Omni-channel customer experience: An investigation into the use of digital technology in physical stores and its impact on the consumer's decision-making process

Jamila El Azhari
jamila.el-azhari@outlook.com
London South Bank University

Dag Bennett
bennetd@lsbu.ac.uk
London South Bank University

ABSTRACT

Increasing use of mobile devices and the evolution of digital technology not only change the way consumers engage with brands and retailers but also how they shop. More marketers and retailers are experimenting with Omni-channel tools to close the gap between online and offline shopping. This research provides an overview of the Omni-channel landscape in Europe and the United States and identifies digital elements embedded into retailers' physical stores. We examine the salience of in-store technology, its impact on consumer decision-making process, and its effect on the customer shopping experience.

Our major findings are that most High street shoppers are generally technology-savvy Omni-channel consumers who are constantly connected. They expect retailers to provide them with opportunities to purchase anytime and anywhere. Nevertheless, when it comes to customer service and product queries, interactive in-store technology is the third choice after real sales staff and their own mobile devices. This study makes a valuable contribution by laying out where the challenges of Omni-channel retailing remain—namely making the technology easier to use, faster, and more fun. In this area, more research needs be done to better understand how the omni-channel world broadens the scope of channels, and how it influences customer/brand/retail interactions and innovative new paths to purchase.

KEY WORDS: Omni-channel retailing, 'bricks and mortar' store, interactive technology, experience marketing, shopping experience, consumer decision-making process.

INTRODUCTION

Today's online consumer is becoming more reliant on interactive technology and social media to research and plan purchases and share shopping experiences (Hildebrand, 2014). Today's consumer is 'an Omni-channel creature (Friedlein, 2014) who sees little difference between making purchases in-store or online' (Adweek, 2013). Innovations in retailing are changing consumer expectations of the shopping experience (Rigby *et al*, 2012). Many of the UK's top retailers have stepped up investment in Omni-channel systems which accounted for up to 3% of gross turnover in 2013, while in the United States a quarter of retailers spent 3% or more (LCP Consulting, 2013). The main purpose of integrating digital elements in stores is to relate better to consumers, not to just 'bombard the senses' (Srini and Rajesh, 2010). Rigby *et al.* (2012) suggest that successful retailers will be those who 'find ways to delight shoppers both in store and online.'

The experience of shopping can affect consumer loyalty and satisfaction (Lee *et al.*, 2011; Bitner, 1992) while physical surroundings and atmospherics influence buyers (Turley & Milliman, 2000). However, research is lacking on digital technology's impact on shopping in physical stores and Schmitt & Zarantonello (2013) cite a need to research 'the process by which specific cues in experiential touch-points create specific consumer experiences, and the process by which experiences impact consumer behavior.' One of the big questions is how technology affects customer experience in the retail domain (Verhoef *et al,* 2009).

The Omni-Channel Retailing Environment

Omni-channel retailing is a 'truly integrated approach across the whole retail operation that delivers a seamless response to the consumer experience,' (LCP Consulting, 2013). But, as Rigby *et al.* (2012, p 13) explain, this is also 'hard and disruptive—and critical to get right'. One example of this is British retailer ***Marks & Spencer (M&S)*** that is integrating its online and offline operations, offering free Wi-Fi and touch screen kiosks throughout its stores (Baldwin, 2013; Eaglen, 2013). The latest fashion trends are presented on 70-inch 'inspirational' video screens while sales staff armed with tablets assist customers with finding the right products (Wood, 2012).

Another Omni-channel approach is by the upscale American fashion retailer ***Nordstrom*** that has integrated assistive retailer technologies (ART) to allow sales assistants to check customers out from anywhere in the store. This streamlines shopping and eliminates queues (Schröder and Bach, 2013; O'Donnell, 2012). Nordstrom's customers also have a 'click-and-collect' option to order online and pick up in store (Anderson *et al.*, 2012).

The French cosmetics brand ***Sephora*** has designed a strategy using touch point technology e.g. Scentsa Fragrance Finder, Skincare IQ touchscreen kiosk and Beauty Studio iPads to provide easy access to product information through QR scanning. It also has tools to share content in social media and a mobile app that allows customers to scan products, look up product information, track their buying history and access customer reviews to help them with their decision-making (Trout, 2014).

Another example is ***Adidas***, whose in-store technology offers 'consumers an immersive experience that puts all of Adidas' shoes at their fingertips, ready to buy' (Aubrey and Judge, 2012). A life-size virtual wall displays the entire product range in a 3D catalogue, which can zoom and rotate products and access customer reviews. When a customer selects a product, a sales assistant checks the availability on a tablet. The customer can then pay immediately or order the product for delivery (Burdett, 2013; Bodhani, 2012).

Pantano and Viassone (2013) categorise technologies as touch screen displays or in-store technology, systems for mobiles or mobile applications, and hybrids (e.g. a retailer's app that allow customers 'to move around in the store'. Using a combination of Meuter *et al.*'s taxonomies (2000) and Pantano and Viassone (2013) this research focuses specifically on the physical point of sale, hence all findings represent in-store technologies.

Digital elements embedded into the physical stores.

Digital signs are large (greater than 30 inches) flat panel monitors with a continuous advertising loop and editorial material (Burke, 2009). Content can be changed in real time to deliver targeted messages to selected audiences (Buterbaugh, 2013) and when combined with point-of-sale scanners and video cameras, retailers can observe customer behaviour and reactions to advertisements and targeted information or offers (Burke, 2009).

Free in-store Wi-Fi enables customers to use a retailer's mobile app to locate products in the shop, access loyalty programs, coupons, in-store deals, and so on (Adweek, 2013). Some retailers, e.g. Macy's, Clarks and Timberland have **beacon Bluetooth devices** in stores that detect shoppers and automatically interact with them through personalised messages to their mobiles (Joseph, 2014; Whiteside, 2014). Beacons also gather shopper data (Taylor, 2014) and according to Miles (2014), are a bridge between physical locations and digital experiences that allow developers and businesses to interact with consumers.

RFID (Radio Frequency Identification) systems collect data from product tags and bar codes, and match those items with customer profiles in the store. The main components are: an RFID tag, an antenna and a RFID reader. Tags can be attached to any product and when it is close to the antenna, product codes are transmitted to the reader (Wong *et al.*, 2012). This is useful for customers, but is especially beneficial for retailers in improving customer service (Hardgrave, 2012).

Some retailers equip employees with **tablets or iPads** to provide information, payment or delivery options (Buterbaugh, 2013). Some stores also provide tablets or iPads for customers to access product reviews or run 'dressing room' applications to create their own outfits to share on social media (Rigby *et al.*, 2012). The data collected also allows retailers to maintain contact after customers have left the store (Ellwood cited in Miles, 2014).

Self-service technology (SST) refers to 'technological interfaces that allow customers to produce a service independent of direct service employee involvement' (Meuter 2000, cited in Curran *et al.*, 2003). Interactive kiosks may be public-access computers, often with touch screens and are ubiquitous in banking (ATM) and travel (check-in). They are also used in retail environments such as supermarkets and department stores (Cho & Fiorito, 2010).

A **smart mirror** (Bodhani, 2012) or 'virtual garment fitting system,' allows customers to virtually try clothes through 3D body scanning systems' (Choi & Cho, 2012 cited in Pantano & Viassone, 2013). This 'augmented reality' technology scans a customer to create an avatar that virtually tries on clothing. The technology is also available as a mobile app that allows consumers to scan each other and share pictures on social networks.

Life-size interactive walls allow customers to view products on a virtual shelf, access product information and reviews and sometimes order products (Aubrey & Judge, 2012; Burdett *et al.*, 2013). Some walls are touchscreens while others react to gestures and movements (Bodhani, 2012). They 'create a link between channels' by combining the best of the physical and the virtual shopping world (Aubrey & Judge, 2012).

Table 1. In-store technologies, classified by purpose and degree of customer interaction.

	Digital Signage	Hybrid systems	Interactive in-store technology
Targeted messaging	Video screens In-store displays	-	-
Self-service	-	Free Wi-Fi Retailer's mobile app	Interactive kiosks Interactive walls Smart mirror
Customer service	-	RFID In-store beacons	Tablets and iPads

Research aims

The main aim of this research project was to extend our knowledge about the use of digital technology in the physical store and its impact on the customer experience. The main research questions were to:

(1) Examine consumer awareness and perceptions of interactive digital technology in 'bricks and mortar' stores,

(2) Analyse the impact of interactive in-store technology on consumer decision making,

(3) Identify how in-store technology affects the customer shopping experience, focusing on service quality and shopping satisfaction.

LITERATURE REVIEW

Omni-channel retailing is about 'nurturing a symbiotic relationship between digital and physical channels so that they work together side-by-side, supporting each other' (Aubrey & Judge, 2012). Hardgrave (2012) suggests that customers should get a consistent and seamless experience whether they are shopping in a store, on a mobile, or on a computer, and that the lines between various modes of shopping are becoming blurred (Brynjolfsson et al, 2013). According to Levitt (2013), in the Omni-channel approach the consumer has a holistic and customer-centric experience with the brand, as opposed to channel-based, where technology to enable a seamless experience for the customer also delivers useful data to retailers about customer needs and to optimize operations (Cho and Fiorito, 2010).

The physical shop used to be the key step in the consumer's path to purchase, but today technological innovations in retailing have made the shop inessential (Anderson *et al.* 2012). Today's omni-channel consumers use many different channels and touch-points and multiple platforms, digital tools and networks, whether at home, at work, while commuting, in public, or in the store using whatever device is convenient (Frazer & Stiehler, 2014, Levitt, 2013).

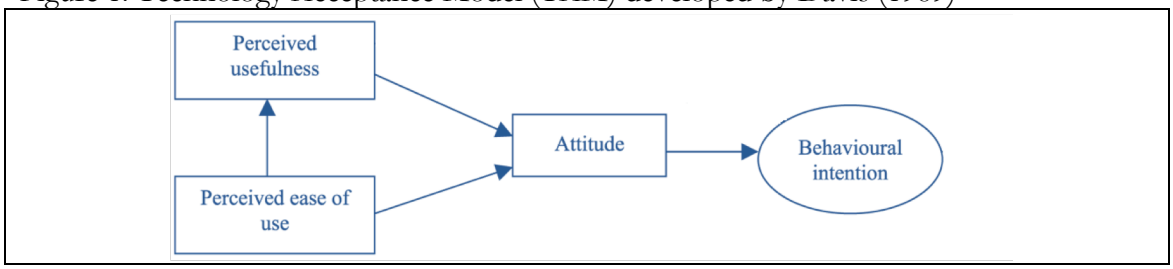
Aubrey and Judge (2012) claim innovative technology enables retailers to optimize product availability, raise consumer engagement, enhance interaction with the brand, build brand image and enhance customer experience. Pantano & Di Pietro (2012) say the integration of technology can improve the customer's shopping experience. However neither offers much

evidence to support these positions. Even so, many retailers are continuing the long trend of replacing staff and sales assistants with technology (Colby and Parasuraman, 2003).

Davis (2014) says 'It's not simply a matter of fixing broken links in the customer journey, it is about understanding the customers' needs and motivations and designing an experience that best meets that need'. Klaus and Maklan (2013) define customer experience as 'the customer's cognitive and affective assessment of all direct and indirect encounters with the firm relating to their purchasing behaviour'. Dholakia et al. (2010) believe that 'shopping in retail environments is a fundamental aspect of consumer behavior and is influenced by complex and varying psychological processes'. Thus it is essential for retailers to exploit the strengths of the physical store 'to create an emotional, sensory experience that deepens the consumer's connection with the physical elements of product' (Aubrey and Judge, 2012). Bauer *et al.* (2006) claim hedonic aspects such as enjoyment of technology-dominated retailing are vital to customer satisfaction.

The Technology Acceptance Model (TAM, Figure 1) is widely used to explain users' behavioral intention to use technological innovations (Pookulangara & Koestler, 2011) In this model, perceived usefulness and ease of use influence attitudes towards technology and determine whether the consumer will use or reject it (Chuttur, 2009; Kallweit *et al.*, 2014).

Figure 1: Technology Acceptance Model (TAM) developed by Davis (1989)



According to Venkatesh (2000), the perceived ease of use of technological innovation is positively influenced by the user's perceived self-efficacy. **Self-efficacy** is the 'individual judgments of a person's capabilities to perform a behavior' (Venkatesh, 2000; Pookulangara & Koestler, 2011). In this research, we define self-efficacy as consumer judgments of their own ability to use interactive in-store technology on the basis of whether they see themselves as 'tech-savvy'. Three items of the Technology Acceptance Model (perceived usefulness, perceived ease of use and self-efficacy) are used to frame research questions.

METHODOLOGY

Sample--The sample population of this study was shoppers over the age of 18 who recently visited a shop in a London High street, 52% were female and 48% male.

Data collection--We used a computer-aided personal interview (CAPI) with the survey tool SoSci. An interviewer read out a structured questionnaire and entered answers on a tablet device. All respondents were asked the same set of questions (De Vaus, 2002).

Components and data analysis--The questionnaire was based on secondary research and selected literature in a framework of questions on technological innovations. The primary measurements were Table 2: nominal scales, ordinal scales and Five-point Likert scales.

Table 2. Questionnaire design

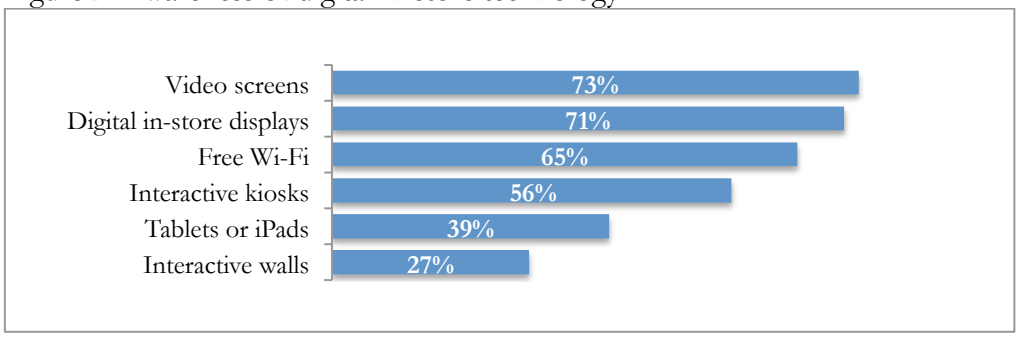
QUESTIONNAIRE SECTION	QUESTION	SOURCE	TYPE OF MEASUREMENT
Self-efficacy	Tech-savviness	Bitner *et al.*, 2002	List: Nominal scale
Shopping habits	Shopping channels used	Developed by researcher	List: Nominal scale
	Frequency of shopping on each channel	Developed by researcher	Rating: Likert scale/ Ordinal scale
Smartphone usage	Smartphone usage	Developed by researcher	List: Nominal scale
	Frequency of smartphone usage in-store	Developed by researcher	Rating: Likert scale/ Ordinal scale
Awareness of in-store technology	Types of technology noticed	Bitner *et al.*, 2002 Secondary Research	List: Nominal scale
	Familiarity of interactive in-store technology	Dabholkar, 2003 Anderson *et al.*, 2012 Cho and Fiorito, 2010	List: Nominal scale
Usage of interactive in-store technology	Usage	Developed by researcher	List: Nominal scale
	Types of interactive technology used	Developed by researcher	List: Nominal scale
Perception of in-store technology	Attributes	Elliot *et al.*, 2013 Cho and Fiorito, 2010 Venkatesh, 2000 Wang, 2012, Davis, 1989 Bagdare and Jain, 2013	Rating: Likert scale/ Ordinal scale
Customer experience throughout consumer decision-making process	Impact on decision-making process	Karaatli *et al.*, 2010 Cho and Fiorito, 2010 Dabholkar, 2003	Rating: Likert scale/ Ordinal scale
	Ordering using interactive in-store technology	Developed by researcher	List: Nominal scale
	Interaction with in-store technology	Developed by researcher	List: Nominal scale
Shopping experience	Service quality (Customer Satisfaction)	Cho and Fiorito, 2010 Kallweit, 2014, Wang, 2012 Pantano and Di Pietro 2012	Rating: Likert scale/ Ordinal scale
	Interpersonal service vs. self-service technology	Developed by researcher	Ranking: Ordinal rank scale
	Impact on overall shopping experience	Anderson et al., 2012 Venkatesh, 2000	Rating: Likert scale/ Ordinal scale
	Word of mouth	Lee and Yang 2013	List: Nominal scale
Intention to use	Intention to use/reuse	Lee and Yang 2013	List: Nominal scale
	Likelihood of use with assistance	Cho and Fiorito, 2010	List: Nominal scale
Omni-channel experience	Importance of Cross-channel customer experience	Anderson et al. 2012	Rating: Likert scale/ Ordinal scale

RESEARCH FINDINGS AND DATA ANALYSIS

The majority of shoppers use multiple information channels—56% of in-store shoppers also shopped online on their pc, laptop or tablet (31%) or on their mobile phone (25%). But the physical store is still essential—38% of respondents shopped three or more times in physical stores per month, and only 12% did not do any in-store retail shopping. In store consumers relied on mobiles for product information, or to make orders and 37% used smartphones to compare prices and products while shopping in physical stores.

The digital elements in high street stores most noticed by consumers were video screens (73%), digital in-store displays (71%) and free Wi-Fi signs (65%). However, interactive technology, such as interactive kiosks, tablets and interactive walls were not noticed very often. Less than half of the respondents had noticed tablets and iPads in stores.

Figure 2: Awareness of digital in-store technology



To explore willingness to use interactive in-store technology, we adopted Pookulangara and Koestler's (2011) self-efficacy construct of the 'individual judgment of a person's capabilities to perform a behavior'. When asked, 60% of men considered themselves as tech savvy, but only 30% of women did so, while nearly half of all women claimed to know only the basics. Self-reported tech-savviness however affected customer views on only a few attributes of in-store technology.

While 61% of respondents said they were familiar with interactive in-store technology, only half of these have actually used it. The most-used technology was the interactive kiosk, (74%), tablets (30%) and interactive walls (24%). Just over half of shoppers felt interactive technology they used was *useful and convenient* and, 48% said the experience was *fun and enjoyable*. A significant relationship was found between *'perceived fun and enjoyment'* and *'intention to reuse,'* X^2 =12.635 with an associated significance level of .013. However, we also found that customers perception of in-store technology are not always positive (Cho & Fiorito, 2010) and compared to all other statements, *'fun and enjoyment'*, had the lowest mean value of 3.26.

Interactive in-store technology also scored low on being *fast* (mean value 3.30). 26% of users *'(strongly) disagreed'* with the statement that interactive technology was *'fast'*. Furthermore, the results indicate that consumers who perceive the interactive technology as *useful* and *easy to use* are more likely to reuse the technology (Chuttur, 2009; Kallweit's, 2014). 84% of all users who stated that they *'strongly agree'* or *'agree'* with the technology being '*easy to use'* are likely to use it again.

In summary, the majority of shoppers who had used interactive technology perceived it positively. This especially refers to the *functionality* of the technology, its *simple and clear layout* and its *ease of use*. We then divided the results between consumers who rated themselves as tech-savvy or non-tech-savvy, because previous research by Venkatesh (2000) found that perceived ease of use of technological innovation is positively influenced by the user's perceived self-efficacy. The results of this study indicate that 80% of users who consider themselves to be technology-savvy *'agreed'* or *'strongly agreed'* that the interactive technology *was easy to use*. Oddly enough, so did 84% of those who are not 'tech-savvy'. Thus in this study tech-savviness did not strongly influence technology use.

***T**he impact of interactive in-store technology on customer decision-making* -- Customer satisfaction is related to the customer's experiences throughout the decision-making process (Pantano & Di Pietro, 2012; Verhoef *et al.*, 2009). To assess the impact of interactive in-store technology on the consumer decision-making process, shoppers were asked to indicate the extent of their agreement with a statements about the shopping decision making process with response levels shown in Table 3.

Table 3: Impact on consumer decision-making

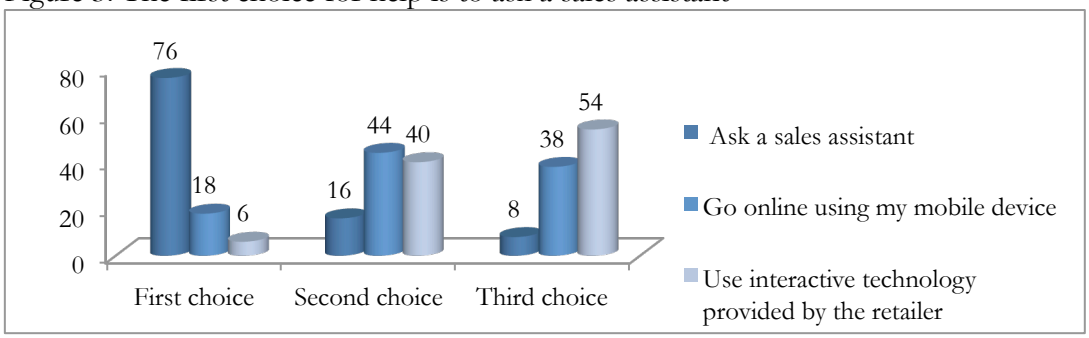
	Tech-Savvy	Non Tech-Savvy
Helps me find product information	3.7	3.7
Helps me find products more easily	3.4	3.6
Helps me find more products than in the store	3.3	3.0
Helps me compare prices and products more easily	3.4	3.0
Helps me make purchase decisions more quickly	3.0	2.7
Average	3.4	3.2

Pantano and Viassone (2013) say that not only do technology-based innovations provide useful information, they also save time. However, in this study, 'helps me make purchase decisions more quickly' received the lowest level of agreement amongst consumers. A possible explanation is that it is not the variety or amount of information that is important, but the relevance to the consumer and ease of accessibility.

In summary, looking at the calculated mean values of each statement we conclude that the results confirm Pantano & Di Pietro (2012) that technology can support consumers in their decision-making process, especially in terms of finding product information and finding products more easily. Moreover, these attributes are perceived only slightly more positively by tech-savvy customers than the non-tech-savvy.

About a third of shoppers used interactive technology to access customer reviews about products, email product information they found with in-store technology or pressed the 'like' button to say they would recommend the retailer's product. However, just over half (54%) claimed to never have used interactive in-store technology for these purposes. Thus, despite much retailer investment in digital technology most customers still do not use it. This may be because technology is often used to replace sales assistants (Colby & Parasuraman, 2003), but as shown in figure 3, the first choice for help or service remains sales assistants—three quarters of shoppers (76%) first ask a sales assistant for advice, while 18% first go online using their mobile devices for assistance. It may be that the softer, or human side of the shopping experience is hard to replace with technology.

Figure 3: The first choice for help is to ask a sales assistant



To measure the impact of interactive in-store technology on customer shopping experience, respondents were asked whether digital elements improve the overall shopping experience. The result was that more than half of shoppers who have used interactive in-

store technology said it had improved their shopping experience to a *moderate extent* (average rating of 3.6). This is consistent with previous findings where it is unclear whether interactive technology in stores will be accepted or appreciated by consumers (c.f Renko & Druzijanic, 2014). To provide more clarity on this, users were asked whether they would use interactive technology again and 88% of them stated they would consider it.

The final issue was to assess how important customers felt omni-channel shopping to be. The result was the highest level of agreement across all attitudes assessed, with an overall score of 4.1. 74% of all High street shoppers said it is '*important*' or '*very important*' to them that retailers give them the opportunity to buy their products anytime and anywhere across different channels, online as well as offline.

DISCUSSION AND IMPLICATIONS

This research into Omni-channel customer experience investigated the use of digital technology in shops and resulted in three important new findings:

1. Most High street shoppers visit 'bricks and mortar' stores to make purchases. But they also shop online on their personal devices and use their mobiles to compare products and prices while in stores. Thus, most High street shoppers are Omni-channel shoppers, almost all of whom have noticed digital technology embedded in high street retail stores. The most noticed type was *digital signage,* followed by interactive kiosks. While most shoppers are familiar with these technologies, fewer have actually used them. The most used in-store technology was interactive kiosks, followed by tablets and interactive walls.

2. In general, High street shoppers who have used retailers' interactive technology, found it useful and convenient, functional, and easy to use, but not very fast. Interestingly, few users found it to be fun and enjoyable. In addition, users who perceived the technology as useful and easy to use were also very likely to re-use it, even though we found no relationship between perceived ease of use and self-efficacy. In total in-store technology supports High street shopper decision-making, especially in information search and evaluating alternatives. However, it was not very helpful for making purchase decisions more quickly, nor do many shoppers use it to order products.

3. For the majority of shoppers the first choice for service is to ask a sales assistant. Most shoppers use the interactive technology as a third choice after interpersonal services and information search on their mobile phones. Hence, no relationship was found between customer satisfaction with the service provided by the interactive in-store technology and ranking this type of technology as first choice service.

The findings of this research are important for High street retailers in making managerial decisions about investment in interactive technology for physical stores. The implications for practice are now discussed.

While the physical store remains essential to a retailer's success, in-store technology helps to maintain its relevance. To ensure the effectiveness of interactive in-store technology, it is essential for it to be visible, accessible and easy to use. The way it is presented in the store should attract the shoppers' attention and encourage them to use it. In-store technologies in High street shops are seen to be functional and well-designed, but there is room for improvement in making the technology more fun and enjoyable to use, as well as faster.

This might help to enhance the customers' overall satisfaction with the technology.

Interactive in-store technology is not the first choice when it comes to customer service, but it may offset negative experiences that arise from crowded shops, or too few sales staff (Arnold et al., 2004). It is also a good option for customers who want to avoid interaction with sales staff. We suggest that integration of staff and technology may help ensure that customers, who already have shown interest in the technology and may have tried it, have a positive experience and hence are more confident to use it next time. In addition, much can be improved to communicate advantages that interactive in-store technology offers.

Although this study provides useful findings, because the sample was limited to High street shoppers in London, a replication in other cities and countries is suggested. This would enable generalization of the findings and perhaps identify variations in other locations. Furthermore, this research is limited to the apparel, accessories and footwear sectors and further studies could include other markets, e.g. electronics or home-wares and furniture.

This research investigated the use of interactive in-store technologies as a general concept. To provide a deeper understanding and fuller assessment of different technologies, future research should consider analysing technologies separately. There are likely to be cross-channel effects between different technologies—thus the effect of mobile channel usage could be explored to see how it affects shopping behavior across other communication channels. Research could also include a time dimension to assess the effects at different points of the buying process, from information search to assessment to purchasing.

A qualitative approach is also recommended for future research. As observed, not all High street shoppers notice interactive technology in stores and further research could tease out why they don't. Furthermore, as many shoppers who are familiar with interactive in-store technology have never used it, future research could provide a deeper understanding of why customers like or dislike using this kind of technology.

The omni-channel environment can enhance the interplay between channels and brands and introduce new purchase routes. As such, the omni-channel world not only broadens the scope of channels, but also influences customer-brand-retail channel interactions. It would therefore be useful to explore separately the various components: search, display, e-mail, affiliates, referral websites, etc. because they can facilitate one- or two-way interaction in different ways. This would help to dimensionalise mobile usage, including mobile apps, including influences across channels and devices that are part of the shoppers' omni-channel experience.

REFERENCES

Adweek (2013) Marketing to the Omnichannel Shopper, *Adweek*, 54 (22), pp. 1-2.

Anderson, H., Ziner, R., Prettyman, R. and Egge L. (2012) *In-Store Digital Retail: The Quest for Omni-channel*. Self-published online resource

Arnold, M. J., Reynolds, K. E., Ponder, N. and Lueg, J. E. (2004) Customer Delight in a Retail Context: Investigating Delightful and Terrible Shopping Experiences, Journal of Business Research, 58 (8), 1132-1145.

Aubrey, C. and Judge, D. (2012) Re-imagine retail: Why store innovation is key to a brand's growth in the 'new normal', digitally-connected and transparent world, *Journal of Brand Strategy*, 1 (1), pp. 31-39.

Baldwin, C. (2013) High Street stores embrace digital to entice customers, Computer Weekly, p. 23-25.

Bauer, H. H., Falk, T. and Hammerschmidt, M. (2006) eTransQual: A transaction process-based approach for capturing service quality in online shopping, *Journal of Business Research*, 59 (7), pp. 866-875.

Bitner, M. J. (1992) Servicescapes: The impact of physical surroundings on customers and employees, *Journal of Marketing*, 56 (2), pp. 57–71.

Bodhani, A. (2012) Shops offer the e-tail experience, Engineering & Technology, 7 (4), pp. 46-49. [Online]. Available from: IEEE Xplore. http://0-ieeexplore.ieee.org.lispac

Brynjolfsson, E., Hu, Y. J., & Rahman, M. S. (2013). Competing in the age of omnichannel retailing. *MIT Sloan Management Review*, *54*(4), 23.

Burdett, L., Walker Smith, J., Curry, A., Gildenberg, B. & Mader, S. (2013) The Future Shopper: How changing shopper attitude and technology are reshaping retail, *Kantar Retail*. In house publications

Burke, R. R. (2009) Behavioral Effects of Digital Signage, Journal of Advertising Research, 49 (2), pp. 180-185. [Online]. Available from: Warc. http://0-www.warc.com.lispac

Buterbaugh, A. (2013) Design an Effective Omnichannel In-store Experience: 5 Key Considerations. [Online]. Available from: http://80weeks.ru/agile-retail-russia/white-papers/2013-06-links/Designing-an-Omnichannel-In-store-Experience.pdf

Cho, H. and Fiorito, S. S. (2010) Self-Service Technology in retailing: The Case of Retail Kiosks, *Emerging Issues in Management*, 1, pp. 43-55. [

Chuttur, M. Y. (2009) Overview of the Technology Acceptance Model: Origins, Developments and Future Directions, *Working Papers on Information Systems*, 9 (37)

Colby, C. L. and Parasuraman, A. (2003) Technology still matters, *Marketing Management*, 12 (4), pp. 28-33.

Curran, J. M., Meuter, M. L. and Surprenant, C. F. (2003) Intentions to Use Self-Service Technologies: A Confluence of Multiple Attitudes, *Journal of Service Research*, 5 (3)

Dabholkar, P. A., Bobbitt, L. M. and Lee, E. (2003) Understanding consumer motivation and behavior related to self-scanning in retailing, *International Journal of Service Industry Management*, 14 (1), pp. 59-95.

Davis, F. D. (1989) Perceived Usefulness, Ease of Use, and User Acceptance of Information Technology, *MIS Quarterly*, 13 (3), pp. 319-340.

Davis, S. (2014) Burberry's Blurred Lines: The Integrated Customer Experience. *Forbes.com* [Online]. http://www.forbes.com/sites/scottdavis/2014/03/27/burberrys

De Vaus, D. (2002) Analyzing Social Science Data: 50 *Key Problems in Data Analysis*. London: SAGE Publications Ltd.

Dholakia, U. M., Kahn, B. E., Reeves, R., Rindfleisch, A., Stewart, D. and Taylor E. (2010) Consumer Behavior in a Multichannel, Multimedia Retailing Environment, *Journal of Interactive Marketing*, 24 (2), pp. 86-95.

Eaglen, M. (2013) Omni-channel retail: joining up the consumer experience. Online]. Available from: http://www.theguardian.com/media-network/media-network-blog

Elliott, K. M., Hall, M. C. and Meng, J. G. (2013) Consumers' intention to use self-scanning technology: The role of technology readiness and perceptions toward self-service technology, *Academy of Marketing Studies Journal*, 17 (1), pp. 129-143.

Frazer, M., & Stiehler, B. E. (2014) Omnichannel Retailing: the merging of the online and off-line environment. In *Global Conference on Business & Finance Proceedings* (Vol. 9, No. 1, p. 655). Institute for Business & Finance Research.

Friedlein, A. (2014) Digital Marketing and Ecommerce Trends and Predictions for 2014. *Econsultancy*.

Hardgrave, B. (2012) Omnichannel Retailing: You can't do it without RFID, *RFID Journal*, 9 (6), p. 38.

Hildebrand, V. G. (2014) How to engage the digital customer in 2014. [Online]. Available from: http://www.forbes.com/sites/sap/2014/01/14/

Joseph, S. (2014) UK brands ramp up Beacons use. [Online]. Available from: http://www.marketingweek.co.uk/sectors/technology-and-telecoms/news

Kallweit, K., Spreer, P. and Toporowski, W. (2014) Why do customers use self-service information technologies in retail? The mediating effect of perceived service quality, Journal of Retailing and Consumer Services, 21 (3), pp. 268-276.

Karaatli, G., Ma, J. and Suntornpithug, N. (2010) Investigating mobile services' impact on consumer shopping experience and consumer decision-making, *International Journal of Mobile Marketing*, 5 (2), pp. 75-86.

Klaus, P. and Maklan S. (2013) Towards a better measure of customer experience, *International Journal of Market Research,* 55 (2), pp. 1-19.

LCP Consulting (2013) Retail Supply Chain Management: The Omni-channel Revolution. [Online]. Available from: http://www.lcpconsulting.com/files

Lee, M. S., Hsiao, H. D. and Yang, M. F. (2011) The study of the relationships among experiential marketing, service quality, customer satisfaction and customer loyalty, The *International Journal of Organizational Innovation*, 3 (2), pp. 352-378.

Levitt, K. (2013) The multi-screen path to purchasing 2013. [Online]. Available from: ComScore. http://www.comscore.com/Insights/Presentations_and_Whitepapers

Meuter, M. L., Ostrom, A. L., Roundtree, R. I. and Bitner, M. J. (2000) Self-Service Technologies: Understanding Customer Satisfaction with Technology-Based Service Encounters, *Journal of Marketing*, 64 (3), pp. 50-64.

Miles, S. (2014) 7 Strategies for Leveraging In-Store Beacons. [Online]. Available from: http://streetfightmag.com/2014/03/18/7-strategies-for-leveraging-in-store-beacons

O'Donnell, J. (2012) Line cutting: Mobile checkout headed to a store near you. [Online]. Available from: http://usatoday30.usatoday.com/money/industries/retail

Pantano, E. and Di Pietro, L. (2012) Understanding Consumer's Acceptance of Technology-Based Innovations in Retailing, *Journal of Technology Management & Innovation*, 7 (4), pp. 1-19.

Pantano, E. and Viassone, M. (2013) Demand pull and technology push perspective in technology-based innovations for the points of sale: The retailers evaluation, *Journal of Retailing and Consumer Services*, 21 (1), pp. 43-47

Pookulangara, S. and Koesler, K. (2011) Cultural influences on consumers' usage of social networks and its' impact on online purchase intentions, *Journal of Retailing and Consumer Services*, 18 (4), pp. 348-354.

Renko, S. and Druzijanic, M. (2014) Perceived usefulness of innovative technology in retailing: Consumer's and retailers' point of view, *Journal of Retailing and Consumer Services*, In Press, pp. 1-8.

Rigby, D., Miller, K., Chernoff, J. and Tager, S. (2012) Omnichannel retailing: Digital disruption and retailer opportunities, *Retail Holiday Newsletter* (2), Brain and Company.

Schmitt, B. and Zarantonello, L. (2013) Consumer Experience and Experiential Marketing: A critical review, *Review of Marketing Research*, 10, pp. 25–61.

Schröder, F. and Back J. (2013) Digital at point of sale: Reinventing Retail for connected customer. [Online]. Available from: http://digitalintelligencetoday.com

Srini, R. S. and Rajesh, K. S. (2010) Creating the futuristic retail experience through experiential marketing: Is it possible? An exploratory study, *Journal of Retail & Leisure Property*, 9 (3), pp. 193–199.

Taylor, G. (2014) Trend Watch: Bringing The Mobile Retailing Experience In-Store With Beacon Technology. [Online]. Available from: http://www.retailtouchpoints.com

Trout, J. (2014) 5 Excellent Examples of Omnichannel Retailing Done Right. [Online]. Available from: http://multichannelmerchant.com/must-reads/5-excellent-examples-omnichannel-retailing-done-right-14052014/ [Accessed 23 June 2014].

Turley, L. W. and Milliman, R. E. (2000) Atmospheric effects on shopping behaviour: A Review of the Experimental Evidence, *Journal of Business Research*, 49 (2), pp. 193-211.

Venkatesh, V. (2000) Determinants of Perceived Ease of Use: Integrating Control, Intrinsic Motivation, and Emotion into the Technology Acceptance Model, *Information Systems Research*, 11 (4), pp. 342-365.

Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen A., Tsiros, M. and Schlesinger, L. A. (2009) Customer Experience Creation: Determinants, Dynamics and Management Strategies, *Journal of Retailing*, 85 (1), pp. 31-41.

Wang, M. C. (2012) Determinants and consequences of consumer satisfaction with self-service technology on a retail setting, *Managing Service Quality*, 22 (2), pp. 128-144.

Whiteside, S. (2014) Trends Snapshot: iBeacon - New ways to connect with shoppers, Warc Trends [Online]. Available from: Warc. http://0-www.warc.com.lispac.lsbu.ac.uk

Wong, W. K., Leung, S. Y. S., Guo, T. X., Zeng, X. H. and Mok, P. Y. (2012) Intelligent product cross-selling system with radio frequency identification technology for retailing, International Journal of Production Economics, 135 (1), pp. 308-319.

Wood, Z. (2012) Marks and Spencer gambles on bringing internet age to the shop floor. [Online]. Available from: http://www.theguardian.com/business/2012/sep/02/marks-and-spencer-multichannel-shopping [Accessed 28 May 2014].