In-store remote collaborative shopping using mobile technology: A qualitative study with premium beef consumers

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Abstract

Collaborative shopping aims to improve the quality of purchase decisions and fulfills a social need for shoppers. Food shopping provides a collaborative shopping context, however, there is a lack of research into collaborative food shopping. This research explored premium beef consumers’ in-store remote collaborative shopping and use of mobile technology through a qualitative study. Six semi-structured interviews were conducted with premium beef consumers to understand their remote collaborative shopping. Data were analyzed using thematic analysis. The study revealed that the main trigger for remote collaboration was to confirm the purchase with a remote partner. The results also identified that current mobile technology is sufficient for remote collaboration. However, participants were interested in using dedicated technological tools to support their remote collaborative shopping. This paper presents an understanding of remote collaborative shopping and what factors need to be considered before designing remote collaborative shopping tools and provides direction for future research.

Keywords: Collaborative shopping, Remote collaboration, Premium beef consumers, Mobile technology, Qualitative study, Information seeking

Introduction

Shopping can be a collaborative activity where two or more people work together to achieve their shopping goals1. There are many dimensions that affect this collaboration, including whether or not the collaborators are co-located or in a remote location, working synchronously or asynchronously, and the depth of collaboration2.
Researchers have studied collaborative online retail shopping\(^3\)\(^-\)\(^5\) and in-store collaborative retail shopping\(^6\)\(^-\)\(^8\). In online collaborative shopping, physically separated consumers can search, navigate, and make purchase decisions from their separate locations using a collaborative web page and mobile app. However, collaborative bricks-and-mortar shopping is different from online collaborative shopping.

In collaborative bricks-and-mortar shopping, collaborators are co-located in a physical shop, where they directly communicate with their shopping companion to discuss shopping\(^9\). Prior research has also discovered that consumers are also involved in remote collaboration, where one person in the physical shop and another is distance location. Consumers use smartphones to collaborate with their remote collaborators using basic interactions such as, voice calls, text messages or sharing photos\(^6\)\(^,\)\(^10\). The anytime, anywhere access provided by mobile devices creates opportunities to support shoppers to seek opinions from others and undertake remote collaborative shopping. However, prior research on collaborative task mostly focused of technological innovations\(^11\). There is a lack of research how available technology create value and support consumers in brick-and-mortar store\(^12\). Especially, there is little research on how consumers use smartphone during shopping to communicate with others who is not at the shopping with them\(^13\)\(^,\)\(^14\).

Taking this as a motivation, aim of this research is to explore remote collaborative shopping using smartphone in the food shopping context. Purchasing food has been identified as one of the main contexts where people prefer to contact their collaborator to help make decisions\(^15\)\(^,\)\(^6\), but there has been little further study in this area. This research focuses on premium beef consumer’s remote collaborative shopping. Premium beef consumers purchase premium beef for taste and health benefits\(^16\)\(^,\)\(^17\). During purchase they appreciate product information and search for information on relevant intrinsic and extrinsic quality cues\(^18\). During product evaluation, meat consumers often seek opinions from others to help them decide on their purchase\(^19\)\(^,\)\(^20\).

In what follows we report on a study that focused on having an in-depth understanding of the lived experience of a small number of premium beef shoppers. Designed as a qualitative study the focus is on exploring phenomena that are of interest even though they may not be generalizable. The study focuses on premium beef shoppers’ information seeking behavior with a particular interest in the way technology is being used to address emergent information needs in remote shopping.

The specific research objectives are:

- To explore meat consumers’ collaborative shopping practices in the context of in-store shopping.
- To investigate how mobile technology is being used to support collaborative meat purchasing in bricks-and-mortar settings.
- To identify the factors that need to be considered for designing technological artifacts to support meat consumers’ collaborative shopping tasks.

This article is organized as follows: in the next section, background for collaborative shopping is discussed. Section 3 discusses the research methods. Section 4 presents our qualitative study results. Section 5 presents the discussion and Section 6 concludes the research.

**Collaborative Shopping**

Shopping is often recognized as a social process when a shopper is accompanied by a collaborator\(^3\)\(^,\)\(^21\). Consumers often spend more time shopping when they are with a collaborator and it leads to a more pleasant shopping experience compared to shopping alone\(^22\). The shopping experience can be influenced by social, relational and individual perspectives\(^23\). For example, consumers can share their opinions about the products, solicit various opinions from their friends and family and other consumers and have fun through interacting with other consumers with similar interests\(^23\)\(^-\)\(^25\).

However, sometimes it is difficult to shop collaboratively due to physical distance. For instance, two friends may live in different cities; in that case they cannot shop together physically. This limitation can be alleviated by online collaborative shopping because it does not require collaborator to be physically co-located\(^3\).

Collaborative online shopping
Collaborative online shopping refers to the activity in which a consumer shops at an online store with a collaborator who is at a remote location. The goal of collaborative online shopping is to not only help shoppers choose the most appropriate products but also to socialize with others. Collaborative online shopping services allow consumers to conduct collaborative product navigation, collaborative synchronous and asynchronous search, voice and text-based communication, and sometimes, embodiment with the help of an avatar.

In the online collaborative shopping context, shared navigation was found to enhance consumers' product awareness compared to individual navigation. Two or more people could share their opinions together on products, preferring voice communication over text messaging, because voice communication created a better connection between shoppers. Integrating virtual avatars in online collaborative shopping with voice chat provided feeling of co-presence in shopping and it enhanced interaction between shoppers. Online collaborative shopping also allows multiple people to search for a product synchronously and asynchronously. Collaborative search tasks were more effective on domain specific environments.

Social commerce is another form of online collaborative shopping. Social commerce is a social media mediated commerce, where users actively take part in product buying and selling in social media platforms. Using social media platforms, social commerce created opportunities for consumers to share their product purchasing experiences through comments, reviews, ratings, and recommendations. These contents influenced other consumers' purchase behaviour, as in social media users were friends or acquaintances and their information was considered to be accurate.

With the advancement of internet and social media collaborative online shopping rapidly growing and getting attention from industry and academics, and they are focusing on technologies that support online collaborative shopping. However, online collaborative shopping is different compared to in-store collaborative shopping with remote collaborator.

Below, we discuss in-store collaborative shopping and in-store shopping with remote collaborators.

In-store collaborative shopping and in-store shopping with remote collaborators

In-store or bricks-and-mortar shopping is an everyday activity for many people. Sometimes it is done alone and sometimes with friends and family. When people shop in a small group it is called collaborative shopping, and they communicate with each other and seek feedback about particular products. When people shop with friends or family it often leads to a more pleasant shopping experience. However, consumers are not always accompanied by collaborators in store due to a range of living pressures.

Mobile devices such as smartphones make it possible to get some of the benefits of collaborative shopping at a distance. Morris, Inkpen investigated the use of smartphones to get remote shopping advice in the context of bricks-and-mortar shopping. Just over half of the people they surveyed used a mobile device to contact their friends and family including parents, children, and siblings who were not present at the shop to seek shopping advice.

The most common item involved in collaborative shopping was food, followed by clothing and electronics. The most common mode of interaction was voice calls, followed by MMS/SMS while some consumers used multiple methods, for example, sending a photo via MMS and then calling the person to discuss the product.

Sharing photos with friends and family also plays a big role in the collaborative shopping context. People share photos of products with their remote collaborators to receive feedback on the product as well as share their shopping experience and encourage others to purchase certain products.

Premium Beef Shopping

According to the Total Food Quality Model, consumers evaluate products before purchase based on quality cues including physical characteristics to form a quality expectation. Perceived cues are affected by the shopping situation, for example, the amount of information available in the shop, whether shopping was...
pre-planned or sudden, time pressure during shopping, and other circumstances. When consumers are not satisfied with the available information, they seek information from other sources since information obtained from a shop can be different from information obtained from other sources. Selection of information sources depend on several parameters such as availability, accessibility, familiarity with the source, the convenience of accessing each source, as well as credibility and trustworthiness. Friends and family are one of the most trusted sources of information.

In the specific context of premium beef shopping, flavor and healthiness are the main reasons for purchase. These product dimensions are difficult to determine from visual inspection though which is why consumers value product information at the point of purchase. Premium beef consumers look for various attributes when purchasing premium beef products such as origin, breed, absence of genetically modified organisms (GMO), animal welfare and organic production, quality labels, cuts and other credence attribute information.

During evaluation, consumers depend on assessing intrinsic and extrinsic quality cues. Intrinsic quality refers to physical properties of the meat (fat, color, marbling, and cut) and extrinsic quality cues include brand name, price, distribution, outlet and packaging. Not all consumers understand the visual appearance of beef or intrinsic cues though (marbling, fat content, color) which is why they depend on the extrinsic cues of the product such as information about nutritional value, production methods, and how to consume after purchase. Typically, consumers obtain extrinsic information from the product labels, information sheet or by scanning QR codes. However, not everyone understands the product information at the point of purchase.

Researchers have explored the role of information technology as a tool to provide clarifying information at the point of purchase via: traceability of provenance, information sheets, barcodes, QR codes, and even RFID tags. Consumers may obtain traceability information by scanning a QR code or using NFC through their smartphone. However, a number of gaps remain including the consumers’ preference for using these technologies. Some consumers are concerned about using RFID tags because of perceived health issue related to the tags, information credibility, privacy and time. Consumers may not be aware of QR codes or do not know how to use them as no instruction is provided. Also, QR code positioning requirements on packages may result in unappealing packaging making it ineffective for the consumer.

When shoppers face a situation where they struggle with the information provided, they may seek additional input from their friends and family directly when shopping together or by using communication technologies including feature phones and smartphones when not co-located.

Research Method

In order to explore premium beef consumers’ collaborative shopping and usage of mobile technology to contact remote shopping partners, this study conducted semi-structured interviews. Interview focused on understanding premium beef consumers remote collaborative shopping using mobile technology, more specifically why they collaborate with remote partner, what kind of information they share, how they use mobile device and their future preference of using remote collaborative tools.

The interview process included a total of six participants. Participants were recruited through social media posts, flyers, online advertising posts and face to face interaction with the researchers. All participants were screened before qualifying for the actual interview to ensure they met the primary requirements of being over 18 years old, the primary grocery shopper or having shared responsibility for grocery shopping, and regular or occasional premium beef consumption. Participation in the study was voluntary. At the beginning of the interview, the researchers explained the process of the interview to the participant, and the participant was also provided with an information sheet allowing the participants to provide informed consent. The interviews lasted between 15 and 30 minutes. The interview site was chosen by the interviewee.

This study followed existing consumer research that focuses on having an in-depth understanding of the lived experience of a small number of populations. As qualitative studies are not concerned about generalising
the results but rather exploring phenomena\textsuperscript{41, 42}. Six sample size is sufficient for phenomenological study \textsuperscript{43}. Interview data were analyzed using thematic analysis. The thematic analysis is a qualitative data analysis method, allowing researchers to report participants’ experience, reality, and meanings of the events\textsuperscript{44}.

The interviews were approved as minimal risk studies by university ethics committee.

Participants

The six participants in the study were all premium beef consumers and responsible for grocery shopping. They all lived in Tasmania, a regional state of Australia. The sample included two males and four females. All participants regularly used a smartphone and used their mobile devices while grocery shopping for various purposes. Details of the participants are shown in Table 1 All of the participants’ real identities have been removed and they have been given pseudonyms using random names.

Table 1: Interview participants’ details.

<table>
<thead>
<tr>
<th>No</th>
<th>Gender</th>
<th>Name</th>
<th>Year of birth</th>
<th>Education</th>
<th>Occupation</th>
<th>Annual income (AUD)</th>
<th>Length of interview</th>
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<td>1</td>
<td>Male</td>
<td>Brian</td>
<td>1957</td>
<td>PhD</td>
<td>University lecturer</td>
<td>Over 100k</td>
<td>30 minuets</td>
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<td>45k</td>
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<td>4</td>
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<td>20k</td>
<td>14 minutes</td>
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<tr>
<td>5</td>
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<td>Driving assessor</td>
<td>60-79k</td>
<td>13 minutes</td>
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<td>6</td>
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<td>Hanna</td>
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<td>Master’s degree</td>
<td>Researchers</td>
<td>80-100k</td>
<td>22 minutes</td>
</tr>
</tbody>
</table>

Findings

Findings from the interviews are presented as themes. A total of four main themes were identified from the interview data that describe premium beef consumers’ in- store collaborative shopping and technology use:

- Reason for seeking input from others
- Usage of technology during the shopping
- Information and collaborative communication
- Consumers’ future preferences for in-store collaborative shopping.

Reason for Seeking Input from Others

Consumers collaborated with their shopping partners for various purposes. Five of the six participants mentioned they contacted their friends or family members during grocery shopping. The most common purposes were to confirm the purchase, finding their preferences and choices and seeking assistance with a purchase decision. Three participants mentioned they contacted their partner during premium beef purchases to confirm the purchase, to know their partner’s preference and choices and seek information about quality cues such as price, cut and brand.

Interview participant Brian contacted his wife to ask about quality cues such as cut, price or which brand to buy. He found the information he received very useful and helped him to make better purchase decisions.
Interviewer: Can you tell me more about it, like what you discuss?

Brian: Normally about the cut and price of course and quality sort of what to look for what to expect for what I’m paying.

Interviewer: How useful is the information you receive from your partner during the shopping?

Brian: She’s the boss’s always useful.

Interview participant Sarah remotely collaborated with her husband during premium beef shopping to know his preference regarding different types of beef.

Interviewer: When you’re buying premium beef do you ever discuss it with your partner?

Sarah: Yes, because he prefers Scotch fillet but it’s not always affordable so yes, we do.

She also discussed quality cues with her husband such as cut, brand as well as location to purchase beef.

Interviewer: What else do you discuss? Like, such as price, cut, brand, color or anything else?

Sarah: Definitely the price and the cut and brand he would prefer me to go to a butcher if we were going to go and get scotch just to have a steak. But for all the other things like a beef stroganoff he doesn’t care if it comes from a supermarket or if it comes from the butcher down near the supermarket.

Interview participant Hanna talked to her remote partner to confirm her impression and make a decision about what to have for dinner.

Interviewer: When you’re purchasing premium beef do you ever discuss it with your Partner?

Hanna: Probably in the context of deciding what to eat I might discuss that.

Interviewer: Can you tell me more about it? Like what sort of things you discussed like a price, cut, brand or color or anything else?

Hanna: It would be, well I guess there’s two things if I’m cooking and I’ve gone the market and I’ve stopped to buy some things and I’m looking at the different meats that are there, I would then send a message saying there are some nice steaks here is that the sort of thing you feel like for dinner and she might say yes or no or if it’s her that’s cooking for dinner and she’s asked me to buy then I might say oh there’s this particular one that’s suitable for what you’re thinking of making and maybe send a photo if I’m not sure.

All three participants engaged with their families when making decisions about premium beef purchases. They used mobile technology while they were at the shops.

Usage of technology during shopping

Another theme emerging from the interviews was the usage of technology during shopping. All the participants use smartphones in their everyday lives and they take the device with them when shopping for food. Four participants mentioned using a mobile device was actually part of their shopping behavior, one participant used a mobile device while in the shop to communicate with her children, but the activity was unrelated to the shopping itself. One participant had their mobile device with them but did not use it while shopping.

Interview participant Brian used a mobile device to search product information on the internet, scan product QR codes or to communicate with his wife to make purchase decisions. He mentioned mobile devices were part of his grocery shopping routine.

Interviewer: Do you use your mobile device while you are grocery shopping? Brian: Yes, I use it quite a lot, like it’s part of my shopping.

Interviewer: What do you [do] to get more information about particular product when you don’t understand any information?
Brian: I do internet search, sometime if I’ve got a QR code I might use a QR code as well.

Interview participant Katy took her mobile device with her grocery shopping however, she did not use the device while shopping for any purpose. Lizzie used her mobile device to keep in touch with her children during shopping.

Interviewer: Do you usually take your mobile device with you during grocery shopping?
Lizzie: Yeah, I usually have it, because the kids are at home and so maybe they'll call me.

Interviewer: Do you use the mobile device while you're shopping?
Lizzie: No not anything to do with shopping I only use it for telephone calls.

Interview participant Cyrus used his mobile device during grocery shopping for internet searching. He searched for product related information on the internet when he needed more information about any product.

Interviewer: What do you do to get more information about particular product[s] when you don't understand?
Cyrus: I'll usually go in my phone and like Google the product back out any information I don't understand I suppose particularly if it’s ethical produce that’s kind of it.

Interview participant Sarah used her mobile device during shopping for internet searching and to communicate with her family. When she wanted to find information about any product, she googled the product to get more information.

Interview participant Hanna also used her mobile device during grocery shopping for product information searches and to communicate with her partner.

Interviewer: What do you do to get more information about the particular products?
Hanna: So sometimes I will look things up on the internet while I’m shopping.

All the mobile device using participants mentioned their experience using mobile device during shopping as being good and that it was convenient to be able to search for product information as well as communicate with their friends and family.

Interview participant Brian said it was very convenient and easy to use his mobile to communicate with his wife during shopping. Lizzie just used her mobile device to keep in touch with her children and anytime anywhere access made it easy for her.

Cyrus used his mobile device to access the internet during shopping and his experience using mobile device was very casual.

Interviewer: What is your experience using mobile during the shopping?
Cyrus: just very casual so I just kind a like look up what I to need to look up and then just make my own decision.

Interview participant Sarah mentioned she tended to miss voice calls in the shop, so she preferred to use text messaging to communicate with her partner. Hanna was also satisfied with her current mobile technology. She used her mobile phone to communicate with her partner and search for information online.

Information technology and Intrinsic Cues

Brian is the only interview participant who pointed out that his preferred method of communication with his wife is multimedia message (MMS) where he took picture of the product and added written descriptions. However, if he wanted quick answer (quick turnaround), he would use text messages or for instant contact he would use voice calls. In the specific premium beef shopping context he would call his wife sometimes to ask her about certain characteristics of products and follow up with visual information to show her the product.
Interviewer: what were your preferred method of contact with your remote partner using mobile technology such as SMS MMS voice call or photo sharing or any other method?

Brian: Probably that the three I would do it’s like MMS, take a photo is this the right one or is this look okay, text if I’d need a quick answer and if I want instantly, I’d use the voice call. I wouldn’t normally leave a voice message. I would make the decision if I don’t get any response.

Interviewer: You did say you use a mobile phone to communicate with a partner so in the beef context so how do you communicate when they’re not with you

Brian: Normally voice call and then maybe follow up with photos to actually say you know this is what I’m looking at. Very rare would it be a video call.

The researcher also inquired specifically about the kind of information participants would want to share if they had suitable information technology readily available. All six participants were interested in sharing information with their remote partners using such technology.

When asked if they would like to share premium beef product quality cues (intrinsic and extrinsic quality) in the future, Brian mentioned he would share or discuss all the product information with this partner to make a decision:

Interviewer: Would you like to share intrinsic quality cues (cut, color, marbling, fat content) and extrinsic quality cues (price, country of origin, animal welfare, quality labels, brand, place of purchase, packaging, expiry date) information with your shopping partner or remote shopping partner while you are in-store to make a decision or for other reasons?

Brian: I would probably share just about all of those, I’m not sure animal welfare because I think we’d assume that most of the butchers here are ethical so we would expect it we probably wouldn’t discuss it so yes it’s something we’ve expect from our suppliers but all the rest at some point we’ll probably discuss nearly all of those. Obviously not at the same time but at different shopping excursions are different purchasing times we’ve probably covered just about all of those including fat and texture and those sorts of things.

When asked specifically regarding the kind of information he would like to share, Brian’s preference was a combination of pictures and text or calls however, it depended on how much time he had. He preferred pictures because with the picture he could show product features such as color, cut or texture of the meat. With call or text, he could confirm and explain to his partner about the purchase:

Interviewer: How would you like to share information with your remote shopping partner using mobile technology?

Visual information (picture or video) Textual information (text messages) Anything else?

Brian: probably combination just a standard picture and voice or text but that depends you know how busy I am.

Interviewer: why would you use the picture and why would you use the text?

Brian: Picture just because it’s yeah it’s a lot easier to say this is you know what I’m looking at yeah so it’s coloring or style or cut sort of thing just to confirm that that’s what we’re looking for and then text some time to confirm or voice you know to say well this is what this look right you know because my wife does most of the cooking so I would confirm that that’s what she’s looking for yeah just confirmation most the time.

The other participants also wanted to share information. Lizzie was skeptical regarding the value of visual impressions regarding beef quality but could imagine sharing pictures of other food like birthday cakes:

Interviewer: Would you use a photo to show your collaborator the physical properties (color, marbling or cut) of the meat?
Lizzie: only if they needed or only if they asked me to do that. I wouldn’t think that would convey information it’s strange, because you can’t because there are so many qualities about it that you can’t catch in the way it looks.

[...]

Lizzie: I wouldn’t. I can’t imagine doing that with something like meat, well I can imagine doing it with something like a birthday cake or something like that.

Hanna preferred text messages however, she thought sharing a photo as more efficient as with pictures she could show product characteristics.

Hanna: Not video, probably text would be my preference if that works but sometimes a photo is more efficient or if there’s lots of information then sending photos can be easier.

Brian mentioned that the lack of a dedicated application means they were already doing it by sharing photos and text. However, he was interested in a shared application where he and his partner could collaborate in real-time. Katy also mentioned something like Facetime (video calling application) where both parties could interact in real-time to choose the product.

Brian: Yes, if that was available and I’m guessing we sort of really doing that at the moment with taking pictures and talking about it. but if there was a shared application that we could both use at the same time you know so that she could because if you say well this is what I’m looking at but if you had an app I can use QR code you know I swiped the QR code sends her the QR code she can look up the same information at home and we can then discuss what we’re looking at the same time I think that might be useful.

Katy: Face time or something like that wouldn’t you know just go ahead have a look check this out so what do you think of that does that look the right size of that is it the right color, does that look nice I think so.

Discussion

Existing research in the collaborative shopping context has explored various domains and technology to support collaborative tasks as technology has advanced and mobile devices have created opportunities for consumers to access information, evaluate and interact with other it has changed how people connect with each other during in-store shopping. However, there is a research gap of understanding how technology impact consumers’ physical shopping. in contrast to existing research, this research explored in-store remote collaborative shopping and how mobile technology supports their collaboration.

The study found that the main trigger for remote collaboration in the premium beef context was confirming the purchase. When shopper wanted to confirm whether they were purchasing the right meat product, the right brand and at the right price they communicated with their partner to confirm their preferences and choices with them. According to Wilson human’s needs for information seeking arise when they need to satisfy some goals. Information seeking process start when consumers recognize the needs for the information. Our study reveals that in remote collaborative contexts, consumer not only seek information to satisfy their purchase goal but also to satisfy their partners need and preference. As consumers who are single does not collaborate with anyone during sopping, they are more dependent on their knowledge or internet. Previous research has found that consumer rely more on human source for information compare to online source, because they are easily accessible and trust worthy. However, this study shows that regardless of communicating with human source some of the participants search for information online, and consumers who are single would like to get information from crowd source. And lack of domain specific online information source sometimes makes it difficult for them to get specific product related information.

Previous research found that price, brand, quality, origin, cut are some of the most information quality cues consumers search for during purchase. This work aligns with previous findings that consumers discuss similar information during remote collaboration.

Similar to the previous studies, this study identified mobile devices played a vital role during in-store
remote collaborative meat shopping. Consumers relied on mobile devices to communicate with their remote shopping partners as this was the only mode of interaction with remote shoppers when consumers shopped alone. The most common method of communication was a combination of photo and text message, as visual information allowed consumers to show the product attributes to the remote partner; next was text message followed by voice call. Most of the consumers preferred a combination of textual communication and sharing visual information with a remote partner. The shopping situation also affected consumers’ choice of communication methods, for example, if they had less time to do shopping, they would make a voice call for an immediate response. Previous research has shown that collaborative task is time consuming.

Also, the shop environment was found to be influencing the choice of communication methods. Some consumers avoided voice calls in the shop due to the noisy environment. Mobile technology was the only means of communication with a remote shopping partner used and most of the consumers’ experience of using a mobile device to remotely collaborate with their remote shopping partner was positive. However, they were interested in using dedicated mobile applications for collaborative premium beef purchases, where they could communicate with their remote shopping partners in real-time to seek opinions, share experiences or information, or discuss product quality, type and price.

We’d like to speculate that systems (apps) that would allow participants see, for example, color-corrected images of the product (counterbalancing colored light may be present at the shops), that would support ways to annotate product and packaging, and that would provide easy ways to search for additional information and integrate the information into a view of the product would have the capacity to transform shopping in this specific high value and high yield market. Extrinsic quality cues which is mostly the data printed on labels attached to products (brand name, origin, . . . ) is easy to share and also to google if desired. It is the intrinsic quality cues that are notoriously difficult to share using commonly used communication technologies. We know from Brian they are sharing information about those however using standard text and photo sharing are woefully inadequate considering the cues are about color, marbling, possibly touch (response to pressure) and other sensory demanding assessments which is why we are thinking beyond leveraging commonly used social technologies as explored by Morris.

Conclusion

Contribution and theoretical implications

Collaborative shopping allows consumers to make better-informed decisions in a more social environment, which may lead to better purchase decisions. The context of collaborative premium beef shopping provides a specific domain, with specific requirements to be considered as the defined problem-space for applying information system theory to the problem of in-store and remote collaboration.

This research makes several contributions to the body of knowledge, firstly it has provided insight into remote meat collaborative shopping and how consumers use mobile technology to support their remote collaborative shopping. To the best of our knowledge, this is the first study that has explored premium beef consumers’ collaborative shopping. Prior studies mostly focused on technological support in collaborative shopping context. This study contributed to the knowledge and understating of premium beef consumers’ remote collaboration.

Furthermore, this study has identified factors that influence premium beef consumers to remotely collaborate and their communication preferences for using mobile technology. This study can provide base understanding of remote collaborative shopping in the meat shopping context.

Practical implication

In general, this study can be used by the HCI and information science community to understand how collaborative in-store shopping works regarding meat shopping. One of the main factors for remote collaboration was the relationship status of the consumers. This indicates that consumers rely on close connections when seeking information, which offers clues for creating systems that will support better communication for couples. Another practical implication derived from the study was how to better crowd source information for
meat. As people who are single, tend to look for information online. This creates opportunities for social platforms, where consumers could collaborate and exchange meat related information. Also, local meat producers could provide more accurate product information to satisfy customer needs.

Limitations and future work

This research only focused on premium beef consumer’s remote collaborative shopping with remote collaborators and mobile technology. This limits the number of participants who took part in the qualitative study. Future studies should consider other collaborative shopping contexts.

Data collection was another limitation of the research. As this research only focused on the specific area it was hard to find participants for the data collection. Also, participants came from various backgrounds, but all were meat consumers. Only a small number of people took part in the study. As such, the findings may not be generalizable to people who are not from the same cultures or do not consume meat.

The data collection method was only through interviews. Future studies should consider other data collection methods to obtain more data and participants.

This study helped us to understand premium beef consumers’ remote collaborative shopping and how they used mobile technology to communicate with their shopping partners. Future studies could focus on other types of meat consumers’ remote collaborative shopping and how they are using technology to meet their information needs. Also studying the collaborative shopping behavior of meat consumers in the context of in-store can help us to understand their collaborative information behavior.

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