Exploring the Effects of Source Credibility on Information Adoption on YouTube

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Abstract. This research-in-progress paper explores the effects of information source credibility (brands versus vloggers), information type (how-to tutorial versus product demonstration), and viewer characteristics on perceptions of information quality, information usefulness, information satisfaction, and information adoption in the context of YouTube videos regarding a technology product, the Apple Watch. The primary goal of this study is to understand how users process information provided through YouTube videos by brands and vloggers, as well as extend existing models of information adoption that solely focus on information and source characteristics without considering characteristics of the user or viewer. Envisioned future steps in this project are discussed as well as implications for research and practice. Data collection will be completed prior to the HCII conference, where results will be presented.

Keywords: Source credibility · Information quality · Information usefulness · Information adoption · User characteristics · Youtube · Social media technology industry

1 Introduction

YouTube is the second largest search engine, making it a principal source of knowledge and information for consumers. Across the various product categories that may be showcased in YouTube videos, the Electronics industry is the most viewed industry, accounting not only for 16 % of all YouTube views but further accounting for 15 % of all video uploads making it the single largest industry, followed by beauty, auto, telecom, beverages, and other [26].

A large proportion of these videos are not created by brands themselves, but rather by electronics vloggers. Because of their popularity, brands are increasingly understanding and embracing the influence of these electronics vloggers. Although brands currently control a mere 3 % of YouTube's videos, recent marketing research reports show that brands are growing their investments for marketing through YouTube channels [26] to improve their presence on YouTube among the influence of electronics vloggers. However, do these massive amounts of views translate into brand or vlogger influence and do viewers act on the content or suggestions found in these videos?

Despite the growing popularity of Apple Watch videos on YouTube and the increasing use of this marketing channel by Apple Watch brands, no studies were

identified that explore viewer behavior in the context of the electronics industry. Although various studies on online consumer behavior have studied social media such as Facebook [12] or Twitter, we identified only a single study regarding YouTube as a source of information on the H1N1 Influenza Pandemic. However, none of the above studies have focused on how viewers process information from videos, and how their information processing is either affected by source credibility or in turn influences the user's intention to act on the content or suggestions found in the video.

Therefore, this study aims to answer the following research question: What is the effect of the information's **source credibility** (brands vs. vloggers) on **information quality, information usefulness, information satisfaction, and information adoption** in the context of YouTube Apple Watch videos? In addition to analyzing perceived characteristics of the information embedded in the video, this study moves beyond existing Information Systems (IS) studies on information adoption in organizational settings (c.f., [33, 38]) by also incorporating viewer characteristics, such as prior knowledge and information relevance.

Therefore, this study offers two contributions to existing research on information adoption. First, by analyzing information adoption in the context of YouTube Apple Watch videos, we shift to an analysis of source credibility and information quality in a voluntary, online environment compared to studies focusing on organizational settings. Second, by incorporating viewer characteristics—prior knowledge and relevance—we extend existing models that have solely centered on characteristics of the source and the information itself thereby overlooking the interactions between the viewer and the source/information.

Beyond the abovementioned contributions to theory, this study is expected to generate practical implications by shedding light on the credibility of brands versus vloggers in the context of YouTube as well as reveal which types of product-related videos— how-to tutorials versus product demonstration—are most likely to result in information adoption.

The remainder of this research-in-progress paper is organized as follows. First, we review the prior literature on source credibility, information quality, and information adoption as well as literature pertaining to viewer characteristics. These theoretical foundations will be used to formulate a set of hypotheses regarding the interplay of these source/information and viewer characteristics. Subsequently, we present the hypothesized research model, envisioned research approach, experimental manipulations, and measurement scales. Finally, we discuss future steps of this study and expected contributions to research and practice.

2 Literature Review

In this section, we review the literature regarding the key constructs underpinning this study, namely: perceived source and information characteristics (source credibility and information quality), viewer characteristics (relevance and prior knowledge), and key dependent variables in this study (information usefulness, user satisfaction, information adoption).

2.1   Source and Information Characteristics

The two key characteristics of the source and information that will be explored in this study are source credibility and information quality.

The concept of credibility has previously been studied in psychology by [16], who studied how intrinsic attributes affect the credibility of a source. [16] analyzed intrinsic attributes such as, trustworthiness, expertise, and attractiveness and their effects on credibility and ultimately someone's attitude towards said source. It was found that high source credibility induces greater positive attitude toward the position advocated [10]. Specifically, these previous studies found that high source credibility leads to higher persuasion than low source credibility; hence source credibility plays a key role in the transmission of information and subsequent decisions to adopt content or suggestions provided by the source.

Although these original studies were conducted in offline environments, recent studies have extended source credibility into the online environment. For instance, [20] studied the differentiation of source, message, and media credibility in an online environment. [9] studied the perceived source credibility of websites regarding message features and structural features. However, these works have been largely exploratory in terms of developing measures of media credibility for online media rather than exploring impacts on information adoption.

For the present study, the following definition of source credibility is retained: *"the extent to which an information source is perceived to be believable, competent, and trustworthy by information recipients"* [3].

The other key characteristic in this study is information quality, a multi-dimensional concept. In what follows, we will discuss some of the various conceptualizations developed in different papers. For instance, [18] found that information quality has two sub-dimensions, which are information persuasiveness and information completeness. According to [34]'s definition of quality, information quality encompasses the dimensions of accuracy, comprehensiveness, currency, reliability, and validity. The latter is similar to [13] five-dimensional conceptualization of information quality as: accuracy, completeness, relevance, timeliness and amount of data. [21] discovered three main dimensions underpinning information quality including the perception of the user about the information, the information itself (completeness), and the process of accessing the information.

In the present study, we will analyze information quality as a subjective factor determined by the user's personal view, experience and his background in line with the suggestion of [32] who argue that information quality cannot be assessed independently of the people who use the information. Therefore, in line with this subjective approach to conceptualizing information quality as well as appreciating its multi-dimensional nature, we adopt the following definition of information quality by [33]: "the extent to which users think that information is relevant, timely, accurate, and complete".

2.2   Viewer Characteristics

In addition to the two characteristics of the source and information, this study also incorporates two characteristics of the viewer (or user), namely information relevance (or interest) and prior knowledge.

Information relevance or interest has long been studied to determine its effect on attention, engagement, and cognitive processing [6, 29, 30]. Given its direct link to engagement and attention, relevance or interest appears to be an important viewer characteristic in understanding information adoption.

Second, prior knowledge—a user characteristic that refers to a person's awareness of and information about a topic, product, or technology [28]—influences people's perception of the attributes of that product. Existing studies have found evidence for relationships between knowledge and perceived innovation attributes, including relative advantage [7], risk (i.e. uncertainty) [8], as well as observability and trialability [23] of a technology. Similarly, one can anticipate that a viewer's prior knowledge would interact with his or her perception of source credibility and information quality in the context of YouTube Apple Watch videos.

2.3   Dependent Variables: Information Usefulness, Information Satisfaction, and Information Adoption

In addition to the information- and viewer-centric independent variables, this study incorporates the following three dependent variables, namely information usefulness, information satisfaction, and information adoption.

Information usefulness has been studied across various settings including health [24] and organizational contexts [33]. Similar to the concept of usefulness in the technology acceptance model [5], research on information has identified information usefulness as an important driver of information adoption [31]. In this study, the following definition is retained: "information usefulness refers to the degree to which the information is perceived to be valuable, informative and helpful" [33].

Information satisfaction is the equivalent of user satisfaction in IS and consumer research, which is largely a function of the effectiveness of the interaction of a user with a technology or product [1, 4, 22]. Contemporary research links user satisfaction to attitude and attitude change (c.f., [17, 19]). In this study, we define information satisfaction as "a person's feelings or attitudes toward a particular informational message" (adapted from [38]).

Finally, information adoption—our ultimate dependent variable—has been previously studied in both offline [37] and online [36] settings. We will mostly leverage the literature on content and information adoption in computer-mediated communication contexts, such as [33]'s study about email information adoption and [36] study of information adoption in online communities. In line with [36], we define information adoption as "the extent to which people accept content that they are presented with as meaningful, after assessing its validity".

3   Research Model and Hypotheses

Given the limited space available, Table 1 summarizes the hypotheses underpinning our research model and provides references to supporting research. Figure 1 visualizes all hypothesized relationships in the overall research model.

Table 1. Hypotheses

Hyp.	Description	Supporting evidence
H1	Source credibility positively affects information quality	[33]
H2	Source credibility positively affects information usefulness	[36]
H3	Information quality positively affects information usefulness	[33]
H4	Information relevance will have a positive moderating effect on the relationship between source credibility and information usefulness	[6, 29, 30]
H5	Prior knowledge will have a negative moderating effect on the relationship between information quality and information usefulness	[11, 37]
H6	Source credibility positively affects information satisfaction	[18, 38]
H7	Information usefulness positively affects information satisfaction	[38]
H8	Information usefulness positively impacts information adoption	[5, 33]
H9	Information satisfaction positively impacts information adoption	[38]
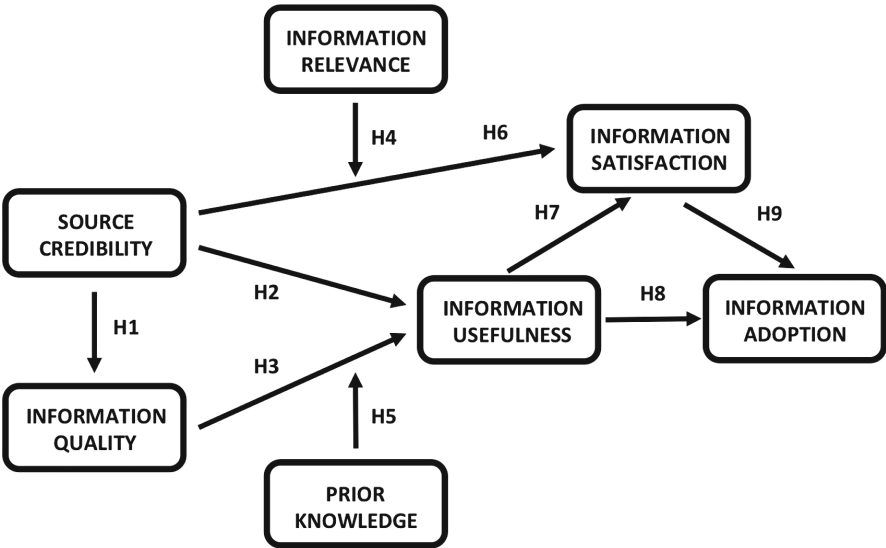
Fig. 1. Proposed research model

4 Methodology

For this study, we will adopt a 2 (Brands vs. Vloggers) * 2 (Product presentations vs. Tutorials) experimental design. Hence, participants will be randomly assigned to one of four videos prior to answering a research question.

4.1 Source and Video (Message) Selection

For the selection of vloggers, a selection will be made based on popularity as defined by total number of views and channel subscribers as well as experience as determined by the number of videos and date of joining YouTube. However, vloggers that have established official contracts with brands will be eliminated so as not to undermine the distinction between the information source—namely brand versus vloggers.

For the selection of official Apple Watch brands, we will use a ranking generated by [26] where they ranked electronics brands based on the total number of videos posted on YouTube.

For the content selection, we classify the videos into one of two main categories (see Table 1). Although two additional video types exist, hauls (showing off recently-purchased items) and vlogger's way of life (aimed at creating intimate relations with subscribers), these are not used by brands, hence, are inappropriate for comparing the two source types. For each cell, we will select a video from the selected vlogger or brand (Table 2).

Table 2. Video categories and descriptions

Category	Product presentations	Tutorials
Brand	Electronics brands are presenting their own products which are often adapted from existing commercials	"How to" videos published by brands which show how to use a particular electronics product
Vloggers	Vloggers create videos such as "50 + Apple Watch Tips and Tricks", or "Top Apps for the Apple Watch" which usually present multiple products	Similar "How To" videos that show how to use an electronic device (e.g., Apple Watch)

4.2 Measures

The constructs and items, as adapted from existing literature, are summarized in Table 3.

Table 3. Constructs and items

Construct	Definition (in this study)	Source	Sample items
Characteristics of the source			
Source credibility	The extent to which an information source (brand or vlogger) is perceived to be believable, competent, and trustworthy by viewers	[3]	"The person/brand who published the video was knowledgeable on this topic" "The person/brand who published the video was trustworthy"
Information quality (*adapted*)	A viewer's assessment of whether the information in the video is accurate, valid, and timely	[35]	"Information provided by this video is accurate" "Information provided by this video is reliable"
Viewer characteristics			
Relevance/topic interest (*adapted*)	The viewer's level of interest in electronics	[14, 15]	"Important- unimportant". "Irrelevant- relevant" "Means a lot to me- means nothing to me" "Unexciting- exciting"
Prior knowledge (*adapted*)	The viewer's familiarity, associations, and knowledge with/about electronics	[27]	"Please rate your knowledge of Apple Watch, as compared to the average person's knowledge of Apple Watch" "One of the least knowledgeable"-"one of the most knowledgeable"
Dependent variables			
Information usefulness (*adapted*)	The extent to which a viewer believes that a specific video would enhance his/her effectiveness in using the Apple Watch	[25]	"This video would be useful for getting valuable information about this product" "This video would enhance my effectiveness in getting useful information about Apple Watch product"
Information satisfaction (*adapted*)	The viewers feelings about the information provided in the video	[2]	"Very dissatisfied- very satisfied" "Very displeased- very pleased" "Absolutely terrible- absolutely delighted"
Information adoption (*adapted*)	The viewer's intentions towards adopting Apple Watch as advocated in the video	[33]	"How likely are you to act on the content of this video"? "To what extent does the content of the video motivate you to take action? Not at all motivated – Totally motivated"

5   Discussion and Concluding Remarks

Research on social media has proliferated in recent years; however, the majority of prior studies have focused on the message without regard for either the source or the recipient of that message. We attempt to overcome this gap in the literature through the study in progress. Hence, the foremost contribution to theory will be the provision of a unified view on the underlying mechanism of information adoption, one that incorporates characteristics of both the source/information as well as the user and explains their associated effects on information adoption.

Furthermore, results will highlight the extent to which mediation occurs between constructs that have previously been studied in isolation, such as the relationships between source credibility, information usefulness, and information adoption [33].

In regards to implications for practice, a clear contribution will be made in identifying which of the two prevalent, product-centered video types – product demonstrations and how-to tutorials – is more effective in leading to the viewer's adoption of the communicated information. Accordingly, a brand can invest in the creation of such digital assets, as they may ultimately lead to greater product sales.

Lastly, a two-fold analysis of source credibility will reveal whether (i) commercial brands are more or less credible than individuals when it comes to product information dissemination, and (ii) the relative effect of credibility on perceptions of information quality, information usefulness, and information satisfaction.

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