

# Interactive Television Context and Advertising Recall

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## INTRODUCTION

Interactive digital television (IDTV), the merging of the Internet and television, has the potential of reaching many consumers. Introducing interactivity in television content will replace lean-backward viewing with a more active lean-forward viewing (Van den Broeck, Pierson, & Pauwels, 2004). This new way of watching TV can have implications for the way people process the advertisements embedded in programmes. We examine the impact of two dimensions of interactivity induced by a TV quiz show, that is, user control and two-way communication (McMillan & Hwang, 2002) on the ad and brand recall of an embedded commercial. User control means the possibility of accessing extra information about the quiz show, the host, and the candidates with the remote control. Two-way communication allows the viewer to play along with the quiz using the remote control.

## BACKGROUND

### Advertising Context Effects

The impact of responses to programme context (e.g., mood, excitement, involvement) on embedded advertisements have been studied extensively (e.g., De Pelsmacker, Geuens, & Anckaert, 2002). This context can have either a stimulating or an inhibiting effect on the processing of an embedded advertisement. Mental processes evoked by the programme have an influence on the processing of the advertisement embedded in the programme. Positive or congruent context effects are caused by the “carry-over” principle of the programme-induced attention, liking, interest, or arousal toward the advertisement that follows (Moorman, Neijens, & Smit, 2005). Negative or contrasting relationships have been explained by the cognitive absorption of the programme, leaving less cognitive abilities for processing the advertisement (Lang, 2000).

### Interactivity and Information Processing

Interactivity can be defined in different ways. Wu (2005) distinguishes between actual or feature-based interactivity and perceived interactivity. McMillan and Hwang (2002) define three underlying dimensions of interactivity: two-way communication, user control, and time delay.

A considerable amount of empirical studies have investigated the effects of the interactivity of a message vehicle on an individual’s cognitive information processing in an Internet context. Some studies found a positive impact of interactivity on memory (Chung & Xinshu, 2004; Macias, 2003), while others found no impact or even a negative impact (Bezijan-Avery, Calder, & Iacobucci, 1998). The cognitive load theory (CLT; Van Merriënboer & Sweller, 2005) can be used to explain both. The CLT assumes that the human working memory is limited in processing novel information. There are broadly two types of cognitive load that can affect the working memory (Van Merriënboer & Sweller): intrinsic cognitive load, which is related to the intrinsic nature of the information (in this study the questions and answers of the quiz programme, and the content of the additional programme information), and extraneous cognitive load, which corresponds to the mental effort imposed by the way the information is presented (for instance, in this study, programme interactivity). According to the elaboration likelihood model (Petty & Cacioppo, 1981), extensive information processing only occurs when the consumer is motivated to process the information. When this prerequisite is accomplished, he or she must also have the ability (cognitive capacity) to do so. The amount of interactivity can have an influence on both mechanisms. Interactivity can increase involvement with the content (Fortin & Dholakia, 2005), which increases the motivation to process the information. However, following the CLT, interactivity can also increase the total cognitive load, and thus diminishes the ability to process information. Therefore, depending on the strength of the intrinsic cognitive load, the individual will or will not have enough ability to process the information (the interac-

tive programme), which will further influence the processing of the embedded advertisement.

In this study, we investigate the context effects of two dimensions of programme interactivity representing a low level of intrinsic load (user control regarding information about the programme, candidates, host) and a high level of intrinsic load (two-way communication involving the questions and answers in the quiz) on ad and brand recall.

## **User Control**

User control is “the range of ways to manipulate the content” (Coyle & Thorson, 2002) and refers to the amount of possible interactions the user has to get the information in the order and pace he prefers (in this study the amount of hyperlinks in the additional programme information). Different levels of this user-control dimension could influence the motivation to process the programme. Because the intrinsic load (extra programme information) is low, we do not expect that the additional load imposed by the interactivity (user control) will lead to limited information processing capacity. Although the respondents have the ability to process the programme and the embedded advertisement when the programme has no user control, the involvement with the programme and thus the motivation to process it will be relatively low. This low processing motivation is expected to be transferred to the advertisement, leading to a superficial processing of the advertisement. At a moderate level of user control and no two way, the motivation to process the information and programme involvement increase, thus facilitating the processing of the programme. This attentive state is expected to be transferred to the subsequent advertisement. A high level of user control will increase the motivation to process the programme but, given the relatively low intrinsic cognitive load of the user control process, this motivation to process information may be higher than is required. This may lead to the development of negative thoughts, which may inhibit advertising processing. Also, more clicks lead to less information per click. This decrease in information complexity may also lead to the development of feelings of boredom and irritation. We expect the following.

*H1: A moderate level of user control will lead to a higher ad and brand recall than a low or a high level of user control.*

## **Two-Way Communication**

This dimension of interactivity can be characterized as a mutual discourse or the capability of providing feedback (Ha & James, 1998). In this study, two-way communication

is manipulated through the possibility of playing along with a quiz show. This implies that the interactivity leads to a high intrinsic load as a result of answering the quiz questions (multiple choices) on screen using the remote control. Although the individual may have a high motivation to process the programme when playing along, he or she may lack the ability to do so given the linear time flow of the programme, which demands the working memory to process the information very fast. This limited cognitive capacity to process the programme may lead to a cognitive capacity problem when the individual is exposed to the embedded advertisement. We expect the following.

*H2: Programme embedded two-way communication (playing along) will lead to a lower ad and brand recall than no two-way communication (not playing along).*

## **Interaction Effect between User Control and Two-Way Communication**

It is unclear what the combined effect of two-way communication and user control in the program context will be on the recall of the embedded ad and brand. On the one hand, a combination of playing along and the availability of more user control could result in a higher cognitive load and less recall of the embedded ad. Following this argument, a combination of low user control and no two-way communication should lead to the highest recall, and high user control combined with two-way communication (playing along) to the lowest. On the other hand, when the viewer cannot play along with the quiz and has no user control, his or her motivation to process the programme will be low, and consequently also the motivation to process the ad. Earlier we also hypothesized that a moderate level of user control leads to the most optimal cognitive activation state to process the programme. This activation state will be transferred to the ad when the consumer has the ability to process the ad in depth. When the consumer does not play along with the game, he or she will have sufficient cognitive resources to process the programme, and thus we could expect that this combination of a moderate level of user control and two-way communication will lead to a positive effect on ad and brand recall. Given that playing along with the quiz absorbs a lot of cognitive resources, the additional cognitive load induced by the moderate level of user control, might lead to a limited capacity problem. Since the combined effect of user control and two-way communication is not clear, we formulate the following open research question.

*Q1: What is the interaction effect of user control and two-way communication on ad and brand recall?*

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