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A Phenomenological Approach of E-Commerce Websites Interactivity Dimensions: A Close Look at Experts' Challenges

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Existing research has showed an increased interest in interactivity dimensions when it comes to attracting and retaining online users, focusing in particular on their responses. However, studies focused on identifying the actual dimensions of interactivity considered by experts in the field are scarce. This study fills that gap by exploring through a qualitative research, the responses of 11 experts in the field of Information Technology from different companies, regarding the assessment of the interactivity dimensions from a pragmatic point of view. This phenomenological approach focuses on the experts' actual experiences with the interactivity challenges on the one hand, and users' demands and expectations, on the other hand. Moreover, this paper provides an important outcome, establishing the first important dimensions of interactivity involved nowadays in the process of engaging online users. Thus, the result of this study has two major implications (1) offers online marketers and web designers the modes of actual interactivity useful in enhancing the user experience, (2) establishes the significant dimensions of interactivity that will further be the subject of a physiological metric based experiment.

Key words: website interactivity, interactivity dimensions, user experience, user interface, e-commerce

JEL classification: M310.

Introduction

Nowadays, almost every large and small business has found a challenging way to reveal their presence, through various innovative websites or even through social networks. The Internet is the main channel they expose themselves and rely on. This new media, as opposed to the old media, such as television or radio (Koolstra and Bos, 2009) offers the possibility to develop a synergy between the main communication channels or between the main parts of the communication process. Through this medium, the sender and receiver roles are interchangeable. This ability to permit a synergy helps to improve the relationship between the seller and buyer and thus, leading to increased trust and to highest converting levels. Besides this, the Internet helps companies to offer various products and services to their customers, to control the communication process and its quality and most important, to check if the information was received, how was it perceived and to gather the customers' feedback. Yet, this medium does not afford customers to inspect the products before buying. For this reason, this medium has to state clearly the displayed information. One of the most important mechanisms that assure the information attractiveness is interactivity. Interactivity plays a significant role when it comes to assess the users' perceptions about the website interface (Jiang et al., 2010; Mazursky and Vinitzky, 2005).

In the last two decades, the attention to the concept of interactivity has increased a lot. It not only describes the communication in the new media but it is addressed in other fields, such as marketing, information technology and nowadays even in education sciences. We also witness an increased attention paid to this concept in the specialized literature. Beginning with 1980s, the concept of interactivity has become a subject of study, until today when we observe a large number of studies that consider the concept of interactivity. Perhaps this interest has began to raise with the development of the new technologies, the emergence of various functionalities of the new applications and integrated functions of e-commerce websites, the appearance of the fascinating ways in which the products are displayed and the use of various communication tools altogether. Some features include the use of chat, forums, filters, virtual tours, real-time communication etc. (Fang, 2012; Koolstra and Bos, 2009; Yoo and Lee, 2010). However, this term is confusing for many people who are not professional experts, because it describes a wide array of actions, not only in the field of information technology. Moreover, there are gaps concerning the development of websites that integrate only those functionalities of interactivity that renders a unique experience with the user. For example, that unique experience is reached by integrating relevant filters in commerce websites that makes the process of purchase efficient. Therefore, we assume that professional experts, due to their

vast experience in the field, have the credit to take the step and give specific information and recommendations concerning the most effective dimensions of interactivity. Studies focused on identifying the actual dimensions of interactivity considered by experts in the field are scarce. This study fills that gap by exploring through a qualitative research, the responses of 11 experts in the field of Information Technology from different companies, regarding the assessment of the interactivity dimensions from a pragmatic point of view. This phenomenological approach focuses on the experts' actual experiences with the interactivity challenges on the one hand, and users' demands and expectations, on the other hand.

Therefore, the study offers a coherent picture of interactivity seen nowadays and establishes the main dimensions of interactivity that should be implemented and emphasized in the process of design and development of persuasive commerce websites. It reveals that the whole endeavor of enhancing interactivity should have as main purpose the establishment of a unique and personal experience with the user. Moreover, it should focus on those functionalities that offer the possibility to feel in control over your actions in that medium with the help of filters, for instance. This study establishes the main dimensions on which marketers, designers and web developers should rely on when implementing an online store. It also makes a point concerning the meaning of interactivity in the actual context and within the information technology field. According to them and broadly speaking, interactivity means: user, tasks personalization, product filtering for search efficiency, website and seller interaction, apps interaction, technology, experience, feedback, real time communication, chat and design.

Theoretical framework

This short overview of the literature outlines the main interactivity definitions and its dimensions in order to provide the theoretical background for the current research. Moreover, the short overview that follows is rendered in order to contrast the associations of interviewed IT experts with the main characteristics described in the literature.

Conceptualizing interactivity

Indispensable element of the actual marketing endeavors, interactivity represents a major component of the online communication process. In fact, this term sets the boundaries between the old media and the new media. According to the literature review, authors have never reached a common definition for this term, as it defines a wide array of activities in various fields. Nevertheless, we can identify some major points in the literature where interactivity gains meanings that could be included in a single overview. Some scholars approach the term interactivity from different perspectives: interactivity as a feature of the system (Downes and McMillan, 2000; Bezjian-Avery et al., 1998; Ha and James, 1998) interactivity as the user perception (Tremayne and Dunwoody, 2001; McMillan and Hwang, 2002) and interactivity as process (Rafaeli, 1988; Heeter, 2000; Ha and James, 1998; Rafaeli and Sudweeks, 1997). On the other side, some scholars think about interactivity as a fusion of the above (Liu and Shrum, 2002; Heeter, 2000; Kiousis, 2002).

Interactivity, as a feature of the system, represents in fact an attribute of the technology (Steuer, 1992; Jensen, 1998). Steuer (1992, p.84) argues that interactivity represents "the extent to which users can participate in modifying the form and content of a mediated environment in real time". Thus, when implementing a new interactive medium, one should facilitate an extensive control of the user over the form and content of it in real time. The user should get the control feeling over his actions through various attributes that help him modify the content. In addition, the author includes three particularities that define interactivity from the technological perspective. He includes the speed of the user message, which is specific to the system, the number of simultaneous actions supported by the system and mapping. In addition to these, Jensen (1998, p.201) indicates that interactivity refers to the "measure of a medium's potential ability to let the user exert an influence on the content and form of the mediated communication".

Interactivity as process has an important role in Computer-Mediated-Communications (CMC) as it is perceived as an exchange of messages in a communication scene. The first author, who advocated for interactivity role in a communication scene, was Rafaeli (1988). One of the most important statement which supports the interactivity as a process of message exchanges says that "in a given series of communication exchanges, any third (or later) transmissions is related to the degree to which previous exchanges referred to even earlier transmissions" (Rafaeli, 1988, p.18). Likewise, other scholars assess the concept of

interactivity from a process view (Rafaeli and Sudweeks, 1997; Heeter, 2000), but one should understand that here, the meaning of it is not the process itself, but what happens in fact inside the process.

In contrast, the perceptual approach argues that interactivity imply the user choice to interact with the medium (Schumann et al., 2001). From this perspective, interactivity indicates a characteristic of the user and not of the medium itself and whom intensity can be increased or decreased according to the user's choice. Based on the idea that interactivity represents a user' characteristic, some scholars assessed the participants' perception of interactivity (Cyr et al, 2009; Quiring, 2009; Gao et al, 2009; Kim et al., 2011). Cyr et al. (2009, p.853) argues that perceived interactivity means, "allowing the user control and access to information on the site in a variety of ways, which is both personal and responsive". Thus, the user has the control over the content in a variety of ways, according to the functionalities he received. In this context, it is important that the user can understand and perceive the interactive character of the medium. This is accomplished, on the one hand, through the fundamental aim of the web, which is to display the information first. On the other hand, the user will perceive the information as offered in an interactive way, through the various applications and mechanisms of the system interrogation. Moreover, the interactivity perception will lead to positive effects on the user, materialized in an assumed loyalty behavior (Cyr et al., 2009).

Concerning the interactivity perception, we distinguished different ways on which it depends. Interactivity perception differs according to the speed of the system (Kiousis, 2002), the way information is displayed (Ha and James, 1998) or how the user is captivated. Particularly, the interactivity perception depends both of the number of attributes included in the website and the way they are designed and how they work further in that medium. This is helpful in the process of evaluating the level of interactivity. Numerous scholars consider that interactivity should be measured through the users' description of it while they communicate in that environment (Lee, 2005; McMillan and Huang, 2002). In order to increase the users' perceptions of interactivity, it is important to include various dimensions of it. The number and relevance of these dimensions represents an important asset when aiming to render a persuasive environment. For instance, Gao et al. (2009) conceived an instrument to measure the level of interactivity by including only six dimensions.

From the prior researches discussed, the last mentioned approach, that is the perception of interactivity, focuses mainly on the subjective perception of the user toward the interactive medium. Its main objective is to reveal the experience of the user with the given interactive mechanisms. In this perspective, the communication process is not essential as it targets the user experiences. One could say that this is a visual communication between the user and the interface.

Therefore, the definitions of interactivity indicate three major aspects reviewed in the literature: interactivity from a functional perspective, which includes the attributes of the media we refer; interactivity as process, which includes the exchange of messages between sender and receiver and the perceptual view of interactivity where the user and his experiences play the main role. This short review of the interactivity definitions underlined from the literature helps to understand its significance and to provide the theoretical background for the current research.

Dimensions of Interactivity

Moreover, another important aspect, which is helpful in the current research, refers to the dimensions of interactivity. These dimensions represent the object of our research, as they are the key points used in our in-depth-interviews with the experts. Interactivity cannot be analyzed only from the three perspectives mentioned above but it should also involve a factual analysis. Here we refer to those studies that involve the applied dimensions of interactivity, as interactivity is a multidimensional construct.

Therefore, Heeter (1989) assesses six dimensions of interactivity: selectivity, user's endeavor, interpersonal communication liaison, information monitoring, responsiveness and ease of adding new information. These dimensions can define the new media either the traditional one. Likewise, Steuer (1992) suggests three dimensions for a higher level of interactivity: the speed of interaction, the degree in which the users can select and modify the options in that medium and the mapping or the degree in which the medium becomes controlled by the users. In accordance with Steuer (1992), Ha and James (1998) suggest another set of dimensions: playfulness, choice, connectedness, information collection and reciprocal communication. These dimensions are considered to be one of the most important predictors of website quality. Playfulness shows the amusing character, an experience of enjoyment during the navigation process. Choice is the dimension that offers different options when personalizing the interface.

Connectedness argues the existence of various links that permits the broadening of connections made during the navigation process. Information collection shows the process of user monitoring while accessing information. Two-way communication has been advocated as a reciprocal communication between users or between user and website. In the empirical studies this dimension was reflected in functions such as forums or hyperlinks to e-mail addresses.

Moreover, synchronicity is a dimension that contributes to a highest level of interactivity, due to its capacity to establish a synchronous exchange of messages. It refers to the message speed (Gao et al., 2009), to the speed of message processing and the time between message delivery and its reception (Yoo et al., 2010; McMillan, 2006; Hoffman and Novak, 1996). The speed is not conditioned only by the users reactions but it is also conditioned by the hardware and software technological means. The faster the message delivery, the less frustrating is the user and the highest is the perceived positive interactivity. In line with this idea is the flexibility of synchronicity, which depends on the users willingness to choose and to react immediately or later. (Koolstra and Bos, 2009). McMillan and Hwang (2002) consider this dimension the backbone of the interactivity conceptualization, as it plays a significant role in rendering an appealing medium. There should be made a distinction between speed as system's velocity and timming flexibility as the flexibility of synchronicity. System's velocity shows the speed of the information delivery inside the system and timming flexibility shows the degree of which users can modify this speed (Kiousis, 2002, p.363).

In addition to the above reviewed dimensions, high levels of interactivity could be achieved through controllability dimension, which indicates the degree of which the user feels that he has the control over his online experience (Gao et al., 2009). Thus, the user needs a higher degree of freedom concerning the content he wants to see. Heeter (1989) view this dimension as an action meant to decrease the user effort when accomplishing a task or in order to smooth the navigation process. In other view, controllability reveals the ease of information completion. As with Koolstra et al. (2009), Jensen (1998) and Steuer (1992) controllability indicates the user's actions in modifying the content of the message and the way he sets this message, according to the options offered by the system. Likewise, Lee (2005) suggests that this dimension represents the first dimension of an interactive medium as it underlines the users ability to modify the displayed information as well as its content. On the other hand, Yoo et al. (2010) argues that controllability not only that it allow users to control the content but it also allow them to control the time and sequence of communication.

Research methodology

In order to outline a holistic image over the interactivity construct and its dimensions, it was conducted a qualitative approach. The study explores the responses of 11 experts in the field of Information Technology from different companies, regarding the assessment of the interactivity dimensions from a pragmatic point of view. Thus, it defines the most significant, actual and relevant dimensions of interactivity, used in e-commerce websites development.

In this qualitative research it was conducted semi-structured in-depth interviews, whose target was to collect information which refers to the personal experiences of the involved subjects and their accounting of the standard process of website development. Different individuals perceive the reality in different ways, as it is influenced by a priori factors, such as the previous individual experiences. Thus, in order to outline a holistic image over the interactivity construct and its dimensions, the personal experiences and the way of understanding of each individual who performs daily activities in the Information Technology field, have an important significance. In order to understand the interactivity concept as seen by experts, it is imperative to penetrate their working environment. This procedure represents a broad and social approach. Moreover, the information resulted in this way establish a factual approach, based on reality itself and identified from the process itself in which the interactivity is implemented. From here, the actual dimensions of interactivity are acquired, as they are perceived nowadays in commerce websites.

According to Marshall and Rossman (1989) definition, an expert is an individual considered to be influential, notable and well informed inside a certain organization. Such an analysis with experts could reveal aspects that were not taken into account previously, could identify current dimensions of interactivity or unique approaches, unusual to the examined construct.

Further, the main objectives of the qualitative research were: (1) in-depth assessment of the interactivity construct and its dimensions, from the experts points of view, (2) the identification of the main dimensions of interactivity considered by experts to be mandatory and which represents motivational factors in the user navigational process by conducting in-depth interviews, (3) identifying the experts' experiences concerning the implementation and development of e-commerce websites and considering the interactivity dimensions.

Participants

Eleven participants (two females and nine males) took part in the interviews. They range in age from twenty-three to forty. All of them were from Iasi, Romania, with important positions in their companies: Web Development Manager, IT Director, IT Manager, Web Developer and one IT Associate Professor. All participants had high levels of professional experience in the Information Technology field, between three to twelve years. They have reported a minimum of three years of higher education in the Information Technology field and all of them were involved in e-commerce websites development processes.

The experts are performing their activities in sectors that target important areas of the Information Technology field: e-commerce websites; websites for operating financial transactions, for managing various transactions or various auctions; presentation websites; online radio streaming websites; customer relationship management (CRMs); employees and expenditure management websites and online reservation websites. The sectors in which the experts are involving represent an important aspect of our study because these reveal high important products nowadays (especially in the Romanian e-commerce market which meets a major upsurge). The evaluations of these experts who work in such sectors represent important considerations when further taking into account the customers involvement and its mark on the interactivity dimensions. These sectors imply a huge customer involvement, taking into account their essential character and indispensable commerce players.

The participants were recruited through a series of phone calls sessions, followed by discussions and meetings in order to fulfill the requirements for a representative sample. From the five companies inquired, we have obtained eleven respondents who met our requirements.

The sample size is representative, given the respondents profile, their expertise and the similar sample sizes used in other studies (Wang, 2011; Downes and McMillan, 2000; Quiring, 2009; Piyasirivej, 2004).

Procedure

The interview guide consisted of four thematic sections, as follows:

(1) General aspects. This section comprised a series of open questions designed to comfort the participant. The questions referred to the participants' experience in the Information Technology field, to their responsibilities in the company and to their degree of involvement in the process of e-commerce websites development.

(2) The analysis of interactivity construct. This section comprised questions designed to assess the interactivity construct from the participants' point of view.

(3) The analysis of interactivity dimensions. This section comprised questions designed to assess the interactivity dimensions mainly from the participants' experiences. Likewise, this section comprised several tests, such as the projective ones and the free association tests.

(4) The identification of the compulsory dimensions of interactivity. This section was designed to identify the most important dimensions of interactivity, essential in a commerce website, from the experts' points of view.

The interview guide was validated in several prior studies (Wang, 2011; Quiring, 2009; Hague, 2002; Malhotra and Birks, 2007). We have also identified the characteristics and applications used in e-commerce websites, which define a certain dimension of interactivity. They were integrated in the interview guide.

The interview guide was conducted after a pretesting session, which included 4 participants.

The interviews were conducted at the working spaces of the participants. The respondents were informed about the official procedure, the objective of the study, the incentives and benefits for their participation. They were also informed about the audio-video recording and their transcriptions. It was

announced the maximum time required for the interview and each respondent have signed the informed consent form. The consent to participate was freely and voluntary.

The average duration of the interviews lasted for 21,15 minutes.

Data analysis and results

It was employed a content analysis approach, as it presents a small sample and therefore, an equivalent of data quantitatively reduced. Qualitative data was analyzed using a four-stage iterative process. In the first stage, data were collected, comprising the study of specialized literature, the audio-video recordings and the personal notes during the course of the study. In the second stage, records were transcripted and the respondents' responses were reviewed and open coding was used in order to identify the common characteristics and to establish the descriptive categories. In the third stage, data were synthesized and presented. In the final stage, data were verified; explicative alternatives from the specialized literature were identified.

The first theme, which referred to general aspects, reveals useful insights about the respondents' concrete tasks in their companies: website development, database development, teaching university courses (Programming, Mobile Applications, Integrated Systems), drawing up specifications, website analysis, system personalization, the development and implementation of various functionalities. This information reveals the importance of their responses and helps understand their comments and suggestions.

Moreover, when respondents were asked about interactivity construct in the second theme ("What do you understand by interactivity?"), they offered various answers, such as: "interactivity includes a variety of aspects, such as: we can discuss about time zone, user geolocation, provider geolocation, currency, reference currency, visual preferences, seasonal preferences, and from my point of view, we should not neglect at all aspects such as the visual sense, tactile and olfactory, of which I believe they could be included in the interactivity construct" (Male, 36 years old).

In another answer, we have identified a characteristic found in the literature at various authors (Liu and Shrum, 2002; Gao et al., 2009; Koolstra and Bos, 2009; Yoo et al., 2010), that is "real time". Thus, "interactivity could be an interaction with the client in real time, through video-conferences, chat, forums or through answers. If not in real time, then in a very short time or giving the possibility to the user to navigate on the website, to filter the products he want to see, to interact with the interface" (Male, 36 years old).

Another respondent say "interactivity means offering the user various options, to give him the possibility to filter his search, reviews, experts' suggestions" (Male, 34 years old). Moreover, "interactivity means receiving feedback and giving feedback", "gamification; giving me a number of points to each purchased product or a number of points I would receive and which are proportional with the value of the product I brought and this to make me buy again from the same vendor; or when I receive points to have the possibility to convert them later in discounts, in coupons or even in products" (Male, 36 years old).

Further, we acknowledge that web design elements are part of interactivity, "interactivity means helping users through web design elements or through other techniques; a certain website should offer me the essential means through which I should find faster the product I search for" (Male, 25 years old). Moreover, interactivity was seen as a personal experience and "one of the most important part is that we, developers put ourselves in the shoes of the users; I think that interactivity means first of all the capacity of an application or of a website to infer the users actions. As a user, I would expect the application render me certain responses, classified in a certain order that I expect to be" (Male, 25 years old).

The second theme has also intended to identify the relevant characteristics used by experts when developing an interactive website. They were asked to give a description of their process when developing an interactive website. Likewise, they were asked to give examples of interactive websites and to rank them according to their level of interactivity: high, medium and low. The answers to this question revealed how they perceive interactivity, what characteristics needs a website in order to be highly interactive. Table 1. reveals a synthesis of the answers obtained for the first two questions regarding interactivity definition and interactivity in the real process.

Experts code	CINT-DEF (interactivity definitions)	CINT-DIP (interactivity in practice)
1CUD	**timezone, geolocation, currency, exchange rate, visual preferences, visual/ tactile/olfactory senses**	**Ajax searches** *("the user inserts only a part of his keyword and the system suggests a list of similar terms or closer concepts");* **the personalization of the interface; memorizing the user profile** *("memorizing the user profile or the interpretation of his past actions"* or *"according of user's preferences")*
2MIT	**Real time interaction with the customer; video-conference; chat; forums; site personalization; product filtering**	**It relies on the technological capacity and on the user experience; a priori and continuous analysis**
3DIT	**Various options; filters; reviews; experts' advices**	**Real time; feedback; avoiding the pooling mechanisms; web sockets and similar concepts**
4PW	**Personalization; filters; giving and receiving product feedback; chat; gamification**	**Filtering systems**
5PW	*"A content's capacity to react to the actions and wishes exerted by the user"*	**Real time display of the information; shopping cart; available check-out; the shopping cart updates; browsing on other websites**
6WDM	**Helping the user through** *"design elements or other various techniques"*	*"Design characteristics help a lot"; "The webdesign with all the backend technologies and with the users' perceptions, I think [...]"*
7PW	*"The capacity of an application to foresee [...] the users' actions"; personalized settings*	**Empathy with the user**
8PW	**Personalizations according to the users' actions and for each user**; *"the system interactivity with the user, to answer his inquiries"*	**Products display according the type of the website; interaction with the users;** *"I post an answer and the other user receive what I have posted"; "to adapt itself on what the user is searching for"; "easy to use";* ***intuitive; it depends on the previous experience of the user***
9PW	**Suggestions; reviews**	**Chat; newsletters; suggestions; reviews**
10PW	*"the reunion of those characteristics through which the users can ease or improve the navigation process or his experience on the website"*	**Filters;** *"other backend technologies for data indexing";* it does not necessarily reffers to what the user sees
11PW	**The user interaction with the website**	**Adding images to the product; feedback; review**

Table 1. A synthesis of the answers for interactivity definitions and interactivity in practice

The second column indicates the answers to the question "What do you understand by interactivity?". The third column indicates the answers to the questions "How do you make a commerce website to be interactive? By whom is this made?". The table reveals recurring items as interactivity was often described through various functionalities used by respondents in the process of website development. The table reveals the connection between the second and third columns, which is between the definition and examples. For instance, the respondent with the assigned code "11PW" defines interactivity as "an interaction with the website" and further, he gives the example "product images", "upload", "feedback" or "review".

Moreover, it was accounted the number of recurrent words. Therefore, Table 2. Reveals the number of recurrent aspects in the respondents' answers concerning the understanding of interactivity concept and its characteristics.

Recurrent words	Frequency	Recurrent words	Frequency
personalization	5	feedback	3
interaction	3	real time	3
user	16	chat	3
tehnology	3	recommendations	2
experience	3	shopping cart	2
filters	5	design	3
reviews	4	intuitive	2

Table 2. The number of recurrent words for interactivity definition

From the above table, the first recurrent words are the following ones: *user* (16), *personalization* (5), *filters* (5) and *reviews* (4). These results show that the entire effort is focused to realize a unique experience with the user (words: user, personalization), to offer the possibility to feel in control over his action on the website (word: filters) and to increase his trust in the vendor and in his products (word: reviews). According to the respondents' answers, interactivity means user, personalization, product filtering, web site/ vendor/ application interaction, technology, experience, feedback, real time, chat, design.

Although the previous theme shaped the directions toward the personal experience of the user on which the actual process is leading, the third theme questions about concrete dimensions of interactivity. It addresses the following questions: "Which are the first five words you think about interactivity?", "What is your opinion about websites using various options such as interface personalization, chat or filters? Are they helpful?", "How do we find the following dimensions in e-commerce websites: personalization, controllability and synchronicity? Are they the most important? ", "How important is the speed of the system toward the user interrogations on e-commerce websites? Can users modify this speed?", "In what conditions, if existent, can a e-commerce website offer the possibility of changing the roles of the communication parts, between user and software/ application, to become interchangeable?".

The recurrent first five words are the following ones: *design* (4 times), *personal experience* (3), *personalization* (3), *filters* (3), *reviews* (2), *chat* (2) and *adaptability* (2). The word *design* comprises a large spectrum of characteristics, starting with the color used, to fonts, buttons, forms and other elements of the interface. Indeed, this dimension is essential in the decision making process and respondents frequently mention it because this is the first thing the user sees. They say that the process should begin from the user and not from the developers. Here, the empirical meaning is established as a whole. Gestalt theory states that in order to understand the visual attraction, one should assess the stimuli as a whole. In this respect, the aesthetic evaluation consists in a subjective understanding of the page, as a whole, but not of its constituent elements. Otherwise, when the user enter the website, he sees the entire site, as a whole and after that he starts analyzing each stimuli. If these stimuli are places where the user expect, then the website as a whole and the other constituent parts of it offers a pleasurable context, appealing and worthy for further navigation.

Personalization, synchronization and controllability are considered important characteristics and the correspondent elements for these are the following ones:

- Personalization: social networks, online commerce, language, targeted products, interface, currency, display panel, geolocation, filters, keywords, speed.
- Synchronization: brokerage companies, bank confirmation, client-stock exchange, real time, auctions, competitive advantage, responsive, fast system loading, response time, filters, hardware, technical support, chat, video-chat.
- Controllability: electronic platforms, electronic payment, personal experience, purchase, fast support answer, functionality, the diversity of filters, user control, order, section personalization.

Moreover, the speed of the system was considered very important and it is dependent on the previous experience of the user, the speed of the user system, on the website optimization or the database optimization. Likewise, the speed was viewed from another perspective: customer-customer communication and not customer-website. It is realized through forums or reviews. It is viewed as an experience exchange.

The forth theme introduces the identification of the most appealing dimensions in a website. It was identified the customer preferences when they ask for the implementation of a website and compared with the users expectations. These characteristics are listed in the following table (Table 3).

Customers' preferences	Users' preferences
Filters	Activities' customization
Functionality	Discounts
Design	Advanced search
Displaying the products on the first page	A short route from product listing to final order
Displaying the data correctly	Profile information storrage
The used colors	Photos
Banners with actual discounts	Design
Feedback and comments	Flexibility by filters
	Intuitive
	Recommendations
	Fast menus

Table 3. Customers' preferences vs. users' recommendations

The most important characteristics that should be implemented in a e-commerce website and are recommended by experts are the following ones: a comprehensible set of functionalities, customization (forms, reports, language, currency, timezone, geolocation), search form, various and advanced filters (drilldown in category, price, attributes or other combinations), reviews, user friendly design, shopping cart, comments, technical support, intuitive navigation, chat.

In the end, it was recorded a list of the most recurrent words inside the whole sets of interviews as well as their frequency (Table 4).

Recurrent words	Frequency
interaction	10
experience	20
filters	45
feedback	14
review	28
chat	32
real time	19
instantaneously	12
personalization	66
user	284
recommendations	12
design	34
intuitive	9
functionalities	8
tehnology	13
products	91
interactivity	152

Table 4. The recurrent words and their frequency inside the whole set of interviews

The recurrent words and their frequency are the following ones: *user* (284), *interactivity* (152), *products* (91), *personalization* (66), *filters* (45), *design* (34), *chat* (32), *review* (28), *experience* (20), *real time* (19). In addition, these results underlines the main direction followed by the actual trends, user requests and experts' suggestions: user oriented experience and enhancing this experience through pertinent filters, reviews and increased system and search speed.

Discussions

The findings suggested that the entire effort of enhancing interactivity aims to express a unique experience with the user, to offer the control to the user over his actions through filters, to enhance trust in the seller and in his products and services through reviews, comments, forums or real time answers.

According to the respondents' answers, interactivity means user, personalization, filters, technology, experience, feedback, real time, chat, design and interaction with the site/ seller/ applications.

In order to establish the most important dimensions of interactivity that should be focused nowadays, were assessed the experts' responses in relationship with the significant works centered on this construct. Thus, the most significant dimensions of interactivity considered by experts to be mandatory and which represent important motivational factors in the navigation process are the following ones:

(1) *personalization*,
(2) *synchronization*,
(3) *controllability*,
(4) *adaptability*,
(5) *receptivity*.

Each characteristic mentioned by experts as being important factors in website development represents relevant correspondents to each dimension underlined above. Through their definitions and examples we can render a coherent modern picture of interactivity. Their opinions about the interactivity dimensions are important factors when developing new websites, due to the past experiences with users, clients and their continuous endeavor to keep in touch with the newer innovations within this field.

We may consider that interactivity is a construct which is shaped in the head of the user. The levels of the perceived interactivity are considered in the users head (Koolstra and Bos, 2009). We may find the most important dimensions of it but it could be perceived differently, depending on the users past experiences, his expectations, the type of site he uses or the type of service he demands. This should consider further research.

As the interviewed experts were part of the same type of sector, all of them brought together similar ideas. In all the conversations we had, a certain pattern was frequently shaped. It underlines the idea that interactivity is based nowadays on different and unexpected functionalities whose target is to create newer and newer experiences. For the generation to come, the Maslow's pyramid starts from the top of it as the actual generations are born with the primary needs of a websites. Not long ago, the only demand of a user was only to have a website which could display the information. Nowadays, the website should render unexpected virtual worlds, as closed to the real one. In this context, the interactivity dimensions should be further analyzed in different sectors as to receive newer insights from the today exigent users. Besides this, a new approach should be considered in our county concerning the simultaneous research of experts and users points of view. This approach would work very well in "the process of gratification" of the Romanian market.

We would emphasize, as in other recent studies, that interactivity should be a never-ending process that is continuously sculpted in accordance with the newer generation to come. Therefore, further research should be focused on different sectors of the Information Technology field as to accomplish a holistic image of the interactivity dimensions and to bring together the common factors that shape the construct. Besides this, it would be interesting to analyze the experts' points of view from different regions of the country as people's habits and cultural backgrounds vary.

The study could be extended to assess new dimensions of the interactivity construct or to find new paths, considering the actual unexpected functionalities and view of the interactive world (consider at least the integration of the senses in our virtual mediums: how would it be to smell the flower before you place on online order for a bouquet or to sense the texture of the clothes you would like to buy online?). The impossible of yesterday is today made possible. The newest functionalities used in other interactive sectors could be now adjusted to the Information Technology field. A simple discussion with experts in the field should bring to light paths unimagined before.

Conclusions

The current research sought to take a step towards understanding the interactivity construct and to identify its major dimensions by interviewing the experts in the field of Information Technology.

The recurrent overall words defining interactivity were: personal experience, personalization, filters, review and chat. Personal experience is acquired through the integration of relevant filters, personalized functions, adjusted to each user (personalization), forms that supports reviews insertion, real time support (chat).

This paper provides an important outcome, establishing the first important dimensions of interactivity involved nowadays in the process of engaging online users. Thus, the result of this study has two major implications: it offers online marketers and web designers the modes of actual interactivity useful in enhancing the user experience and establishes the significant dimensions of interactivity that will further be the subject of a physiological metric based experiment. With reference to the second implication, the identified set of the five dimensions of interactivity will be the subject of an experiment that targets e-commerce websites.

References

BEZJIAN-AVERY, A., CALDER, B., & IACOBUCCI, D. 1998. New Media Interactive Advertising vs. Traditional advertising, *Journal of Advertising Research,* 38(4), 23-33.

CYR, D., HEAD, M. & IVANOV, A. 2009. Perceived interactivity leading to e-loyalty: Development of a model for cognitive-affective user responses, *International Journal of Human – Computer Studies*, 850-869.

CYR, D., HEAD, M. & LARIOS, H. 2009. Colour appeal in website design within and across cultures: A multi-method evaluation, *International Journal of Human-Computer Studies*, 1-21.

DOWNES, E.J. & MCMILLAN, S.J. 2000. Defining Interactivity: A Qualitative Identification of Key Dimensions, *New Media & Society,* 2(2), 157-179.

FANG, Y.H. 2012. Does online interactivity matter? Exploring the role of interactivity strategies in consumer decision making, *Computers in Human Behavior,* 28, 1790-1804.

GAO, Q., RAU, P.L.P. & SALVENDY, G. 2009. Perception of Interactivity: Affects of four key variables in mobile advertising, *International Journal of Human-Computer Interaction*, 25(6), 479-505.

HA, L. & JAMES, E.L. 1998. Interactivity Reexamined: A Baseline Analysis of Early Business Websites, *Journal of Broadcasting & Electronic Media,* 42(4), 457-474.

HAGUE, P. 2002. *Market Research – A guide to planning, methodology & evaluation,* 3rd Edition, Kogan Page.

HEETER, C. 2000. Interactivity in the context of designed experiences, *Journal of Interactive Advertising,* 1(1), 75-89.

JENSEN, J.F. 1998. Interactivity: Tracing a new concept in media and communication studies, *Nordicom Review*, 19(1), 185-204.

JIANG, Z., CHAN, J.C.,TAN, B.C.Y., & CHUA, W.S. 2010. Effects of interactivity on website involvement and purchase intention, *Journal of the AIS,* 11, 34-59.

KIM, Y., SOHN, D. & CHOI, S.M. 2011. Cultural difference in motivations for using social network sites: A comparative study of American and Korean college students, *Computers in Human Behaviour*, 27(1), 365-372.

KIOUSIS, S. 2002. Interactivity: A concept explication, *New Media & Society,* 4(3), 355-383.

KOOLSTRA, C.M. & BOS, M.J.W. 2009. The development of an instrument to determine different levels of interactivity, *The International Communication Gazette,* 71(5), 373-391.

LEE, T. (2005). The impact of perceptions of interactivity on customer trust and transaction intentions in mobile commerce, *Journal of Electronic Commerce Research*, 6(3), 165-180.

LIU, Y.P. & SHRUM, L.J. 2002. What is interactivity and is it always such a good thing? Implications of definition, person and situation for the influence of interactivity on advertising effectiveness, *Journal of Advertising,* 31(4), 53-64.

MALHOTRA, N.K. & BIRKS, D.F. 2007. *Marketing Research. An applied approach,* 3rd Edition, Prentice Hall.

MARSHALL, C. & ROSSMAN, G.B. 1989. *Designing Qualitative Research*, Newbury Park, Sage Publications.

MAZURSKY, D. & VINITZKY, G. 2005. Modifying consumer search processes in enhanced on-line interfaces, *Journal of Business Research,* 58, 1299-1309.

MCMILLAN, S.J. & HWANG, J.S. 2002. Measures of perceived interactivity: An exploration of the role of direction of communication, user control and time in shaping perceptions of interactivity, *Journal of Advertising,* 31(3), 29-42.

MCMILLAN, S.J. 2006. Exploring modes of interactivity from multiple research traditions: users, documents, systems, *The Handbook of New Media,* 205-29.

PIYASIRIVEJ, P. 2004. *Using a contingent heuristic approach and eye gaze tracking for the usability evaluation of web sites*, PhD Thesis, Murdoch University, Perth, Australia.

QUIRING, O. 2009. What do users associate with interactivity? A qualitative study on user schemata, *New Media and Society*, 11(6), 899-920.

RAFAELI, S. & SUDWEEKS, F. 1997. Networked interactivity, *Journal of Computer Mediated Communication*, 2(4).

RAFAELI, S. 1988. Interactivity: from new media to communication, *Advancing Communication Science: Mergine Mass and Interpersonal processes*, 110-34.

SCHUMANN, D.W., ANDY, A. & RACHEL, R. 2001. The future of interactive adverting viewed through an IMC Lens, *Journal of Interactive Advertising*, 1(2), 43-55.

STEUER, J. 1992. Defining virtual reality: Dimensions determining telepresence, *Journal of Communication*, 42(4), 73-93.

TREMAYNE, M. & DUNWOODY, S. 2001. Interactivity, information processing and learning on the World Wide Web, *Science Communication,* 23(2), 111-134.

WANG, H. 2011. *To investigate relative effectiveness of the dimensions of interactivity*, PhD Thesis, University of Portsmouth.

YOO, W.S., LEE, Y., & PARK, J. 2010. The Role of Interactivity in E-Tailing: Creating Value and Increasing Satisfaction, *Journal of Retailing and Consumer Services,* 89-96.