its online flow. We anticipate that a brand website user who experiences online flow during his/her surfing session may evaluate the website as being of higher quality. Therefore, we propose the following hypothesis:

Hypothesis 5. The online flow state experienced by users while surfing a brand website influences the perceived quality of that brand website.

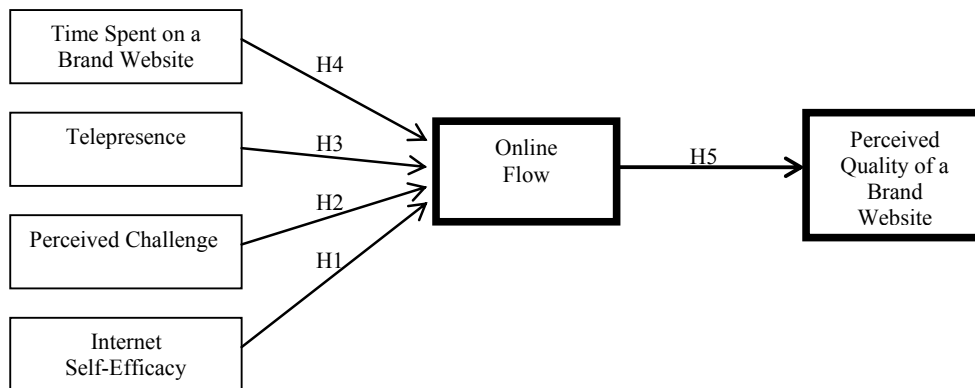


Fig. 1. Conceptual diagram of the relationship between flow antecedents, online flow state, and perceived quality of a brand website

As we can see, **Figure 1** is a conceptual diagram in which we present synthetically the relationship between our sets of variables, suggested in the five hypotheses previously discussed.

3. Methodology

3.1. Research design

In order to study the relationship between the variables shown in our conceptual diagram, we used a quasi - experimental design. The first phase of our study consisted of selecting a brand website - <http://www.inpascani.ro> - and establishing a task scenario. The second phase involved data collection.

The study population was represented by potential users of a brand website. In order to collect data, we used convenience sampling. Through an email marketing platform we sent 890 emails containing an invitation to participate in the study and received 62 valid answers. To facilitate the occurrence of an online flow state, we set a navigation task: participants were asked to search for information about an event in order to buy a ticket as a gift for a friend (goal-oriented behaviour) on the assigned brand website. A self-administered survey questionnaire was employed to collect the information from the participants.

3.2. Instrumentation

The questionnaire contained closed-ended questions and used 61 items to measure the constructs of perceived challenge, Internet self-efficacy, telepresence, online flow, and perceived quality of a brand website (PQBW).

In order to measure users' perceived challenge, we used the seven-point Likert-type scale ranging from strongly disagree – 1 to strongly agree – 7, containing 6 items, proposed by Hoffman and Novak (2000). In our study, the scale of perceived challenge has demonstrated construct validity with a reliability of 0.863. Internet self-efficacy was measured with a seven-point Likert-type scale ranging from strongly disagree – 1 to strongly agree – 7, containing 5 items, used by O'Cass and Carlson (2010). Cronbach's alpha (α) coefficient for this scale was 0.885 demonstrating an adequate reliability (Nunnally, 1978). For measuring telepresence, we used the Likert scale, ranging from strongly disagree – 1 to strongly agree – 7, and 5 items from Lee and Chen (2010). Cronbach's alpha (α) coefficient for this scale was 0.882 proving a good reliability of the scale. Time spent on a brand website was measured by recording the actual length of time spent by users during a browsing session on a brand website, while pursuing the achievement of the goal we had set. In order to measure users' optimal experience, we considered that an indirect approach would be appropriate, using a seven-point Likert-type scale ranging from strongly disagree – 1 to strongly agree – 7, containing 12 items and four dimensions we identified in flow literature: (1) concentration, (2) time distortion, (3) intrinsic interest, and (4) perceived control. We run an EFA analysis in order to assess the multidimensionality of online flow scale we used. The rotated factor solution confirmed scale multidimensionality: a 3 factor solution (explaining 67,026 % of online flow variance). These three factors were labeled, based on existing concepts from flow literature, as: (1) concentration and time distortion, (2) intrinsic interest, (3) perceived control. Cronbach's alpha (α) coefficient for online flow scale was 0.872, demonstrating an adequate reliability (Nunnally, 1978). Perceived quality of a brand website (PQBW) was also assessed using a seven-point Likert-type scale ranging from strongly disagree – 1 to strongly agree – 7, containing 33 items. We identified from PSQ literature variables proposed by different researchers to be dimensions of PQBW construct. In order to evaluate the multidimensionality of PQBW scale, we conducted an EFA analysis. The rotated factor solution confirmed the scale multidimensionality: a 3 factor solution (explaining 56,402 % variance): (1) content and design quality, (2) perceived ease of use, (3) novelty & perceived usefulness. Cronbach's alpha (α) coefficient for PQBW scale was 0.817 indicating an adequate reliability (Nunnally, 1978).

4. Results and main findings

We computed a summative score for five variables from our study: *perceived challenge*, *Internet self-efficacy*, *telepresence*, *online flow state*, *perceived quality of a brand website*. Furthermore, Pearson's correlations coefficient was used to identify relationships among our sets of variables: *Internet self-efficacy* – *online flow state* ($r = .746$, $p < 0.00$), *perceived challenge* – *online flow state* ($r = .607$, $p < 0.00$), *time spent on a brand website* - *online flow state* ($r = .071$, $0.585 > 0.05$), *telepresence* – *online flow state* ($r = .840$, $p < 0.00$). As we can see, correlation analyses

revealed a strong correlation between Internet self-efficacy, perceived challenge, telepresence and online flow state experienced by users while surfing on a brand website.

Next, we performed a simple linear regression analysis to examine the impact of online flow on perceived quality of a brand website, in order to achieve our research objectives. Tolerance and variance inflation factors were also examined for the regression model to determine the impact of multicollinearity. As a result of this step, tests' scores indicated that our results were not seriously influenced by a multicollinearity problem. Also, we used the scores of standardized deleted residuals to identify influential data points, demonstrating that observations are normally distributed. The regression equation for the effects of online flow experience on perceived quality of a brand website had an R^2 of 0.560, an adjusted R^2 of 0.552, R of 0.748. Sig. for F-test was 0.000, $p < 0.05$ meaning that we accepted the hypothesis that there is a linear relationship between online flow state and perceived quality of a brand website. Kolmogorov-Smirnov Test showed $p > 0.05$, indicating that errors are normally distributed. We run a T test that indicated an error mean of 0.000. All Sig. values for Spearman's coefficient, $p < 0.05$, showed that errors were homoscedastic. Finally, we run a Partial ACF that showed that the errors are not autocorrelated. The results indicated that our model explained 56% variance of dependent variable (perceived quality of a brand website). The results revealed that online flow state experienced by a user while surfing on a brand website had significantly positive effects on perceived quality of visited brand website.

5. Conclusion

First of all, our study proves that customers can experience online flow while they surf a brand website. This is in accordance with previous studies published in the literature, showing that during Web navigation, customers can experience an optimal experience, or online flow.

The most important finding of our study was the confirmation of the relationship between the user's online flow state and the perceived quality of the brand website. More importantly, the results showed that the online flow state influences the perceived quality of the brand website. This main finding is important for flow theory, and for practitioners, due to its implications. First, the confirmation of the online flow state influence on the perceived quality of a brand website could be useful for a better measurement of the perceived quality of a brand website. Second, the findings of this study may have an important contribution with regard to a better understanding of the online flow experience and its marketing implications. Third, the study results may be useful for marketing and information systems' practitioners, in order to understand online customer behavior, and to develop effective marketing strategies in an online environment.

However, another important finding of our study is the invalidation of the relationship between the time spent by a user on a brand website and the online flow state. This insight is important in order to distinguish between two similar, but different variables: *the actual time spent by the user on a brand website*, and *the perceived time* - when we refer to the flow process. A user can experience a flow state even if the actual time spent on a brand website is short. Also, a user who spends a long time surfing a brand website may not experience a flow state because he may be anxious, or bored, but he needs to complete a task due to an external regulation (and his behaviour may be extrinsically motivated). In our opinion, for marketers, the quality of the user's experience while surfing a brand website is more important than the length of the surfing session.

We conclude by arguing that the marketing outcomes of online flow are extremely important for understanding online customers' behaviour, and our study contributes to an extension of this knowledge.

6. Limitations and future research

First, we consider measuring the online flow construct to be a challenge due to its contextual nature. Second, the study design and the nonprobabilistic sample we used requires caution when it comes to generalizing the results. Also, we assume that the small sample size we used does not allow us to draw inferences for a larger population. Finally, we emphasize the need for more studies exploring the relationships between online flow antecedents, flow state, and the perceived quality of a brand website.

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