

COMPARING THE IMPACT OF PRESENTATION FORMAT OF CONSUMER GENERATED REVIEWS ON SHOPPERS' DECISIONS IN AN ONLINE SOCIAL COMMERCE ENVIRONMENT

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ABSTRACT

This research compared the impact of the presentation format of consumer generated reviews on online shoppers' perceptions, attitudes, and purchase intentions within an online social commerce environment, using an integrated conceptual model that combined technology acceptance model and media richness theory. As a new stream in e-commerce, e-marketplaces are increasingly evolving into social commerce platforms that allow online shoppers to co-create brand-specific content to help their peers in the purchase decision-making process [Hajli 2015]. Presentation format of reviews was a between-subjects factor. 339 online shoppers participated in an online survey. The results indicated that technology acceptance and media richness factors influence shoppers' acceptance of reviews, and therefore, purchase intentions. This study discusses the implications for social commerce research, theory, and practice, and makes several useful recommendations for future research.

Keywords: Social commerce; Consumer generated reviews; Online review formats; Technology acceptance model; Media richness

1. Background

With the advancements in mobile and social media technologies, we are witnessing online communities of consumers shaping up across different e-commerce, and especially on social commerce platforms. E-commerce platforms are rapidly evolving into social commerce spaces allowing online shoppers opportunities to interact with other consumers and co-create brand-specific content [Hajli 2014, 2015]. As a new form of e-commerce [Hajli 2014], social commerce effectively integrates Web 2.0 and social technologies in the e-marketplace systems creating an interactive environment for online shopping [Tajvidi et al. 2017]. One of the key drivers of social commerce platforms is electronic word of mouth [eWoM: Goraya et al. 2019].

On e-commerce websites such as Amazon.com, the most popular forms of eWoM are consumer generated online reviews, which are increasingly available for different products and services. Especially within the social commerce ecosystem, online reviews offer online shoppers additional information about brands and products. Reviews are available in different forms such as feedback, experiences, expert advice and personalized recommendations. In social commerce platforms, different types of reviews provide different signals to online shoppers relating to their purchase decisions [Hajli 2015]. Online reviews are an important component in today's e-commerce marketplace [Tran 2020; Ventre and Kolbe 2020; Yang et al. 2016]. They have become a popular source of brand-related information [Chakraborty and Biswal 2020; Chevalier and Mayzlin 2006].

Consumer generated reviews, as a form of electronic word of mouth (eWoM) help consumers in informing other consumers about their knowledge of and experiences with brands and products [Hajli 2015; Mohammad et al. 2020; Yang et al. 2016]. Many researchers have examined the impact of online reviews on shoppers' perceptions and purchase decisions [Chevalier and Mayzlin 2006; Tran 2020; Ventre and Kolbe 2020; Xu et al. 2015]. However, not many researchers have not attended to the influence of the presentation format of the online reviews on shoppers' purchase decisions. Particularly, on e-commerce and social commerce sites such as Amazon.com,

consumer generated reviews are increasingly available in four different presentation formats including text, images, text with images and video reviews [Amazon.com Help 2020]. Xu and colleagues [2015] investigated the effects of online review presentation formats [text, image, and video] on consumer perceptions, using the elaboration likelihood model [Petty and Cacioppo 1986] and cognitive fit theory [Vessey et al. 2006]. They conducted laboratory experiments for comparing the impacts of the three online review presentation formats. Laboratory experiments, specific to investigating consumer psychology and behavior, are prone to limitations such as low realism, low ecological validity, experiment effects, and demand characteristics as highlighted in the prior literature [Clifford and Jerit 2014; Dandurand et al. 2008; Kim et al. 2019; Podasakoff and Podasakoff 2019]. This research was different from Xu and colleagues' [2015] work in that it used all presently available online review presentation formats on social commerce sites such as Amazon.com (text, text with image, image, and video). Also, this research used an online survey to compare the effects of different review presentation formats, which can have benefits over in-lab experiments in terms of generalizability of findings [Clifford and Jerit 2014; Evans and Mathur 2005; Kim et al. 2019]. This research approach was also recommended by Xu and colleagues [2015] in future directions of their study.

The effects of different review presentation formats on social commerce shoppers' purchase intentions is one area that needs systematic investigation. For instance, a review that is posted in a plain-text format could yield different effects compared to a review wherein a user is shown using the product in a video format. With the growing popularity of multimedia such as images and videos online, particularly in the social commerce platforms such as Facebook and Instagram [Hajli 2015; Hajli & Sims 2015; Qui et al. 2020], understanding the role of presentation format in purchase decision-making becomes crucial. Hajli [2015] suggested that advancements in the social commerce ecosystems, technological and otherwise, shape a postmodern view of consumers. Literature suggested that information presentation formats could impact the strategies users adopt to acquire the information [Feiereisen et al. 2013; Jiang and Benbasat 2007; Musto et al. 2015]. However, the fit between online review format and purchase decision-making remains largely under-explored. This research, using technology acceptance model and media richness theory, aims to fill this void in literature. This study provides new perspectives, model, and insights on consumer responses to and reliance on consumer generated reviews in different presentation formats on social commerce platforms, especially in the COVID-19 era. The COVID-19 health and safety restrictions have caused online retailers and social commerce platforms to change in unprecedented ways [Zhang et al. 2020]. The shift toward increased online shopping and cashless payments have benefitted social commerce and m-commerce platforms. During the times of crisis such as the COVID-19 pandemic, consumers are no longer restricting their online shopping experiences and decisions to brand-generated information. More importantly, social commerce platforms have enabled consumers to create, publish, and share their brand- and product-specific experiences with other consumers [Haji 2015]. In the post-pandemic era, social commerce is an exciting space to be in, and this research offers important managerial implications for brands and online vendors that want to stay ahead of the trend.

1.1. Consumer Generated Reviews on Amazon.com

Amazon.com is a leader in the ecommerce industry in the US [eMarketer 2020]. The ecommerce website's net annual sales in 2020 is estimated at USD 276 Billion [Statista 2020b]. Amazon.com has over 300 Million active user accounts [Statista 2020a]. In terms of ecommerce website design, Amazon.com regularly keeps its shopping interface up-to-date by integrating users' expectations and feedback [Razbari 2018]. The website offers extensive brand- and product-related information to its users, generated by both brands and consumers. Consumer generated information is usually presented in the form of online product reviews, which are presented along with brand-generated product information. Consumers on Amazon.com increasingly post reviews about brands and products to help other consumers in making better buying decisions [Jiang and Benbasat 2007a]. Considering the growing popularity of online reviews among shoppers on Amazon.com, online retail brands and e-commerce vendors increasingly encourage users to share their experiences, feedback, and recommendations about products with others on their product pages [Tran 2020; Ventre and Kolbe 2020; Zhu et al. 2010].

On Amazon.com, different types of brand- and product-related information are available to consumers. Primarily, they have access to the brand- or vendor-generated product information. This information is presented in different formats like textual descriptions, product images as well as video descriptions. Researchers have examined the impact of different presentation formats of the vendor generated information on product sales [Appiah 2006; Jiang and Benbasat 2007a, 2007c]. Another type of product-related information on Amazon.com is in the form of consumer generated reviews. Consumer generated reviews are equivalent to the electronic word of mouth (eWoM). Mudambi and Schuff [2010] described eWoM as user generated evaluations of products, which are created and posted by them on an online retailer's website to help other users in their purchase decisions.

Hajli [2015] suggested that social commerce platforms enable consumers to generate content about brands and products that they shop on such websites. Although a relatively newer concept, social commerce allows consumers

to share and seek brand- and product-specific information and experiences, more commonly in the form of eWoM [Hajli et al. 2017]. E-commerce platforms like Amazon.com are increasingly evolving into social commerce ecosystems through integration of various social media features along with their core commercial features. Many brands and online vendors are seen to increasingly use social commerce features available within the traditional e-commerce platforms such as Amazon.com in the form of consumer generated reviews to optimize engagement with online shoppers in order to gain valuable feedback about brands and products [Hajli and Featherman 2017]. By co-creating brand- and product-related content with consumers through eWoM, online vendors offer social support, social information sharing, and social value to online shoppers [Bazi et al. 2019]. Researchers have examined the impact of eWoM on consumers' purchase decisions [Chevalier and Mayzlin 2006; Dellarocas et al. 2007a; Duan et al. 2008; Hu et al. 2013]. On Amazon.com, consumer generated reviews are published alongside vendor-generated product descriptions. Scholars and practitioners reiterate that brands should pay greater attention to consumer generated reviews on online retail websites, such as Amazon.com [Archak et al. 2011; Chen and Xie 2008; Hajli and Sims, 2015; Dellarocas 2003; PowerReviews 2018]. This study, through an online survey, assessed the effects of different presentation formats of consumer generated reviews on Amazon.com on shoppers' perceptions, attitudes, and purchase intentions.

This study is different from prior research on presentation formats of brand-related information [Appiah 2006; Jiang and Benbasat 2007a]. While previous studies focused on the presentation format of the brand generated information [Appiah 2006; Jiang and Benbasat 2007a], the current study examined consumer generated reviews. This research also differed from the literature that focused only on the effects of visual, mainly video presentation on buyers' responses [Moreno and Mayer 1999; Smith et al. 2011; Tufte and Moeller 1997]. Instead, this study compared the effects of different formats of consumer generated reviews. This highlights the comparative advantages of a specific presentation format of user-generated reviews under differing e-commerce conditions. Given the differing foci, this study was conducted specifically to examine the differing impacts of consumer generated review presentation formats on online shoppers' evaluations of reviews and brand, and therefore, on their purchase intentions.

1.2. Presentation Formats of Consumer Generated Reviews

Consumers are no longer just passive receivers of brand generated information, but play an active role in generating brand-related information, in the form of online reviews [Godes et al. 2005]. Hajli [2015] suggested that ecommerce platforms, through the integrated social and mobile technologies, have empowered consumers to generate brand-specific content, potentially in different formats. Mudambi and Schuff [2010b] defined consumer reviews as peer-generated evaluations of products published on a brand's official website or third-party retail websites, such as Amazon.com. By better understanding the impact of online consumer generated reviews, brands can enhance the overall shopping experience for their users by prominently placing reviews on their product pages [Zhang et al. 2010]. Similarly, if brands can better understand the impact of different presentation formats of reviews, they can place more emphasis on those formats to attain the desired impact on shoppers' decisions.

Despite the increasing popularity of consumer generated reviews, scant literature has focused on the presentation format of reviews [Mudambi and Schuff 2010b; Quaschnig et al. 2015; Weathers et al. 2015]. Most of the prior studies has focused only on the impact of textual reviews [Archak et al. 2011; Mudambi and Schuff 2010b; Zhang et al. 2010]. The presentation format of consumer generated reviews on Amazon.com needs to be systematically analyzed to better understand its significance to users as well as brands. From the purchase decision-making perspective, prior research argued that consumers would gather brand- or product-specific information in different formats, when available, to build their information reservoir and reduce decision-specific uncertainty [Kotler et al. 2018; Li et al. 2017]. Literature also indicated that product information when presented with richer cues enhances the overall persuasiveness of the content in the ecommerce context [Burke 2002; Hong et al. 2004a; Lightner and Eastman 2002]. Prior studies also argued that richer media help in reducing product-related uncertainties [Elder and Krishna 2012; Lightner and Eastman 2002; Lurie and Mason 2007; Weathers et al. 2015]. On the contrary, studies also argued that more cues in brand-related information can be counterproductive [Lim et al. 2005; Tversky et al. 2002]. They may distract or split attention, based on the context.

Thus, literature seemed split up in terms of evaluation of different presentation formats of brand-specific information, regardless of the source of the message, i.e., marketer or consumers. *Table 1* summarizes different studies about effectiveness of presentation formats of information. Some studies indicated that media with richer cues were more effective in influencing consumers' perceptions and responses [Coursaris et al. 2014; Yi, Jiang, and Benbasat 2015; Tseng et al. 2017]. Contrarily, other studies argued that consumers did not differentiate between channels with lesser or richer cues and they focused instead on channels that provided the information that best corresponded with their needs [Brunelle 2009; Feiereisen et al. 2013; Musto et al. 2015].

Table 1: A summary of prior research on effects of information presentation formats

Authors	Study Description	Main Findings
Brunelle [2009]	The study investigated the effects of media richness [less vs. more rich media] on online users' intentions.	Consumers preferred channels that appeared to them to offer the kind of information that best corresponded to their needs. Media with richer cues were found to be more effective on intentions than media with lesser cues.
Feiereisen et al. [2013]	The study examined the impacts of alternative presentation formats [text vs. images] on consumers' early evaluations of really new products.	The effectiveness of alternative presentation formats in enhancing product comprehension and attitudes was dependent upon the type of product.
Coursaris et al. [2014]	The study examined the empirical links between purchase involvement, strategy, content and media type [URL vs. visual] on social media site, Facebook.	The findings showed that specific message strategies and visual media type of brand Facebook posts resulted in significantly higher consumer engagement.
Cheng et al. [2015]	This work investigated the effects of online product presentation formats [video vs. virtual experience] on engaging and enticing users to try the product offline.	Restricted interactions within a virtual experience compared to video presentation was found to be more enticing.
Musto et al. [2015]	The study evaluated the impacts of the presentation format [text vs. video] of information about livestock production practices on people's acceptability of such practices.	Both information presentation formats failed to make consumers assimilate toward their expected liking, thus indicating that milk acceptability was mainly affected by sensory properties.
Tseng et al. [2017]	This study explored the role of media richness [text vs. images vs. videos] in determining consumers' loyalty to mobile instant messaging.	The results indicated that multiple cues were positively related to functional value of mobile instant messaging.
Boardman and McCormick [2019]	The paper investigated how apparel product presentation [images with models vs. mannequin images] would influence consumer product decision making.	A higher number of product presentation features resulted in increased positive visual, cognitive and affective responses as consumers wanted as much visual information as possible to aid decision-making.

For these reasons, this research argues that the effects of presentation formats of consumer generated reviews would not be the same and must be examined systematically. One study that was close to the nature of this research was by Camilleri [2017], wherein they examined consumers' behavior in the context of online review scores presented in a disaggregated format, an aggregated format, and a combined format. However, they did not specifically investigate the presentation format of consumer generated reviews. Additionally, another similar study was conducted by Xu and colleagues [2015] in comparing the presentation formats of online reviews. However, as highlighted earlier, Xu and colleagues [2015] did not include all possible presentation formats of online reviews available on social commerce sites such as Amazon.com. Additionally, they used in-lab experiments whereas this research used online surveys for comparing the effects of online review presentation formats. Furthermore, unlike Xu and colleagues' [2015] study, this research used a technological approach to investigating the differences between different review formats, employing the Technology Acceptance Model [Davis 1989]. Xu and colleagues [2015] suggested in their future directions of the study that their research could be enhanced by studying the influence of information design and technology aspect of review formats. On Amazon.com, consumers have access to different formats of reviews. Videos, in particular, are growing in popularity as they provide richer cues and are considered more engaging than other formats such as text reviews [Alaimo 2018; MacDonald 2020; Marv 2018]. Online marketers also seem to prefer the video format as it helps them in search engine optimization (SEO) [Clarine 2016; Marv 2018].

This study helps bridge the gap in the literature as identified by scholars in the past by examining how consumer attributions could be influenced by the review presentation format [Camilleri 2017; Lee and Youn 2009; Park and Han 2008; Wulff et al. 2014]. This study aimed to make theoretical contribution to the consumer behavior research by testing and proposing a unique integrated conceptual model that assesses the impact of review

presentation formats on shoppers' decisions. From the managerial perspective, the goal of this study was to offer insights on how brand and product evaluations are influenced by the presentation format of consumer generated reviews. Online retail platforms such as Amazon.com could use the findings of this study for optimizing the usability of their platform for improving consumer experiences, and therefore, engagement [Wulff et al. 2014; Weathers et al. 2015]. This study has implications for the e-commerce and social commerce industries in general and online consumer purchase decision-making context in particular. This study also adds significant managerial implications for brands and practitioners by highlighting the need for promoting consumer generated reviews in different formats. Finally, this research opens new avenues of research as it highlights the importance of presentation formats of online consumer generated reviews in the context of online consumer purchase decisions.

1.3. Technology Acceptance Model

This research used technology acceptance model (TAM) for examining the impact of the presentation formats of consumer generated reviews on online shoppers' perceptions, attitudes and intentions. According to TAM, technology users' attitudes toward- and intentions to use a technology are influenced by its perceived usefulness and perceived ease of use. Perceived usefulness is defined as the degree to which people believe that using a technology would enhance their performance [Davis 1989]. Perceived ease of use refers to the degree to which people believe that using a technology would be free from effort [Davis 1989]. To examine people's attitudes toward different presentation formats of reviews on Amazon.com, this research included two separate attitude constructs, namely – attitude toward the review and attitude toward the brand. Attitude toward the review (ATR) was defined as people's favorable or unfavorable evaluations of brand-specific information [Lutz 1985; MacKenzie and Lutz 1989]. Attitude toward the brand (ATB) was defined as people's favorable or unfavorable evaluations of the brand [MacKenzie and Lutz 1989; Spears and Singh 2004]. Purchase intention (PI), was defined as people's willingness to perform a specific action after being exposed to brand-specific information [Ajzen 1991]. Thus, using the TAM framework, this research examined the effects of review presentation formats on consumers' acceptance of brand-specific information when forming purchase decisions.

TAM has been deployed to study a wide array of consumer technology adoption research. For example, studies have found that consumers are more likely to adopt new technologies such as mobile services [Shin 2011], web services [Wei 2006], satellite radio systems [Lin 2009], online banking [Pikkarainen et al. 2004], and health information technologies [Kim and Park 2012], when such technologies are perceived as useful and easy to use. Also, within the consumer behavior research, studies have found that people's positive perceptions of usefulness and ease of use of technologies such as e-commerce [Pavlou 2003; Ha and Stoel 2008], social media advertising [Lin and Kim 2016; Pinho and Soares 2011], social commerce [Hajli, 2015], and online finance [McKechnie et al. 2006] would lead to favorable attitudes toward such technologies. Additionally, research has indicated that consumers' positive perceptions of technology would lead to favorable brand evaluations, which in turn would positively influence their behavioral intentions to adopt the technology [Morgan-Thomas and Veloutsou 2013; Ha and Stoel 2008; Kim and Park 2012]. Similarly, TAM could be used to examine online shoppers' purchase intentions as an outcome of their perceptions and attitudes toward using consumer generated reviews. Online reviews have recently become an important source of brand-specific information on e-commerce platforms like Amazon.com for shoppers [Racherla and Friske 2012]. While literature, especially in the eWoM area, has often focused on the influence and transmission of online reviews using TAM [Erkan and Evans 2016; Tseng and Hsu 2010], there is an apparent gap in the research investigating the underlying processes that drive consumers' receptions of online reviews and, as a result, their purchase intentions [Racherla and Friske 2012]. It is important to understand how consumers process online reviews, because studies have indicated that consumer generated reviews could have significant effects on shoppers' purchase intentions [Jimenez and Mendoza 2013; Chatterjee 2001; Lee et al. 2011; Thomas et al. 2019]. This study addressed this gap in extant marketing and advertising literature.

1.4. Media Richness Theory

Media richness theory (MRT) posits that the richness of a medium is based on its capacity to process rich information cues [Daft and Lengel 1986]. According to the theory, the information carrying capacity of media is increased by the extent to which they can facilitate synchronicity, a range of cues, engagement through natural language, and feelings and emotions of communicating parties [Daft and Lengel 1986; Xu et al. 2015]. MRT has been previously applied to interpersonal online media such as emails [Carlson and Zmud 1999; Suh 1999; El-Shinnawy and Markus 1999] and professional group communication environments [Burke and Chidambaram 1999]. Similarly, Gunde [2004] used MRT to investigate online discussion support systems. Other than that, the theory has been applied in the context of usefulness of website information [Simon and Peppas 2004; Chen and Chang 2018]. Apart from these studies, little attention has been paid to the media richness, especially in the context of consumer generated communication such as online reviews on e-commerce sites such as Amazon.com. While theory in general argues that messages with richer cues would be perceived as more salient by users, prior research also

argued that presence of more cues could distract the receiver of information [Lim et al. 2005; Tversky et al. 2002]. This study aimed to bridge this gap in research in understanding the effects of media richness on consumers' responses to and evaluations of online reviews.

This research proposes an integrated theoretical framework using TAM and MRT to examine and determine the effects of the presentation format of consumer generated reviews on online shoppers' perceptions, attitudes, and intentions. Both theories are widely accepted among consumer behavior and information processing researchers for studying technology-acceptance attitudes, intentions, and behaviors of users across different contexts [Brunelle 2009; Chen and Chang 2018; Kahai and Cooper 2003]. Researchers, especially in e-learning, have applied these two theories together to study user acceptance of newer technologies. The integration of TAM and MRT has not been deployed in empirical investigations in consumer responses to online reviews within e-commerce context. Comparing consumer acceptance model of online reviews with different presentation formats of reviews can show the important influence of media richness on consumer evaluations of such technologies, and therefore, can offer richer theoretical contributions to the literature.

1.5. Hypotheses Development

This study drew on TAM for its basic model and integrates it with MRT to establish a rich theoretical framework for understanding online shoppers' acceptance of consumer generated reviews in different formats. The proposed model has at its core the TAM constructs and media richness constructs in the extended model. The specific constructs of the model and related hypotheses are discussed in detail below.

1.5.1. Presentation Format Hypotheses.

According to TAM, two constructs influence individuals' attitudes and intentions toward technologies, perceived usefulness (PU) and perceived ease of use (PEU). PU refers to the degree to which an individual believes that using a particular technology would enhance their task performance [Davis 1989]. Prior studies suggested that if richer media such as video information about products or brands would facilitate consumers' purchasing decisions, then they would perceive it to be more useful than less rich media such as textual information [Kahai and Cooper 2003; Mayer 2002; Xu et al. 2015]. However, no prior research compared different presentation formats—text, image, and video, when measuring the perceived usefulness of consumer generated reviews on Amazon.com. On websites such as Amazon.com, consumer generated reviews are increasingly available in different formats and not just in text format. So, it is important to evaluate different presentation formats for identifying a hierarchy of effects on consumer responses. Liu and Karahanna [2017] showed that the format in which brand- or product-specific information is presented swayed consumers' attribute preferences, and therefore, their evaluations of usefulness of the information. In line with the literature [Chang and Yang 2013; Fulk 1993; Lim et al. 2005], this study hypothesized that when individuals perceive an online review format as rich, that review is more likely to be perceived as more useful than reviews presented in less rich formats such as text and images. As reviews presented in vivid format, such as video-based reviews, combine multiple cues and facilitate imaginative thinking, they would be perceived as more useful compared to other lesser cue-rich formats such as images or texts [Hu et al. 2013; Kumar and Benbasat 2006; Xu et al. 2015]. Therefore, we expect that consumers would perceive the reviews in the richest information format as most useful, compared to other formats of reviews.

H1: Video-based reviews on Amazon.com will elicit the highest perceived usefulness, compared to text, text-with-images and image-based reviews.

Perceived ease of use refers to the degree to which individuals believe that using a particular technology would be free of effort [Davis 1989]. Prior research indicated that if richer media format such as video information about products or brands would facilitate consumers' purchasing decisions, then consumers would perceive it to be easier to use than less rich media such as textual information [Saeed and Yang 2008]. Similarly, Hung and colleagues [2013] argued that a richer format such as video, compared to less rich formats such as image or text is more likely to be perceived as easier to use as it requires less cognitive efforts in processing the information. Liu and colleagues [2009] and Lim and Benbasat [2000] also found that presentation with richer media format would influence users' perceptions of perceived ease of use. Liu and colleagues [2009] showed that people would associate richer media formats with the ease of use, and hence, perceive them as facilitating the understanding of product-specific information. In line with the prior research, it is important to compare different review presentation formats in shoppers' evaluations of their ease of use. Accordingly, this study hypothesized that when individuals perceive an online review format as rich, that review is more likely to be perceived as easier to use than reviews presented in less rich formats such as text and images. Therefore,

H2: Video-based reviews on Amazon.com will elicit the highest perceived ease of use, compared to text, text-with-images and image-based reviews.

The present study operationalized attitude toward online reviews (ATR) as online shoppers' favorable or unfavorable assessments of different formats of consumer generated reviews. Prior studies indicated that if richer

media such as video reviews would facilitate consumers' purchasing decisions, then they would have a more favorable attitude toward it than less media rich review formats [Chen and Dermawan 2020; Chen and Xie 2008; Duan et al. 2008; Jawad and Benbunan 2020; Spears and Singh 2004; Zhang et al. 2010]. In line with the literature, it is important to study how different review presentation formats influence consumers' attitudes on websites such as Amazon.com, because they can potentially influence the purchase decisions. Accordingly, this study postulated that when individuals perceive an online review format as rich, that review is more likely to render more favorable attitude than those presented in less rich formats such as text and images. Therefore,

H3: Video-based reviews on Amazon.com will elicit the most favorable attitude toward the reviews, compared to text, text-with-images and image-based reviews.

Prior studies had also assessed consumers' favorable or unfavorable evaluations of the brand (ATB), after being exposed to brand-related information such as online reviews [Huang et al. 2013; Koh et al. 2017; Shimp 1981; Spears and Singh 2004]. Prior research indicated positive effects of rich media formats such as video information on consumers' attitude toward brands, compared to less rich formats such as textual information [Chen and Dermawan 2020; Jawad and Benbunan 2020; Saat and Selamat 2014a; Spears and Singh 2004; Sukoco and Wu 2011]. In line with the literature, this study hypothesized that when individuals perceive an online review format as rich, the brand mentioned in the review would be evaluated more favorably than those presented in less rich formats such as text and images. Therefore,

H4: Video-based reviews on Amazon.com will elicit the most favorable attitude toward the brand, compared to text, text-with-images and image-based reviews.

Researchers, in the past, had examined consumers' willingness to purchase a product after they were exposed to brand or product specific information [Chevalier and Mayzlin 2006; Duan et al. 2008; Mudambi and Schuff 2010; Spears and Singh 2004; Wells et al. 2011]. For the purposes of this research, purchase intention (PI) was operationalized as shoppers' willingness to purchase a product after being exposed to a specific format of online reviews on Amazon.com. It is important to factor the effects of review presentation formats in evaluating the overall purchase decision process. Practitioners have indicated that consumers would prefer brand-specific information such as reviews in richer format when forming purchase intentions [MacDonald 2020; Marv 2018]. Teo and colleagues [2019] showed that richer media formats such as video would elicit greater intentions to shop a product online compared to less rich formats such as image or text. Similarly, Tseng and colleagues [2017] indicated that media richness increases repurchase intention as well as loyalty toward a brand or a product. Valentini and colleagues [2018] argued that presenting brand-specific information in richer formats such as images would provide a better experience to consumers compared to less rich formats such as text-only. This research, therefore, hypothesized that when individuals perceive an online review format as rich, they would have higher purchasing intentions than other less rich formats. Thus,

H5: Video-based reviews on Amazon.com will elicit the most favorable purchase intention, compared to text, text-with-images and image-based reviews.

1.5.2. Integrated Model Hypotheses

TAM posits that PU and PEU are positively associated with each other. This association has already been established in the prior research [Adams et al. 1992; Davis 1989; Mayrhofer et al. 2020]. Therefore, this study did not hypothesize for the relationship between perceived usefulness and perceived ease of use.

TAM posits that individuals' PU and PEU will be positively related to their attitudes [Davis 1986, 1989]. Additionally, prior research showed that perceived usefulness and perceived ease of use would significantly lead to people's favorable attitude toward a brand or its offering [Suleman et al. 2019; Zuniarti et al. 2020]. Um [2019] also showed that shoppers' perceptions of usefulness and ease of use would lead to favorable attitude toward a brand in a social commerce setup. Therefore,

H6: (a) Perceived usefulness and (b) perceived ease of use will have a significant positive effect on their attitude toward online reviews.

Additionally, prior research indicated that individuals' attitudes toward brand-specific information would be positively associated with their attitudes toward brand [Shimp 1981; Spears and Singh 2004]. Ghosh [2018] and Park and colleagues [2019] showed in their respective studies that online shoppers' attitude toward reviews is positively associated with their attitude toward the brand. Additionally, Sallam and Algammash [2016] showed that people's attitude toward a brand-specific information such as online reviews has a positive and significant effects on their attitude toward the brand. Therefore,

H7: Attitude toward online reviews will have a significant positive effect on their attitude toward the brand mentioned in online reviews.

TAM posits that people's attitude toward a behavior would significantly predict their behavioral intentions [Davis 1986, 1989]. Literature also indicated that consumers' attitudes toward the brand would be positively

associated with their purchase intentions [Chen and Chang 2018; Lee et al. 2011; Lee et al. 2016; Spears and Singh 2004]. Indarsin and Ali [2017] established this association between attitude toward a brand and purchase intentions within an m-commerce setup. Similarly, Hong and Cho [2011] proved this relationship in a B2C e-marketplace. Therefore, this research hypothesized that,

H8: Attitude toward the brand will have a significant positive effect on their purchase intentions.

In addition to the core TAM model, this research also integrated the MRT elements: channel experience, product experience, and perceived media richness (see *Figure 1*).

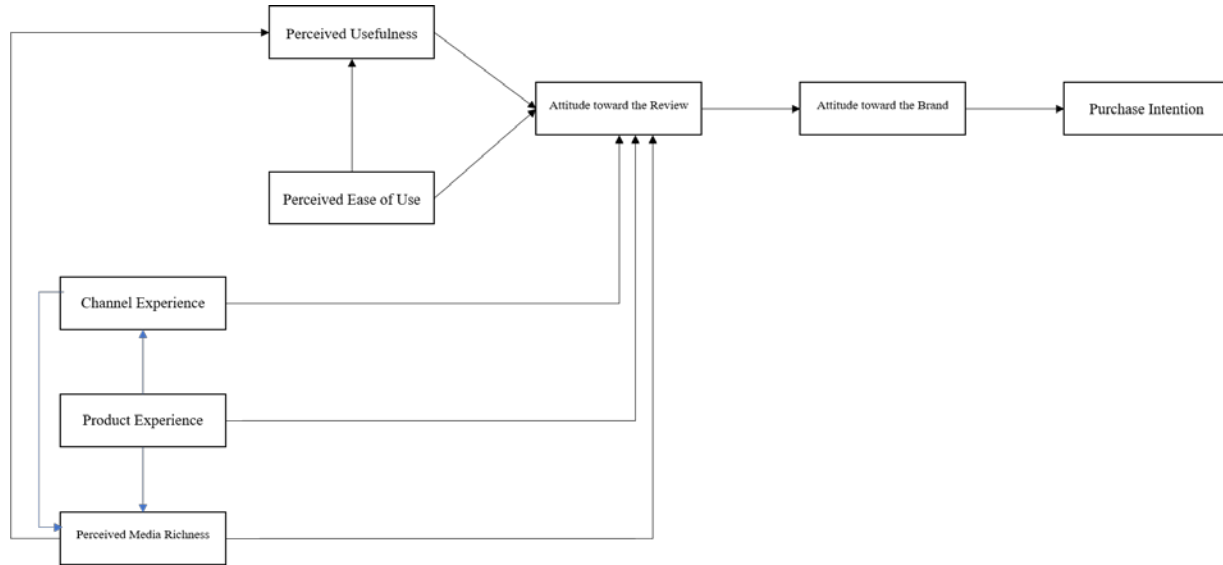


Figure 1: Proposed integrated model for assessing the effects of review presentation formats

Literature indicated that when a channel provides rich information cues, it would allow users to obtain sensory information more easily than channels with less rich cues [Brunelle 2009; Daft and Lengel 1986]. Channel experience (CE) represents individual use, skills, and comfort with a particular channel or format [Daft and Langel 1986]. Prior research indicated that channel experience would have a positive association with attitude toward the information presented through the channel [Brunelle 2009; Fulk 1993; King and Xia 1997]. Melero and colleagues [2016] found that consumers’ channel experiences would be a central driver of their channel choice, and therefore, their attitude toward the information presented through that channel. Within the context of this research, channel experience is considered as consumers’ experiences of using different online review presentation formats. It is argued that consumers’ experience of using a specific type of review presentation format would significantly predict their attitude toward the information presented. Consequently, the following hypothesis was proposed:

H9: Online shoppers’ experience with online review presentation formats will have a significant positive effect on their attitudes toward reviews.

Product experience (PE) was operationalized as the degree to which an individual their use, skills, and comfort using a particular product, e.g., video game consoles. Prior research argued that individuals’ product experience would have a positive association with attitude toward the information about the product such as online reviews [Brunelle 2009]. Keng and colleagues [2016] found that people’s experiences with a product led to favorable evaluations of the information presented about the product and the brand. Additionally, Ifie [2020] tested this relationship within the context of online product reviews and found it as a significant positive predictive association. Accordingly, the following hypotheses were proposed:

H10: Online shoppers’ experience with product will have a significant positive effect on their attitudes toward online reviews about the product.

Perceived media richness (PMR) refers to the degree to which an individual perceives a particular media to offer richer information cues [Daft and Langel 1986]. Brunelle [2009] and Chang and Yang [2013] argued that PMR will have a positive association with PU and ATR. Choi and Kim [2020] found that perceived media richness would have a positive effect on consumers’ perceptions of usefulness of the information presented. Similarly, Onobhayedo [2017] also found that people’s perceptions of media richness would significantly affect the shaping of their beliefs about the usefulness of the information. Li and colleagues [2018] established in their research that PMR would lead

to online shoppers positive evaluations of the information presented. Consequently, the following hypothesis was proposed:

H11: Online shoppers' perceptions of richness of online review presentation format will have a significant positive effect on (a) their perceptions of usefulness of reviews and (b) attitudes toward reviews.

2. Method

2.1. Research Design

Based on the literature, an empirical online survey design was used in this study [Keppel and Wickens 2004]. The research involved a between-subjects randomized control research design. Presentation format of online review (Format: text-only, text-with-image, image, video) was a between-subjects factor. At the time of conducting this research, online reviews were available in the above mentioned formats across different e-commerce and social commerce platforms. Therefore, while there could be other combinations possible, this study focused on only the presently available online review presentation formats. Before recruiting participants, an a priori power analysis was carried out using G*Power software. The parameters were set with power $(1 - \beta)$ at 0.80, .17 effect size f , and $\alpha = .05$, one tailed, with five measures. The effect size was selected as per the effect size guidelines provided by Cohen [1988] and also because it represented a moderate effect size used in behavioral and social sciences studies of this nature [Coe 2020; Cohen 1988; Lepper et al. 1999; Rubin 1992]. The results of the power analysis suggested a sample size of 89 participants as sufficient to examine the differences between the four presentation formats of consumer generated reviews at .05 significance level for analysis of variances. The actual sample size of this research was 339 ($n=339$) participants. They were randomly assigned to one of the five conditions, including a control condition, in an online study using Qualtrics. The proposed hypotheses were tested using SPSS 27.0 statistical software as well as Mplus 8.5.

2.2. Independent Variable

2.2.1. Presentation Format of Consumer Generated Review.

In line with prior research, this study compared the impact of review presentation format on shoppers' perceptions, attitudes and purchase intentions [Xu et al. 2015; Zhu and Zhang 2006]. The four presentation formats included: text-only, text-with-image, image, and video. These are the most common presentation formats examined in the media richness literature [Brunelle 2009; Chang and Yang 2013; Saeed and Yang 2008; Xu et al. 2015]. These are also the four most commonly used review presentation formats on Amazon.com [Amazon.com Help 2020]. When consumers want to add a review on Amazon.com, they can write their review in the text area allotted by platform and can also upload images of the product they purchased in addition to the text review. This way, they have an opportunity to show the condition of the product they received as well as product in use. This can provide useful visual cues to other shoppers who would like to see how the product actually looks and how it works, in addition to reading text reviews from other consumers. At the time of this study, Amazon.com would only allow shoppers to attach multimedia files in image or video formats. Accordingly, in this research, the text-only condition presented review in the text format. The text-with-image condition presented textual review accompanied by product-specific images by consumer. The image condition only showed product-specific images by consumer, without any text in the review. In other words, in the image-only condition, it was shown that consumer only posted photos of the product they purchased without writing any text review, whereas in the text-with-image condition, consumer not only posted photos, but also wrote a review. The video condition presented a video-based review by consumer. The researchers ensured that all four presentation formats presented the same information. In addition, based on the literature [Saat and Selamat 2014b; Walker et al. 2009], this study also involved a control condition, which only showed product-related brand generated information. The control condition was used to examine the treatment effects of review presentation format types.

2.3. Dependent Variables

2.3.1. Perceived usefulness (PU).

Davis [1989] defined perceived usefulness (PU) as people's perceptions about the potential benefits of a particular technology. In the context of this study, PU was measured using Davis' [1989] three-item, seven-point Likert type scale ("strongly disagree" = 1 to "strongly agree" = 7, *Cronbach's* $\alpha = .82$), which consisted of: 'This review helps me to make my purchase of a video game console faster;' 'This review helps to make my purchase of a video game console more economical;' and 'This review makes it easy for me to make my purchase of a video game console.'

2.3.2. Perceived Ease of Use (PEU).

Davis [1989] defined perceived ease of use [PEU] as people's perceptions about the ease of using a particular technology. To measure PEU, this study used Green and Pearson's [2011] four-item, seven-point Likert type scale ("strongly disagree" = 1 to "strongly agree" = 7, *Cronbach's* $\alpha = .84$), which consisted of: 'My interaction with this review is clear and understandable;' 'Interacting with this review does not require a lot of mental effort;' 'I find this review ease to use;' and 'I find it easy to locate the information I need in this review.'

2.3.3. Attitude Toward the Review (ATR).

Lutz [1985] defined attitude toward a message as people's favorable or unfavorable evaluations of it. In this research, ATR was measured using Bhutada and colleagues' [2016] five-item, seven-point semantic differential scale, which included: believable (1)-unbelievable (7), unappealing (1)-appealing (7), valuable (1)-not valuable (7), useful (1)-useless (7), and unfavorable (1)-favorable (7) (*Cronbach's* $\alpha = .93$).

2.3.4. Attitude toward the brand (ATB).

Kraft and colleagues [2005] defined attitude toward the brand (ATB) as people's favorable or unfavorable evaluations of the brand after being exposed to brand-related content. In this study, Bhutada and colleagues' [2016] three-item, seven-point semantic differential scale was used to measure ATB, consisting of: good (1)-bad (7), pleasant (1)-unpleasant (7), and favorable (1)-unfavorable (7) (*Cronbach's* $\alpha = .95$).

2.3.5. Purchase Intention (PI).

Purchase intention (PI) was defined as people's willingness to purchase a product after being exposed to brand-specific information [Ajzen 1991]. This study used Lee and colleagues' [2016] four-item, seven-point Likert type scale to measure PI ("strongly disagree" = 1 to "strongly agree" = 7, *Cronbach's* $\alpha = .95$), consisting of: 'I am willing to purchase this video game console;' 'I feel positively about purchasing this video game console;' 'I want to buy this video game console;' and 'I want to consider purchasing this video game console.'

2.3.6. Channel Experience (CE).

Channel experience (CE) was defined as an individual's use, skills, and comfort with a particular technology [Daft and Langel 1986]. CE was measured using Brunelle's [2009] four-item, seven-point Likert type scale ("strongly disagree" = 1 to "strongly agree" = 7, *Cronbach's* $\alpha = .96$), consisting of: 'I am experienced with this particular review format use;' 'I feel competent using this review format;' 'I feel comfortable using this review format;' and 'I feel that this review format is easy to use.'

2.3.7. Product Experience (PE).

Daft and Langel [1986] defined product experience as an individual's use, skills, and comfort with a particular product. Brunelle's [2009] three-item, seven-point Likert style scale was used to measure PE ("strongly disagree" = 1 to "strongly agree" = 7, *Cronbach's* $\alpha = .82$), consisting of: 'I feel that I am experienced using this type of product;' 'I feel that I am well-versed with this type of product;' and 'I feel knowledgeable about this type of product.'

2.3.8. Perceived Media Richness (PMR).

Daft and Langel [1986] defined perceived media richness (PMR) as the degree to which an individual perceives a particular technology to offer rich information cues. To measure PMR, this study used Brunelle's [2009] four-item, seven-point Likert style scale ("strongly disagree" = 1 to "strongly agree" = 7, *Cronbach's* $\alpha = .86$), consisting of: 'This review provides timely feedback;' 'This review provides a tailored message for me;' 'This review communicates a variety of different cues;' and 'This review uses rich and varied language.'

2.4. Selection of Product for Stimuli

The present research involved a pretest to determine an appropriate product category for the stimuli. The pretest consisted of 102 undergraduate students from a major Southeastern U.S. university ($n=102$). The researchers provided participants with different hedonic and utilitarian product categories. Okada [2005] defined hedonic products as those items that are primarily used for recreational, entertainment and simulation purposes. Some examples of the hedonic product categories used in the pretest are a video game console, a candy bar, and perfume. Childers and colleagues [2001] defined utilitarian products as those items characterized by task-oriented and rational motivation. Some examples of the utilitarian products used in the pretest are auto insurance, a dishwasher appliance and sunscreen. Participants were asked to rate these different products on a four-item, seven-point purchase decision scale [Mittal 1995, *Cronbach's* $\alpha = .80$], which included: 'I would not care at all (about this product) (1)-I would care a great deal (about this product) (7),' '(Product is) Not at all important (1)-(Product is) Extremely important (7),' 'Not at all concerned (about this product) (1)-Very much concerned (about this product) (7),' and '(Products are) All very similar (1)-(Products are) All very different (7).' Based on the results of the pretest, the video game console was determined to be the product category to be used in the stimuli.

A second pretest was conducted for ascertaining the appropriate product features to be highlighted in the stimuli. A list of video game console features was compiled from the real-life product descriptions of different video

game consoles sold on Amazon.com. For the purposes of the second pretest, another set of 114 undergraduate students was recruited from a major Southeastern U.S. university ($n=114$). Some examples of product features used in the second pretest included quality of the video game console, gaming controller options, console exclusive games, online collaboration with other players, as well as video game character options. Participants rated different product features on a one-item, seven point Likert style scale (“strongly disagree” = 1 to “strongly agree” = 7), consisting of: ‘This feature is important to me when I am considering purchasing a video game console [Steenkamp et al. 2003, Cronbach’s $\alpha = .88$].’ Once the product features were finalized, the researchers custom coded the stimuli product pages using JavaScript so that they were similar to the real-life product pages on Amazon.com. Different consumer generated review presentation formats were placed alongside the brand generated product descriptions as they would be placed on the real-life Amazon.com product pages. All four presentation formats of consumer generated reviews provided identical information (see Figure 2). The control condition only included product-specific information. The image reviews included unboxed images of a video game console product. The video reviews showed a consumer’s hands unboxing a video game console product. The video’s narration was identical to the textual and image-based reviews’ descriptions. The researchers used a fictitious video game console product and brand name in order to avoid any effects of brand knowledge and prior brand familiarity [Huang et al. 2013]. The stimuli images and videos only showed the hands of a user unboxing the product, in order to minimize the effects of gender, race or culture [Hu et al. 2013].

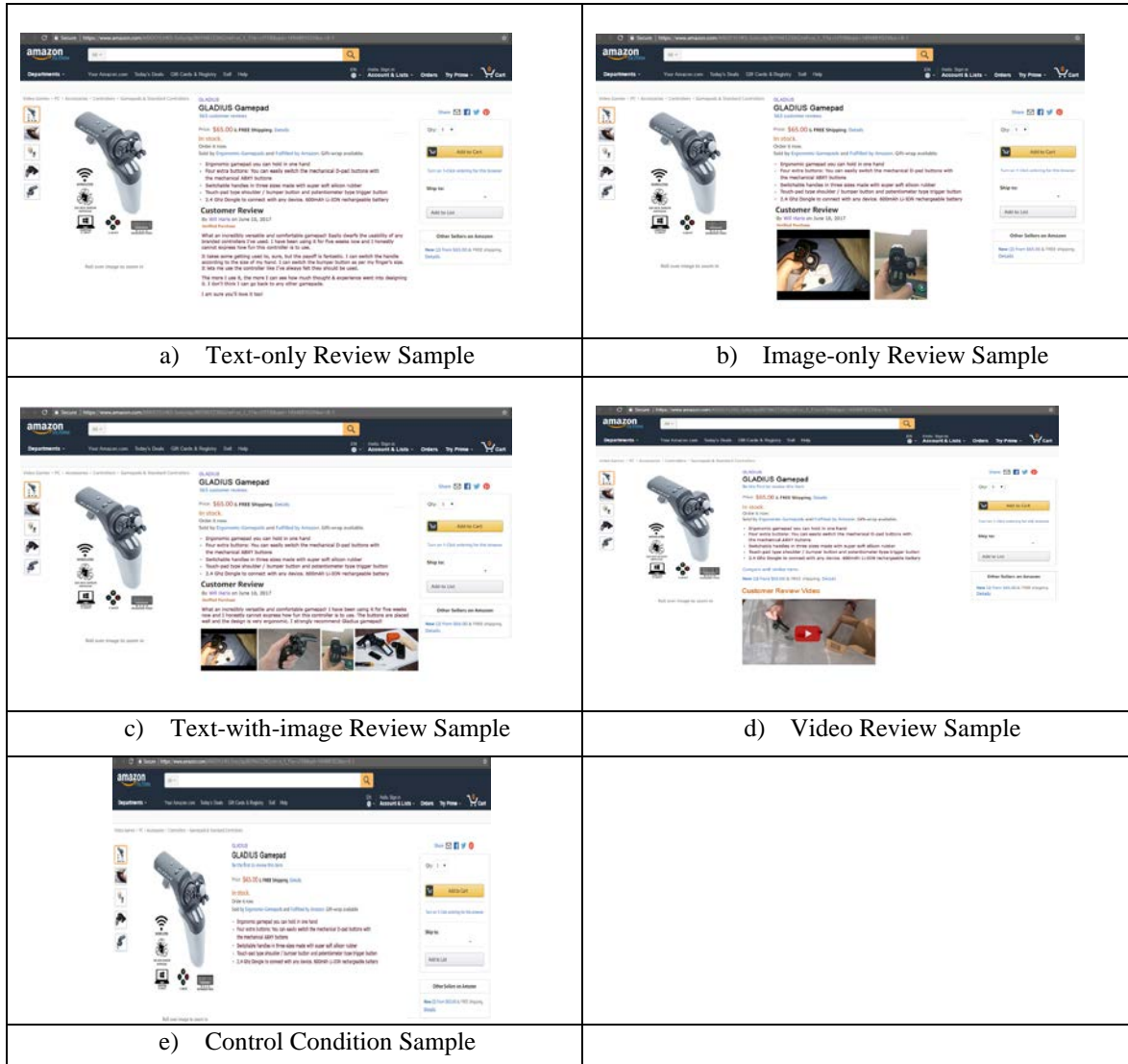


Figure 2: Samples of different presentation formats of consumer generated reviews

2.5. Research Procedure

This research involved an online survey study. Participants were asked a screening question about whether or not they frequently purchased or searched for products on Amazon.com. Only those who said “Yes” were allowed to move forward in the study. In other words, only people who had prior experiences of using the e-commerce platform for carrying out any type of online shopping transactions were selected for this study. The idea was to ensure that participants were real-life consumers who actually were familiar with online shopping, and more specifically with Amazon.com, which was used for this research. The purpose to do this was to ensure that participant responses were based on their actual experiences of online shopping, and thereby eliminating any potential risk of leniency, acquiescence, or social desirability biases, in line with Podsakoff and colleagues [2003], Lu and colleagues [2016], and Tajvidi and colleagues [2017], and Lin and colleagues [2019]. Xiao and colleagues [2019] suggested that online shoppers’ purchase intentions are shaped by online shopping context cues such as familiarity with an e-commerce platform, online promotion and marketing cues, and social review cues. As participants consisted of university students similar to prior social commerce studies [Featherman and Hajli 2016; Hajli and Lin 2016; Lin and colleagues 2019; Tajvidi and colleagues 2017], it was important to ensure that they had some experience of online shopping. Accordingly, the screening used in this research helped to focus on the relevant respondents and to ensure the quality of the data. Participants that said “No” to the screening question were thanked for their time to participate on a thank you page. After receiving general instructions, the screened participants started an online survey by clicking on the “I agree to participate” button displayed at the bottom of the consent form. Participants were randomly assigned to one of the five conditions, including a control condition. First, they answered the questions about background demographic information and their online purchasing behaviors and preferences. Next, they saw a brand-generated product description as it would appear on Amazon.com, which was followed by consumer generated reviews presented in a specific format. Participants then answered a questionnaire that gauged their perception, attitudes, and intentions. The total study lasted between 15 and 20 minutes.

2.6. Participants

This study involved a total of 384 participants using a convenience sampling method [Emerson 2015]. The participants were recruited from a major Southeastern U.S. university. Marketing and consumer behavior research traditionally relies heavily on student samples for empirical testing. Scholars argue that students have a demographic and psychographic profile which may not be representative of other consumers or individuals [Basil 1996; Bello et al. 2009; Lynch 1999]. However, the proponents argue that because the objective is to develop theories dealing with fundamental human behavior, students as humans do represent a legitimate sample choice [Calder et al. 2009; Lucas 2003]. In consumer research such as this study, Wells [1993] suggested studies that use student samples can still provide generalizable findings if the research design is theoretically well-founded and results are carefully reported and interpreted. For the purposes of this research, student samples effectively represented the typical consumer base for the product category used, i.e., video game console [[Palomba 2016](#); [Statista 2020](#)]. After considering the screening question responses and removing inattentive responses and missing values, a total of 339 participants remained ($n=339$). The demographic responses showed that about 54% ($n=183$) of participants were female and 46% ($n=156$) were male. Age of participants ranged between 18 years old and 29 years old ($M=21$, $SD=3.37$).

3. Results and Findings

3.1. The Internet and Social Commerce Usage Patterns

Data were analyzed using SPSS 27.0 and Mplus 8.5 statistical software. The findings regarding participants’ Internet and e-commerce usage indicated that about 92% of participants accessed the Web on a daily basis. Participants reported that they spent about two to three hours daily on the Internet. In terms of their social commerce usage patterns, about 54% ($n=183$) of participants would first search for a product online and then buy it offline later on, whereas 26% ($n=88$) of participants would directly buy products from social commerce websites such as Amazon.com. When asked about their frequency of online shopping, 62% ($n=210$) of respondents would purchase items online on a weekly basis, whereas about 26% ($n=88$) of respondents would shop online on a monthly basis. A vast majority of participants (94%, $n=319$) reported using Amazon.com for their online shopping more than using other e-commerce websites or the brand’s own retail websites. Participants reported that they accessed Amazon.com more on their desktop devices (78%, $n=264$) than on mobile devices (22%, $n=75$). A clear majority of respondents (96%, $n=325$) said that they would read/watch reviews about products on Amazon.com before deciding to buy a product.

3.2. Test of Hypotheses

3.2.1. Presentation Format Hypotheses Testing.

H1 posited that shoppers would perceive video reviews as the most useful compared to other review formats. To test the first hypothesis, ANOVA was conducted. Levene’s test and normality checks were carried out and

assumptions met. Findings indicated that the effects of the presentation format of consumer generated reviews on PU were significant, $F(4, 333) = 2.44, p=.02$. As hypothesized, the PU score was the highest in the video-based reviews condition ($\bar{x}=5.31, SD=0.76$), followed by the text-with-image condition ($\bar{x}=5.18, SD = 0.82$), followed by the image-based reviews condition ($\bar{x}=5.00, SD=0.85$), which was followed by text-only reviews condition ($\bar{x}=4.99, SD=0.85$), and control condition ($\bar{x}=4.93, SD=0.89$). Thus, *H1* was supported.

H2 hypothesized that shoppers would perceive video-based reviews on Amazon.com as easiest to use compared to other review formats. To test the second hypothesis, ANOVA was conducted. Levene's test and normality checks were carried out and assumptions met. Results indicated that the effects of the presentation format of consumer generated reviews on PEU were significant, $F(4, 333) = 2.14, p=.04$. As hypothesized, the PEU score was the highest in the video-based reviews condition ($\bar{x}=5.55, SD=1.00$), followed by the text-with-image condition ($\bar{x}=5.54, SD=1.05$), followed by the image-based reviews condition ($\bar{x}=5.32, SD=1.19$), which was followed by text-only reviews condition ($\bar{x}=5.23, SD=1.02$), and control condition ($\bar{x}=5.12, SD=1.07$). Thus, *H2* was supported.

H3 hypothesized that shoppers' attitude toward the reviews would be highest for video-based reviews, compared to other review formats. To test the second hypothesis, ANOVA was conducted. Levene's test and normality checks were carried out and assumptions met. Results indicated that the effects of the presentation format of consumer generated reviews on ATR were significant, $F(4, 333) = 3.53, p=.004$. As hypothesized, the ATR score was the highest in the video-based reviews condition ($\bar{x}=5.52, SD=1.13$), followed by the text-with-image condition ($\bar{x}=5.04, SD=1.17$), followed by the image-based reviews condition ($\bar{x}=4.95, SD=1.14$), which was followed by text-only reviews condition ($\bar{x}=4.88, SD=1.26$), and control condition ($\bar{x}=4.87, SD=1.24$). Thus, *H3* was supported.

H4 posited that the attitude toward the brand would be highest for video-based reviews, compared to other review formats. To test the second hypothesis, ANOVA was conducted. Levene's test and normality checks were carried out and assumptions met. Results indicated that the effects of the presentation format of consumer generated reviews on ATB were significant, $F(4, 333) = 2.17, p=.04$. As hypothesized, the ATB score was the highest in the video-based reviews condition ($\bar{x}=5.20, SD=1.37$), followed by the text-with-image condition ($\bar{x}=4.87, SD=1.13$), followed by the image-based reviews condition ($\bar{x}=4.78, SD=1.18$), which was followed by control condition ($\bar{x}=4.69, SD=1.23$), and text-only condition ($\bar{x}=4.66, SD=1.19$). Thus, *H4* was also supported.

H5 posited that the purchase intention would be highest for video-based reviews, compared to other review formats. To test the second hypothesis, ANOVA was conducted. Levene's test and normality checks were carried out and assumptions met. Results indicated that the effects of the presentation format of consumer generated reviews on PI were significant, $F(4, 333) = 2.39, p=.03$. As hypothesized, the PI score was the highest in the video-based reviews condition ($\bar{x}=3.50, SD=1.38$), followed by the text-with-image condition ($\bar{x}=3.40, SD=1.41$), followed by the image-based reviews condition ($\bar{x}=3.01, SD=1.38$), which was followed by the text-only condition ($\bar{x}=2.96, SD=1.46$), and the control condition ($\bar{x}=2.93, SD=1.48$). Thus, *H5* was also supported.

3.2.2. Integrated Model Hypotheses Testing.

H6 hypothesized that PU and PEU will have a significant positive effect on ATR. The confirmatory factor analysis using Mplus helped in examining this association between the variables. The results indicated that PU had a significant positive effect on ATR, ($\beta=0.28, p=0.01$). Similarly, PEU also had a significant positive effect on ATR, ($\beta=0.46, p=0.001$). Thus, *H6* was also supported.

H7 hypothesized that ATR will have a significant positive effect on ATB. The confirmatory factor analysis helped in examining this intercorrelation between the variables. The results indicated that ATR had a significant positive effect on ATB, ($\beta=0.21, p=0.001$). Therefore, *H7* was supported.

H8 posited that ATB will have a significant positive effect on PI. The confirmatory factor analysis helped in examining this intercorrelation between the variables. The findings indicated that ATB had a significant positive effect on PI, ($\beta=0.42, p=0.001$). Therefore, *H8* was supported.

H9 hypothesized that online shoppers' experience with particular review format will have a significant positive effect on ATR. Confirmatory factory analysis was used to test the association between channel experience (CE) and attitude toward the review (ATR). Results indicated that CE had a significant positive effect on ATR, ($\beta=0.28, p=0.001$). Therefore, *H9* was supported.

H10 posited that shoppers' experience with particular product (PE) will have a significant positive effect on ATR. Again, confirmatory factor analysis helped in testing the intercorrelations between these variables. Findings indicated that PE had a significant positive effect on ATR, ($\beta=0.27, p=0.001$). Thus, *H10* was also supported.

H11 hypothesized that shoppers' perceptions of richness of reviews (PMR) will have a significant positive effect on PU and ATR. The results of confirmatory factor analysis indicated that the PMR had a significant effect on PU, but not in the hypothesized direction ($\beta=-0.07, p=0.09$). PMR had a significant positive effect on ATR, ($\beta=0.15, p=0.005$). Thus, *H11(a)* was not supported, but *H11(b)* was supported.

Confirmatory factor analysis was used to test the overall model and the factor structure between the variables. A path model was constructed to test all intercorrelation hypotheses and results did not show a good model fit, $\chi^2=100.43$, $p=.001$, $CFI=.735$, $TLI=.658$, $RMSEA=.147$, $SRMR=.09$. It was because two of the hypothesized paths in the model—linking PMR and PU and PE and PMR—did not reach statistical significance. After removing these two paths, a revised model was tested. Results indicated a relatively improved and good model fit (See Figure 3), $\chi^2(24)=34.51$, $p=.10$, $CFI=.954$, $TLI=.85$, $RMSEA=.043$, $SRMR=.07$.

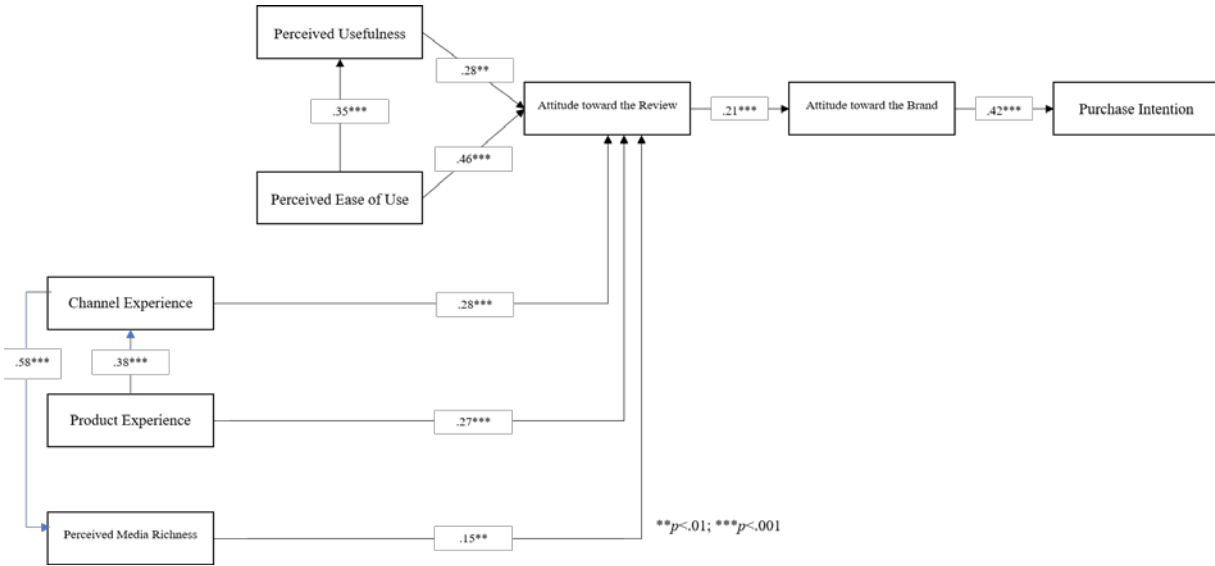


Figure 3: Revised integrated model for assessing the effects of review presentation formats

4. Discussion and Implications

This pioneer research examined the effects of different presentation formats of consumer generated reviews on Amazon.com on online shoppers’ perceptions, attitudes and purchase intentions. The results showed that video-based reviews, compared to other formats, had significantly higher influences on shoppers’ acceptance of and perceptions about the richness of reviews. The results found theoretical support from the technology acceptance model and media richness theory. Further, this study also found support for an integrated theoretical model that includes TAM and MRT variables.

First, this study found support for all hypotheses predicting that the most media-rich review presentation format (i.e., video) would have the highest impact on shoppers’ acceptance of reviews. *H1* hypothesized that PU would be highest for video reviews. It found support in the data. This was consistent with the prior literature, which suggested that video reviews had a higher impact on users’ perceptions of the usefulness of the reviews than the text reviews [Horst et al. 2007; Racherla and Friske 2012a; Xu et al. 2015]. *H2* posited that PEU would be highest for video reviews. This hypothesis was also supported and indicated a hierarchy of presentation formats in the higher order of richness of media, in terms of the effects on shoppers’ perceptions of ease of using the reviews. This was in line with Saeed and Yang’s [2008] research that users would perceive richer media as easier to use than less rich media.

Similarly, *H3* and *H4* posited that the most media-rich review format would elicit the highest effects on shoppers’ attitudes toward the review and also toward the brand. Both hypotheses were supported by the results. Both these findings found support in the prior research in terms of more favorable attitudes toward richer media compared to the less rich media [Chen and Xie 2008; Duan et al. 2008; Saat and Selamat 2014a; Zhang et al. 2010]. Finally, *H5* hypothesized that online shoppers’ purchase intentions would be highest for the video review format than other less rich formats. This hypothesis was also supported and in line with the richness hierarchy effects as established in the literature [MacDonald 2020; Marv 2018]. The control condition with only brand-specific information [no reviews] was found to elicit the lowest effects in all format-comparison hypotheses mentioned above, except for attitude toward the brand, where it was higher than the text-only review format. This could be due to the fact that both conditions (control vs. text-only) provided only text information about the brand, and therefore shoppers showed a more favorable attitude toward the brand when they thought the information came directly from the brand instead of other consumers. This argument found support in the literature [Camilleri 2017; Maryam et al. 2017].

Although much research has dealt with how consumers process information related to their purchase decision, this research has looked directly at why online shoppers may get more benefit from consumer generated reviews in one format over others. With the rapid advancements of digital audio and video technologies, a growing number of people are able to produce short video clips and share them with other consumers through social or e-commerce platforms. Moreover, the growing popularity of mobile and Internet technologies facilitates the integration of video-enabled reviews on online marketplaces such as Amazon, and especially on social commerce platforms such as Facebook and Instagram [Hajli 2015]. Video reviews allow online shoppers to see products in actual use, which can only be possible to a certain extent in still images. Text-based reviews are more description-based, and therefore, may not provide a clear picture of the product in use like the video reviews [Chen and Dermawan 2020; Diwanji and Cortese 2020; Jawad and Benbunan 2020]. Online videos are increasingly becoming popular among consumers, on social media platforms such as YouTube where about 100 hours of video is uploaded every minute [Jawad and Benbunan 2020]. On social commerce websites, video-based content are gaining popularity among users [Hajli 2015]. On the digital platforms, we can observe that many consumers create and share video-based reviews about brands and products that they have used or currently using. As a result, online vendors and brands have started realizing the efficacy of video-based reviews, and therefore, often send their products to famous reviewers or influencers so that they can product video reviews of their products and share with their followers. This study is among the first attempts to highlight the efficacy of consumer generated review formats in a consumer purchase decision-making process.

Next, this study applied TAM and MRT to test an integrated conceptual framework for understanding shoppers' acceptance of consumer generated reviews. No other research in the past had examined such an integrated model in terms of consumer generated reviews. All the hypothesized intercorrelations among the dependent variables were supported, except for the paths between perceived media richness and perceived usefulness. The analytical results of the hypothesized associations are summarized in *Table 2*.

Table 2: Results of hypotheses tested in this study

Research Hypotheses	Statements	Result
H1	PU: Video > Other formats	Supported
H2	PEU: Video > Other formats	Supported
H3	ATR: Video > Other formats	Supported
H4	ATB: Video > Other formats	Supported
H5	PI: Video > Other formats	Supported
H6a	PU → ATR	Supported
H6b	PEU → ATR	Supported
H7	ATR → ATB	Supported
H8	ATB → PI	Supported
H9	CE → ATR	Supported
H10	PE → ATR	Supported
H11a	PMR → PU	Not Supported
H11b	PMR → ATR	Supported

Notes: PU=Perceived Usefulness; PEU=Perceived Ease of Use; ATR=Attitude toward the Review; ATB=Attitude toward the brand; PI=Purchase Intention; CE=Channel Experience; PE=Product Experience; PMR=Perceived Media Richness

These findings confirmed the results associated with the limited existing research that has integrated these two theories in the past in the context of acceptance of different message formats [Liu et al. 2009; Saeed and Yang 2008; Xu et al. 2015]. Specifically, this study found support in Xu and colleagues' [2015] argument that the association between shoppers' perceptions of the richness of brand-specific information and its usefulness depends upon their experiences with the particular product category. This link between the task and presentation format was also echoed in prior research [Liu et al. 2009; Saeed and Yang 2008]. Overall, TAM and MRT appeared to be valid theoretical frameworks for explaining how online shoppers' respond to consumer generated reviews presented in different formats on e-commerce sites such as Amazon.com. This study, therefore, bridges the gap in the literature regarding understanding consumers' acceptance of online reviews as part of their purchase decisions by introducing and confirming the influence of media richness as external variables on the original TAM elements.

The findings of this study support the notion that online shoppers' purchase intentions and presentation formats of consumer generated reviews are interrelated. Particularly, they extend Camilleri's [2017] argument in comparing

different review types by specifically examining the presentation formats of reviews. This study also extends Xu and colleagues' [2015] argument by including all presently possible types and combinations of review presentation format available on e-commerce sites such as Amazon.com, whereas the previous study only compared three formats. Additionally, while Xu and colleagues [2015] focused on the elaboration in user responses in terms of the three review formats as well as the cognitive fit of information presented in reviews, this research offered information system and design affordances of the presentation format in terms of effects on consumer purchase intentions, using the technology acceptance model and media richness theory. With rapid advancements in the social commerce ecosystem due to the increasing penetration of mobile and social technologies into consumers' lives, consumer generated reviews are increasingly available in different presentation formats on such platforms. Therefore, this research provides useful insights in terms of impacts of consumer generated reviews in different media formats on social commerce shoppers' purchase intentions. Overall, the results suggested that online shoppers using different levels of media richness in reviews might form purchase decisions differently. By integrating TAM and MRT, this research provided a unique theoretical perspective in understanding the impact of different presentation formats of consumer generated online reviews on purchase decisions. In an increasingly user-centered brand communications space, this study provides an important insight into how online shoppers evaluate consumer generated reviews, based on presentation format. The findings, therefore, have implications for consumer choice and the optimal design of reviews on e-commerce platforms such as Amazon.com.

From the social commerce perspective, this study helped in understanding how social commerce interactivity, in the form of consumer generated reviews presented in different formats, would enable online shoppers in their purchase decision-making process [Bazi et al. 2019; Hajli, 2015; Tajvidi et al. 2017]. The results of this research find support in the literature that suggested that consumer co-creation of brand- and product-specific content on social commerce platforms can provide social support to other shoppers [Hajli 2014, 2015; Hajli et al. 2017]. This research contributed toward developing a more enhanced understanding of the concept of consumer generated brand co-creation, especially within social commerce platforms. Therefore, it provided a useful empirical and theoretical foundation of examining how consumers co-create branding in increasingly social e-commerce environment.

This study also offers several significant managerial implications. The research further extends the findings of prior research that brands and vendors on e-commerce websites such as Amazon.com should carefully consider different presentation formats of consumer generated content as part of their overall advertising strategy [Hong et al. 2004b; Jiang and Benbasat 2007b; Xu et al. 2015]. While Xu and colleagues [2015] primarily focused on the effects of video versus image versus text reviews to see if they added any additional value to the brand generated product description, this study, on the contrary, found that all four formats uniquely added to the brand generated product description. Therefore, brands must carefully examine the impact of each review presentation format and accordingly focus more efforts in encouraging shoppers to post reviews in a specific format that is most likely to influence other users' buying decisions. To encourage users to post reviews in a specific format, brands can also consider offering them incentives, which in turn, can provide more leverage to their products. In summary, understanding the enticing tactics in terms of review presentation format could be extremely helpful for e-commerce sites such as Amazon.com and their vendors, who have long been seeking to understand and manipulate shoppers' attention and reaction to brand-specific information, especially when it's user-generated.

On e-commerce and social commerce platforms, recommendations and referrals, and ratings and reviews are the main element to build trust, which in turn affect shoppers' perceptions, attitudes, and purchase intentions [Hajli, 2015]. As Hajli and Sims [2015] highlighted in their research, consumer generated reviews, in different presentation formats, can serve as useful tools for co-creation of value and co-branding on e-commerce and social commerce platforms. Additionally, this study provided e-commerce managers with an enhanced understanding of the implementations of social commerce for online business practices and achieving competitive advantages, especially during the COVID-19 era. Brands and online vendors can take advantage of social commerce to increase shopper engagement and achieve co-creation of brand- and product-specific content, as highlighted by Hajli and colleagues [2017] and Tajvidi and colleagues [2017]. In the COVID-19 era, firms can focus on developing consumer-centered and consumer-driven branding and promotions strategies by empowering consumers to create content in different presentation formats, using the technological and social advancements [Lin et al. 2019]. On the other side, social commerce platforms and e-commerce platforms such as Amazon.com can consider partnering with online vendors for creating a trustworthy and convenient online shopping environment for consumers that allows them to interact with brands and peers, and thus improve overall user satisfaction on such platforms [Bazi et al. 2019].

5. Limitations and Future Directions

There are certain study limitations to note. This study used student participants who reported being active online shoppers, especially on platforms such as Amazon.com. They indicated that they were potential future consumers

of the product category studied, and hence they offered a representative sample. However, future studies could recruit from a larger and general population to increase the generalizability of findings. Similarly, the effects of different presentation formats of online reviews, in this study, are manifested through self-reported measures. Future studies could examine such effects in field settings by collaborating with brands that intend to launch new products through e-commerce sites such as Amazon.com. Moreover, to extend the findings of this research, it is also promising to further examine whether the effects of presentation formats of reviews are strong enough to hold over a long period, for example, when there is a time gap between shoppers' first e-commerce store visit and their consecutive re-visits. This research has significant implications for user interface design researchers too. A recent trend in social commerce website design is to create a sense of immersion by providing interactive elements to shoppers [Camilleri 2017; Jiang and Benbasat 2007b; Yi et al. 2015]. Using the model suggested by this study, future research can test the idea of interactivity, but specific to user-generated content across different online platforms and product categories. It is important to address the objectiveness of consumer generated reviews, in different presentation formats. As highlighted by Colvin [2013], Janze and Siering [2014], and Lin and colleagues [2019], consumer generated reviews and recommendations significantly influence online shopper trust within social commerce. On the other hand, online vendors and social commerce marketers are aware of this and some of them succumb to the temptation to generate fake consumer reviews [Lappas et al. 2016; Malbon 2014]. Therefore, research is warranted in investigating the impacts of online review objectiveness in different presentation formats on consumer decision making on social commerce platforms. Overall, this study provides important theoretical implications to consumer behavior researchers and practical guidance for social commerce website designers. The findings provide managerial implications for social commerce developers and e-vendors to optimize the quality of their platforms by offering consumer generated content in different formats. Finally, in line with Tajvidi and colleagues [2017] and Bazi and colleagues [2019], this research suggests that in the constantly evolving consumer co-creation space within the social commerce ecosystem, increased consumer connectivity, interactivity, social support, and consumer brand engagement would be a strong call for future research.

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