Consumer communication when eating out of home: the role of technology

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Abstract

Purpose
Despite growing demand, little product information is available when eating out. Information that is provided is often not well understood leading to a lack of consumer control and acting as a barrier to healthy food choices. The AIDA model which highlights the key stages of effective marketing communication (Awareness, Interest, Desire and Action) is applied. Information provided through technological solutions is examined to provide clear guidance on future use.

Methodology
Exploratory qualitative methods through four focused group discussions, allowed consumers views to be probed in-depth and key themes to emerge through thematic analysis.

Findings
In addition to the four key elements of the AIDA model, Accessibility and Relevance are found to be key constructs relevant to food information provision. Accessibility highlights the need for quick, and clear data display, while relevance stresses how salient information is key to each consumer. Technological solutions may offer the most responsive, effective and trusted way to provide enhanced information.

Practical Implications
With increasing consumer demand for clear information, a competitive advantage can be gained through the provision of personalised enhanced dish information when eating out. Findings from this study highlight consumers desire for online (app or web-site based) platforms.

Social Implications
The provision of enhanced food information when eating out has clear public health implications and may influence choice leading to a reduction in non-communicable disease.

Originality and Value
This study, evaluates consumers perceptions to the provision of enhanced food information out of home providing novel insights and guidance for both managerial and societal impact.

Keywords

Eating out; food choice; food information; Apps.; communication

Introduction

Eating out has become an integral part of modern life for many people; one in six meals are consumed out of the home in restaurants, cafés or workplace canteens in the EU (Benelam, 2009). Compared to meals prepared at home, the consumer often has very little control or knowledge of the ingredients, their provenance or nutritional profile. In fact, public food settings particularly are environments where there is an increased offer (availability), placement and promotion (accessibility) of unhealthy calorie-dense food and beverages (Evenhuis *et al.,* 2018), and there is a positive association between the rise in eating out and increasing rates of obesity, a major health and wellbeing societal challenge in many Western nations (Bezerra *et al.*, 2012).

There is however growing consumer interest in information on food eaten in this setting including the nutritional content of dishes, the origin of ingredients and the presence of possible allergens (Banterle *et al.*, 2012; Karamanos and Hobbs, 2018). Some argue that it is a fundamental right to know what we are eating while others more pragmatically highlight consumers' appetite for increased information regarding purchases of any kind (Case, 2012). In recent years, there has been a marked increase in the amount of information provided to consumers about the nutritional and ingredient content of meals but mainly in the retail sector and minimal while eating out. Regulation within Europe, for example, 'Provision of food information to consumers' (EU No 1169/2011) requires the clear labelling of the presence of 14 possible allergens for pre-packaged food and food served from December 2014. From 2021 this requirement is extended in the UK to food that is made and packed where it is to be sold, the 'Natasha's Law', named after a teenage consumer who suffered an allergic reaction after eating a baguette purchased from Pret A Manger which contained sesame that was not declared on the label (UK Government, 2019). Additionally, since 2016 there is a

requirement for retail products to display, in the same field of vision, the energy value and amount of fat, saturates, carbohydrates, protein, sugars and salt per 100g or per 100ml (EC.Europa.eu, 2015). The 2010 Patient Protection and Affordable Care Act in the USA goes further requiring nutritional information to be posted in many restaurants and fast food places (Gregory *et al.*, 2014), and Ireland and the UK have consulted on a similar requirement (FSAI, 2016; Public Heath England, 2018). However, in many countries, very little information is available to consumers, and indeed studies have found that where increased information is provided it is not having a strong influence on consumers' choice (Westenhoefer, 2013). Further, there are indications that the information is often not communicated in a consumer-friendly manner (Bray *et al.*, 2019).

Currently, most information provision on food when eating out is delivered on a printed menu. This medium has, however, only limited space for nutritional and other enhanced information to be provided. Where this is given it is usually limited to overall calories of the dish and the presence of any key allergens (Breck *et al.*, 2014). There is some evidence that such limited additional information can influence consumer choices (Roseman *et al.,* 2013), however findings in this regard are mixed. Krieger *et al.* (2013) for example found that while females were more likely to select lower calorie dishes when presented with nutritional data, male consumers were not. The physical limitations of a printed menu render it impossible to deliver personalised health messages that each consumer would like to receive in a clear and simple manner.

Another method of providing enhanced dish information is through a dedicated menu board located within the establishment (Conkin *et al.*, 2012). Through this it is possible to

communicate greater depth, but it does push all information to all consumers and individuals may have to exert significant effort to find the information of importance to them.

Studies have highlighted the potential that technology based applications (apps) may hold in providing detailed but clear individualised information (Hartwell *et al.,* 2019). Through utilising web or mobile apps, data provided can be tailored to the user and can promote greater engagement through interactivity (Appleton *et al.*, 2019). The potential of such web-based solutions is being enabled by the rapidly growing numbers of smart phone users. Such technology is estimated to be used by over a third of the world's population with penetration rates of 68.4% in North America and 64.7% in Western Europe (Statista, 2019).

A small number of smart phone apps have been developed and marketed to provide consumers with enhanced food information (Flaherty *et al.*, 2018). Examples of these include 'Tapingo' which enable university students to order food from their canteen (Barfield, 2014), and 'SmartAPPetite' which encourages people to eat local and healthy food. Interestingly, this latter app requires personalisation, where consumers are prompted to provide information about their nutritional goals, and the information provided is personalised accordingly (SmartAPPetite, 2016).

This study researches consumer's attitudes toward seeking and receiving food information. It debates the current and possible future role that ICT (Information Communication Technology) apps can play in delivering enhanced and personalised information. The opportunities for increasing consumer engagement with and comprehension of dish nutritional information in an out of home setting are also reviewed.

Literature review and conceptualisation

Eating out

Many different terms are used in the literature to describe eating out, and eating out does not carry the same meaning across cultures. Warde and Martens in their seminal work from 2000 describe eating out as a *"socio-spatial activity involving the commercial provision of food"* (Warde and Martens, 2000 p.46). For this study, the term eating out includes the purchase and consumption of a meal outside of the home in restaurants, pubs, fast food outlets or workplace canteens. The consumption of pre-packaged food such as sandwiches purchased from a retail setting are not included since the informational possibilities on the products' packaging that can be considered pre-purchase are quite different, and different legislative demands are currently placed upon this provision in many countries.

Consumers increasing demand for information

Perhaps due to increased media coverage of health issues, consumers have become more health conscious and are increasingly taking greater interest in the healthiness of their food choices (Filimonau and Krivcova, 2017; Bray and Hartwell, 2018). Particularly, consumers have shown desire for more healthy food, including dishes that consist of fewer calories than usually encountered (Roseman *et al.*, 2013). However, it is important to note that not all consumers wish to receive the same information. Price *et al.* (2016) identified diverse kinds of information that different consumers are seeking when selecting food items especially out of home. The factors uncovered include information relevant to religious constraints; allergen information; environmental impacts; specific dietary requirements; production methods; provenance as well as general health and nutritional factors. There is a distinct challenge to providers to make such varied and detailed information available. Further, if information is provided, consumers often find it difficult to process such a plethora of data in a timely manner. Even if two people wish to receive the same information, they may both be

dissatisfied by its provision, as it could be too difficult to understand for one, whilst not meeting the detailed needs of the other (Hartwell *et al.,* 2019).

Information provision

With such a wide range of consumer informational demands, there is a clear challenge for operators to be able to deliver this information in a comprehensible, meaningful and trusted manner (Price *et al.*, 2017). Food providers can satisfy legal requirements by delivering information in a dry factual manner that is not necessarily received, processed or well understood by the consumer (Sunstein, 2013). On the contrary, there is evidence to suggest that consumers are often overwhelmed by the information presented (Mai, 2013), and can struggle to assess its value, usefulness or quality (Ruževičius and Gedminaitė, 2007); factors that could lead to disengagement altogether. Other studies have shown that consumers are often not able to process and understand the information that is currently provided due to cognitive limitations; since the information requires some prior knowledge and mathematical ability to process (Persson, 2018). Time pressure at the point of purchase has been highlighted as a further constraint (Persson, 2018). One study found that 78% of consumers find the information provided on food packaging difficult to understand (Zuehlsdorf and Spiller, 2012).

Persson (2018) highlights that to be effective, information must be concise, simple, reliable, accurate and complete, but also communicated to the consumer in an individualised way. There is a growing understanding in this area that the tailoring of information provision to different consumer groups or even each individual consumer may be the only way to satisfy current needs in a clear and comprehensible manner (Souiden *et al.*, 2013).

Food systems have evolved to be complex and although the end consumer has some knowledge, information is vast and difficult to interpret (Bildtgard, 2008). Moreover, food service is anonymised and the consumer alienated from the production, therefore, it is increasingly difficult for the consumer to judge the qualities of food through traditionally used methods such as personal interaction or sensory judgements (Kjærnes, 2012). Trust is an important component of foodservice, in times where the consumer takes a less active role in production, information therefore providing transparency is important. Catering operators that are open and transparent, demonstrate commitment and trustworthiness to their clients.

In summary, consumers are demanding more information, but where this is currently provided, there is not clear evidence that it is impacting on choice. To be effective, studies have highlighted the need for information to be presented in a clear, trusted and easily accessible manner, and tailored to the needs of each individual consumer.

Communication Theory

The provision of nutritional information is communication to the consumer with the potential to influence their purchase decision. One of the earliest and most widely cited marketing communication theories is the progressive AIDA model which simply outlines how a consumer must have Awareness of a product or issue; have an Interest in it; develop a Desire for it before any Action can occur. Commonly attributed to St. Elmo Lewis (1903), this model has appeared in several subtly different forms over the years with different researchers proposing slightly different acronyms including various constructs.

Given that there are many precedents adapting the basic AIDA model to specific contexts, it is useful to reflect on the communication aspects that have been discussed in the literature concerning the role of enhanced product information in eating out food selection. Firstly, the

need for information to be presented in a clear manner that is easy to access and process was discussed, and secondly, the need for the information to be relevant to each individual consumer through tailoring the information provided. Figure I depicts a framework integrating these two new constructs within the traditional AIDA structure.

{Insert Figure I about here}

Technological solutions offer the potential to personalise communication including health messages (Flaherty *et al.*, 2018). Further, from a business perspective such tools could be used to add value and target specific customer segments (Flaherty *et al.*, 2018), however no research has been undertaken to understand consumer interest in such initiatives, likely adoption rates or what features such tools might incorporate. This study aims to fill this knowledge gap.

The primary research presented here will build upon our reconceptualization of the AIDA model, and assess the potential for a technological solution to address the need for salient information in an accessible manner on a personalised basis. We will probe consumers' attitudes towards the use of app technology in an eating out context and assess its current and desired future use in this domain.

Methodology

Since research in this area is nascent and fast moving it is necessary to approach the research questions in an inductive manner. Further, since idea generation and discussion to develop and debate current and possible future practice was necessary to the aims of the study, a group-based approach was adopted through focus group discussions.

Focus groups were designed and moderated along established guidelines (Krueger and Casey, 2014). Four focus groups were conducted in the United Kingdom, two with staff from large companies who had access to and regularly used (at least twice a week on average), a work place canteen, and a further two with students who accessed on-campus food service. Focus groups contained between six and eight participants each, with a total sample of 28 diners. Following the guidance of Tuckett (2004) data collection was guided by the descriptive saturation principle in qualitative research. Preliminary analysis of the four focus groups highlighted that descriptive saturation of the data had been achieved such that no new data themes emerged in the latter group. Other exploratory studies in the food sector have adopted a similar approach (see Nandonde and Kuada, 2018; De Silva Kanakaratne *et al.,* 2020).

The research was not limited to participants dining in their work/study place canteen, and also considered other out of home dining experiences such as restaurants or fast-food outlets. Access to, and use of eating-out was the main inclusion criteria. Participants were recruited through convenience sampling while gender balance and a range of ages was assured. The sample was typical of a normal population with some having allergen requirements. To reduce any possible bias in the response, the presence or absence of food allergies or particular dietary requirements were not discussed in participant recruitment. The composition of each focus group is summarised in table I.

{Insert Table I about here}

Since it is well documented that technology adoption varies between generational cohorts (Taipale *et al.*, 2018), each focus group included participants of similar ages providing a

degree of commonality in terms of technological experiences. It is considered best practice in such discussion groups to cluster participants in such a manner to ensure that all participants feel comfortable, and that they feel fully included to facilitate the richest possible discussion. Each participant gave informed consent prior to the commencement of the focus group discussions and ethical approval was granted prior to data collection. It was not an aim of this study to identify differences between different consumer groups, and after preliminary analysis of the four focus groups data saturation had been reached.

An experienced moderator convened each discussion and was joined by a trained observer, who was impartial to the research. The observer monitored the group discussions to ensure that all aspects were being addressed and to interject if they observed any group member's contribution had been missed. To ensure that each group discussion followed the same structure and addressed the same key objectives, the same moderator and observers conducted each group, and a structured discussion guide was compiled with a broad, open-ended questioning route and prompts. This discussion guide was developed from the literature and comprised probes relating to current use of technology when eating out; the functionality sought and participant feedback on contemporary provision. To introduce the topic and ensure that all participants were relaxed the moderator identified how eating out was defined in this study, and discussions identified how often each participant eats out of home during a normal week, and the aspects that were particularly liked or disliked. Current uses of technology to aid eating out behaviours were initially collated through an individual writing task before being discussed in each group. Participants were asked to consider possible future technology applications that they would consider useful in this context. Finally, the concept of a smartphone app that might provide enhanced dish information in a personalised manner was introduced and discussed by each group.

The protocol was pre-tested with a small number of one-to-one interviews (n=6) prior to use to ensure that the parlance was clear, wording used was grounded in the consumers own vocabulary and initiated a free discussion (Krueger and Casey, 2014). In keeping with qualitative research principles, the moderator did not follow this guide rigidly, and the discussion was allowed to freely develop to ensure that all possible ideas could emerge and be discussed. A relaxed and informal tone was maintained and moderator involvement was kept to a minimum to ensure that discussions progressed freely without unnecessary intervention. Each group discussion was around one hour in length (mean length 62.40 minutes).

Discussions were recorded and transcribed verbatim. Data were coded manually within the NVivo software package using open and axial coding to develop a template of emergent factors (King and Brooks, 2016), which was refined through iterative coding and recoding to ensure robustness of the findings.

Findings and Interpretation

There was a range of differing eating out practices among the research participants, however all ate out of home (according to this study's parameters) between twice and seven times a week. Key themes reflected participants attitudes towards eating out and information provision, current uses of technology in this setting and future technological applications. These themes are summarised in Table II.

{Insert Table II about here}

Information Provision

While our participants reported enjoying eating out, and particularly appreciating the quality and variety of food served, there were aspects that they disliked. Clear frustration was expressed in each discussion group around the inability to understand the nature and properties of dishes when eating out, with the lack of sufficient information about dish ingredients, nutrients and preparatory methods being discussed. One participant commented:

> *"Yea, it's not just the calories, but I think it is just about the food in general and how it is being prepared and um what goes into it. […] we continuously get frustrated by the lack of information…"*

This comment highlights that for some consumers there is a general desire to understand more about what they are eating; others had particular dietary requirements such as vegetarian or gluten free, and experienced difficulties informing such choices:

> *"Yea, I'm not vegetarian, but the rest of my family are, including my children. So it is quite difficult to, to sometimes ascertain what's in it and how it's being cooked […] you never know when eating out."*

Further to this, one participant had a potentially dangerous nut allergy and found eating out very difficult indeed due to a perceived lack of trustworthy information:

> *"Peanuts, I'm allergic to peanuts and it's just impossible"*

Many participants expressed strong interest in understanding better what they are eating for a variety of different reasons. One participant in our research compared eating out with the purchase of food in grocery stores, commenting:

"It is not as easy as it is. Where in the supermarket you can look at the back or like researching before you go but in the restaurant you don't know."

Others suggested that through increased availability of nutritional information on food products in a retail setting they have become more informed and would like to extend this informed decision making practice into the eating out arena. Discussions raised the notion of control, with participants expressing the desire to know what they are eating more fully such that they could be more in control and empowered to make more informed consumption choices. Some expressed dissatisfaction with hospitality service staff where they were not trusted to be knowledgeable or caring enough to provide accurate information if it was requested:

"And even sometimes you ask them and they just kind of act like they know but you can tell that they don't. "Or they just lie." "You wouldn't be able to tell."

However, whilst greater information provision was generally sought, there were clear differences between participants around the nature of information demanded. For some, the presence of particular ingredients was important; others were interested in provenance or the calorific content and nutrient profile of dishes. Interestingly, however, providing such detailed dish information to all consumers could prove problematic in unexpected ways.

Some commented that they would rather not know, and that actually the inclusion of information such as the calorific content of dishes to menus detracted their enjoyment.

"I really don't want to know exactly what's in my food. I just want to eat it. It's actually putting me off now."

"I don't like to be pestered"

From this discussion, it is clear that there is a strong desire from some consumers to receive enhanced information on dishes when eating out however this provision needs to be managed carefully to ensure that each consumer can receive just the insight they want and they are not overloaded with information. Further, the concern that operational staff are not always trusted to have sufficient knowledge to address questions raised by diners has not been found in previous studies and provides an additional efficacy to communication through other means.

Current technology use

Technology use has become embedded into our daily lives, and in the eating out context has been embraced in a range of different ways. Discussions identified a wide range of ICT functionality used to support eating out practices. These factors can be summarised in three groups: 1) Marketing; access to offers, discounts or loyalty schemes 2) Enabled convenience; online booking, viewing a menu in advance, maps and directions, ordering deliveries and paying for food consumed 3) Access of additional information; photo and image sharing, customer reviews, identifying unfamiliar ingredients and translation of foreign menus.

~~It is notable that p~~Participants described smartphones as the platform for most of their technical engagement relating to eating out. Several functions were accessed through web-

browsers on smartphones e.g. viewing an establishment's menu, reading reviews and seeking discount codes. While other information was accessed through apps that were dedicated to either an individual restaurant chain or service provider.

"terms of ordering take always I use apps all the time. I just do it on my phone."

"I would always check out a restaurants web-site for menus and prices on my phone before booking"

It is ~~those~~ apps ~~classified here as providing~~that provide access to additional information that may hold the potential to address the concerns identified by our participants around wishing to understand more about dishes when eating out. However, current exchanges of information only allow subjective peer to peer assessment of an establishment and most do not provide factual dish level information from a nutrient and allergenic perspective.

Future technologies

Given the current widespread use of technology by participants, avenues for future potential usage were identified. The first area introduced by participants centered around the introduction of digital menus provided on tablets that enabled consumers to view pictures of each dish, order, and possibly pay electronically. While this was identified as a potential future innovation, several participants noted that such a digital service was already provided in a small number of establishments and was generally liked for its novelty value.

The concept of using a smartphone app to access an establishment's menu and gain enhanced dish information in a personalised manner was discussed. Participants expressed enthusiasm toward the use of such an app and suggested that they would keenly engage with such a

technological solution at least some of the time. It was thought to be of particular use to people who were trying to control their eating:

> *"It's a really interesting concept, I think, and I think it will help a lot who are on diets."*

And for those diners who may have allergies, intolerances or specific dietary preferences such as vegetarianism. One participant framed the discussion well when ~~they~~ he said:

> *"I think it is useful […] because a lot of the time my friend is really fussy about what she can eat and they also always ask the waiter or waitress does this have this and this in it and sometimes what they respond you don't have a lot of confidence in it. And you be like, are you sure, am I going to have a reaction to that? And you should know this a bit better, it would be nice not having to ask and to worry and to know that this is going to be factual."*

The notion of the consumer gaining control over what they were eating was felt strongly by some participants, and it became clear that our participants would trust information provided in such a manner more than they would information provided by staff. It was commented that such information provision would make them more confident in their choices, would make it easier for them to eat-out and consequently make them more likely to patronise establishments offering such functionality.

One group member questioned how the provision of enhanced dish information might make dining in a restaurant or canteen ~~intolerably~~ inefficient, commenting that:

"[…] it will take up ages though to start ordering what you actually want."

However, through discussion, the notion that the information provided could be tailored to each consumer providing each with only the information that was of salience to them was outlined. Through this, it was thought that such information provision might actually make it quicker for diners to be able to identify dishes that meet their dietary requirements and preferences and avoid concerns of 'information overload'. The need for the personalised provision of information was very clear to a number of participants, with one commenting:

"Surely to be able to give you accurate information they need to know your details. The reason why I don't like those things is because I don't think it represents the person. So if I ever was going to be interested in that it would have to be personalised."

The opportunity to consider a menu in advance of the dining occasion was discussed. Several participants commented, for example, that they could consider their workplace canteen menu before leaving home, providing them with the opportunity to proactively take a packed lunch with them if the offered dishes were not suitable to their needs.

In-spite of positive discussions around the concept of a smartphone app providing personalised enhanced dish information, the notion was not universally liked, with one participant commenting:

"I use my phone a lot to buy things but I wouldn't want to go to a restaurant and do it. If I'm going out for dinner I want to put my phone in my bag and that's it."

While this did seem to be an isolated view, a small number of other participants suggested that they were simply not interested in understanding more about the food they were eating.

"Like obviously you want to be healthy, but if not that bothered […] I don't think so. I have never ever looked what is in something before I eat it."

Those who were keen to understand the composition or nutrient profile of dishes asserted that any dynamic menu should still display all dishes available rather than just those which fit the profile of the user, possibly in a less prominent manner, thus enabling the user to 'disobey' their usual choice criteria depending on their mood or situation. This was thought to particularly apply to any elective calorie limit that had been selected with one participant commenting that they

"reserve the right to be naughty".

Discussion

This study has shown that consumers are aware of the need to consider the constituents and nature of the food that we eat, and many have a keen interest in learning more about what they consume. This confirms the findings of previous studies, which have also commented on growing awareness and interest in information on food eaten out of home (Banterle *et al.,* 2012). It is notable however that the level of interest is not equal for all consumers; for some it is considered a fundamental right to know what they are eating, while other participants suggested that they would rather not know or be informed, and the presence of nutritional information could even dissuade them from dining in a particular venue altogether.

For those who are keenly interested in the composition and properties of the food they consume there is currently frustration when information is not available. These consumers speak of a need to access detailed dish information in order to gain control and trust in what they are eating. The role of trust in food is mainly influenced by humanistic understandings of trust and can be categorised as interpersonal trust between individuals and institutions. Consumers do not only value the literal message of food information but also the nuance of that message; menu labelling can be seen as a key communication tool between foodservice operator and consumer. Hereby, consumers make judgements about the trustworthiness of the food operator in the absence of face-to-face contact (Tonkin, 2015).

This study has found that trust does not just exist between individuals and institutions, but also between individual diners and their respective foodservice hosts. Waiting staff were not always trusted to be able, or caring enough, to provide accurate information on food items. This suggests that secondary and objective means of data presentation are required for consumers to feel that they can control their food choice. Further, the information needs to be available to the consumer on-demand and in an easily accessible format. Previous studies have highlighted the efficacy of digital menus, citing their ability to present extended product information (Hartwell *et al.*, 2016), however, if this information is not presented carefully it can 'overload' the consumer (Mai, 2013). Ruževičius and Gedminaitė (2007) suggest that if data is presented in a generic manner diners can struggle to assess its value and usefulness which naturally impacts engagement and effectiveness.

In parallel with other studies, most recently Price *et al.* (2016), the research conducted here has highlighted that not all consumers wish to receive the same information. Consequently,

for information to influence actions it must be relevant and salient to each individual consumer. Through this study, it has emerged that the required customisation of information provision could be most effectively facilitated through personal ICT solutions. The concept of using a smartphone app to access personalised information on the nutrients, ingredients and allergens was viewed positively by many participants. It would appear to offer consumers the control that they seek over what they eat, and would deliver the information through a medium and process that they trust.

The findings from this research confirm the applicability of communication theory to the eating out context. A key negative factor discussed by participants was the perceived lack of control and insufficient information about, dish ingredients and nutrients. There is a clear need to provide greater communication to address this, but any such communication needs to be considered carefully to ensure that it is well understood and salient to each consumer. The AIDA model (Hanlon, 2013) provides a clear framework for communication, and the research presented here confirms the usefulness of the additional elements proposed in figure I. Further, the data presented provides a clear guide to the key considerations at each stage of the communication process when applied to an eating out of home context.

Within AIDA, *awareness* in this context links to consumer familiarisation with nutritional information in the retail sector while *interest* is driven by consumers' dietary requirements and motivations to select the most healthy or appropriate dish. From the primary research, some consumers have a clear *desire* to receive additional dish information. Studies in food selection have highlighted the challenges of clearly communicating the potentially complex array of food data in an accessible manner (Nocella *et al.,* 2014), and as such *accessibility* and the need for individual *relevance* and saliency are underscored and proposed as essential

additions to the communication model in this context (figure II). Specifically, *accessibility* highlights the need to make information quickly, easily and clearly available. *Relevance* and saliency stress the necessity for personalized information delivered through a tangible, objective and thus trustworthy medium. When delivered in an *accessible* and *relevant* manner, consumers are more likely to act upon the data presented to make more informed choices, leading to more confident *actions,* and for some, making the eating out process easier, more enjoyable and potentially healthier.

{Insert Figure II about here}

Conclusion

Studies have clearly demonstrated that consumers have a strong desire to be more informed about what they are eating (Banterle *et al.,* 2012), and through enabling this, diners will be more confident in the choices that they make, and eating out will, for those who have particular dietary needs become a lot easier. Industry should seek to develop such solutions to ensure that it is possible for consumers to be confident about provision. Further, for some consumers, enhanced information delivery is likely to increase their dining enjoyment, and increase their likelihood to patronise establishments which provide such communication.

This study is the first of its kind to consider both a theoretical conceptual framework as it relates to food messaging and the needs of an increasingly discerning consumer in a real life eating out context. Through uniquely applying marketing communication theory to the context of eating out and food choice a greater understanding is brought to best practice within the hospitality industry. It is argued that electronic provision is most suited to meeting the challenges of providing relevant and salient food information to each individual

consumer. Participants in this research demonstrate a clear willingness and desire to embrace such provision if it was customized to their own individual needs. The insights identified can be realistically and viably accomplished by operators providing clear consumer benefits and thus competitive advantage. The potential impact of practical advances in this field are broad, not only influencing consumers' enjoyment, sense of control and trust but also helping the sector to improve accountability and effective communication.

Limitations and directions for future research

A limitation of qualitative research is the inherent small sample sizes. While the data presented here is saturated, no claims of generalisability can be made. Notwithstanding, the hearts and minds of the participants have been represented providing clear guidance to the sector. The research was conducted in the UK on a highly dynamic topic. Future studies should replicate this work to maintain currency and investigate the applicability of the findings presented here to other territories. Further, additional research could usefully elucidate the caterers perspective.

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Table I: Composition of Focus Groups.

	Total participants	Number of male participants	Number of female participants	Setting
Focus Group 1	7	4	3	Company employees
Focus Group 2	6	3	3	Company employees
Focus Group 3	8	4	4	University campus, students
Focus Group 4	7	3	4	University campus, students

Table II: Summary of Data Themes

Information Provision	Lack of sufficient information
	Ingredients, nutrients, preparatory methods (important for those with dietary requirements)
	Expectation for information provision growing.
	Controlling food intakes
	Trust in service staff
	Varied informational requirements
Current technology use (web-pages & apps.)	Marketing
	Convenience
	Additional Information
Future technology use	Enhanced digital menus
	E-payment
	Personalised enhanced dish information
	Pre-ordering

Figure I: Framework depicting the stages of communication in influencing consumers eating out food choices.

A – Awareness of the information;

I – Interest in engaging with the information;

A – Accessibility of information provided, including ease and speed of access and ability to process and comprehend the information;

R – Relevance and salience of the information to the individual consumer;

D – Desire to act upon this enhanced knowledge;

A – Action. Choice influenced by this information provision.

Figure II: Summary of the Communication Stages influencing consumers eating out food choices and key components.