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WORKING PAPER

2020/10

User, customer and consumer
experience: A multidisciplinary
systematic literature review

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Louvain Research Institute in Management and Organizations

Working Paper Series

Editor: Prof. Valérie Swaen
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Summary

The notion of experience has gained in popularity both in management and in computer science. To assess the quality of an information system, specialists in human-computer interaction are now referring to the user experience. On the marketing side, the concept of experience has also become key to describe the relationship between an individual and a brand. Several streams of research exist, some privileging the notion of customer experience and others of consumer experience. However, the multiplication of those works also created fragmentation and theoretical heterogeneity, as emerged through our analyses. This situation is particularly noxious to the communication between the disciplines of human-computer interaction and marketing, becoming more and more necessary. In order to promote this multidisciplinary communication, we clearly define and differentiate the constructs of experience. We also highlight the current heterogeneity in the literature through a systematic literature review and we end by formulating some suggestions to researchers and practitioners. This work contributes to a better communication between the disciplines of human-computer interaction and marketing, and more particularly to the unification of the constructs of experience.

Keywords : Consumer Experience, Customer Experience, Multidisciplinary Communication, User Experience, Systematic Literature Review.

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User, customer and consumer experience: A multidisciplinary systematic literature review

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Abstract: The notion of experience has gained in popularity both in management and in computer science. To assess the quality of an information system, specialists in human-computer interaction are now referring to the user experience. On the marketing side, the concept of experience has also become key to describe the relationship between an individual and a brand. Several streams of research exist, some privileging the notion of customer experience and others of consumer experience. However, the multiplication of those works also created fragmentation and theoretical heterogeneity, as emerged through our analyses. This situation is particularly noxious to the communication between the disciplines of human-computer interaction and marketing, becoming more and more necessary. In order to promote this multidisciplinary communication, we clearly define and differentiate the constructs of experience. We also highlight the current heterogeneity in the literature through a systematic literature review and we end by formulating some suggestions to researchers and practitioners. This work contributes to a better communication between the disciplines of human-computer interaction and marketing, and more particularly to the unification of the constructs of experience.

1 INTRODUCTION

The notion of experience has gained in popularity in human-computer interaction and even became a buzzword employed by practitioners and researchers alike (Hassenzahl & Tractinsky, 2006). A product should no longer be seen as an object offering various functionalities and benefits but rather an experience (Hassenzahl et al., 2003). This also applies to marketing where this notion has gained popularity since its apparition 40 years ago (Holbrook & Hirschman, 1982).

However, the multiplication of papers dealing with the experience, especially through different research fields, created fragmentations and theoretical confusions (Becker and Jaakkola, 2020). These confusions and this lack of a unified view undermine the effectiveness of researching and managing the experience (Law et al., 2008) but also make it especially complicated to connect different literatures.

This situation is particularly problematic as it is now essential for the fields of marketing and human-computer interaction to communicate, one of the reasons being the complementarity of the points of view. This communication challenge is crucial for researchers but also for practitioners (De Keyser et al., 2020). As an example of multidisciplinary work, more and more large user-centered companies are now incorporating user experience design into their marketing and branding strategies (Lee et al., 2018).

The purpose of this work is thus to facilitate multidisciplinary communication between the disciplines of marketing and human-computer interaction, and more precisely to help connect the different constructs of the experience. In order to have an in-depth understanding of the problem studied, we first clarify the constructs of user, customer and consumer experience, in particular by exposing their particularities and how they are linked. Given the multiplication of papers combining several constructs of the experience, we then carry out a systematic

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literature review and highlight the ontological heterogeneity in the literature. We finally formulate some suggestions to researchers and practitioners.

2 CONSTRUCTS

This part aims to provide a clear vision of the consumer, customer, and user experience. Each construct will be defined individually with a brief history of its evolution and an explanation of its particularities. We will also see the articulations between these constructs and how they influence each other.

2.1 Consumer Experience

The construct appeared in the 80th with the emergence of the consumer research as a new discipline. In the latter, consumers began to be seen as non-rational beings and researchers started to consider the emotional aspect in the relationship between an individual and a company. This later resulted in the apparition of experiential marketing and, today, different research streams exist, some preferring to use the construct of customer experience and others the consumer experience. The major authors for the consumer experience are Holbrook and Hirschman who, in 1982, developed the consumption experience. They then carried out several works specifying this postulate (Holbrook, 2006).

Although there is no widely accepted definition, we can describe the consumer experience as directed toward the pursuit of fantasies, affect, and fun (Holbrook & Hirschman, 1982). It depends on the object with which we are interacting, the preferences of the consumer, and the situation in which this interaction occurs.

This construct has the particularity of focusing more on the personal meanings of the consumption experience and tends to be studied in naturalistic settings. It is also very common to study its antecedents and outcomes (Antéblan et al., 2013). We are here in an approach of understanding the consumer as an individual who is not necessarily a rational, information-driven, utility-maximizing decision makers.

2.2 Customer Experience

As previous explained, this construct originally comes from the consumer experience of Holbrook and Hirschman (1982). However, the specific term “customer experience” was first introduced by Pine

and Gilmore (1998). Although it is traditionally related to service marketing, it is now starting to be used in human-computer interaction (Rusu et al., 2018).

A popular definition of the customer experience is the one from Lemon & Verhoef (2016), developing that it is the totality of a person’s responses from every interaction he has with a company during the entire journey that takes him from discovering a brand or product to any post-purchase interactions. It is now considered an essential marketing tool to handle to ensure the competitiveness of a company (McCall, 2015).

The particularity of the customer experience is that it integrates several points of contact during the customer journey, and thus specific interactions. The dimensions that compose this construct are the sensorial, emotional, cognitive, pragmatic, lifestyle, and relational (Gentile et al, 2007). A possible measurement method is to use the customer’s feedback and perceptions during his journey. There is also a strong emphasis on the role of the brand as, for the consumer experience, we seek to understand the consumer.

2.3 User Experience

The user experience initially comes from the construct of usability. The latter includes the effectiveness, efficiency, and satisfaction (Sauro, 2015), therefore cognitive and rational dimensions. However, these dimensions have become too restrictive to assess users’ preferences, especially in the context of gestural interaction (van Beurden et al., 2012). To overcome this problem, specialists started to use the user experience, which extends the dimensions of the usability (Poushneh & Vasquez-Parraga, 2017), and especially with emotional aspects (Cruz et al., 2015).

This construct is officially defined by ISO 9241-210 (2010) as “A person's perceptions and responses that result from the use or anticipated use of a product, system or service”. It is influenced by the context, the user and the system (Roto et al., 2011). Important elements for a good user experience are the pragmatic quality, hedonic quality and global attractiveness (Hassenzahl et al., 2003).

The main particularity of this construct is that it focuses on one person-product interaction in a specific context (Ceccacci et al., 2017). This enables to be evaluated directly after the interaction, for example via a multi-item questionnaire such as AttrakDiff (Hassenzahl et al., 2003). Unlike the two

other constructs, the main focus here is on the product and the assessment of its quality.

2.4 The Links Between the Constructs

Our postulate is that these three constructs capture different aspects of a same overall experience. They are also linked and influence each other in several ways. For example, we can consider that the user experience is one particular point of contact in the customer journey and therefore has an impact on the customer experience, which in turn influences the more holistic consumer experience. We can also have the opposite logic since our past experiences influence our future experiences (Lemon & Verhoef, 2016). In this scenario, the customer experience that an individual has with a company will influence his next user experience he will have with the company's products.

Given these links, it sometimes becomes too restrictive to take only one construct into account. It is therefore essential to guarantee good communication between these fields of research and to combine the points of view. For some practitioners, the customer experience is already considered to be closely related to the user experience (Sirapricha & Tocquer, 2012). On the researchers' side, some studies are also starting to move in this direction, such as that of Lee et al., (2018) which empirically validates a model combining elements of the user experience, customer experience and brand equity. For the marketing, we can cite Becker and Jaakkola (2020) who carry out a systematic review of the literature focusing on the customer experience and involving the consumer experience. However, as we will see in our analyses, these links have also given rise to a certain heterogeneity in the literature.

3 RESEARCH METHOD

In order to analyse the multidisciplinary works on the experience, we focus on the articles developing several constructs in the same paper. To guarantee a complete view, we adopt the PRISMA methodology (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). This approach, inspired by Moher et al. (2009) and summed up in Figure 1 (cf. Appendix 1 for more details), enables to easily reproduce our study.

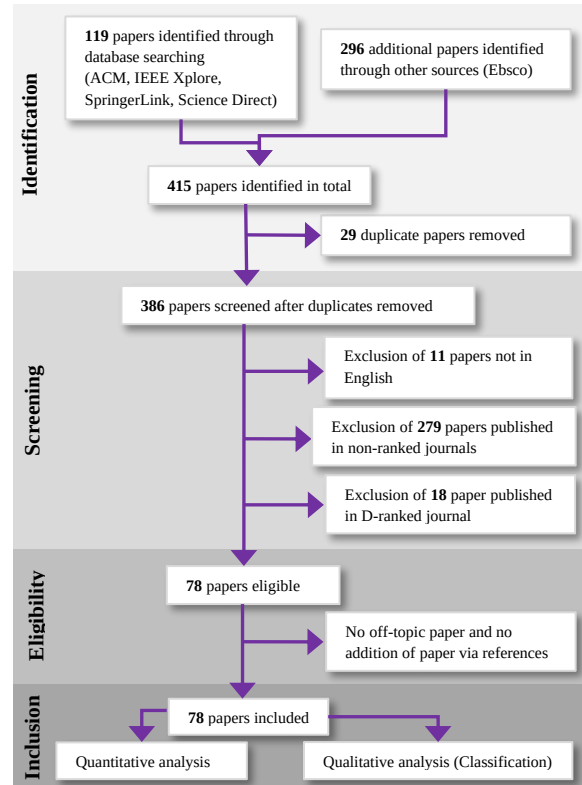


Figure 1: PRISMA diagram.

3.1 Identification

We searched for relevant papers by establishing four different research scenarios, each leading to its own query:

- Q = "User* Experience*" AND "Consumer* Experience*" AND "Customer* Experience*"
- Q = "User* Experience*" AND "Consumer* Experience*"
- Q = "User* Experience*" AND "Customer* Experience*"
- Q = "Consumer* Experience*" AND "Customer* Experience*"

The first one focus on the paper mentioning the three constructs of experience. The other scenarios cover the three possible pairs of terms. In order to analyse a maximum of documents, no publication date restriction has been established.

We ran those queries on the following major digital libraries: (1) ACM Digital Library; (2) IEEE Xplore; (3) Elsevier ScienceDirect; and (4) SpringerLink. We also used (5) Ebsco as a multi-publisher sources to ensure the completeness and coherence of the references, validate independent

query results, and cover other publishers as well. At the end of this process, a total of 29 duplicates were deleted.

3.2 Screening

This second phase consists in defining and applying inclusion or exclusion criteria. Each paper was evaluated with respect to its relevance and its form. We only kept papers written in English that underwent a peer-review process, and for which the full text was available.

Another criterion being the quality, we also evaluated the ranking of the journals or conferences in which the articles are published. Given the use of multiple publishers from different fields of research, the UNIFI ranking was used in order to have the widest possible scope for the classification of the papers. At the end of this process, 18 D-ranked documents were deleted.

3.3 Eligibility

To analyse the disciplines while keeping maximum objectivity, the choice of the field of research assigned to the articles was made via the journal's discipline, using the most recent Scopus ranking. However, in our case, we would like to know how several constructs are treated together, regardless of the discipline. We thus decided to keep all the articles.

This phase is also dedicated to the verification of the completeness of our corpus. We thus checked the references cited in the papers of our corpus in order to eventually add them. However, no article was added during this phase.

As another verification, we used Scopus to extract the 100 most cited articles for each of the 3 constructs of the experience. Two articles were duplicated due to the use of the three different queries and we thus ended up with a total of 298 articles. These only two duplicates were already present in our corpus, which is another element ensuring its completeness.

3.4 Inclusion

This last phase consists in verifying quantitative and qualitative aspects of our corpus of papers. These analyses are detailed in the following chapter developing the results.

Quantitative analysis: we employed Zotero - a multi-platform bibliography management software tool for collecting, organizing, and sharing research sources - to create a collection of papers. The collection of the references examined in this paper is

available [here](#). We also used PaperMachines, a Zotero extension for visualizations.

Qualitative analysis: qualitative classifications of each paper were manually performed with regards to various dimensions of analysis, e.g., definitions used, dimensions evaluated, evaluation methods, etc.

4 RESULTS

As schematized in Figure 2, our final corpus includes 78 unique papers. During this chapter, we carry out analyses on the full corpus, by construct of experience, and by research scenario.

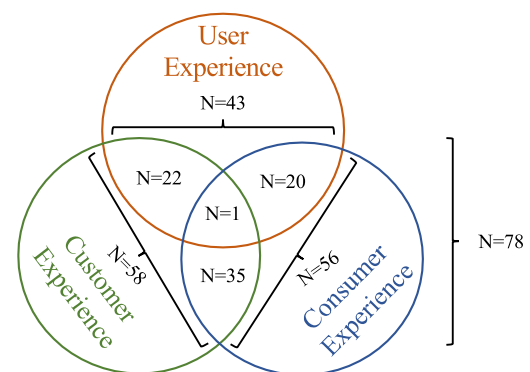


Figure 2: Part of the literature analysed.

Half of the documents in our corpus are published in management journals or conferences and the third in computer science. The remaining references are mainly in social sciences and engineering. Figure 3 details this repartition and shows that the majority of the articles have been published in the last 5 years.

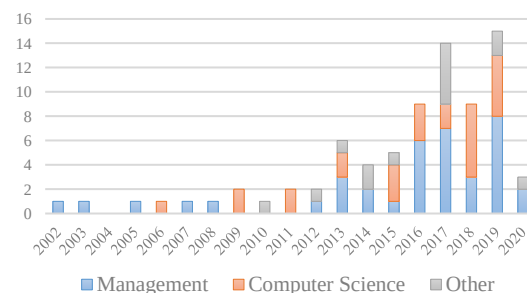


Figure 3: Years of publication and disciplines of the articles from our final corpus.

4.1 Differentiation of the Constructs

Although all the articles of our corpus mention several constructs, not all of them make a concrete distinction between them. For example, some are in

fact papers that focus on the customer experience but once use the term "user experience" as a synonym. In this analyse, we observe what proportion of articles properly develop several constructs at the same time. The results are summed up in Table 1.

Table 1: Classification of the references based on the main construct(s) they develop, per research scenario.

User & Customer (n = 22)		User & Customer & Consumer (n = 1)	
Only User	11 (50%)	The only reference of this scenario is considered as "Only Consumer".	
Only Customer	5 (23%)		
Neither User nor Customer	4 (18%)		
User & Customer	2 (9%)		
User & Consumer (n = 20)		Customer & Consumer (n = 35)	
Only User	12 (60%)	Only Customer	17 (48%)
Only Consumer	3 (15%)	Only Consumer	9 (26%)
Neither User nor Consumer	5 (25%)	Neither Customer nor Consumer	9 (26%)
User & Consumer	0 (0%)	Customer & Consumer	0 (0%)

It appears that the majority of the articles are focusing on just one construct. Whatever the scenario, about a quarter of the papers are not focusing on the experience. By analysing their content, we see that these are articles sometimes using the experience to illustrate their main point but without giving a definition and leaving it a marginal place in the article. Only the "User Experience & Customer Experience" scenario includes articles developing both of the terms. In these, we can cite the article of Lee et al. (2018) whose goal is to create a model unifying the constructs of the experience. This illustrates the fact that the customer experience is starting to be used in human-computer interaction, as stated by Rusu et al. (2018). We thus observe variabilities in the use of the constructs of experience. A possible explanation for this is developed in the next analyses.

4.2 Theoretical Foundations

We use CiteSpace - a tool to visualize and analyse trends and patterns in scientific literature (Chen,

2006) - to analyse the networks of the references cited by the articles of our full corpus. We notice that the networks are little concentrated, with the largest one regrouping only 7% of the references. By analysing in details the references of these networks, we observe that they are grouped by sub-subjects disconnected from each other. For example, some major networks focus on the consumer experience in retailing context, the brand equity, or the experience in tourism and hospitality industry.

These analyses enable us to observe that there are indeed important disparities in the theoretical foundations of the different constructs of experience. Moreover, this variability is sometimes observed within the same constructs.

4.3 Precision of the Constructs

In this part, we focus on the treatment accorded to the different constructs in the papers. We look at whether a definition is given, what dimensions are eventually mentioned and how they are measured. The details of these analyses are available in Table 2. An analysis of the terms used to designate the constructs is also available in Appendix 2.

It appears that whatever the construct, the articles refer to different definitions. For the customer experience, the definitions of Pine and Gilmore (1998) and Lemon and Verhoef (2016) are slightly more popular, even if their use is far from generalized. The situation is similar for the dimensions composing the constructs. In terms of evaluation, the use of questionnaire is the most popular method, although the measurement items are also different. These analyses, showing a heterogeneity in the definitions and dimensions used, illustrate that the theory is not stabilized yet.

Table 2: Precision given to the constructs.

	Consumer Experience	Customer Experience	User Experience
Total number of articles	56 (100%)	58 (100%)	43 (100%)
Nb. defining the construct	7 (12,5%)	13 (22,4%)	8 (18,6%)
Number incorporating dimensions of the construct	7 (12,5%)	8 (13,8%)	13 (30,2%)
Number evaluating dimensions	4 (7,1%)	4 (6,9%)	11 (25,6%)

4.4 Topics Covered in the Corpus

We use PaperMachines to analyse the topics of the papers using the word frequencies (the word clouds are available in Appendix 3). The articles involving the user and consumer experience tend to deal with the topics of mobile apps and, more generally, technologies, models and data. For the user and customer experience scenario, the topics are similar but focus slightly more on the logistics and delivery aspect. In the last scenario – “Customer Experience & Consumer Experience” – the situation is also similar, but the keywords “brand” and “product” have a slightly higher importance than in the two other scenarios. We thus observe slight differences even though the topics remain largely similar.

We can also ask ourselves if there are more significant differences in the topics if we don’t make the analyse per research scenarios but rather on the full corpus and per construct. For this, we use again CiteSpace to perform an analysis of the networks of the keywords used in the papers of our full corpus. The main network alone includes 69% of the keywords. When analysing it, we can observe that the network is organized according to the initial research area of the constructs. However, just like in the previous analysis, the topics remain connected.

In order to ensure that our corpus of 78 documents isn’t a biased sample, we used the 100 most cited articles for each of the 3 constructs of the experience to process the same CiteSpace analysis. It enables us to observe that this sample of 298 articles behaves in the same way as our 78-documents corpus, whether at the level of the topics or of the theoretical foundation.

5 DISCUSSION

This work aimed to improve communication between the fields of human-computer interaction and marketing, and more particularly to unify the constructs of experience. To this end, the constructs were delimited, and a systematic literature review was carried out.

5.1 Clarification of the Constructs

We exposed the peculiarities of the different constructs of experience. The user experience has the particularity of being specific to one human-product interaction in a given context while the customer experience includes several interactions during the

customer journey. The consumer experience aims to understand consumers as non-rational beings.

Despite these peculiarities, these constructs capture different aspects of the same overall holistic experience and thus influence each other. It therefore becomes crucial to enable effective communication between human-computer interaction and marketing. Some studies are starting to move in this direction, but some work is still necessary.

5.2 Current Heterogeneity

We looked at the articles developing several constructs in the same paper and highlighted the heterogeneity in the literature. To identify these references, we went through the PRISMA methodology via 4 different research scenarios. At the end of the 4 stages of the process - identification, screening, eligibility and inclusion - we ended up with 78 articles.

It appears that the majority of the articles of our corpus do not differentiate the constructs. Rather, these are articles focusing on a particular construct, or even none, and sometimes using other terms as synonyms. Only the scenario where we were looking for articles mentioning both user experience and customer experience revealed references that properly develop these constructs together.

These variabilities were explained via several analyses. First, we saw that the theoretical foundations are disparate, sometimes within the same constructs. Moreover, there is neither reference definitions nor dimensions widely used for each of the constructs, which shows that the theory is not stabilized yet. However, even if there are some minor particularities, the topics are strongly linked.

5.3 Design Considerations

Following the work we performed, we can formulate some suggestions to researchers and practitioners working with the constructs of the experience:

- We suggest opting for a multi-constructs approach whenever possible, to benefit from the complementarity of points of view. From a managerial perspective, the implementation of management strategies consistent with the user experience creates an increased level of customer experience and brand equity (Lee et al., 2018). For example, Apple is known to have a strong competitive advantage in terms of user experience (Wan et al., 2013).
- We advise to first link the user experience to the customer experience, without taking into account

the consumer experience. These first two constructs are naturally closer, which was felt throughout our analyses. This is probably why some works linking these constructs already exist (Lee et al., 2018). In addition, by its nature, it is harder to measure the consumer experience, unlike the other two constructs that emerge through points of interaction.

- Given the important variability in the definitions and dimensions used, we suggest limiting to a few popular works that are already well established, such as Pine and Gilmore (1998), Lemon and Verhoef (2016), Hassenzahl et al. (2003) and ISO 9241-210 (2010). This would also enable to start creating a certain homogeneity in the literature.
- We advise specialists to familiarize themselves with these other constructs even if it is outside the scope of their discipline. The present work and the few references cited above are, we believe, a good starting point.

5.4 Limitations & Future Work

Despite our systematic and rigorous approach to this analysis, some limitations persist. We had to make choices in the keywords used during the identification of articles in order not to disperse. For example, we carried out research with the "consumer experience" but not the "consumption experience". We also had to put aside other concepts that could potentially be considered as constructs of experience but without specifically mentioning the term "experience" in their name.

In addition, this work mainly focuses on papers at the crossroads between several constructs of the experience. It would be interesting to focus on all the papers specific to each single construct, as for example Becker and Jaakkola (2020) did for the customer experience. Another interesting aspect to explore, highlighted by the paper by Lee et al. (2018), is the role of the brand experience in the 3 constructs that we analysed.

Finally, in order to continue this work of multidisciplinary link between constructs, it becomes necessary to create and validate quantitative models as the one of Lee et al. (2018). This step is essential to enable the unification of the experience.

6 CONCLUSION

We have seen that the notion of experience has gained in popularity in multiple disciplines of research.

However, this popularity has also created fragmentation and theoretical confusion, which is particularly problematic when trying to connect different literatures. In order to promote multidisciplinary communication, we clearly defined and differentiated the constructs of experience. We also showed that, even if the topics covered are connected, there are important differences between the constructs, and particularly in their theoretical foundations.

The major theoretical contribution of this research consists in the highlighting of the current heterogeneity in the literature developing several constructs of the experience. It is particularly problematic as it deteriorates good communication between the fields of human-computer interaction and marketing, which becomes crucial for researchers and practitioners alike. From a practical point of view, this study encourages practices combining user experience and marketing aspects and provides guidelines to this effect.

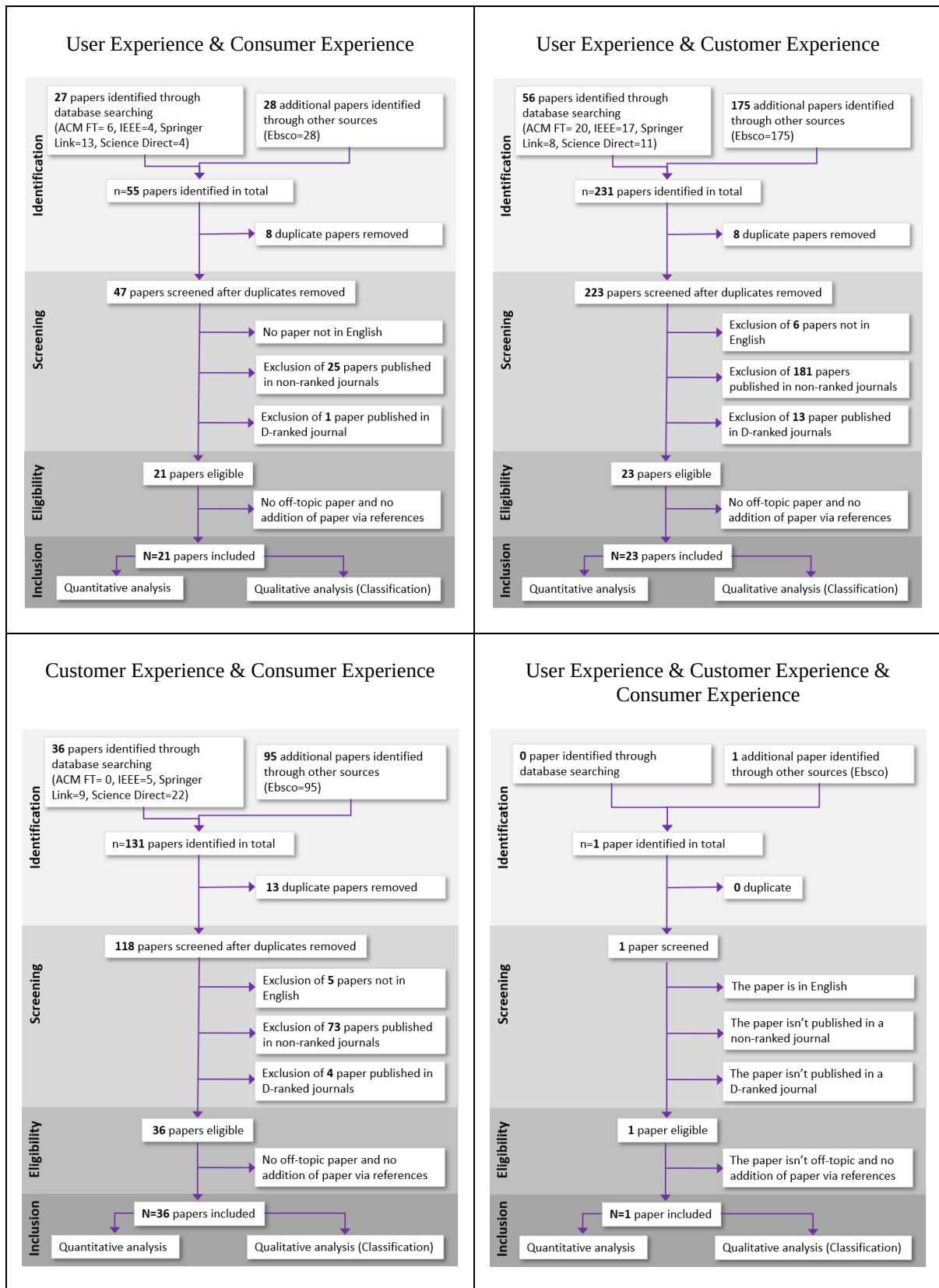
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APPENDICES

Appendix 1: PRISMA diagrams of the four research scenarios



Appendix 2: Terms used to designate the constructs of experience

In this part, we focus on the terms used to designate the constructs. For this, we use the number of appearances of certain terms in the articles, without counting the ones in the bibliography. This frequency is then normalized so that each article has the same weight. The terms used are summed up in Figure 5 and are classified in the following categories:

- Acronyms: for example, it is relatively common to use "UX" to refer to the user experience.
- The exact term: these are exactly "user experience", "consumer experience" and "customer experience".
- The term considering the declinations: this last category counts for example "customer's experience" or "customer experiences".

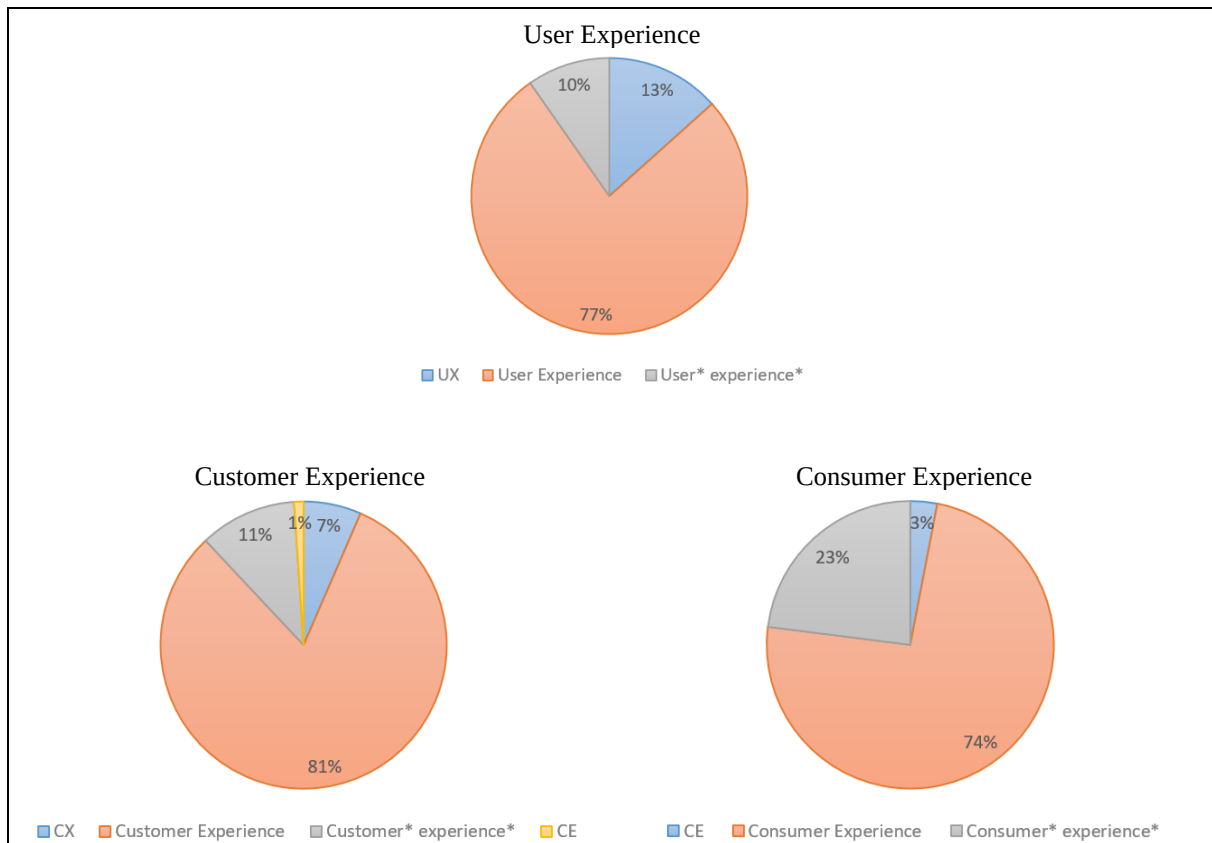


Figure 5: Frequency of appearance of the terms used to designate the experience

As we can see, the use of acronyms is the most frequent for the user experience, with 13%, and the least frequent with the consumer experience, with 3%. The customer experience, on the other hand, has two used acronyms: "CX" and "CE", although "CX" is more popular. The major problem with this is that "CE" is also used for the consumer experience, which could cause confusion. It is more frequent to use the exact term "customer experience" (81%) compared to "consumer experience" (74%), which manifests itself more in the form of its variations. In the same way, the user experience is proportionally less present in the form of its variations (10%).

Appendix 3: Word clouds of the full corpus and per scenario of research

