6th International Conference on Mass Customization and Personalization in Central Europe (MCP-CE 2014)
Managing Co-Creation and Personalization in Central Europe
September 23-26, 2014, Novi Sad, Serbia

RETAIL INNOVATION: CAN AN APP SAVE THE CITY CENTRE?

Igor ter Halle, Marcel Weber
Windesheim University of Applied Sciences, Zwolle, the Netherlands

Abstract: *In Zwolle (the Netherlands) an innovative online and mobile application is developed. This application tries to enhance the local shopping experience by bridging online and in-store shopping with an online platform (website) and a smartphone app and making the physical city centre available for smartphones and tablets. The total of combined shops in a city centre is turned into a mobile mall. By adding personalized features like same day delivery and e.g. a loyalty system the platform wants to impact the bottom line of inner city retailers.*

In this paper this application is evaluated for a city centre that faces the aforementioned retail challenges: Zwolle in the Netherlands. A panel-based living lab is used and the app and platform are evaluated through surveys, user interviews and focus group/co-creation sessions. In the focus group / co-creation sessions feedback of the users is captured (iterative) and this has lead to some modifications / alternations of the innovation.

The first results of this evaluation study to validate and co-create this retail innovation are presented in this paper. The app appeals to the user in that its innovative character is appreciated. However the app is not working yet flawlessly and this influences the user acceptance of this platform negatively. Consumers experience a mismatch between the current service and their expectations instructions.

Key Words: ***retail innovation, living lab, mobile commerce, app***

1. INTRODUCTION

The retail industry is facing rough times. The turn-over of the Dutch shops is declining every year. At the same time online stores are flourishing and the recent recession has made the retail battleground even more intense. Today's consumers have more retail choices than ever but are cutting back on their overall purchases [1]. Retailers are exploring new ways to reach shoppers. In this study an innovative application is researched that tries to bridge online and in-store shopping with an online platform (website) and a smartphone app. The aim of this platform and app is to enhance the local shopping experience by making the physical city centre available for smartphones and tablets. This is done by developing a mobile mall in which consumers can find the combined shops in the city of Zwolle. By adding features like same day delivery and e.g. a loyalty system this platform wants to impact the bottom line of inner city retailers. This novel approach to inner city retailing sounds promising, but its success will be (partly) dependent on the acceptance of this platform by users. And as this platform has been developed without any form of user involvement or user testing chances are that it consumers may not adopt this solution or will undergo sacrifices that impede an effective use [2]. To get insights into the acceptance of the local consumer we develop a research lab. In this paper the first results of the study of this concept are presented.

2. BACKGROUND

The platform is developed by a start up company with the aim to address the economic problems inner-city retailers are facing nowadays. The founders believe that most shop owners do not have the possibility to develop their own online mobile presence. Nor do shop owners work together with colleagues in making the city centre more viable. To address these shortcomings the platform (website and app) is developed. In the development process focus has been put on the participation of shop owners in the platform. Less effort is made into capturing the shopping experience of the consumer.

The app has been downloaded 1600 times (as of March 2014) without any marketing effort. This figure in itself seems impressive for an app that's only interesting for people living in or in the direct neighbourhood of the city of Zwolle. Although the app is available in Google Play (Android) and in the App Store (IOS) it's still in beta. The platform needs improvement before the full release (end of 2014). This study aids in this improvement.

This paper is structured as follows. In the next paragraph we explore some previous research on mobile shopping experience and on the user acceptance of apps. This part results in criteria we will have to address in our study. Then we describe the research design followed by the presentation of the first results of this study. In the last paragraph we will discuss the next steps in this research and present some first conclusions.

Figure 1: *Screenshots of iPhone and iPad screens*

2.1. Mobile shopping experience

To compete effectively, retailers must focus on the customer's shopping experience. The aim is to create

greater customer loyalty and affection through enhancement of this experience, not only during the shopping moment, but at moments before and after this shopping moment as well, in particular, at all touch points, both direct and indirect, that the retail shop has with its customers, regardless of the channel in use [3] . In effect, when creating great customer experiences, organizations should install service processes that are designed from this customer journey's perspective [4]. The shopping experience should therefore also entail online shopping. Physical shops - brick and mortar retailers [5] - will have to find ways to cope with the growing online consumer spending. Making a city centre online accessible is one possible and innovative way of achieving this. In this study we study factors influencing the acceptance and use of this novel approach to combining on- and offline retailing for city centre retailers.

In theory the benefits of this platform are abundant. The platform is potentially freeing consumers from temporal and spatial constraints of the physical shop. This platform makes the city centre accessible at all times (you don't have to take the effort to go to your favourite shop to buy something) and can therefore (online) support the customer's journey.

In the retail industry, the rapid adoption of mobile Internet and smartphones has retailers attempting to capitalize on the promise of mobile services as a new and important channel to serve and connect with consumers [6]. The mobile shopping channel has the potential to become a personal shopping assistant for consumers to enhance their shopping experiences and assist in making purchases across channels. While mobile shopping services may promise better consumer shopping experiences, there are concerns about whether consumers will actually adopt these services when available. The mobile shopping channel is different from traditional (e.g., in-store, catalogue) and webpage based online shopping channels and it is still in its infancy.

Although mobile marketing can deliver relevant, personalized, and contextualized information and marketing offers via Bluetooth, shopping apps and other technologies, not all consumers will want to use all of these features, no matter how much information, convenience, and flexibility they provide [7]. Another key finding of this is the significance of consumer shopping styles, which suggests that mobile marketing strategies need to be nuanced to reflect the contextual differences among consumers in their respective journeys. Proper segmentation and targeting must be undertaken to guide mobile strategies and ensure effective use of marketing resources.

Kim [8] e.g. explored hedonic (adventure, gratification, value, social, and idea shopping) and Utilitarian (achievement and efficiency) dimensions of motivation in the context of inner city and non-inner city populations. Kim's results demonstrated that inner city consumers were similar to non-inner city shoppers in that both groups were motivated by utilitarian aspects of shopping and value, but inner city shoppers placed more emphasis on hedonic motivations, namely social, entertaining experiences that offered a range of products. This focus on hedonic motivations might also be relevant for a platform that is making a city centre online available.

2.2. Technology acceptance and flow

In this study we have applied the unified theory of acceptance and use of technology (UTAUT). This theory is a widely used information technology adoption theory, which argues that four factors, including performance expectancy, effort expectancy, social influence and facilitating conditions determine user adoption. UTAUT was developed in 2003 by Venkatesh [9] to predict user adoption of an information technology. UTAUT integrated eight theories, including e.g. the theory of reasoned action [10] and the diffusion of innovations [11]. UTAUT has been used to explain user adoption of a variety of information technologies, and also of mobile commerce applications (e.g. [12], [13])

One of the elements in the UTAUT framework is effort expectancy. Defined by Venkatesh et al [14] as "the degree of ease associated with the use of the system". This ease of use of a system (or usability) is important in mobile commerce [15] . Ghinea and Angelides defined mobile commerce (m-commerce) usability as one of the biggest challenging issues in adopting m- commerce. An investigation into the impact of mobile interfaces on the usability of mobile commerce applications by Buranatrived et al. [16] noted that usability has been identified as a main barrier to user acceptance. Also Venkatesh et al. [17] identified user experience as an important prerequisite for the success of m-commerce applications.

An investigation into the impact of mobile interfaces on the usability of mobile commerce applications by Buranatrived et al. [16] noted that usability has been identified as a main barrier to user acceptance.

Because this platform also has to address hedonic motivated shoppers we also want to use the concept of flow in this study. Flow, which originated from psychology, has also been used to predict information systems user behaviour [18]. Flow includes two factors: perceived enjoyment and attention focus.

Flow is described as an optimal experience: a holistic sensation that people feel when they act with total involvement [19]. In game design e.g. the concept of flow is used to describe the balance between users' skills and challenges (e.g [20]). When skills exceed challenges, users feel bored. In contrast, when challenges exceed skills, users feel anxious. When both skills and challenges are lower than the threshold values, users feel apathy. Only when both skills and challenges exceed the threshold values and have a good fit users will experience flow.

3. RESEARCH DESIGN

For this research we use a living lab approach. William Mitchell from MIT (Boston), one of the first scholars to use the term Living Lab described such a lab as follows: 'Living Labs is a research methodology for sensing, prototyping, validating and refining complex solutions in multiple and involving real life contexts.'

These kinds of facilities can be set up and managed by one company. They can also be configured as open

and innovation-oriented platforms that involve various technology and service providers as well as users in different stages of technology design, development and testing. This project can be described as a relatively close lab. It deals with one platform, developed by one company with the assistance of one university.

In a Living Lab users / consumers are conceptualized as co-producers of ICT, which refers to the idea that the user is never an 'end user' but re-interprets technological artefacts within his social context once they are adopted [21]. This point of view needs to be situated within the theoretical notions of 'social construction of technology' [22] . The living lab is thus characterised by confronting (potential) users with (ideas, prototypes or demonstrators of) technology early on in the innovation process (though in this case the user is introduced in the process at a relatively late stage).

A living lab configuration offers assistance for designing and conducting research around a new service platform based on ethnographic principles. Ethnography in general and the living lab approach in particular fit in mainly with the actor or interpretative approach [23] . Nevertheless to operationalize this living lab research we choose for a 'multi methodological' approach [24]. The prevalent qualitative part enables us to identify the meanings and experiences of the actors, while the quantitative research plays a supportive role. It is in our opinion the combination of both, that will enable a more elaborated triangulation of findings.

The aim of this research is to validate and co-create this retail innovation. For this study a panel-based living lab [25] is being created and the platform is evaluated by multiple methods (surveys, user interviews) with both users and potential users of the platform. Research goal is to gain insights in the (real life) context of use, the user experience of the platform. In the focus group / co-creation sessions feedback of the users is captured (iterative) and this has led to some modifications / alternations of the innovation.

The outcome of this project is (1) the specification of user requirements for this platform, but more importantly especially on (2) developing and elaborating sensitizing concepts around the online future of brick and mortar inner-city shops through research guided continuous design.

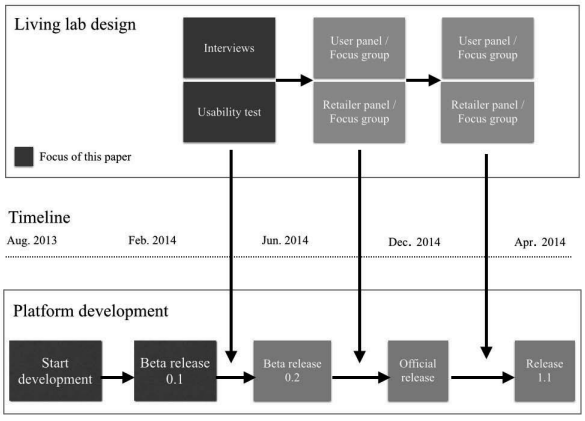

Figure 2: *Research timeline. This paper focuses on the purple sections.*

A number of (small scale) studies have been deployed to address the above-mentioned outcomes.

1. User experience interviews with 7 users of the platform.
2. A usability test with 24 users of the platform.

In the near future these studies will lead to the development of an user panel which will be consulted regularly in face-to-face focus group interviews and by questionnaires. In the research process also the needs of the shop owner needs to be addressed. One of the next steps in this research is to capture the needs and issues that participating retailers face in implementing this platform. To do this a panel of shop owners will be set up. This panel will be consulted regularly.

3.1. User experience interviews

Seven users of the platform are being interviewed about their use experiences. In these (retrospective) interviews concepts from the UTAUT-model were used as effort expectancy (ease of use) and performance expectancy (usefulness) as well as motivations (hedonic versus utilitarian) in a walk through of the app. The users were selected by a call on the Facebook page of the platform.

Retrospective interviews generate a wealth of qualitative data on meaning related to the product design aspects and underlying human needs [26]. In these interviews aimed to reveal subjective meanings related to the user experience and serve as the starting point for design improvements.

3.2. Usability study

To find out possible usability problems of the mobile platform and to discover ways to resolve these problems a usability study was conducted. 24 students of Windesheim University are being asked to download the app and to perform three simple shopping tasks. For this research students were recruited in the university canteen and invited to a small office space. This set-up can be described as a classic usability test (see [27]). This approach, normally used for testing software on PC's, however has some drawbacks when used in a mobile situation. Mobile systems are typically used in highly dynamic contexts (i.e. the inner city). This means that this set up at university of course is not capturing the key situation in the use-context described above. We have considered to use more context-sensitive approaches like e.g. cultural probing i.c. use diaries [28]. These approaches are ideal for gaining understanding of the use context. However these approaches are less suitable for testing the usability of the system itself and gathering immediate feedback in the use of the application. For these reasons we considered the classical usability test as most suitable research approach.

In the usability test users had to perform four different tasks:

- A shopping task in which respondents were asked to order a bag of a certain brand.
- A search task in which respondents had to find information on an event in the city next weekend.
- An entertainment task: watch a sport movie.
- And finally a free browsing task. Look around the app for 10 minutes and try different features.

The first three tasks were observational tasks. Users were observed during the execution of the task and after each task they were asked to elaborate on their use experience.

3.3. User acceptance survey

Also a questionnaire has been sent out by a push notification in the app to all its users. The questionnaire was based on the UTAUT-model described above. Because of technical difficulties, we did not have contact information of the users so we could only reach users by sending a push message to their mobile devices. The response was unsatisfactory (N=40). However, because the survey handles the same topics as the interviews mentioned above we did use the data to complement the interviews.

4. FINDINGS

4.1. Usability study

Search

The search engine in the app was slow. It took too long before search results were shown on screen. Also the results could be presented more clearly. E.g. by some sort of ordering of findings in (sub-)categories (shopping, coupons etc.).

Back button

The absence of a back button was an annoyance for most users. Users had to go back through the home screen and start their browsing all over again.

Too many options

The app has eleven categories ranging from sale to events to information on public transport. This wide range of categories is good if you want a complete overview of what is going on in the city. Most users however were mainly interested in shopping and shopping deals. Options not related too these interests often lead to confusion. Most users were convinced that there were too many categories in this app. Schwartz' paradox of choices [29] seems relevant here. Abundance of choices often does not result in more satisfied consumers but may instead cause feelings of paralysation.

Consumers did not provide clear insights in what particular option they like to see in the app and which option could be regarded as redundant. Users agreed upon the watching video and the day deal options: these elements provided no or little added value to the app. The shopping, catering and events option were adding more value. Users reacted very differently on options like coupons, shop overview; some regarded the categories as (very) valuable, some as unwanted.

In the user experience interviews (see below) this usability issue of choice abundance was also addressed. Respondents claimed that the app would be more useful if the available options would be adjusted to the use situation. 'I check this app when I'm in town, but when I'm at home, on the couch, then I don't use the app for shopping. I'll go the webpage of the shop (respondent 1)'. Some form of flexibility, providing different options in different use situations, different stages in the customer journey might improve the platform.

Technical performance

Many respondents complained about the technical performance of the app. Users regularly faced slow loading pages and error messages. In some parts of the app information was loaded directly from the website of the shop owner. In those cases users found the difference in design between the loaded website and app very confusing (and ugly).

4.2. User experience interviews

Online shopping behaviour / habit

All the interviewed users are regular online shoppers. Some of them spend more money online than offline. They are shopping during leisure time or when they have a moment for themselves. Older users buy online but love to see and feel the article first in the physical shop. We can clearly distinguish different shopping behaviours and customer journeys, implying that the app should take these differences into account, for instance through personalization options.

Performance expectancy / perceived usefulness

About half of the respondents are enthusiastic about the app. They like the innovative idea. Some respondents describe the app as apparent, practical and user friendly, while others are more critical in their judgement of the app. They claim that the app has little practical value for them. Critical consumers see the app as a nice innovation, but lagging behind in execution. „Too much information; misses the point".

Respondents are dissatisfied with the selection of shopping offers available through the app. The app should be a copy of the city centre: all shops in the city centre must have a presence in the app. As long as not all local shops in the city centre can be found in the app many shoppers don't see the added value. „I miss the nicest shops in town, I want to see what they have on offer (respondent1)"

Not every participating shop also has an embedded shop in the app. In some cases consumers are redirected from the app to the online shop of the retailer. This has a negative impact on the perceived usefulness of the app. „if I want a shirt from e.g. shop X[1] than I can visit the city centre or buy it online. But if I see this app, I don't see the added value of buying in this app, I might as well visit the online store of the shop directly (respondent 3)".

Customers seem to want to cross the boundaries between traditional shopping and mobile shopping, and do not wish to shop only online or only offline. Users want to be able to switch channels: use the app for orientation and than visit the store to actual see the product. This app would be far more useful if it would allow users to interact with retailers through multiple touch points (see e.g. [30]).

Coupons

The app has a section where shop owners can offer coupons. These coupons have a limited validity. Some coupons (e.g. catering coupons) have to be redeemed within five minutes. Some users find this coupon section an attractive part of the app. However at this moment the number of available coupons was too limited. „I think this is a very good idea [the coupon section - ItH] but it looks like this section is not fully developed (respondent four)". Some users stated that they might use the app more often if there would be more (relevant) coupons available.

[1] Shop name removed

Also here users want to have more control in what coupons to receive (or not). The app e.g. has the option for consumers to receive push notifications if they are near a venue offering coupons. "I received a message whether or not I want to receive push messages. I wondered what kind of messages I would receive. I want to receive push messages, but only for things that I find interesting. Where in this app can I enter what I like? (Respondent 2)". The platform should be more adaptive to the use context (phase in customer journey) and user preferences. Some form of (user tailored) customization or (system tailored) personalisation features should be added to the requirements of such an platform (see e.g. [31]).

Effort expectancy / ease of use

Many respondents have the opinion that there are too many options in this app. It looks like the developer has made the app over complete. In the app the following sections can be found: sale, coupons, shops, catering, centrum, events, C.tv, coins, public transport, contact and settings. A respondent claims „When I downloaded the app I first couldn't see what I should do. I thought all the shops were offering products, but in reality there was only a limited number of products available. Also, too many options were available so I didn't know what to do (respondent 6)". Many respondents also would like to see a categorization e.g. clothing, electronics etc. Most respondents had the opinion that the app was easy to use. „It is easy to control, easy to navigate, but I don't like the design (respondent 3). The design has been described as boring and some respondents said the app could be improved by making it more colourful and cheerful.

The importance of such perceived design aesthetics should not be underestimated. Karvonen [32] e.g. found that design aesthetics or visual aesthetics (e.g. colour, photographs, font style and lay out) of websites are important for gaining trust from customers. Lih and Yen [33] found similar results for mobile commerce sites.

More important is the impression of too rapid implementation the app has right now. „The app doesn't feel useful. It looks like the mobile sites of the participating shops are continually loaded into the app. That's what makes it messy and chaotic (respondent two)". Also the presence of writing errors adds to this impression that this product is put into the market too quickly.

Safety

Perceived safety and security aren't items included in the UTAUT-model. But all respondents more or less spontaneously mentioned the perceived security issue during interviews. Some respondents argue that they don't see an app as a safe shopping environment. They prefer websites for online transactions. A respondent said „maybe I'll have to explore more, but as this app doesn't have a reputation yet, and maybe because of the flaws in the use of this app, I would certainly not use this app for buying expensive stuff, I would definitely use a website for this (respondent four)". Another user said „I definitely prefer my laptop for online purchases. Not such an app. I just saw a product of 600 euro. I will never buy such a product through an app on my phone. It should look really trustworthy before I buy (respondent two)".

This importance of trust in the vendor has been described in multiple studies on e-commerce (see e.g. [34] for an overview). Trust beliefs affect online intentions to purchase [35]. Especially in e-commerce trust in the vendor is essential because of the absence of a physical person or organization.

Social influence

Social influence can be described as, the degree to which an individual perceives that important others believe he or she should use the new system' [14] The app has been introduced to the interviewed users by friends or family. This seems strange for an application that has not yet been officially released. But prior to this research there has been some media attention in regional news outlets on this innovation. This may have let to some early adoption and early recommendation / word of mouth about the app.

Recommendations and word of mouth communication seem to play a role in the adoption of the app. However most of the interviewed users didn't recommend the app to their friends or relatives themselves. Apparently the users didn't find the app a tool worth sharing. However, as consumers are not very satisfied with the product, the app faces the risk op negative word of mouth. Sweeney et al [36] found that negative word of mouth damaged unknown brands and products more than known brands and products. This suggests the risk perceptions associated with an unknown product as this platform are magnified by negative information.

Hedonic motivations

Users are describing the platform as not very entertaining. They don't describe the act of using the app as a fun experience. However respondents are positive about the core idea of the app as a local shopping platform. „I think this is a nice initiative, but I wouldn't call the use of it as fun. It's not a fine app, though I think it is an interesting development (respondent 2)".

The platform should address these hedonic motivations, add more fun, as the 'fun factor' is an important predictor of continuance usage [37].

5. (PRELIMINARY) CONCLUSIONS AND IMPLICATIONS

Although this paper only describes the first tentative results some conclusions and future directions can be drawn from these first studies.

Firt of all our study shows it seems that time is on the side of these kinds of initiatives. Users consider innovations like this inner-city app as at least an interesting development. This means that consumers are prepared for some experimentation with new possibilities in this area and are willing to at least give these kind of platforms a try.

However in this case, the platform (app and website) has been developed by a small team without direct consultation of the most important stakeholders: consumers and shop owners. And because of unknown user expectations and requirements it seems obvious that, as a developer of new mobile services, you will at least have some form of interaction with consumers in order to reduce failure risks [38] and involving users in service innovations at least leads to higher perceived user value (e.g. [39]). This

might be one of the most important reasons why we saw a mismatch between the current service and consumer expectations.

Secondly this platform is a one-size-fits-all service. This platform addresses no specific target group. Every resident of the city with an interest in online shopping is a potential user. Park & Gretzel [7] concluded before that although mobile marketing can deliver relevant, personalized, and contextualized information and marketing offers via shopping apps (and other technologies) not all consumers will want all of these features, no matter how much information, convenience, and flexibility they provide. It is no solution to overcrowd an app with all possible features in the hope that all of these features will appeal to some consumers.

This research shows that consumers do not provide a clear preference in which features they like or prefer. In our usability test we asked our respondents to grade the existing features. Some features clearly appealed to no-one (the video's).

Most features however appealed to some users, while others described the feature as rather useless. Park & Gretzel [7] used the concept of shopping style to differentiate between consumers. They found that e.g. brand conscious consumers are generally less price sensitive, committed to particular brands and may not value comparison shopping information. Similarly, impulsive shoppers do not care much about comparison-shopping, convenience and flexibility. But in comparison, price/value or incentive/bargain-conscious consumers will find comparison-shopping, coupons, and discounts extremely useful. Recognizing such differences would be good starting point in redesigning this platform. We therefore suggest that some form of personalisation, providing different options in different use situations, different stages in the customer journey might improve the platform.

Third conclusion we would like to address is the issue of felt security and trust. Users felt insecure in using an app for financial transactions. They didn't have previous experience with using mobile apps for shopping and probably because of that had a preference for placing orders through a website. Respondents related this issue to the unfamiliarity of the app; the platform is not yet a household name in the city. Investments in brand awareness and building brand reputation seem to be conditional for future success of the platform.

Practical implications

City centres that are thinking about mobile innovations can learn from the experiences gained in this pilot. The following lessons learned can be distinguished:

- Aim for brand awareness and trust. Your users will be more likely to shop through an app if they feel the companies behind the app can be trusted. One of the antecedents of trust the users mentioned is brand familiarity. But of course there are more antecedents of trust in online environments, like e.g. social presence (see eg. the work of Beldad [40]).
- Add some form of flexibility, providing different options in different use situations, different stages in the customer journey might improve the platform.
- Work together with stakeholders. Developing a functional city centre app is not only a technological challenge. City centre innovation involves collaboration with a broad coalition of stakeholders. Co-innovation seems te be a prerequisite for innovation in complex situations. On the input site you will need full cooperation of all (or at least a very substantial part of) shop owners. Even in a small town you will find hundreds of shop owners. Some working independently, some are part of a retail chain. Aligning all interests should not be underestimated. Some go for the shoppers themselves. Each shopper is different, has different experiences and expectations regarding online shopping. The challenge of addressing those needs can easily being underestimated.
- Add value: the notion of value goes beyond just providing useful information or coupons; your app must result in tangible benefits for consumers in terms of convenience, efficiency, flexibility, and relevance. The content provided (message design and format) and timing of delivery, must be personalized, contextual, and helpful without being intrusive. Guiding question in the design should be how can we create value for shop owners and customers.
- Think omnichannel [41]. Users want to be able to switch channels: use the app for orientation and than visit the store to actual see the product.
- Take care of a flawless operation of the app. Long loading times, textual errors, bad (graphical) design are negatively influencing the use experience of the app.

Research limitations / research continuation

In this paper we present the first results of our effort to validate and co-create this retail innovation. Although this study has reported interesting results and contributes to our understanding of consumers' intentions to accept this mobile innovation, caution must be exercised since the sample size was small. Conclusions therefore should be treated with caution. To address this issue of small sample size we will continue our research efforts as described in the research design.

Two follow up studies are being planned for the end of 2014. One study concerns the set up of a focus group for co-creating purposes and the other study tries to gain insights in the shop owners perspective of this kind of innovations.

Acknowledgements

We would like to thank graduation student Carlijn van Eijk and the students of the minor online communication for participation in this project.

6. REFERENCES

[1] Molenaar, C. (2010). *Shopping 3.0: Shopping, the Internet Or Both?* : Gower Publishing Company, Limited.

[2] Weber, M.E.A., Weggeman, M.C.D.P., & Van Aken, J.E. (2012). Developing what customers really need: Involving customers in innovations. *International Journal of Innovation and Technology Management, 9*(03).

[3] Verhoef, P.C, Lemon, K.N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L.A. (2009). Customer Experience

Creation: Determinants, Dynamics and Management Strategies. *Journal of Retailing, 85*(1), 31-41.
[4] Zomerdijk, L.G, & Voss, C.A. (2010). Service design for experience-centric services. *Journal of Service Research, 13*(1), 67-82.
[5] Mahadevan, B. (2000). Business Models for Internet-Based E-Commerce: an anatomy. *California management review, 42*(4).
[6] Liesse, J. (2007). Mobile moves forward. *Advertising Age, 19*.
[7] Park, Y.A., & Gretzel, U. (2010). Influence of consumers' online decision-making style on comparison shopping proneness and perceived usefulness of comparison shopping tools. *Journal of Electronic Commerce Research, 11*(4), 342-354.
[8] Kim, H. (2006). Using hedonic and utilitarian shopping motivations to profile inner city consumers. *Journal of Shopping Center Research, 13*(1), 57-79.
[9] Venkatesh, V., Thong, J., & Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS quarterly, 36*(1), 157-178.
[10] Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*.
[11] Rogers, E.M. (2010). *Diffusion of innovations*: Simon and Schuster.
[12] Zhou, T. (2011). Examining the critical success factors of mobile website adoption. *Online Information Review, 35*(4), 636-652.
[13] Alkhunaizan, A, & Love, S. (2012). What drives mobile commerce? An empirical evaluation of the revised UTAUT model. *International Journal of Management and Marketing Academy, 2*(1), 82-99.
[14] Venkatesh, V., Thong, J., & Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS quarterly, 36*(1), 157-178.
[15] Ghinea, G., & Angelides, M.C. (2004). A user perspective of quality of service in m-commerce. *Multimedia Tools and Applications, 22*(2), 187-206.
[16] Buranatrived, J, & Vickers, P. (2002). *An investigation of the impact of mobile phone and PDA interfaces on the usability of mobile-commerce applications.* Paper presented at the Networked Appliances, 2002. Liverpool. Proceedings. 2002 IEEE 5th International Workshop.
[17] Venkatesh, V., Ramesh, V, & Massey, A.P. (2003). Understanding usability in mobile commerce. *Communications of the ACM, 46*(12), 53-56.
[18] Hoffman, D.L, & Novak, T.P. (2009). Flow online: lessons learned and future prospects. *Journal of Interactive Marketing, 23*(1), 23-34.
[19] Csiksczentmihalyi, M., Kolo, C., & Baur, T. (2004). Flow: The psychology of optimal experience. *Australian Occupational Therapy Journal, 51*(1), 3-12.
[20] Schell, J. (2008). *The art of game design. A book of lenses.* . Burlington: Morgan Kaufmann Publishers.
[21] Frissen, V., & van Lieshout, M. (2006). Ict in everyday life *User Behavior and Technology Development* (pp. 253-262): Springer.
[22] Bijker, W.E. (1987). *Social construction of technology*: Wiley Online Library.
[23] Pierson, J., & Lievens, B. (2005). *Configuring living labs for a 'thick' understanding of innovation.* Paper presented at the Ethnographic Praxis in Industry Conference Proceedings.
[24] Mingers, J. (1997). Multi-paradigm multimethodology.
[25] Schuurman, D., & De Marez, L. (2012). Structuring user involvement in panel-based living labs. *Technology Innovation Management Review*(September 2012: Living Labs).
[26] Burmester, M., Mast, M., Jäger, K., & Homans, H. (2010). *Valence method for formative evaluation of user experience.* Paper presented at the Proceedings of the 8th ACM conference on Designing Interactive Systems.
[27] Nielsen, J. (1994). *Usability engineering*: Elsevier.
[28] Gaver, B., Dunne, T., & Pacenti, E. (1999). Design: cultural probes. *interactions, 6*(1), 21-29.
[29] Schwartz, B. (2004). *The paradox of choice*.
[30] Brynjolfsson, E., Hu, Y.J, & Rahman, M.S. (2013). Competing in the age of omnichannel retailing. *MIT Sloan Management Review, 54*(4), 23-29.
[31] Sunikka, A., & Bragge, J. (2012). Applying text-mining to personalization and customization research literature–Who, what and where? *Expert Systems with Applications, 39*(11), 10049-10058.
[32] Karvonen, K. (2000). *The beauty of simplicity*. Paper presented at the Proceedings on the 2000 conference on Universal Usability, Arlington, Virginia, USA.
[33] Li, Y., & Yeh, Y. (2010). Increasing trust in mobile commerce through design aesthetics. *Computers in Human Behavior, 26*(4), 673-684.
[34] Beatty, P., Reay, I., Dick, S. & Miller, J. (2011). Consumer trust in e-commerce web sites: a meta-study. *ACM Computing Surveys (CSUR), 43*(3), 14.
[35] Becerra, E.P. & Korgaonkar, P.K. (2011). Effects of trust beliefs on consumers' online intentions. *European Journal of Marketing, 45*(6), 936-962.
[36] Sweeney, J., Soutar, G, & Mazzarol, T. (2014). Factors enhancing word-of-mouth influence: positive and negative service-related messages. *European Journal of Marketing, 48*(1/2), 336-359.
[37] Zhou, T. (2011). Examining the critical success factors of mobile website adoption. *Online Information Review, 35*(4), 636-652.
[38] Hoyer, W.D, Chandy, R., Dorotic, M., Krafft, M., & Singh, S.S. (2010). Consumer cocreation in new product development. *Journal of Service Research, 13*(3), 283-296.
[39] Magnusson, P.R., Matthing, J., & Kristensson, P. (2003). Managing User Involvement in Service Innovation Experiments with Innovating End Users. *Journal of Service Research, 6*(2), 111-124.
[40] Beldad, A., et al. (2010). "How shall I trust the faceless and the intangible? A literature review on the antecedents of online trust." Computers in Human Behavior 26(5): 857-869.
[41] Rigby, D. (2011). The future of shopping. *Harvard Business Review, 89*(12), 65-76.

CORRESPONDENCE

Igor ter Halle
Windesheim University of Applied Sciences
Campus 2-6
8017 CA Zwolle, the Netherlands
phj.ter.halle@windesheim.nl

Marcel Weber
Windesheim University of Applied Sciences
Campus 2-6
8017 CA Zwolle, the Netherlands
mea.weber@windesheim.nl