



# The use of an online completion test to reveal important attributes in consumer choice: An empirical study on frozen burgers



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## ABSTRACT

Consumer behavior surveys in the online environment have been encouraged, but its application needs further investigation. Completion test is a projective technique that can reveal the deepest thoughts and feelings of consumer, and can be used to identify the attributes of a product that they valorize. The main purpose of this study was to discuss the conduction of the completion test in an virtual environment and present an online empirical application. The study focused on consumer choice regarding frozen burger, a widely known product that has gone through innovation. Using as stimuli images of couples in the supermarket with incomplete dialogues, a two-in-one online completion test was carried out with 357 respondents, focusing on the main attributes for consumers at the moment of burger purchase, and in the estimation of a price range through the consumer internal reference. As the results of the empirical study were comparable to secondary data, the online application of the completion test was considered valuable, besides being convenient and capable to yield rich information.

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## 1. Introduction

The online survey on consumer behavior has been encouraged for a long time (Bachmann, Elfrink, & Vazzana, 1996), but there are still challenges to be achieved. Mastering the use of modern and flexible tools to gather information on food purchase decision is very relevant. The understanding of what consumer wants involves a dynamic process (Grunert, 2002; Pieniak, Verbeke, Vanhonacker, Guerrero, & Hersleth, 2009) and it is determinant to the success of a product (Carrillo, Varela, Salvador, & Fiszman, 2011; Furst, Connors, Bisogni, Sobal, & Falk, 1996).

In the 1990s, consumer researchers commonly sought to elucidate the factors that determine food choice and purchase, e.g., price, taste and quality (Furst et al., 1996). Nowadays, they also seek to explore the behavior focusing on different aspects, e.g., the preference of consumers for foods with new attributes and appeals (Ares, Giménez, & Gámbaro, 2008; Loureiro & Umberger, 2007).

Among the techniques to investigate consumer behavior, exploratory research can provide in-depth information and a lot of details (Levy, 2005). It can be used in the early stages of the food

development (Donoghue, 2000; Grunert, Verbeke, Kügler, Saeed, & Scholderer, 2011; Steinman, 2009; van Kleef, van Trijp, & Luning, 2005) and when the product is already in the market (Bernabéu & Tenders, 2005; Huang & Fu, 1995).

Some examples of exploratory studies are in-depth interviews, focus groups, projective techniques and observational research (Donoghue, 2000). The projective technique is an indirect research (van Kleef et al., 2005) considered suitable for marketing purposes, revealing abstract values and needs, which influence consumer behavior (van Kleef et al., 2005). It has contributed to gather information that would not be obtained by using direct methods (Ares, Barreiro, Deliza, Gimenez, & Gámbaro, 2010; Ares & Deliza, 2010; Guerrero et al., 2010; Mitterer-Daltoé, Carrillo, Queiroz, Fiszman, & Varela, 2013; Piqueras-Fiszman, Velasco, Salgado-Montejo, & Spence, 2013; Vidal, Ares, & Giménez, 2013). The projective technique of completion test consists of showing an incomplete stimulus (such as a phrase or dialogue) to the respondent, who has to complete it (Donoghue, 2000).

When three different projective techniques (word association, completion test and Haire's shopping list) were compared, it was found that the completion test, combined with the use of images, provided the best results, as it revealed the deepest thoughts and feelings of participants (Vidal et al., 2013).

A recent study applied a completion test to identify the motives underlying wine purchase decisions, and to identify consumer

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segments with different behavior. One hundred and twenty-seven Burgundy wine consumers were asked to complete a free listing task and the four categories with the highest saliency indices were Price, Production region, Wine type and Production year (Ginon, Ares, Issanchou, Laboissière, & Deliza, 2014b).

Complementary, an investigation on how Burgundy wine consumers perceive a series of logos indicating environmental sustainability in wine production was taken also using a completion test. The authors asked the following question to 127 participants: “What does a bottle of wine with this logo suggest to you?” Results demonstrated that most logos did not communicate properly a message related to environmental sustainability (Ginon, Ares, Issanchou, Laboissière, & Deliza, 2014a).

Taking into account the potential of online consumer surveys and the relevance of projective techniques, an interesting approach is to use the completion test in the online environment. To evolve in this direction, it is important to consider some challenges of an online survey, as the quality of the data gathered depends on the efforts made in order to minimize common problems (Howard, Rainie, & Jones, 2001).

To directly contribute to the discussion related to the application of a projective technique in the virtual environment, this study presents an empirical application of an online completion test. One of the main issues considered during the preparation of this survey was the attractiveness of the form, since an unattractive questionnaire can limit the number of the responses. And, to count on a relevant empirical application, the chosen product used as stimuli was the frozen burger, as it can be perceived in different ways by the consumer and has been submitted to a series of innovations by the meat industries (Resurreccion, 2004).

Therefore, the present study aimed to conduct a completion test in the online environment in order to identify important attributes for consumers in the moment of purchasing frozen burger, and to estimate price levels of this product through the consumer internal reference.

## 2. Materials and methods

The study was divided into three main steps, as follows: questionnaire design and data collection; identification of determinant attributes in the consumer purchasing decision of frozen burgers; and estimation of a price range for frozen burgers.

The meat product selected for the study, the frozen burger, is popular among Brazilian consumers. Thus, participants were able to respond easily to the stimuli of the completion test. The details of each phase are presented below.

### 2.1. How was the online questionnaire developed?

The online questionnaire was developed using *SurveyPie.com*, which was a non-cost tool at the time the research was conducted. The form included questions about the consumer profile and two different completion tests. It was planned to take only 5–10 min for completion.

The use of online questionnaires have been tested and it has been considered useful due to the possibility of collecting information from respondents who are geographically distributed, particularly beneficial considering a large country such as Brazil, and due to the low cost when compared to in-person surveys. Another important feature is the convenience of the tool that allows access to the survey at anytime.

As the respondent could give up the survey before completing it, a questionnaire with an attractive appearance, clear instructions and objective questions was developed to prevent the withdraw of participants. In this research, the evaluation of the return of the

questionnaires was done by comparing how many times it was opened with the number of completed questionnaires that were obtained. The questionnaire was tested by researchers who were or were not involved in the study, and adapted until the final version was approved. The questionnaire did not clearly reveal the intentions of the survey, so respondents were not influenced by any prior assumptions (Braun, Woodley, Richardson, & Leidner, 2012).

When planning a study that involves figures or pictures it is important to consider the quality of the images and the words used, given that they have an important role on the tool. It is vital to catch respondents' attention and to rely on their interest in completing the online test. So, efforts were employed to find in the open internet images with good resolutions, good colors and that represented relatively common consumers among the Brazilian population, as much as possible. The characters in the images were adults who wore ordinary clothes (not worn or fancy). This is an important issue to be considered because it was not intended that respondents associated the characters to people of very low or very high social classes. The characters also had calm expressions on their faces, i.e., they were not overly smiling and were not showing anxiety, contributing to the experience of filling the balloons as in a normal shopping situation. In addition, the intention was that the characters were as neutral as possible, without any associations with times of stress related to financial problems, for example.

It is important to emphasize that these precautions were taken based on Vidal et al. (2013) recommendations. The authors mentioned the need of further research to investigate the effect of the pictures on the completion test.

Regarding the vocabulary employed, a great effort was made to make good use of grammatical rules of Portuguese, which was the original language of the questionnaire. For the construction of the sentences, we did not employ complicated terms or words that are less commonly used, as it could affect the participation of people of lower level of education. Thus, an ordinary vocabulary with phrases routinely used among the Brazilian population was built in a very clear way. We did not use regional terms that could be more usual for specific areas of the country. Besides, we employed polite words, making the questionnaire friendly, and avoiding the tone of command. It is noteworthy that we made preliminary tests with specialist researchers and with ordinary participants, which contributed to come up with an appropriated version for the study.

### 2.2. Participants socioeconomic information and burger consumption

Potential participants were invited to complete the online survey by email and by social networks. The contact list included students, staff and lecturers of the Faculty of Animal Science and of Food Engineering of the University of São Paulo (FZEA – USP). It is important to notice that, as usual in qualitative research, this study did not intend to be representative of the entire Brazilian population, but rather to test the online projective technique and to obtain inferences about consumer behavior towards frozen burger.

Participant's started the study answering questions on socioeconomic characteristics (age, gender, educational level and family income) and burger consumption through the following questions: “Did you buy frozen burgers for consumption at home during the last three months? (YES/NO)”; “If you answered NO to the previous question: did you buy other frozen industrialized meat products for consumption at home during the last three months? (YES; which ones?/NO)”.

Regarding the three months period, the implicit assumption is that it is a period of time long enough to observe if the respondent is a user of the product and short enough to consider a recent shopping history of the participant. It is a period of time commonly

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