UX as a rising multidisciplinary concept: a conceptual analysis

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Abstract: From a managerial point of view, a company that puts user experience at the heart of its strategy is evaluated as an entity that enhances its product or service offering.One way to differentiate from the competition or at least follow the strategy implemented by the competition is to offer a user experience of quality.

Indeed, differentiation through the user experience allows the conquest of new customers and the conquest of more market shares (Beauregard and Corriveau, 2007).

This article aims to provide a general literature review of user experience (UX). This is a continuously evolving concept that can be adapted to different research contexts. Our research has a theoretical scope. It focuses on the key dimensions of user experience and is intended as a synopsis describing the progress of UX research.

Keywords: user experience, usability, quality of experience, UX disciplinary fields, UX evaluation

Introduction

Starting in the 1990s, an American cognitive psychologist called Norman[1]used the concept of "user experience" instead of the term "Human Interface" often used at the time.

The idea behind it is to advocate an organizational change of Apple in order to have a complete products design. He develops the concept of "the user experience architect's office" coordinating between Apple's divisions, with the perspective of adapting and homogenizing the interface and industrial design (Tabard and Mille, 2015).

All these changes affected the perception of design, considering it as a central component throughout the company.Thus, the objective is to focus more on the Human-Machine relationship tying the experience of the individual to the system used (Norman, Miller & Henderson, 1995).

A few years later, Alben (1996) approaches the term " experience quality" to emphasize the aspects related to the general context of interaction, including: the understanding of functioning, the feeling and the different sensations during use, and the achievement of objectives.

The 2000s have seen an increased and diversified use of the concept of user experience (Roto, Law, Vermeeren & Hoonhout, 2011). Many definitions have been suggested by authors (Hassenzahl & Tractinsky, 2006; Desmet & Hekkert, 2007; Law et al., 2009), but without reaching a unanimous one.

According to Law et al. (2009), this conceptual deficiency is due to the attribution of user experience to vague and evolving concepts. As a result, user experience is perceived as a generic term that brings all these elements together (Roto et al., 2011).

This is how the concept of "user experience", more commonly known as UX, emerged to complete the meaning of the expressions: user interface (UI - User Interface), ergonomics (usability) or human-computer interaction

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[1]Donald Norman: Author of the book "The Design Of Everyday Things" and Professor of Cognitive Psychology at the University of California, San Diego (Lallemand, Koenig & Gronier, 2013).

(HCI) and to unravel the terms "digital design" and "interaction design". The objective behind it is to focus on the individual's lived experience regarding a product or a web interface (Tabard & Mille, 2015).

On a theoretical level, user experience refers to several disciplinary fields, including: activity theory (Kuutti, 1996), distributed cognition (Hollan, Hutchins & Kirsh, 2000), usability studies (Nielsen, 1993), emotional design (Norman, 2004) etc.

Many professionals have concluded that UX is a dynamic, contextual and subjective concept (Law et al., 2009).
It is in this perspective that we attempt to present the main theoretical work on user experience, focusing on the characteristics of the concept in the different disciplinary fields explored so far.

To do so, we first define user experience from different perspectives: according to the international organization of standardization, from a marketing point of view, in information architecture, in ergonomics of human-machine interactions and in the virtual context. Then we address usability as a notion assimilated to UX. Also, we will highlight the importance of lived experience quality and emphasize the specificities as well as the different evaluation factors of the user experience. Finally, we bring the user experience (UX) closer to the customer experience (CX).

1. User experience: State of the art

User experience has emerged over the last decade as the result of a long process of reflexion inherent to the field of Human-Computer Interaction. Several stages follow one another, justifying the rise of the notion of user experience (Rochefeuille, 2013).

Initially, Human-Computer Interaction was limited to the functionalities and technical attributes of systems. Towards the 1970s and with the evolution of technology, several authors became interested in the usability of interactive systems taking into account the cognitive, perceptual and motor abilities of individuals (Brangier & Barcenilla, 2003).

UX according to disciplinary approaches

The user experience can be defined in several ways and is present in several disciplinary fields. The UX is defined according to the objectives assigned to the user. Whether it is in marketing by focusing on user loyalty, in information architecture by focusing on content adaptation and access to information, in ergonomics where the evaluation and design of interfaces require compatible Human-Machine interactions with respect to the user's expectations and capabilities (Gentner, 2014), or in the virtual context where the focus is on the user's perceptions and accumulated behaviors.

In summary, the definition of the concept "user experience" depends on the fields of analysis to which it refers.

1.1.1 According to the International Organization for Standardization.

The user experience according to the ISO 9241-210 standard (2009), corresponds to the set of perceptions and responses both physical and psychological expressed by the individual following the use of a product, a system or a service (Rochefeuille, 2013).

In addition to the user's explicit perceptions and responses, the user experience also includes the individual's emotions, beliefs, preferences, and behaviors during, before, and after use (Gentner, 2014).

1.1.2 In a marketing context.

According to Stone and Desmond (2007), marketing research refers to « any activity in which market data is collected and then analyzed, in order to minimize any risk in decision making ». The analysis of the user's decision process is the core element of marketing research activity.

Given the notion of "user" becoming central to diversified information systems and internet content, marketing strategy is increasingly focused on the user experience. The goal is to create desire and pleasure in the user experience (Février et al., 2011).

In order to describe the user experience, Swenson (2011) defines the user experience in his article combining the user experience and the marketing process, as a subjective element, because it is related to the feeling experienced by each user according to his own experience.

In marketing, the UX study's purpose is to make users adopt the product, even before causing attachment to the brand image. The fact that the user adopts the product is based on the notion of product acceptability. The latter corresponds to the evaluation of the perceptions, feelings and behaviors of the user before, after and during the use of the product. The aim is to understand the reason for the use or non-use of the concerned products (Gentner, 2014).

1.1.3   In the information architecture field.

In information architecture, Bellino (2013) describes the user experience as the informational usability as perceived by the user. The UX embodies both findability and information quality. The former represents the user's ability to identify a relevant site, with the aim of enabling efficient navigation and pertinent information retrieval (Morville, 2005). The second refers to the users' appreciation of the information reliability, validity and completeness.

1.1.4   In the ergonomics of Human-Computer Interaction field.

In human-machine interaction ergonomics, a branch of computer science that focuses on the design of effective, easy-to-use, interactive web interfaces, the user is at the heart of the design process (Norman & Draper, 1986). The objective behind the design of an effective ergonomic system is to provide the user with a good experience (satisfactory experience). Hence, the importance of subjective usability notion (satisfaction) (Loup-Escande & Lécuyer, 2014; Burkhardt & Sperandio, 2004).

For Barcenilla and Bastien (2009), the user experience corresponds to the different aspects of the user's personality, cognition, affect , the properties of products and technical systems.

Referring to the ISO 9241-210 standard (2009), the evaluation of the user experience must take into consideration beyond the classical criteria such as emotions, beliefs, preferences... the evolving technological context and consequently fashion (Hassenzahl & Tractinsky, 2006).

For Hassenzahl & Tractinsky (2006), the user experience is intended to be the result of the user's inner state combined with the specificities of the system.

1.1.5   In the virtual context.

Speaking of the virtual environment, Wu et al (2009) see the user experience as a multifaceted composition of all perceptions (perceptions as perceived and interpreted by the user and as presented and exhibited by the virtual environment itself) and behaviors accumulated by the user.

According to the Usability Professionals Association (UPA3), the user experience consists of the user's perception at the end of his or her interaction with a product, a service or a company (Rochefeuille, 2013).

User experience is more than just interaction with products, services, or companies. User experience is affected by the individual's internal state, past experiences, and the context of use (Law et al., 2009).

User experience and usability: Rapprochement of two often confused concepts

Defining the concept of user experience goes beyond the notion of usability. According to Roto (2007), usability is a characteristic that is linked to the product's image. Whereas user experience refers to the personal and

subjective perception related to the product.

By evoking the term usability, we are talking about performance, safety and accessibility. The transition from usability to user experience is established in order to complement the efforts made in the research sphere of Human-Computer Interaction (Robert & Lesage, 2011). Hence the growing interest in user perception (Rochefeuille, 2013).

For Shackel (1991), usability is the ability of a system to enable the user an easy and an effective use within a given context (Hounnou, 2018).

According to ISO 9242-11 (2009), usability refers to the threshold at which a product is used in a given environment to achieve goals with effectiveness, efficiency and satisfaction (Kocovski, 2009).

Therefore, further explanation of usability depends on the definition of three parameters: effectiveness, efficiency and satisfaction.

- Effectiveness provides information on whether the user's desired objective is achieved. For this, success factors must be determined;
- Efficiency depends on the efforts made to reach the objective;
- Satisfaction reflects the affective return experienced by the user following his experience.
User experience is then a notion supported by usability (Beauregard and Corriveau, 2007). Compared to usability, user experience is characterized by three factors (Hassenzahl, 2007):
- The positive interaction between the user and the product;
- The non-instrumental nature of the product;
- The understanding of the user's subjective aspect of a product.

Thus, user experience goes beyond the simple interaction between the user and the system. It covers the dimension of pleasure, satisfaction, emotion and motivation. In other words, user experience goes beyond functional characteristics to take on a rather human character to Human-Machine interactions (Robert & Lesage, 2011).

User experience is the result of the user's interaction with a product. This experience generates feelings, thoughts and actions, to the point of becoming an experience that impacts the user's future experiences (Rochefeuille, 2013).

Hassenzahl & Tractinsky (2006) seem to propose the most complete definition of user experience. For these authors, it is the intersection between three fundamental parameters:

- The internal state of the user, referring to his predispositions, his expectations, his needs, his motivations, and his mood;
- The functional and technical characteristics of the system, including complexity, usefulness, usability, functionality etc.;
- The environment where the interaction took place, the usage framework and the type of activity...
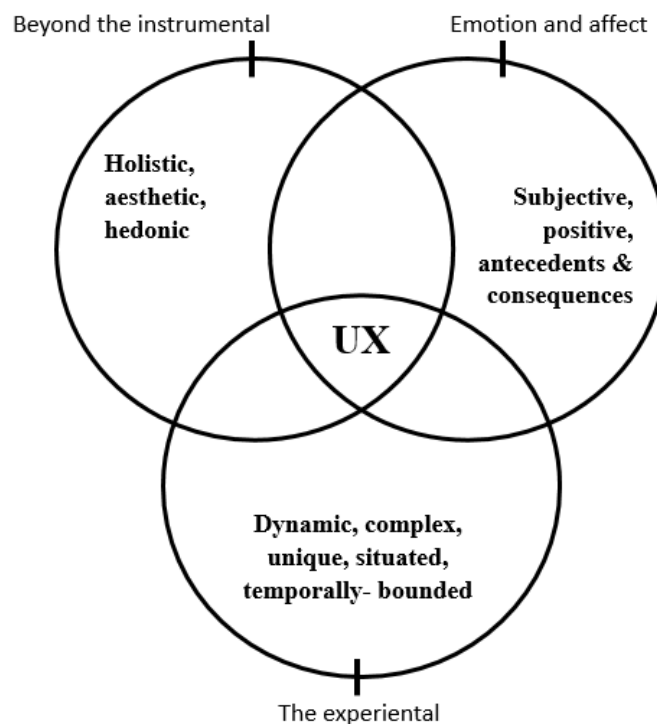
Figure 1. The different aspects of user experience according to Hassenzahl & Tractinsky (2006)
Source: Rochefeuille, 2013

User experience is viewed by Robert & Lesage (2011) as a multifaceted construct, emphasizing the overall impact of user interaction with a given system or service.

Experience quality at the core of the UX

User experience is a generic term that attempts to study and understand the quality of use of interactive products. Early work on user experience focused on the notion of usability and particularly on effectiveness, with a greater emphasis on experience quality.

User experience in HMI language refers to interaction, to usability putting the user at the center of interest. Many authors emphasize the holistic view of the user experience considered as indivisible (Bargas-Avila, and Hornbæk, 2011).

Also, user experience highlights the emotional factor, considering emotion at the center of any human experience. Indeed, emotion impacts the user's perception and the way he interacts with products. The holistic approach focuses on the co-experience or the experience of the user in a social context (Bargas-Avila, and Hornbæk, 2011).
User experience concentrates on the positive aspects of user's interaction with products to respond favorably to human needs. These are mainly hedonic, non-instrumental aspects (usually related to visual aesthetics, joy of use...) and situational ones (which refers to the importance of the context of use) (Bargas-Avila, and Hornbæk, 2011).
Furthermore, the user experience highlights interactive product quality. Indeed, there's not only the product's utilitarian value to respond to the user's need, the symbolic value and the aesthetic value are also important and should be considered. As an illustration, the aesthetic attribute of a product is appreciated but neglected compared to the utility one: an aesthetically beautiful cell phone is appreciated but matters less compared to a usable cell phone" (Bargas-Avila, and Hornbæk, 2011).

Thus, and in order to have a user experience of significant quality, good quality of interactive product, positive emotion experienced by the user, and favorable virtual atmosphere are all factors that favor the user experience.

2. Characteristics of the UX

User experience counts several parameters considered as fundamental (Rochefeuille, 2013).

These are essentially the following characteristics:

- Multidimentionality: which is realized through a set of combined elements in order to constitute a coherent whole. For example, when a person uses his phone to make a call, the phone allows him to call (the usefulness attribute), easily and quickly (the usability attribute). Following this call, the person feels pleasure (psychological characteristic) to exchange with his interlocutor on the phone (social characteristic), while handling a device with a nice interface (aesthetic factor).
- Subjectivity: is the result of a personal vision according to the interaction of each user.
- The holistic dimension: the user experience goes beyond the interaction with the product. It is general and represents a harmonious whole for the user.
- The user experience is situated: it takes place in a given environment and a specific context that impacts it.
- The user experience is changing: during the use of a product or a service, the user's perception changes and evolves according to his expectations as the activity is carried out.
- For each user the UX is unique: even if it is the same user using the same product. The user experience remains different each time the activity is performed.
- The user experience is generally complex, indefinable and incommunicable. Indeed, it remains difficult, if not impossible, to transpose the feelings experienced with precision (Tye, 1996).

The user experience begins well before the actual interaction with the product (Roto, 2007). In fact, user experience refers to what happens before the experience, which is what Springett & French (2007) refer to as the contemplation stage. Whereas Roto (2007) refers to the expected experience.

The lived experience affects the user's perception, initial judgment and psychological predisposition. If a user, for example, hears good things about a particular product (unique, convenient...), once interacting with that product, he will develop a predisposition to have a favorable user experience, despite all its disadvantages (Rochefeuille, 2013).

User Experience Assessment

The user experience can be assessed through two dimensions:

- The UX components: contain the set of characteristics related to the user's perception and specifying the user experience. In other words, whether the system is perceived as desirable or usable; and
- The UX influencing factors: are more related to external factors. They generally concern the system (design method, level of interactivity, field of view, etc.) and the individual's context of use (previous experiences, culture, gender, etc.).

In that respect, we deduce that the components of the user experience (related to the desirable/usable dimension) are what define the user experience. While the influencing factors of the user experience are determined beforehand by the designed system; the general use framework.

UX influencing factors

Referring to the ISO 9241- 210 (2009), there are many factors that unfluence the user experience, among them :
- Brand image: any company seeks to distinguish itself from the others by conveying ecological, ethical and reliability values that attempt to communicate a value image, particularly via: reputation, celebrity, low price, product category, etc. It is the values conveyed by the company that the user retains and ultimately impacts his experience (Porter & Claycomb, 1997; Dupré et al., 2017).

We cite as an example, the brand "scotch" whose image is of such notorious influence that the brand name is understood by the consumer as being the generic term itself: the adhesive tapes.

- Presentation, which is illustrated by image quality, format, content relevance and background color. According to Mandel and Johnson (2002), these factors influence the choice of product and thus affect the user experience.
- The interactive behavior of the user: in particular the type of interaction, the visual feedback, the interactive dialogue, all are elements that influence the satisfaction of the need.
- User personality characteristics: beliefs (the user believes keeping up with technological change and adapting to it), preferences (aesthetic, technological and linguistic. This specificity reflects the user's inclination towards certain properties of the system) and past successes reflecting successful technological experiences.

According to Mahlke (2008) and Hassenzahl & Tracktinsky (2006), there are connections between user experience and the external factors that impact it. The factors that influence the user experience are :
- The system properties related to the input (interaction technology used) and output (visual content, sensory feedback) ;
- User characteristics including memorization skills, verbal skills, personality etc. ; and
- Context parameters: namely the organizational dimensions, the type of activity and the environment.

For Hassenzahl and Tracktinsky (2006), user experience is described as the result of the internal state of the user (predispositions, expectations, needs, motivations and moods...), the characteristics of the system (usability, functionality, complexity...) and the environment where the interactions took place.

In addition to these three influencing factors, Arhippainen and Tähti (2003) add two others: social factors related to time pressure, social desirability and cultural factors related to habits, language and religion.

With respect to the virtual environment, Wu et al. (2009) emphasize the system factors synthesized in the term "quality of service" corresponding to the ability of the system to provide a service that matches the users' requirements and needs.

Wu et al (2009) also highlight the relationship between service quality and user experience quality. Quality of service refers to four factors: vivacity[2], interactivity[3]and coherence[4] of the environment.

The UX components

The dimensions related to the user experience remain numerous, according to the research on the subject.
Bargas-Avila & Hornbaek (2011) expose on the basis of about fifty studies, the dimensions of user experience most cited in the literature.

In an effort to standardize terminology, Rochefeuille (2013) referred to the characteristics of the user experience in three terms: "pole" broken down into "dimension" and then the latter divided into "indicators."
We distinguish 8 classifications designating the main dimensions of the user experience:

- According to Hassenzahl (2007)
User experience is divided into two poles: pragmatic and hedonic. Each of these is fragmented into dimensions. On the one hand, the pragmatic pole includes usability and utility as dimensions. On the other hand, the hedonic pole whose three dimensions are stimulation, identification and evocation.

- According to Mahlke (2007)
For Mahlke (2007), there are three attributes related to the user experience: instrumental qualities and non-instrumental qualities. These two characteristics give rise to the "emotional reaction" component.

Utility and usability represent the two dimensions of instrumental qualities. Aesthetics, symbolic aspects and motivational aspects constitute the dimensions of non-instrumental qualities. Usability, aesthetic aspects and symbolic aspects are dimensions modeled by measurable indicators.

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[2] Vivacity concerns both the quantity and the quality of the sensory data exposed to the user.
[3] Interactivity includes factors that contribute to the modification of the virtual environment.
[4] Coherence is linked to the coordination and synchronization between the different elements that make up the user's environment.

- According to Roto (2007)

Roto (2007) relies on two poles:
- The hedonic pole divided into two dimensions: pleasure and pride; and
- The pragmatic pole divided into two dimensions: utility and usability.

- According to Garett (2006, 2010)
User experience is described through two dimensions: the functional dimension and the informational dimension. The first refers to the product's functionalities and technical attributes. Indeed, the user experience is evaluated through the product's ability to satisfy the user's need by manipulating the different functionalities proposed.
The second is the product's ability to transmit the information necessary for the user to understand the product. The way in which the information is assimilated affects the user's perception of the product, which in turn influences the experience.
For Garett (2010), these characteristics apply to the context of websites and concern interactive products.

- According to Reagan (2010)
According to Reagan (2010) the human experience in general is personal, unpredictable and meaningful. For this author the user experience contains 14 dimensions. These are: emotion, context, cognition, culture, environment, physiology, technology, behavior, perception, memory, language, personality, attitude and design.
Reagan's thinking has been criticized on several occasions, arguing that personality is an input to the user experience rather than a separate dimension. On the other hand, Lee et al (2008) emphasize the cultural dimension, understanding it as a component influencing the user's perception.

- According to Robert and Lesage (2011)
Based on a study experience of a different products users group, Robert and Lesage (2011) raise eight dimensions that are:

The functional attribute: Being an integral part of the operated system and based on instrumental characteristics such as utility and usability. The functional dimension allows the user to perform his activity and achieve his objectives.

The physical attribute: Refers to the effort provided by the user in order to interact with the system. The effort provided can be related to the posture, the movements, the displacements etc.

The perceptual attribute: This is a characteristic present in any user experience. It represents the user's entry point with the system through sight, hearing, touch...

The cognitive attribute: It is a characteristic related to the activities of analysis, evaluation, reflection, learning and creation that facilitate the understanding, accumulation of knowledge and experiences. The cognitive attribute also helps develop the user's skills, sense of creativity and innovation as they interact with different products.

The psychological attribute: This is a characteristic that corresponds to the psychological state (mood, attitude, motivations, and emotions during use...) of the user at the time of his interaction with the system.

The social attribute: This is a component of significant importance in the user experience. The social dimension corresponds to the ability to meet or be in contact with other people while using the product.

In addition to the six mentioned dimensions, Robert and Lesage (2011) present sense making as well as aestheticism as two meta-dimensions that characterize the user's emotional experience:

Sense making: considered as a dynamic cognitive process that allows us to understand why we behave as we do in order to deduce consequences (Kort, Vermeeren & Fokker, 2007).

Aesthetics: refers to the richness of the user experience.

The actual definition of each dimension remains attached to each user's own perception.

- According to Larouche (2012)

Based on a qualitative study that draws on both positive and negative user experiences, Larouche (2012) identifies ten dimensions that define user experience: functional, psychological, cognitive, physical, social, perceptual characteristics (Robert & Lesage, 2011), informational characteristics (Garett, 2006; 2010), contextual characteristics (Reagan, 2010), cultural characteristics (Lee & al., 2008) and temporal characteristics.

- According to Provost (2012)
For Provost (2012), there are two poles: the product pole and the user pole.

Functional, physical, informational, usability, external characteristics (such as weight, and size) and other system qualities (including safety and reliability) represent the dimensions of the product pole.

While the user pole contains perceptual, cognitive, psychological, social and physical dimensions as well as other criteria with a personal impact (such as profitability and time).

- According to Loup-Escande & Lécuyer (2014)
According to Loup-Escande & Lécuyer (2014), six aspects constitute the user experience:
Utility: relative to the user's need;

The hedonic qualities: which illustrate the manifestations of the subjective feeling of the user;
Attractivity: is the global judgment of the system, whether it is good or bad;

Usability: is related to the user; if he's reaching goal (effectiveness), accomplishing the task with a minimum of effort (efficiency), which generates a rapid adaptation to the system (learning), its subsequent reuse (memorization) and thus a satisfaction or a non-satisfaction at the end of the use.

The feeling of presence: reflecting the effective presence of the user in the virtual context;

The resulting emotions: at the end of the appreciation (positive or negative of the system), the user releases emotions such as joy, fear, sadness, frustration or anger.

The following table summarizes all the components of the UX from the perspective of several authors.

Table 1 Summary of the main characteristics of UX

	AUTHORS	POLE	DIMENSIONS	INDICATORS
USER EXPERIENCE (UX)	Hassenzahl (2007)	Pragmatic	Usability	
			Utility	
		Hedonic	Stimulation	
			Identification	
			Evocation	
	Mahlke (2007)	Instrumental qualities	Utility	
			Usability	Efficiency
				Controllability
				Effectiveness
				Learnability
		Non-instrumental	Aesthetic aspects	Visual

			Tactile
	qualities		Acoustic
		Symbolic aspects	Associative symbolism
			Communicative symbolism
		Motivational aspects	
Roto (2007)	Pragmatic	Utility	
		Usability	
	Hedonic	Pleasure	
		Pride	
Garett (2006, 2010)		Functional	
		Informational	
Reagan (2010)		Emotion	
		Cognitive context	
		Culture	
		Environment	
		Physiology	
		Technology	
		Behavior	
		Perception	
		Memory	
		Language	
		Personality	
		Attitude	
		Design	
Robert &Lesage (2011)		Functional	
		Physical	
		Perceptual	
		Cognitive	
		Psychological	
		Social	
		Sense making	
		Aesthetics	

	Larouche (2012)		Functional	
			Informational	
			Perceptual	
			Physical	
			Cognitive	
			Psychological	
			Social	
			Contextual	
			Cultural	
			Temporal	
	Provost (2012)	Product	Functional	
			Physical	
			Usability	
			Informational	
			External characteristics	
			Other qualities of the system	
		User	Perceptual	
			Cognitive	
			Psychological	
			Social	
			Physical	
			Other personal impacts	
	Loup-Escande & Lécuyer (2014)		Usability	Effectiveness, learning, memorization and satisfaction feelings
			Utility	Responds to the need for autonomy and progress
			Hedonic qualities	Originality, innovativeness
			Attractivity	Overall product assessment

			Sense of presence	Feeling of being really present in the virtual world
			Resulting emotions	Joy, fear, sadness, anger, frustration

Source: Developed by the author

3. Customer experience (cx) and user experience (ux): Which rapprochement?

Referring to the Harvard Business Review, the concept of "customer experience" appeared in the late 1990s in "The Experience Economy" by Joseph B. Pine and James H. Gilmore.

These authors emphasize that it is no longer a question of offering products or services to customers. It is rather about offering an experience that distinguishes a product, a service or a brand from its competitors, in order to create a strong bond, an attachment between the user and the consumer.

There are as many definitions of customer experience as there are disciplinary fields (CRM: customer relationship management, marketing, consulting, advertising...). We can retain the following definitions (Dabi-Schwebel and Vax, 2021):

- The customer experience is a set of stages that consists of a series of events experienced by the customer and that have influenced his memory positively or negatively (from the cognitive point of view);
- It is also about the emotions and sensations experienced by the customer during the pre-purchase, post-purchase and purchase phases of the product (from an affective point of view);
- The customer experience is perceived as the impression that the customer keeps following all the interactions with the products or a given brand (from the conative point of view).

User experience and customer experience are two notions that are generally confused. Indeed, each one allows to live a particular experience: the user of a product is potentially the customer of a given brand.

The definition of these two notions also depends on the context. When a retailer welcomes the customer as soon as he comes to the point of sale, it is the relational dimension that is highlighted. In the same way, when a user accesses a video platform or a website to benefit from a product or a service, it is the virtual contact that is emphasized.

User experience is therefore linked to usage, while customer experience is linked to relational factor. A good marketing strategy should take into consideration these notions.
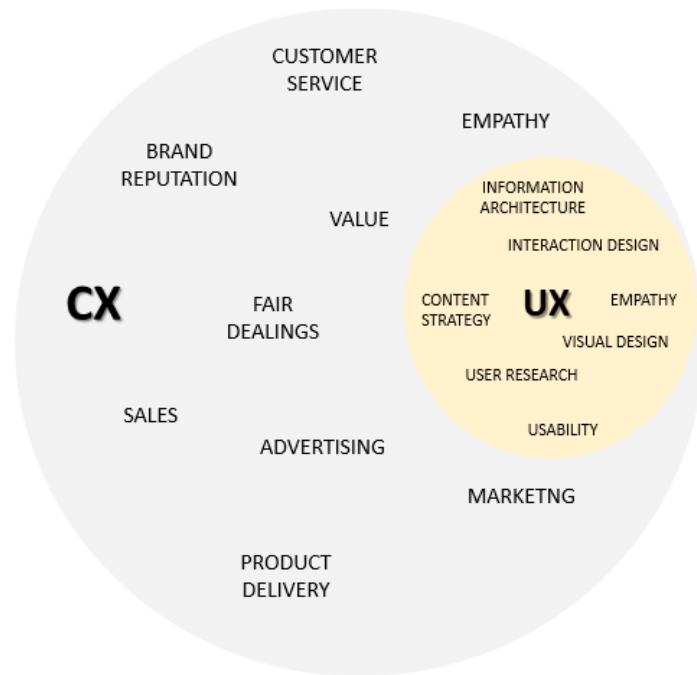
Figure 2. User experience at the heart of the customer experience

Source: Extract from usabilis website[5]

User experience is an integral part of customer experience. It relates to the general technical aspect of a system, taking into account the user's perception once interacting with a website, an application or a product.

Integrating customer experience, user experience in the context of a website or an application is inevitably affected by the visual design, the information architecture, the usability factor... it's all about the interaction between the user and the system.

In fact, customer experience covers the user experience and user experience in turn covers the user interface, which makes the user experience a notion dominated by the virtual dimension.

User experience and customer experience: a complementary relationship

A good product or service is never enough to guarantee a good user experience. The latter is evaluated according to the quality of the pre-established interactions with the company. On this basis, the user is tempted to buy the product or is demotivated.

It is the user's loyalty to the brand and the customer's interest in the product that makes for a better experience.
To meet the expectations of the user-customer, it is important to adopt a hybrid marketing approach, which reconciles the user and the customer.

There is a reciprocal relationship between user experience and customer experience: if user experience contributes to customer experience, then the favorable customer experience will inevitably be the result of a successful user experience. A well-founded user experience is the successful outcome of the customer experience.

Conclusion

In this work, we have presented a synoptic view of the UX concept in different disciplinary fields: in marketing, in information architecture, in ergonomics and in the virtual context.

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[5]https://www.usabilis.com/cx-ux/. Consulted on 08/12/2022 at 22h19.

Indeed, from different disciplines and in different contexts, user experience is constantly developing until it becomes a differentiating factor with great potential in competitive markets. This article is a theoretical analysis that proposes through the definition of user experience in different contexts, the conceptualization of the components of user experience and the factors underlying the concept in continuous evolution.

Moreover, user experience is at the heart of customer experience. The two experiences are interdependent. If the favorable user experience contributes to the improvement of the customer experience, the customer experience will consequently be the result of a successful user experience.

Thus, we aspire to provide through this research a conceptual model that highlights the impact of the UX variable seen from the marketing perspective, through the "usefulness" and "usability" dimensions (the most recurrent dimensions), while verifying its impact on the user connected to virtual platforms.

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