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# The effects of the integration of external and internal communication features in digital magazines on consumers' magazine attitude

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ABSTRACT

This study investigates the effects of external and internal communication features on consumers' digital magazine attitude, and the processes (i.e., perceived interactivity and social presence) underlying these effects. Both feature types enable communication between two or more people. Though, in the case of external communication features, the interactions take place *outside* the digital magazine (e.g., on Facebook), whereas in the case of internal communication features, the communication takes place *inside* the digital environment of the magazine. In a two-wave experiment with a 2 (external communication features: present/absent) × 2 (internal communication features: present/absent) between-subjects design, 192 participants were exposed to a digital tablet magazine in which the presence of interactive features was manipulated. The results show that digital magazines with either external or internal communication features are perceived as more interactive, which has a positive influence on consumers' digital magazine attitude. The findings also reveal that – in contrast to external – internal communication features have the ability to enhance feelings of social presence, another process through which digital magazine attitude is positively affected. So, internal communication features improve consumers' digital magazine attitude through two pathways (i.e., perceived interactivity and social presence), and external communication features only via one (i.e., perceived interactivity).



## 1. Introduction

Today, numerous well-established print magazine titles are fighting for survival. They are facing severe financial difficulties, caused by declining circulation figures and falling advertising revenues (Sweney, 2014). Various magazine titles that were once successful have disappeared from the media landscape (e.g., Rosendahl, 2013). In order to survive, magazine companies must find new revenue sources, and the digital magazine market might be one of them (Mufson, 2013).

In this study, we define a "digital magazine" as an interactive tablet publication (or app) that can be downloaded from an app store. A magazine becomes interactive through the integration of features that either facilitate the interaction between user and device (i.e., medium interactive features), or allow the user to communicate with other individuals through a communication channel (i.e., human interactive features; Chung, 2007, 2008; Chung & Yoo, 2008). Unfortunately, today's digital magazines lack popularity (Sedghi, 2013). One of the reasons is that relatively little is known about which interactive features can make a digital magazine more successful (Mufson, 2013). This study set out to shed light on this issue by being the first to empirically test the impact of the integration of human interactive features (i.e., external and internal communication features) on consumers' attitudes toward digital magazines.

We specifically focus on human interactive features due to the popularity of various online magazine communities (for examples, see: www.gameinformer.com and www.ew.com), which shows that there is a desire among magazine readers to connect with each other. However, today's digital magazines hardly respond to this desire, since human interactive features are only rarely integrated. It therefore seems plausible that if digital magazines make better use of these features, they will be more attractive to consumers. To investigate this assumption, we make a distinction between two types of human interactive features, namely external communication features and internal communication features. Both feature types facilitate forms of communication between two or more people; however, this takes place on different platforms. External

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communication features enable users to discuss the magazine content with others by redirecting them to external communication platforms (e.g., email services and social media). Because the communication takes place outside the magazine app, non-readers can also participate in the online discussions. In contrast, in the case of internal communication features, all the content-related discussions take place within the digital environment of the magazine app, and thus solely users of the app can participate in these discussions. So, external communication features enable users to communicate with others (i.e., both readers and non-readers of the magazine) outside the digital magazine, whereas internal communication features allow users to communicate solely with other readers inside the digital environment of the digital magazine.

The aim of this study is to examine whether the integration of either external or internal communication features has positive effects on consumers' attitudes toward digital magazines, and if so, which processes (i.e., perceived interactivity and social presence) underlie these effects. In doing so, we will first examine the extent to which external versus internal communication features have differential (or similar) effects on perceived interactivity and social presence, and subsequently we will investigate how these processes affect consumers' digital magazine attitude. As this study is the first to empirically test the effects of consumer responses toward digital magazines with external and internal communication features, it not only contributes to the existing digital magazine literature and the further development of a typology for interactive features, but it also provides magazine publishers with some valuable insights into how to develop a successful digital magazine.

## 2. Theoretical background

In this study, we identify two potential underlying processes through which the presence of external and internal communication features could affect consumers' digital magazine attitude, that is, perceived interactivity and social presence. In previous research, perceived interactivity has often been used to explain the positive effects that adding interactive features to a digital content has on consumers' attitudinal responses (e.g., Oh & Sundar, 2015; Wu, 1999). However, in the case of internal communication features, we expect that the effects of these features on consumers' digital magazine attitude can also be explained by social presence. In the following, both paths – that through perceived interactivity and that through social presence – are described in detail.

### 2.1. The mediating role of perceived interactivity

#### 2.1.1. The effects of external and internal communication features on perceived interactivity

The first potential underlying process that we examine is perceived interactivity. This process should not be confused with actual interactivity, because there is a subtle, but important, difference between the actual and the perceived interactivity of a digital magazine (Sundar, 2004; Voorveld, Neijens, & Smit, 2011; Wu, 2005). Actual interactivity is the potential for interaction, which can be measured by observing the number and type of interactive features that are available in a digital magazine (Voorveld et al., 2011; Wu, 2005). Perceived interactivity, on the other hand, is the extent to which users truly perceive the digital magazine as interactive, which can be measured by asking users about their magazine experience (Voorveld et al., 2011; Voorveld, Van Noort, & Duijn, 2013).

For human interactive features, empirical evidence shows that a higher number of these features corresponds with stronger interactivity perceptions (Voorveld et al., 2011). Since external and internal communication features are forms of human interactive features, we assume that the presence of these features in a digital magazine (i.e., integrating the features in the digital content) shall increase perceived interactivity levels. These assumptions are formulated in Hypotheses 1 and 2 (see Fig. 1):

**H1**. Digital magazines with (vs. without) external communication features are perceived as more interactive.

**H2**. Digital magazines with (vs. without) internal communication features are perceived as more interactive.

A key difference between external and internal communication features is the platform on which the human interaction takes place. In the case of internal communication features, all the interaction occurs inside the digital magazine, whereas external communication features redirect the user to external communication platforms (e.g., Twitter or Facebook). Because a part of the interactivity delivered by the external communication features can be ascribed to these external platforms, it is imaginable that external communication features are perceived as less interactive compared to internal communication features. Consequently, this results in the following research question:

**RQ1**. To what extent do internal communication features and external communication features have different impacts on perceived interactivity?

#### 2.1.2. The effect of perceived interactivity on digital magazine attitude

We expect that a higher degree of perceived interactivity is related to a more positive digital magazine attitude. Previous research has demonstrated that highly interactive digital media generate more positive affective responses (e.g., brand attitude and website attitude) compared to less interactive digital media (e.g., Xu & Sundar, 2012), which can be explained by the dual-process model of interactivity effects (Liu & Shrum, 2009). This model states that the integration of interactive features can positively affect consumers' attitudes, regardless of whether they actually use the features. If they do, they will experience the benefits of the interactive features; if they do not, the mere presence of the features functions as a positive peripheral cue. Further, Wu (2005) showed that these positive effects of actual interactivity on consumers' attitudes are mediated by perceived interactivity. Since we believe that digital magazines with external and internal communication features are perceived as highly interactive, we therefore expect that the integration of these features has a positive effect on users' digital magazine attitude mediated by perceived interactivity. These assumptions are formulated in Hypotheses 3 and 4 (see Fig. 1):

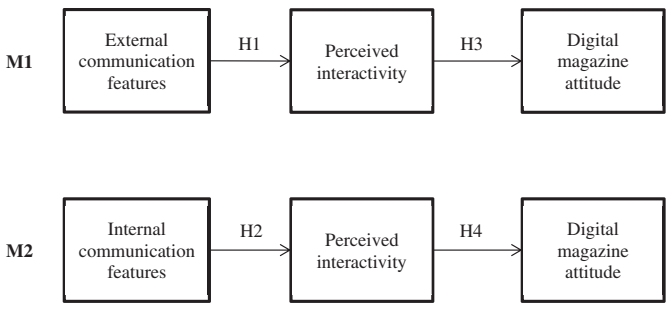


**Fig. 1.** Hypotheses 1–4 visualized. *Note.* M1 = Model 1; M2 = Model 2.