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Conceptualizing engagement in the mobile context: A systematic literature review

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ABSTRACT

This conceptual study answers how engagement is defined and conceptualized in the mobile service/technology context. A systematic literature review was conducted in the fields of business and human-computer interactions to achieve this objective. The 22 studies included in the final analysis are classified into two categories that distinguish the main perspectives of mobile engagement. This study demonstrates that prior research has either conceptualized mobile engagement as a behavioral activity (i.e., using or interacting with mobile service/technology) or has perceived it holistically as customer engagement that occurs in a mobile environment. Based on the analysis, it is proposed that customer engagement in mobile service/technology context should be understood as a multidimensional concept including behavioral, emotional, and cognitive dimensions. This study contributes to this growing area of research by increasing the understanding about it and proposing a holistic conceptual model of mobile engagement.

CCS Concepts

• **Human-centered computing**→Ubiquitous and mobile computing theory, concepts and paradigms

Keywords

Mobile engagement; mobile apps; marketing; customer engagement; smartphones; systematic review

1. INTRODUCTION

Mobile services have become an integral part of the everyday life of consumers. These services can be formally defined as “content and transaction services that are accessed and/or delivered via a mobile handheld device (PDA, mobile, cellular or smartphone, GPS, etc.) based on the interaction/transaction between an organization and a customer” [10, pp. 521–522]. Due to the ubiquitous nature of mobile services, consumers can use mobile applications (apps), the Web, email, and social media anytime and anywhere through their smartphones.

One of the most popular ways of using mobile services is via apps. Apps are software applications designed to run on mobile operating systems [8] for the purpose of performing specific tasks

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for the user [5], such as Web browsing and mobile banking. ComScore [27] reports that US consumers spend almost two-thirds of their total digital media time on mobile apps and mobile Web, and 71% of this time constitutes the use of mobile apps. Therefore, it is not surprising that this rapid change in consumer behavior has received attention from both researchers and marketers.

Companies are striving to understand how to create value and engage their “always connected” customers through mobile services [14]. Thus, mobile engagement has become an emerging topic among business practitioners. The Marketing Science Institute (MSI) [21] has identified mobile technology as one of its tier-two priorities for 2014–2016. Further research has called for increasing the understanding of how marketers could integrate mobile marketing into their customer relationship management and brand-building activities. Customer engagement (CE) has also been considered a top research priority by the MSI [21] and business practitioners [9].

Despite the growing attention of business practitioners and academia toward both mobile engagement and CE, little research has examined CE in a mobile context [4, 14]. Thus, the research related to mobile engagement is still relatively new and not well established. Moreover, the concept of mobile engagement has remained unclear since researchers use the term “engagement” with different meanings. Therefore, additional studies are needed to clarify this concept.

The main objective of this study is to provide answers to how engagement is defined and conceptualized in the mobile context. To achieve this objective, the relevant literature is systematically reviewed and the current state of knowledge about mobile engagement is analyzed. This conceptual paper contributes to existing research by distinguishing between two main perspectives of engagement in the mobile context and by proposing a holistic conceptual model of mobile engagement. Moreover, this study identifies where further research is needed on this emerging subject.

The rest of this article is organized as follows. Section 2 provides a brief overview of the engagement concept. Next, the research methodology is presented in Section 3. Section 4 introduces the classification framework and explains the results. Finally, the conclusions are discussed, the limitations are recognized, and future research directions are suggested.

2. ENGAGEMENT

The concept of engagement has received considerable attention in academic research and among business practitioners (e.g., [12, 22]). A number of engagement concepts vary among disciplines. Many of the presented mobile engagement conceptualizations are based on existing engagement concepts. Therefore, it is

worthwhile to conduct a brief overview of two key engagement concepts related to this research before proceeding with a closer investigation of mobile engagement.

The first of the two presented key concepts is CE. Along with its different forms, it is one of the most explored engagement concepts in the marketing field. Although a final consensus has not been reached on CE conceptualization [22, 33], it is acknowledged that CE has its roots in the relationship marketing theory and service-dominant logic. Both of these theories emphasize the interactive co-creative nature of value creation between customers and companies in service relationships [3]. Whereas the customer is the focal subject of this concept, the object of engagement may vary based on the context [12] (e.g., brand, online, and mobile). Usually, the object is stated in the name of the concept. Based on an extensive literature review of numerous engagement conceptualizations, it can be concluded that engagement is a multidimensional construct [12]. Customer brand engagement is one of the most established conceptualizations. Examining the holistic relation between a customer and a company, this concept is defined as “a consumer’s positively valenced brand-related cognitive, emotional and behavioral activity during or related to focal consumer/brand interactions” [12, p.154]. The cognitive dimension represents consumers’ thought processing about a brand, whereas affect refers to the emotional connection between a brand and a customer. Furthermore, the behavioral dimension is defined as “a consumer’s level of energy, effort and time spent on a brand in a particular consumer/brand interaction” [12, p.154].

Although it is widely accepted that CE is multidimensional, interactions between a customer and a company have been emphasized in engagement conceptualizations. Brodie [3] further leverages the role of the interactions by stating that CE is created through interactive, co-creative customer experiences in service relationships. Thus, CE can be perceived as an outcome of a set of brand-initiated experiences that meet the goals/values of current and prospective customers [20]. The level of how consumers perceive interactive experiences during service relationships varies among individuals [34].

The second key engagement concept presented in this research is user engagement (UE). This concept, which is based on human-computer interaction (HCI), attempts to explain consumer engagement in the computer-enabled context, such as mobile engagement. Consequently, UE is one of the concepts that has been used to explain user experiences with mobile technology. The UE concept is formally defined as “a quality of user experiences with technology that is characterized by challenge, aesthetic and sensory appeal, feedback, novelty, interactivity, perceived control and time, awareness, motivation, interest, and affect” [24, p.949]. These attributes of engagement show UE as a multidimensional concept that includes cognitive (e.g., motivation), emotional (e.g., appeal), and affective elements. Another similarity between consumer engagement and UE is that the role of interactions is highlighted in both these concepts. However, interactions in the computer-enabled context are perceived as communications between a user and a computer interface [24], whereas CE positions interactions between a customer and a company. Additionally, the consumer or user is a focal subject in both these multidimensional concepts.

3. RESEARCH METHODOLOGY

Systematic literature research is applied in this study. This well-defined methodology aims to evaluate and interpret all available studies relevant to the research subject in a repeatable way [18].

3.1 Identifying the research question

In the first step of the systematic research process, we conducted a preliminary search of the literature to identify the research question. An outcome of the prereview phase was the formulation of the research question for this study, as follows: **How is mobile engagement defined and conceptualized?** By answering this question, we aim to increase the understanding of mobile engagement and to clarify the concept.

3.2 Literature search

We defined the search terms based on the research question. Due to the scarcity of academic research on mobile engagement, as identified in the prereview phase, we decided to use a broad set of search terms to have adequate coverage of the literature. These search terms included “engagement,” together with words that linked engagement to a mobile-related context, including mobile/app/mobile user/smartphone/branded app. We used other synonyms, such as “customer engagement AND mobile,” “mobile customer engagement,” and “user engagement AND mobile.”

The literature search was systematically conducted in January 2016 by using the following electronic databases: ABI/INFORM (ProQuest), ACM, EBSCO, Emerald, IEEE, JSTOR, ScienceDirect, Springer, and Wiley. Additionally, Google Scholar was browsed to perform horizontal searches. Our search covered business and HCI-related literature that had been published from 2000 to January 2016 or was in press at the time of our search.

3.3 Literature selection

Using predefined selection criteria reduces the likelihood of bias in systematic reviews [18]. Therefore, we applied the following inclusion criteria to identify the primary studies:

- any study that includes a definition, conceptualization, or detailed discussion of engagement in mobile services or a technology-related context.

On the other hand, we employed the following exclusion criteria to ensure the quality of the materials:

- studies related to topics other than business and HCI (e.g., employee engagement) and
- studies that used the word “engagement” as a general term, not linking it to mobile services or technology.

In the second stage of the process, our search covered the whole content of the articles. To select the relevant papers for further investigation at the third stage, we manually read the title, abstract, and keywords of each paper. After identifying the potentially relevant papers, in the fourth phase, we read the full papers to analyze the relevance of their content. We also examined the references of the potential papers to identify additional pertinent materials, which ultimately led to the inclusion of 22 relevant studies for the final set.

4. RESULTS

The 22 studies (14 journal articles, 4 conference papers, 2 books, 1 doctoral thesis, and 1 working paper) comprise the final set for in-depth analysis. Interestingly, all of these studies were published over the last five years (from 2011 to January 2016), indicating the novelty of the research area. The majority of these studies (73%) are from the marketing field, totaling 16 articles. Four of the studies (18%) involve the HCI field. The remaining two studies (9%) are related to media research. However, many of the studies are multidisciplinary, combining perspectives and theories from both marketing and HCI disciplines.

The increased interest in understanding consumers' mobile app behavior is also observed in the results, with apps constituting the main focus area in 15 of the studies (68%). Three of the studies examine engagement in the smartphone context, while two others explore the mobile environment and digital media at the overall level. Three conceptual studies investigate the roles of different digital platforms in holistic engagement frameworks. This section discusses the results of the review.

4.1 Classification of the results

Based on the analysis, the studies are classified into two categories—behavioral activity and CE in mobile context. The studies in the first category perceive mobile engagement as user interactions with or usage of mobile services and technology. In other words, these studies place the concept in the behavioral dimension of engagement. On the other hand, the studies in the second category take a more holistic approach to mobile engagement instead of considering it an independent concept. These studies perceive CE in the mobile context, located in the multidimensional concept that includes behavioral, emotional, and cognitive aspects.

Table 1. Categorization of the literature

Category	Description of mobile engagement	Studies
Behavioral activity	User interactions with mobile technology/services	[6, 11, 13, 15–17, 23, 25, 26, 28, 30–32]
CE in mobile context	In the mobile context, CE is created from a set of experiences that meet customer goals and values.	[1, 2, 7, 14, 19, 20, 22, 29, 35]

These two categories share the same elements and are highly overlapping. However, the proposed categorization is useful for understanding the nature of mobile engagement and clarifying the concept. The following subsections present the different perspectives of these two categories. Subsection 4.2 reviews the studies that conceptualize mobile engagement as a behavioral activity. Next, Subsection 4.3 examines the studies that perceive mobile engagement as CE in the mobile context.

4.2 Behavioral activity

The 13 studies placed under this category are further classified into four subcategories—usage and interactions, mobile UE, gamification, and mobile news engagement. Table 2 presents a description of these subcategories and their corresponding literature.

Table 2. Summary of studies under behavioral activity category

Subcategory	Description	Studies
Usage and interactions	Mobile engagement involves customer interactions with or usage of a mobile app or device.	[6, 15, 26, 30]
Mobile UE	Mobile engagement is defined as users' interactions in their mobile experiences that give them value and satisfaction.	[16, 17, 23, 28]
Gamification	Gamification is a technique to create engagement—a stage where users are encouraged to continue using the app with game-like elements.	[11, 25, 32]
Mobile news engagement	Mobile news engagement is the extent to which users use smartphones for mobile news surveillance.	[13, 31]

4.2.1 Usage and interactions

The first subcategory includes four studies that situate mobile engagement as customer interactions with or usage of a mobile app [6, 15, 26, 30]. All of these studies investigate the effects of customers' mobile app usage on their purchase behavior. Although all of these studies link engagement in the mobile context to usage of a mobile app, they have varying conceptualizations. In one of the studies [15], mobile app users' engagement is operationalized as the number of their interactions with two specific functionalities of an app. Similarly, another study [6] operationalizes engagement as the number of times that customers use an app during a certain time period. Purchasing and sharing social media content via a mobile app are also described as engagement in the mobile environment [26]. On the other hand, mobile engagement is also defined as an outcome of customer interactions with an app, instead of mobile engagement itself [30]. This is further explained as involving customer interactions with mobile touchpoints that create opportunities for companies to engage with their customers. Thus, engagement is closely linked to interactions.

Since these studies perceive engagement as a behavioral activity, the reported consequences of mobile engagement can be considered the outcomes of using a mobile app. All of the studies that investigate the relation between customer engagement with an app and purchase intention prove this relation to be positive [6, 15, 26, 30]. The continued use of interactive features (i.e., information lookups and check-ins) is also confirmed to have a positive effect on purchase behavior [15]. This positive effect is reported to increase further when customers use the interactive features more actively. On the other hand, abandoning the app has a negative influence on purchases.

Customers' interest in a retailer's mobile app is positively related to their intention to both purchase and share content on social media via the app [26]. Another interesting finding from this study is that the less time that has passed since the customers' last visit to the retailer's store, the stronger the effect is between interest in the app and the two behavioral outcomes mentioned [26]. Additionally, the app usage positively affects customers' mobile shopping intentions; it is reported to increase the propensity of purchasing in offline and Web channels [6, 30]. The customers of an online grocery company who have developed a

habit of mobile shopping are identified as placing orders more frequently [30].

4.2.2 *Mobile UE*

Four of the studies closely link mobile engagement to the UE concept adapted from the HCI literature [16, 17, 23, 28]. One of these studies [23] introduces a mobile UE model that is built on existing UE framework. The proposed model is equipped with attributes adapted from UE (i.e., focused attention, felt involvement, perceived usability, novelty, aesthetic appeal, and durability). These attributes are refined to be more suitable for the mobile context. Furthermore, the original proposed model is further extended with contextual and temporal aspects. Although the mobile UE aims to investigate mobile information interactions, the authors suggest perceiving these more broadly as experiences [23].

The rest of the studies under this subcategory examine users' intention to engage with mobile devices [16, 17, 28]. All of these studies have been conducted by the same researchers. Mobile UE is defined as "[...] user interaction with their devices to deliver experiences that give them value and satisfaction" [16, p.364]. Mobile engagement occurs when users interact with their smartphones to satisfy their need states [16]. Therefore, these studies perceive mobile engagement as the behavioral activity of using mobile devices.

In these three studies, smartphone users' engagement is investigated with a specific mobile engagement model. In the researchers' first study [28], this model consists of the following four dimensions: UE, perceived value, satisfaction, and intention to continue UE. Instead of explaining UE with existing UE theories, it is described as activities that support mobile users' motivation to use mobile technology. The mobile engagement intention construct includes two items that ask about the likelihood to continue using a mobile device and to recommend this usage to others. This first study's findings show that features (e.g., high quality of information and content, intuitive control choices) and functions (e.g., possibility to communicate, anytime and anywhere accessibility) serve as users' primary motivations to use their mobile devices. Both of these motivational factors are identified as affecting perceived value, which leads to satisfaction and the intention to continue using mobile technology [28].

The model is further developed in the most recent of these three studies [16] and is formally named the mobile user engagement (MoEN) model. This refined model includes the same dimensions as those of the earlier version, but the UE motivations are further divided into utilitarian, social, and hedonic types. Based on the empirical study, user motivations are identified as having a positive relationship with perceived value, satisfaction, and continued engagement intention. However, only hedonic and social motivations are found to have a strong, positive influence on perceived value, while the effect of utilitarian motivation is insignificant. The second finding is that smartphone users' perceived value of using mobile technology is strongly related to satisfaction and continued engagement intention. Furthermore, users' satisfaction significantly influences smartphone users' continued engagement intention. In summary, these results suggest that mobile experiences that satisfy smartphone users' needs may create value and satisfaction, which may lead to continued mobile engagement behavior (i.e., continued use of mobile devices) [16].

4.2.3 *Gamification*

Three of the reviewed studies examine the role of gamification in the mobile app context [11, 25, 32]. Although they do not provide a precise definition of mobile engagement, they discuss engagement at a general level. The first of these studies [11] reviews prior research conducted on health-related mobile apps (mHealth) and analyzes these studies from several perspectives, such as gamification and personalization. It remains unclear whether the authors refer to usage as a consequence of engagement or engagement itself. However, engagement is closely related to app usage. This conceptual study proposes that UE with mHealth apps can be increased by providing game-like elements, such as leaderboards, points and levels, challenges, and quests. The other gamification-related study in the mHealth app context provides similar suggestions [25].

The third paper under this subcategory takes a different perspective on the relation between gamification and engagement in the mobile app environment [32]. This study explores how companies could use gamification mechanisms to increase app users' purchase intention. Engagement is referred to as a stage where app providers try to satisfy users and encourage them to continue using the apps. On the other hand, gamification is presented as a mechanism that companies can utilize for creating positive experiences at the engagement stage [32]. Although gamification provides an interesting viewpoint in the mobile engagement discussion, it should be perceived more as a method or tactic for increasing the usage of mobile services instead of a concept that attempts to explain engagement in the mobile context.

4.2.4 *Mobile news engagement*

The final subcategory includes two studies that discuss mobile news engagement [13, 31]. Both of these studies investigate online news consumption in the mobile app environment and apply use and gratification (U&G) as a background theory. Particularly, surveillance gratification plays a significant role in both of these mobile news engagement conceptualizations [13, 31].

The first of these studies defines mobile news engagement as "the extent to which smartphone users use the mobile phone to show supportive engagement by following a variety of digital news sources" [31, p.185]. Likewise, the other paper describes mobile news engagement as a "sustained interest in mobile news content, where the format and nature of the presentation likely influence the degree of that interest" [13, p.21]. Therefore, engagement is also explained as a behavioral activity in the mobile news media context.

Based on the empirical study, surveillance motivation is proven as a significant predictor for mobile news engagement [31]. Additionally, usability, interactive features, and elements of enjoyment are identified as key aspects explaining engagement in the mobile news environment [13]. The convenience of accessing news "wherever and whenever" is also found to be a significant factor leading to the enjoyment of mobile news and enhanced UE [13].

4.3 *CE in mobile context*

This subsection discusses the nine studies that deal with mobile engagement either as CE or in a more holistic engagement framework. Table 3 summarizes these two subcategories and their corresponding literature.

Table 3. Summary of studies under CE in mobile context category

Subcategory	Description	Studies
CE as a set of mobile experiences	In the mobile environment, CE is created through a set of interactive experiences that meet customers' goals or values.	[1, 7, 14, 20, 29, 35]
Mobile engagement as part of a holistic framework	Consumers' interactions with a brand through mobile touchpoints do not constitute a separate type of engagement but behavior utilizing mobile engagement.	[2, 19, 22]

4.3.1 CE as a set of mobile experiences

Six studies are placed under this subcategory [1, 7, 14, 20, 29, 35]. Instead of regarding mobile engagement as an independent concept, these studies hold the view that it is a medium or a touchpoint for creating CE. This engagement can be created in the mobile environment through a set of interactive experiences. Consumers may have several kinds of experiences that can be described as consumers' beliefs (i.e., cognitive elaboration) regarding the extent to which a brand links to their personal goals or values [20]. Accordingly, to create engagement through mobile contact points, brands should design their mobile experiences so that these create value for their customers. In addition to a brand's own mobile platforms, such as its apps and website, this value can be created through other mobile touchpoints, such as search engines (e.g., Google), review sites (e.g., Yelp), and map services (e.g., Google Maps) [20].

Malthouse et al. [20] propose two different perspectives for measuring CE in the mobile environment. The first option is to focus on measuring how mobile engagement affects the connection between a brand and a customer (brand attitudes), using generic questions about experiences with a brand. This approach is used in one of the studies included in the literature review. This conference paper [7] applies a three-dimensional model (cognitive, emotional, and behavioral) from the CE literature to measure CE in the mobile app context. The results reveal a reciprocal relationship between CE and satisfaction in the mobile app context. Based on these findings, the authors suggest that satisfaction should be treated as an antecedent of CE in the mobile app environment. This study also shows both emotional and behavioral engagement's significant impacts on customers' perceived value. On the other hand, cognitive engagement does not influence perceived value [7].

The second perspective for measuring engagement in the mobile context is to investigate each experience and the connection between a brand and customer goals/values [20]. This approach has been used in prior research on online engagement (e.g., [4]). Likewise, one of the included studies [35] applies this measurement approach in empirical research that investigates the factors that affect consumers' intention to continue using branded apps. In this study, the app engagement construct is based on three survey items adopted from the online engagement concept. Using branded apps (1) could be part of my routine, (2) would make a difference in my life, and (3) improves my mood and makes me happy.

This study has discovered [35] that app engagement is positively affected by consumers' intention to use branded apps continually. Additionally, effort expectancy (i.e., ease of use), social influence, and brand identification have positive effects on app engagement.

Thus, the authors suggest that these three factors should comprise the antecedents of app engagement. Interestingly, the study also proves that neither perceived interactivity nor performance expectancy has a significant effect on consumers' app engagement. However, perceived interactivity reduces the effort expectancy related to app usage, which in turn has a positive influence on app engagement. Since the results indicate app engagement as an essential prerequisite to continued usage of apps, it is proposed that marketers pay more attention to experiences than to useful app functions [35].

Two of the studies [1, 14] under this subcategory take a design-centric perspective in their investigations of mobile app engagement. The first of these studies [14] examines the kind of features (i.e., vividness, novelty, motivation, control, customization, feedback, and multiplatforming) that companies have incorporated into their apps for creating engaging experiences. These features, named engagement attributes, are adopted from the UE concept. Thus, this study combines concepts from both the HCI and the marketing literature to investigate CE with apps. An exploratory content analysis of 106 apps from major brands shows that most of these apps (98.1%) have employed at least one engagement attribute. The three most commonly used attributes among the examined apps are control (97.2%), customization (85.8%), and vividness (78.3%). This study also finds that many brands display their identifiers (e.g., brand name and logo) in these apps to enable customers to be connected with the brand. According to the authors, this mobile-enabled connection may lead to greater brand engagement.

The second design-centric study [1] investigates the relationship between the creative execution style of a branded app with both the brand attitude and the purchase intention of consumers. An experimental test with the apps from major brands confirms that branded app usage has a significantly positive persuasive impact on attitudes toward the brand but minimal effect on purchase intention. Surprisingly, this positive impact is verified even when the brand that provides the app is irrelevant to the consumer. Furthermore, the effect on purchase intention is higher with apps that have an informational design style than those with an experiential style. The apps with an informational design style encourage personal connections with the brand in a better way because these apps focus attention on the user. Overall, the authors state that the effectiveness of branded apps might be explained by their ability to create a high level of UE through interactive experiences [1].

4.3.2 Mobile engagement as part of a holistic framework

The three studies [2, 19, 22] in this subcategory do not present conceptualizations or detailed discussions on the mobile engagement concept but provide holistic frameworks that enable a better understanding of mobile engagement's role. The first of these studies [22] places the different engagement concepts in one comprehensive framework called the CE ecosystem. This ecosystem consists of several interconnected engagement elements (e.g., brand actions, other actors, customer brand experience, and shopping behaviors). Instead of perceiving different forms of engagement as separate types (e.g., social media and online engagement), the authors suggest that these represent different touchpoints or tactics that are encompassed by the engagement ecosystem. According to this distinction, customer interactions with a mobile device or service can be considered engagement behavior that utilizes mobile media.

The second paper [2] discusses engagement ecosystems in the information and communication technology context. The engagement ecosystem is constellated from mutually dependent engagement platforms (EPs), defined as “physical or virtual touchpoints designed to provide structural support for the exchange and integration of resources, and thereby co-creation of value, between actors in a service system” [2, p.594]. Based on this conceptualization, mobile technology/services can also be considered EPs that enable companies to create engagement for their customers. Furthermore, the paper presents the following four archetypes of EPs that help stakeholders understand the different roles of mobile technology/services: instrumental, operating, enabling, and supplying platforms. Mobile services/technology can perform as many of these archetypes as applicable. First, mobile devices can be considered (physical) instrumental EPs that enable customers to access mobile apps. Second, apps can be perceived as operating EPs for interactions and co-creation between the EP actors (i.e., firms and customers). Third, app marketplaces (e.g., Google Play) represent enabling EPs. Finally, companies may provide supplying platforms (i.e., physical touchpoints) to support their customers in their mobile experiences [2].

The final paper of this subcategory introduces the concept of value fusion [19]. This concept describes how value can be created for several parties (e.g., consumers, companies, and competitors) simultaneously through the usage of mobile technology. Although this conceptual study does not include a specific definition or conceptualization of engagement in the mobile environment, it contributes to the discussion in two ways. First, it extends the network of subjects who create and derive value from engagement in the mobile environment. In addition to the value generated by the customers for the company, value fusion embodies the value gained by customers from the company, other consumers, and even the company’s competitors. However, value fusion may create negative value if the mobile environment fails to provide mutual value. For example, a mobile app with poor usability may confuse customers and lead to negative word-of-mouth feedback. Second, this paper suggests that engagement can also be created through passive participation on mobile networks without customers’ behavioral interactions with mobile services [19]. For example, companies could use the contextual data collected from the app users for targeted advertising. This provides value for the company; consumers also benefit by receiving relevant advertising.

5. CONCLUSION AND DISCUSSION

By reviewing existing studies, this research contributes to the growing engagement literature with a comprehensive overview on how engagement has been conceptualized and defined in the mobile context. Although engagement has received considerable attention in academic research and among business practitioners, engagement in the mobile environment is a relatively new research area. We have identified the scarce studies that have attempted to define or conceptualize ME. All of the 22 studies that were selected through a systematic literature search were published over the last five years (2011–January 2016). The concept’s novelty is one probable explanation why the discussion on ME has remained fragmented and is lacking consensus on how ME should be defined and conceptualized.

As a conclusion of the present study, we identified two perspectives of ME. The first main perspective is to consider it as behavioral activity. This perspective emphasizes the role of the interactions with and usage of mobile services/technology in

engagement creation. Furthermore, the reviewed studies provide three concrete ways for measuring behavioral mobile engagement. First, it can be assessed by investigating consumers’ usage frequency or time spent on mobile services/technology, such as apps and smartphones. Secondly, ME can be measured by studying the quality of the interactions between the user and the mobile service by utilizing attributes of the UE concept. The third way of measuring is to take a design-centric approach and to investigate how different design choices affect the usage of mobile services.

The second main perspective of ME take a holistic approach and perceive it as a multidimensional concept including cognitive, emotional, and behavioral dimensions. Thus, ME is described as CE in the mobile environment instead of independent concept. Furthermore, it is explained that engagement can be created through a set of interactive experiences that meet customer goals/values. Therefore, interactive experiences have been identified as antecedents of engagement in the mobile environment.

For measuring engagement derived from experiences, examining each particular experience and the connection between a brand and customer goals/values is suggested [20]. Another recommended option for assessing CE in mobile environment is to investigate the connection between a brand and a customer [20] since mobile experiences may affect a customer’s brand attitude. The concept of customer brand engagement (CBE) attempts to explain this connection. However, as the constitution of CBE measurements has remained fragmented, academia has failed to provide solid measurements. Consequently, there is a lack of studies that have attempted to utilize CBE measurements in mobile-related research.

We argue that the behavioral dimension alone is insufficient for explaining ME. In addition to the actual usage of mobile services, mobile experiences include elements from cognitive and emotional dimensions. For example, checking in and boarding a flight via a mobile app may require minimal interactions between customers and the app. Nevertheless, customers may *feel* that this mobile-enabled process makes their travel easier. Moreover, this process requires cognitive elaboration (*thinking*). Thus, ME should be perceived as a multidimensional concept including behavioral, emotional, and cognitive dimensions.

To help in understanding the different aspects of ME, we propose a conceptual model that integrates the various perspectives presented in this study. Instead of using the two-tiered categorization presented in the results section, the proposed model is based on three components—interactions, experiences, and the connection between a brand and a customer (Figure 1).

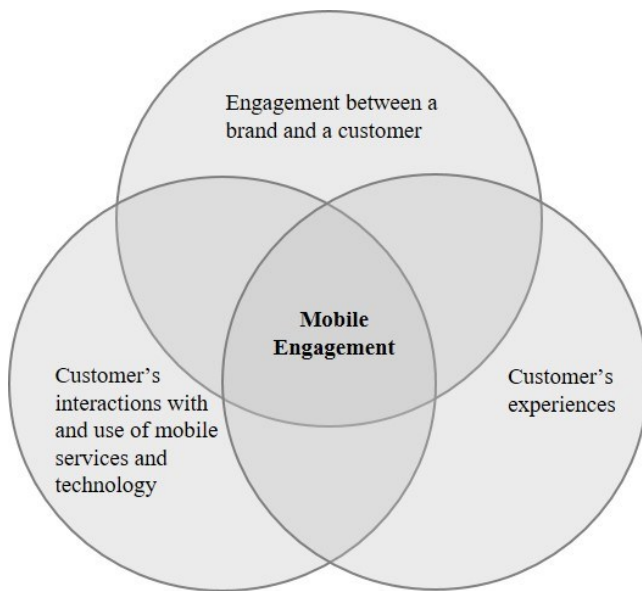


Figure 1. Proposed conceptual model for mobile engagement

The first component of this conceptual model represents customer interactions with and use of mobile services and technology. These behavioral activities create a basis for engagement in the mobile context. However, it must be noted that ME is beyond use and can thus be created even without consumers' active use of mobile services. For example, companies can utilize mobile apps for gathering information about their customers to create meaningful experiences with other online or offline touchpoints.

The second component represents the interactive experiences that are created through customer interactions with brand-related mobile touchpoints. To create engagement, these experiences should meet customer goals/values. The third layer represents the multidimensional connection between a brand and a customer. Brands can strengthen this connection by creating positively valenced cognitive, emotional, and behavioral activities (interactions and experiences) through brand-related mobile touchpoints. These three components are interrelated and overlapping. Together, these comprise a holistic conceptualization of ME that provides a synthesis of this study.

Some limitations of this literature review restrict the generalizability of the results. The main weakness is the small amount of published studies that focus on investigating ME. The literature also provides varying perspectives and meanings of ME. Furthermore, only 63% of the included studies are published in academic journals. It can be stated that the research on ME is still relatively new and not yet well established. For these reasons, we could not provide profound information about the antecedents/consequences and background theories of ME.

Although 11 electronic databases have been used for the literature search, the dataset is not exclusive. The dataset can be leveraged by using additional databases and including research other than business and HCI-related studies. Expanding the set of keywords used may lead to discovering more studies on ME.

Albeit this research provided knowledge on how ME is considered in current body of knowledge, it remains open whether we should discuss ME as a separate concept or consider it as engagement in mobile context. Therefore, further research is required to clarify the concept as well as to develop measures for it. We propose taking a holistic view in this future work and

perceiving ME as a multidimensional concept. This development work could benefit by identifying relevant measures from the CBE concept and modifying them to be more suitable for the mobile environment. We suggest including both cross-disciplinary research and separate investigations in different fields, such as HCI and marketing. Due to the growing adaptation of connected devices (e.g., wearables, virtual reality glasses), future studies could also explore how these devices create engagement in the mobile environment.

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