

Examining the Functions of Attributes of Mobile Applications to Build Brand Community

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Abstract

Mobile fashion apps present much opportunity for marketers to engage consumers, however not all apps provide enough functions for their targeted audience. This study aims to determine how mobile fashion apps can be used to build brand community with consumer engagement. Qualitative data on fashion mobile apps were collected from the Apple app store and Android market during the spring and summer of 2015. A total of 110 fashion mobile apps were collected; 50 apps were identified as apparel brands that either manufacture or sell apparel to consumers, which we categorized as “brand” fashion apps, and the remaining 60 were categorized as “non-brand” fashion apps. The result of the study can be summarized as below. The 60 non-brand fashion apps were grouped into 5 app types: shopping, searching, sharing, organizational, and informational. The main functions are for informational use and shopping needs, since at least half (31 apps) are used for either retrieving information or for shopping. However, in contrast, social networking and location were infrequent and not commonly utilized by these apps. The most common type of non-brand fashion apps available were shopping apps; many shopping apps enable users to shop from several different websites and save their items into one universal shopping cart so that they only check out once. Most of these apps are informational and help consumers make more informed decisions on purchases; in addition many offer location services to help consumers find these items in store. While these apps perform several functions, they do not link to social media. The 50 brand apps were grouped into 5 brand types: athletic, casual, fast fashion, luxury, and retailer. These apps were also checked for attributes to determine their functionality. The result shows that the main functions of brand fashion apps are for information (82% of the 50 apps) as well as location searching (72% of 50 apps). Conversely, these apps do not offer any photo sharing, and very few have organizational or community functions. Fashion mobile apps and m-marketing elements: To build brand community, mobile apps can be designed to motivate consumer’s engagement with brands. The motivations of fashion mobile apps are

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useful in developing fashion mobile apps. Entertainment motives can be fulfilled with multimedia attributes, functionality motives are satisfied with organizational and location-based features, information motives with informational service, socialization with community and social network, learning and intellectual stimulation from informational attributes, and trend following through photo sharing. The 8 key attributes of mobile apps can correspond to the 4 m-marketing elements (i.e., Informative content, multimedia, interactions, and product promotions) that are further intertwined with m-branding elements. App Attributes and M-Marketing aim to Build Brand Community; the eight key attributes can impact on 4 m-branding elements, which further contribute to building brand community by affecting consumers' perceptions of brands preference and advocacy, and their likelihood to be loyal.

Keywords : mobile application , fashion apps, fashion brands, brand community

I . Introduction

American consumers have powered the economic growth of the U.S. for the past several decades. In 2010, American households spent on average about \$1,700 on apparel, footwear, and accessories per a year (Bureau of Labor Statistics, 2012). A comScore survey revealed that as much as 37% of all clothes and accessories were sold through mobile applications, and that clothing and accessories were the second highest mobile-purchased items (Radwanick, 2011).

Mobile applications (apps) play an important role in the fashion system (Kawamura, 2004). In contrast to how traditional media has presented fashion to the public, mobile apps introduced various approaches to understanding fashion and have adapted to the needs of the public (Nie & Fortunati, 2013). According to a survey conducted by Pitney Bowes, 4 out of 5 smartphone owners prefer to shop with their mobile phones, spending an average of \$300 annually on mobile-purchased items. 79% of consumers rely on their smartphones for shopping and 27% made purchases through a mobile site (Allen, 2011).

The rise in mobile apps has broken geographical barriers for consumers to enjoy seamless shopping experiences, which suggests that a mobile strategy can produce a more efficient way to connect with shoppers (Khan, 2015). Mobile technology has increasingly received attention from fashion companies, however, not all brands have recognized this emerging opportunity for building stronger relationships with their customers or have implemented it into their online strategies (Poq Commerce, 2013).

There are a variety of fashion mobile apps in the market, but there is no benchmark for developing and maintaining mobile apps according to a brand's target audience. Although many fashion brands build communities as part of their marketing strategy to increase loyalty from their customers, there is still a lack of understanding how the functions of their apps affect user behavior. With so much riding on the proper development of fashion mobile apps, it is critical to understand the motives behind fashion mobile app users.

The purpose of this study is to examine the functions of app attributes by brand type to understand their significance for branding.

Drawing on Magrath and McCormick's research frameworks for mobile branding (2013a) and mobile marketing (2013b), this study proposes an extended m-branding model focusing on the significance of mobile apps for building brand community.

II. Literature Review

Grounded on the mobile branding and mobile marketing models of Magrath and McCormick, this study suggests three propositions: that the diverse attributes of mobile apps can facilitate consumer brand preference, brand advocacy, and behavioral loyalty, according to the different types of fashion apps and app attributes.

According to eMarketer, 51% of adults' total Internet usage per day as of May 2015 is via mobile devices, compared to 37% in 2012 (Meeker, 2015). Smartphone mobile apps are end-user software applications that are designed for a cell phone operating system and which extend the phone's capabilities by enabling users to perform particular tasks (Purcell, Entner, & Henderson, 2010).

Fashion apps can provide instant gratification and help save time for consumers by providing sales alerts and personal stylists at their fingertips (Boyd, 2014). For example, The Hunt is a community-powered app that empowers users to suggest products to other users who have posted photos of items they are looking for. Members help others search for hard-to-find items and thereby create a positive community of like-minded individuals centered on fashion and individual style. Tradesy is a buy-and-sell marketplace of designer fashions, where users can list their items for sale or purchase from other community members. Whisp is a messaging app for fashion shoppers to

share their shopping experiences with friends while shopping online. It enables small-group conversations to help consumers make purchasing decisions by chatting with the people they trust (Boyd, 2014).

Fashion brands also create a sense of community through their mobile apps. Through the social app, organic advertising is facilitated to promote certain items as well as the brand (King, 2013).

By providing a platform for users to connect with other users and engage with the company, consumers can feel a deeper sense of community and thus feel stronger loyalty to the brand. In return, companies can profit from this loyalty with more sales and word-of-mouth advertising.

1. M-Marketing

Marketers need to design more persuasive messages to visually portray their brand, personality, and identity via visual design stimuli. Traditional marketing methods cannot merely be transferred from physical to online, nor online to mobile. Mobile consumers differ from online consumers in terms of motivations, expectations, and behaviors (Magrath & McCormick, 2013b), therefore it is important to understand the marketing and visual design elements that relate to these consumers. Online retailers need to utilize interactive marketing tools to create and maintain value, expectations, and relationships with consumers in a way that benefits their organization (Boone & Kurtz, 2011). Below is the framework developed for marketing design elements of mobile fashion retail apps, in which four key stimulus categories are represented: multimedia product viewing, informative content, product promotions, and consumer-led interactions.

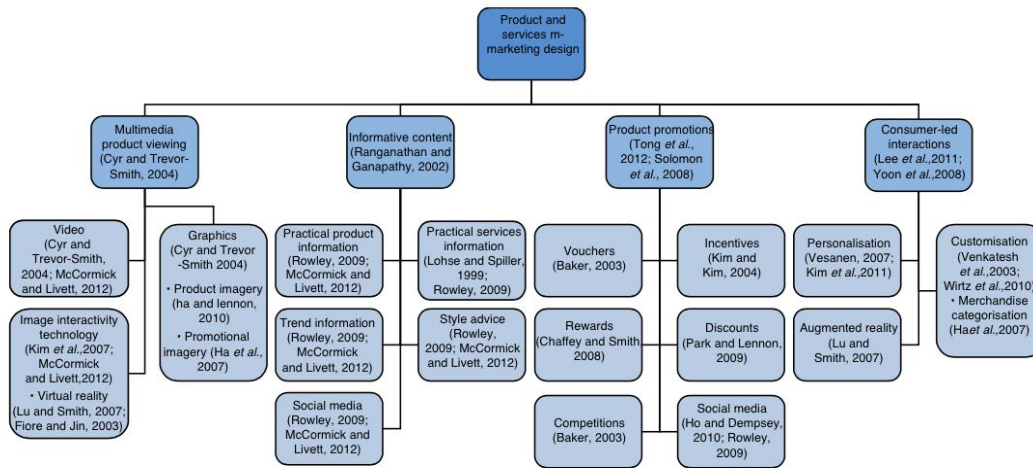


Figure 1. M-Marketing Framework
-Magrath & McCormick, 2013b

2. M-Branding

Branding is important to the success of a company, since it establishes trust and can lead to increased purchase behavior, and is especially important online because consumers prefer to purchase brands that they trust (Aaker, 1991). As consumers make more purchases via mobile devices instead of their home computer, mobile commerce has become an extension of online commerce (Turban et al., 2002). According to ITU World Telecommunications (2011), there are twice as many mobile broadband subscriptions than fixed broadband. Thus, brands have begun to invest their marketing efforts into mobile apps to capitalize on this growth.

Branding involves many visual design elements to strengthen their image and improve brand loyalty, brand satisfaction, and brand equity (Ailawadi & Keller, 2004). These design elements make up the overall image of the brand and

enable consumers to recognize and value the brand (Karjalainen, 2007). Mobile branding (m-branding) relates to the visual branding elements utilized within a mobile application (Magrath & McCormick, 2013a). These brand elements allow consumers to identify the brand by using visual cues in respect of the brand, such as shapes, colors, text, images, sound, and video (Okonkwo, 2007). Below is the framework developed for branding design elements of mobile fashion retail apps, in which four key brand categories are represented: brand name, brand logo, brand design, and brand content.

3. Building Brand Community

To increase consumer engagement and brand loyalty, mobile branding must incorporate effective methods for interacting with consumers to make the branding process more dynamic. While mobile branding primarily contributes to

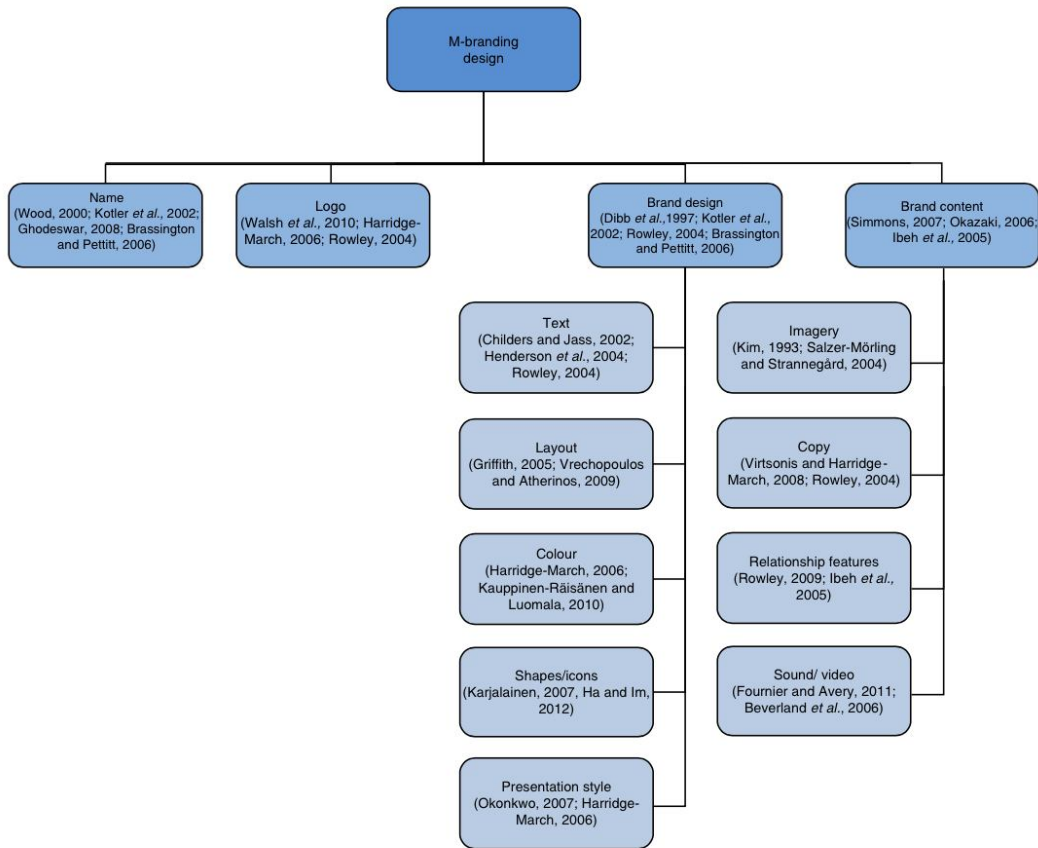


Figure 2. M-branding Framework
-Magrath & McCormick, 2013a

brand awareness, mobile marketing promotes the brands to encourage interactions between consumers so that brand community is further fostered, thus an extended view of m-branding can help build brand community.

Sense of community is a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together (McMillan, 1976).

The idea of "brand community" refers to

specialized, non-geographically bound community, based on a structured set of social relations among admirers of a brand (Muniz and O'Guinn, 2001). Brand communities act as platforms for consumers to express and foster their intense brand loyalty and forge emotional connections with the brand. They allow consumers to form relationships with others who share interests in the brand, and they are more credible and effective in persuading and bonding consumers to the brand, which can lead them to become more loyal and make more

purchases (Bagozzi & Dholakia, 2006). By coinciding with consumer empowerment and not being perceived as associated with traditional marketing approaches such as mass advertising campaigns, brand communities serve as effective marketing programs (Bagozzi & Dholakia, 2006).

According to Kitto (1951), sense of community is based on loyalty, commitment, and interactions. Since sense of community provides the foundation for any relational community, we can accept the elements of loyalty, commitment, and interactions for building brand community. Sense of community leads to brand commitment, which in turn leads to brand preference, brand advocacy, and behavioral loyalty.

Brand preference refers to an individual's preference for a brand under the assumption of equality in price and availability (Carlson et al., 2008). Carlson et al. (2008) verify that participants of a brand community have a tendency to form a brand preference to conform to a group norm. Brand advocacy indicates an individual's likelihood to share favorite brands

with others by word-of-mouth, as advocated by Sweeney, Soutar, and Mazzarol (2012).

These outcomes of brand commitment have been supported by the role of sense of community in online brand social networking. Thus, we can construe from these results that the outcomes of brand commitment can be used as elements of brand community. For this study, the outcomes of brand commitment will be used as markers for brand community.

4. A New M-Branding Framework

The m-branding and m-marketing frameworks both refer to the mobile environment and include design elements for implementing a mobile strategy into fashion retailers' marketing strategy. From analyzing these frameworks, it is reasonable to adopt both models for designing successful mobile fashion apps and engaging mobile consumers. However, it is tedious to refer to two separate frameworks for developing a mobile strategy when both frameworks incorporate similar elements.

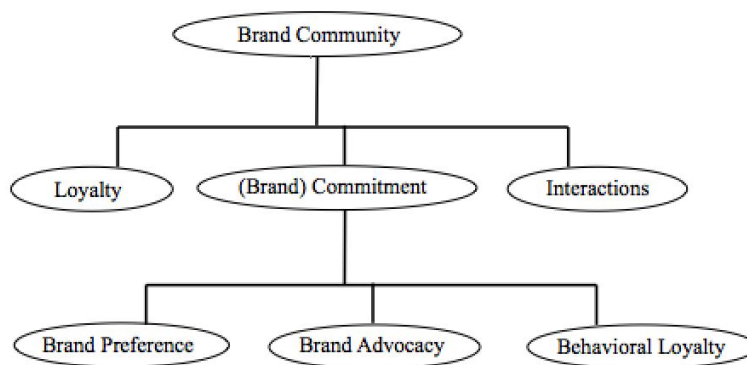


Figure 3. Proposed Framework Showing Brand Commitment Outcomes as Elements of Brand Community

As suggested by Zhao and Balagué (2015), the functional building blocks for designing mobile apps include mobile, brand mention, and social features. In mobile design terms, these three aspects could be expressed as integrating mobile technology, mobile branding, and mobile marketing. We can then deduce that m-branding and m-marketing should be integrated to develop one framework for mobile design.

The branding design element “copy” clearly correlates with the marketing design element “informative content,” in which both refer to text that the retailer uses to communicate information to consumers. The branding design element “relationship features” correlates with the marketing design element “consumer-led interactions” in that they create experiences that add value to consumers for building relationships. Finally, “sound/video” is a component of “multimedia,” therefore these

elements are analogous. Below is the proposed merged framework demonstrating how marketing design elements constitute a section of branding design.

Based on the literature review, three propositions were developed to examine the impacts of mobile apps on m-marketing and further build brand community.

Proposition 1: Brand and non-brand fashion apps differ from their types of apps

Proposition 2: Fashion apps correlate with m-marketing elements and m-branding elements.

Proposition 3: M-marketing & m-branding elements build brand community.

Upon examining these propositions, we can extend the typology of mobile app attributes and the role of app attributes in relation to the m-branding context.

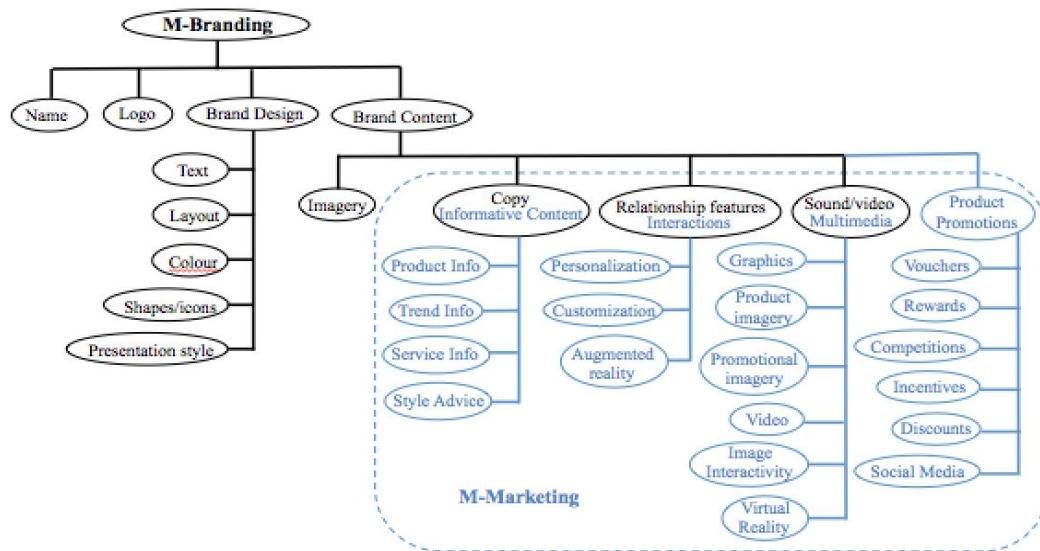


Figure 4. Proposed Framing Demonstrating M-marketing within M-branding

III. Method

Through a phenomenographic interpretive approach (PIA) and content analysis, mobile fashion apps were categorized by attribute typology. In this section, the methodology for this research is described, including the method for data collection, the stages for qualitative data analysis, and the categorization of these apps.

Phenomenographic Interpretive Approach

Phenomenography is an interpretive research approach that seeks to explore and understand phenomena by mapping out the qualitatively different ways people experience and perceive various aspects of phenomena in the world around them (Marton, 1986). This method is concerned with identifying similarities and differences in the way people experience an event and focusing on the relationship between the experiencer and the phenomenon being experienced (McManus, 2009). It has been used to study a range of issues by describing things as they are perceived, with an emphasis on how things appear to people and how people explain what goes on around them (Barnard, McCosker, & Gerber, 1999).

To conduct phenomenographic research, a series of steps must take place, however, there is no single technique for data analysis (Marton, 1986). Some researchers employ the five step process of phenomenography, which is comprised of becoming acquainted with the information, identifying significances, comparing similarities to form groups, creating categories, and finally giving descriptions to each category (Gonzalez, 2010), while others employ seven steps, consisting of familiarization, compilation, condensation, preliminary grouping, preliminary comparison of categories, naming categories,

and final outcome space (Sjöström & Dahlgren, 2002). Nevertheless, this research approach must begin with a clear intention and be organized with a particular purpose (Bowden, 2000). First, data is analyzed to identify similarities and differences. Next, similar items are grouped to develop a list of categories. The last step is to discover structural relationships between the different categories to represent the final outcome of the research (Marton, 1994).

From March to June, 2015, qualitative data on fashion mobile apps were collected from the Apple App Store and the Android Market. Based on recommendations from various sources including Interbrand and Brand Index, these apps were ranked highly on popularity, recognition, performance, and brand power. We first began with the list of best global brands for 2014 from Interbrand and Brand Index and extracted all brands related to fashion. Next, we found several lists of best fashion apps as suggested by Forbes, Harpers Bazaar, App Storm, and Style Caster. Among the total of 110 fashion mobile apps that were collected, 50 were identified as fashion brands that either manufacture or sell fashion products to consumers, which we categorized as “brand” fashion apps, and the remaining 60 were categorized as “non-brand” fashion apps. “Non-brand” generally refers to “generic brand or generic product” in marketing literature. However, we used the term of “non-brand” as auxiliary fashion information and services related to fashion products. These fashion mobile apps were categorized as either branded or non-branded in order to aid in understanding the difference in branding strategies between the two types.

To further explore the significance of mobile apps in relation to brand community, it is

necessary to identify the typology of brands. From the 50 apparel brands, these apps are divided into 5 groups considering fashion lifestyles and brand ownership: casual (13 brands), luxury (15 brands), athletic (5 brands), fast fashion (7 brands), and retailer (10 brands). Conversely, the typology for the 60 non-brand fashion apps were categorized by app type instead of brand type: shopping apps (18 apps), sharing apps (14 apps), searching apps (7 apps), organizing apps (9 apps), and informational apps (12 apps).

Next, to examine the functions of mobile app attributes according to the diverse types of brand and apps, attributes were analyzed and grouped into key categories that delineate the main functions of these fashion apps. Previous literature on mobile apps identified several categories that somewhat overlap, thus pose unnecessary attribute types. For example, Nie and Fortunati (2013) identified *games*, *music*, and *entertainment* as separate attributes, which can seem redundant since both *games* and *music* are related to entertainment features. However, *entertainment* itself is too general, as entertainment can be perceived differently by various individuals, thus the *entertainment* attribute should be more specific.

To parsimoniously categorize app attributes, the fashion apps were analyzed to find attributes that were interrelated but discernibly different. A similar study classified fashion apps as having seven attributes: information service, social networking service, location-based service, augmented reality, entertainment service, mobile shopping, and live streaming. Since these categories were formed based on Korean fashion apps, certain attributes do not apply to U.S. apps, such as augmented reality. Thus, these attributes were renamed according to the

usability and functions of U.S. fashion apps. Through an iterative process between two researchers, attributes were identified and further classified together to impart a final outcome of eight key attributes of fashion mobile apps: Informational, Organizational, Community, Social Network, Location-based, Photo Sharing, Multimedia, and Shopping. The inter-coder reliability regarding app attribute categories between two research experts is 0.86.

The final stage of this research approach involved deducing reasonable insights from the analyzed data to describe the operational aspects of fashion apps, which will be further discussed in the next section.

IV. Findings and Discussion

1. Examining Proposition 1: Typology of brand and non-brand fashion apps

From the phenomenographic interpretive approach, eight key attributes were identified for both brand apps and non-brand apps, which were further grouped by typology. In this section, non-brand apps will be discussed, followed by brand apps, and then a summary of findings.

Non-brand fashion apps: As mentioned previously, the 60 non-brand fashion apps were grouped into 5 app types: shopping, searching, sharing, organizational, and informational. These apps were checked for attributes to determine their functionality. From the data, we can see that the main functions of non-brand fashion apps are for informational use and shopping needs, since at least half (31 apps) are used for either retrieving information or for shopping. In contrast, social network and location are

infrequent and not commonly utilized by these apps.

To further probe this analysis, the app types can also determine functionality. Informational apps, which obviously functions mainly to provide information to users, also incorporates multimedia usage. For example, magazines such as Vogue or Marie Claire feature videos of fashion shows. However, informational apps do not provide any functionality for organization.

Organizational apps allow users to organize photos or lists of their favorite looks. Similar to informational apps, the main function of organizational apps is to provide organization tools for users. Such apps include closet organization, in which users can take photos of their clothing items to take inventory of their clothes or help them plan outfits. These apps do not offer location services or multimedia, as these apps are used mainly for consumers to survey what they already own instead of searching for new items. Additionally, these apps have links to social media, but do not provide a platform for its own community.

Searching apps offer users a platform for searching for a variety of things, such as where to find certain items to purchase or what styles are currently trending. These apps mainly utilize informational and shopping functions, as these are the most common types of searches. Additionally, photo sharing is frequently seen among these apps. Many times, users who are searching for places to shop post photos of items they are looking for, and the community of other users of the same app respond with suggestions on where to find that item. Since these apps have their own community, they do not engage in social media.

Many fashionistas who are interested in what other people are wearing use photo sharing

apps. These apps allow users to snap photos of people they see on the street and post to the community to show others what people in their town are wearing. These types of apps are highly photo-based and community-based, with some even linking to social media platforms. However, with all these photos, these apps lack photo organization and the multimedia function for sharing videos of people on the street.

The most common type of non-brand fashion apps available are shopping apps. Many shopping apps enable users to shop from several different websites and save their items into one universal shopping cart so that they only check out once. Most of these apps are informational to help consumers make more informed decisions on purchases, and many offer location services to help consumers find these items in store. While these apps perform several functions, they do not link to social media.

Brand fashion apps: The 50 brand apps were grouped into 5 brand types: athletic, casual, fast fashion, luxury, and retailer. These apps were also checked for attributes to determine their functionality. The table shows that the main functions of brand fashion apps are for information (82% of the 50 apps) as well as location searching (72% of 50 apps). Conversely, these apps do not offer any photo sharing, and very few have organizational or community functions.

Athletic brands such as Nike, Adidas, and Puma aim their apps more toward encouraging an athletic lifestyle by providing information on events and tips for staying fit. Also, to encourage their friends to keep up, the app allows users to link to their' social media accounts to spread the word for a healthy lifestyle.

Casual brands such as American Eagle, Hollister, and Urban Outfitters are mostly used to provide information for making purchases. These apps are informational and provide location services to find stores nearby. Additionally, many of these brands link to social media so consumers can interact with the brands through social networks and mobile platforms. Some casual brands offer their catalogs on their mobile app, such as Victoria's Secret, utilizing the multimedia function.

The fast fashion brands selected for this study all employed informational and shopping functions, with many of them location-based and offering multimedia. Conversely, none of these brands are organizational, community-based, or allow photo sharing. This might be because some of them are linked to social media and use those outlets for engaging their customers.

The luxury brands in this study all provide multimedia tools within their apps to uphold their brand experience and support their image. The majority of these brands offers brand information and provide location services for purchasing in-store, but very few allow mobile purchasing. This is common among luxury apparel brands, as many of them avoid online presence out of fear that it would compromise the brand experience and exclusivity appeal (Mau, 2014). Although they do not sell online, they have embraced social media and utilize mobile technology for engaging with their customers.

Every retailer brand in this study provides the necessary tools for their customers to find information and make purchases, with many offering organizational tools for managing their shopping cart or wish list. Yet none allow photo sharing and very few offer multimedia options. Similar to apparel brands, retailer brands have

an existing customer base and use their mobile app to further engage consumers on multiple platforms.

2. Examining Proposition 2: Fashion apps and m-marketing elements

To engage consumers and thus build brand community, mobile apps must be designed with user motivations in mind. According to Zhao and Balagué (2015), there are seven motives for using fashion mobile apps: entertainment, functionality, information, socialization, intellectual stimulation, trend-following, and learning. The app attributes from this study are in line with these motivations. Entertainment motives can be fulfilled with multimedia attributes, functionality motives are satisfied with organizational and location-based features, information motives with informational service, socialization with community and social network, learning and intellectual stimulation from informational attributes, and trend following through photo sharing. Since these eight app attributes correspond with the four key m-marketing elements that are components of m-branding, we can conclude that these app attributes contribute to building mobile branding. The identified eight key attributes of fashion mobile apps each correspond with the four key elements of m-marketing that intertwine with elements of m-branding: Informative content, multimedia, interactions, and product promotions.

Informative Content: Some fashion apps are classified as informational, in which they provide practical information on products, trends, services, and style advice. This information makes up the informative content element of m-marketing, thus this attribute corresponds with this element. The location-based attribute of

Table 1. Non-brand Fashion Apps

APP	App type	ATTRIBUTES							
		Informational	Organizational	Community	Social Network	Location-based	Photo Sharing	Multimedia	Shopping
The Hunt	searching			x			x		x
Like to Know it	sharing	x			x		x		
Keep	organizing		x						x
Pose	sharing			x			x		x
Lyst	searching	x	x						x
Tradesy	shopping			x					x
Poshmark	shopping			x					x
Bib + Tuck	shopping			x					x
Threadflip	shopping			x					x
Go Try It On	sharing			x			x		
Whisp	sharing			x			x		x
Stylebook	organizing		x						
Closet +	organizing		x						
Netrobe	organizing		x						
Cloth	organizing		x		x				
Touchcloset	organizing		x						
Good Looks	organizing		x						
Covet	sharing	x		x			x		
Spring	shopping	x							x
ShopStyle	searching	x							x
PS Dept	searching	x							x
Mallzee	organizing	x	x				x		x
Stylect	organizing		x						x
Polyvore	sharing			x			x		
FAD	information	x							
StyleKick	shopping			x			x		x
ASAP54	searching	x		x			x		
Style Eyes	searching	x					x		x
Pounce	searching	x					x		x
Shop It To Me	shopping	x							x
Sproose	sharing				x		x		
Sartorialist	sharing						x		
ShopKick	shopping	x				x			x
Regoop	shopping	x				x	x		x
Style Tag	sharing			x	x		x		
Style.com	information	x						x	
TrendTracker	information	x							
Gilt	shopping								x
HauteLook	shopping								x
Net-a-porter	shopping	x						x	x
Rue La La	shopping								x
Ideeli	shopping								x
Beso	shopping	x							x
FashioNomad	shopping	x				x			x
Kaleidoscope	sharing						x		x
Trendabl	sharing	x			x		x		
Snapette	information	x		x		x			
Styleshare	sharing			x			x		
Chicfeed	sharing						x		
Thre.ad	sharing						x		
Fab.com	shopping								x
ASOS	shopping	x							x
Elle	information	x					x		
Vogue	information	x			x			x	
WWD	information	x							
Marie Claire	information	x						x	
Lucky	information	x							x
W magazine	information	x							
GQ	information	x							
Nylon	information	x							

Table 2. Brand Fashion Apps

APP	Brand type	ATTRIBUTES							
		Informational	Organizational	Community	Social Network	Location-based	Photo Sharing	Multimedia	Shopping
Abercrombie	casual	x			x	x			
Aeropostale	casual	x			x	x		x	x
Adidas	athletic	x			x	x		x	
Amazon	retailer	x	x	x					x
American Apparel	fast fashion	x			x	x			x
American Eagle	casual	x			x	x			x
Ann Taylor	casual	x		x	x	x			
Banana Republic	casual	x			x	x			
Bloomingdale's	retailer	x	x						x
Brooks Brothers	casual	x			x	x		x	x
Cartier	luxury	x						x	
Chanel	luxury					x		x	
Charlotte Russe	fast fashion	x			x	x			x
Christian Louboutin	luxury	x		x	x			x	
Coach	luxury	x				x		x	
Dior	luxury				x	x		x	
Dolce & Gabbana	luxury	x			x	x		x	
Donna Karen	luxury	x				x		x	
eBay	retailer	x		x					x
Forever 2x	fast fashion	x				x		x	x
Gap	casual				x	x		x	
Gucci	luxury				x	x		x	
H&M	fast fashion	x				x		x	x
Hermes	luxury	x						x	
Hollister	casual	x				x		x	x
Hugo Boss	luxury	x			x	x		x	
J Crew	casual	x							x
JC Penney	retailer	x	x			x			x
Kohl's	retailer	x	x						x
Louis Vuitton	luxury	x			x	x		x	x
Macy's	retailer	x	x			x			x
Mango	casual	x				x			
Michael Kors	luxury					x		x	
New Balance	athletic	x			x	x			
Nike	athletic	x			x	x			x
Nordstrom	retailer	x		x		x			x
Old Navy	casual				x	x			x
Puma	athletic	x			x	x			
Ralph Lauren	luxury				x	x		x	
Saks Fifth Ave	retailer	x						x	x
Target	retailer	x	x			x			x
TopShop	fast fashion	x			x			x	x
Tory Burch	luxury	x				x		x	x
Uniqlo	fast fashion	x			x	x		x	x
Under Armour	athletic		x	x					
Urban Outfitters	casual	x				x		x	x
Valentino	luxury							x	
Victoria's Secret	casual	x			x	x		x	x
Zappos	retailer	x			x				x
Zara	fast fashion	x						x	x

mobile apps provides geographical information on where to find certain stores or where to shop for specific items. Since this practical usage can help consumers with information

searching, it can be categorized as informative content.

Multimedia: Fashion apps that contain multimedia provide entertainment for the

consumers who use them. Such multimedia types include video, audio, high definition graphics, image interactivity, and virtual reality. This obviously matches up with the multimedia element of m-marketing. Some fashion apps allow users to upload photos, post photos, view other users' photos, and comment on photos. These apps that enable photo-sharing can also be considered multimedia, since they provide entertainment through graphics.

Interaction: Photo-sharing is dynamic and provides a platform for users to interact with others through the app. Interaction, including communication between brands and consumers, offers added value to the consumers' experience, (Rowley, 2004). The perceived benefits and satisfaction gained from this total experience can build a strong relationship between brands and their consumers through interaction on their app (Magrath & McCormick, 2013).

Amongst photo-sharing, the organizational attribute of mobile apps is also related to the interaction element of m-marketing. Organizational apps allow users to manage their closet inventory, shopping lists, favorite images and inspirations, and even favorite brands. This type of usage supports interaction between consumers and demonstrates how they use mobile apps to keep up with their shopping, styling, and inspirational needs.

While some apps facilitate image distribution, other apps connect users through it. As mentioned previously, users can upload, post, view, and comment on photos. By viewing and commenting on other users' photos, a community is formed within the app around those photos. An example of this includes an app for consumers to buy and sell designer apparel among other users of the app, who are

also in the market to buy and sell previously worn designer apparel. The community within the app is exclusive to users of this app. Another example is an app that allows users to organize their closet and upload a photo of an outfit for other users to vote on whether that user should wear the outfit. Again, only users of the app are able to interact. This type of exclusivity among users establishes a community within an app, hence the community attribute corresponds with the interaction element.

Product Promotion: In addition to creating community, some apps can link to social media so that users can like, share, tweet, pin, or tumble their app content with friends who are not users of the app. Consumers can share information such as their shopping lists, sales going on around them, store coupons, and more. Many consumers already use social media to spread word-of-mouth about brands and products, therefore being able to connect to social media through mobile apps can further facilitate product promotion.

Fashion apps support a variety of functions for consumers, most importantly for shopping. Apps for shopping include creating a universal shopping list from any retailer, finding store locations that carry certain products, and receiving discounts for specific items. Many brands offer consumers incentives for shopping with them, usually in the form of discounts, reward points, or competitions. When consumers shop, they engage in the product promotions that manufacturers and retailers use to increase sales. Thus, shopping corresponds with product promotion.

3. Examining Proposition 3: App Attributes and M-Marketing to Build Brand Community

Consumer engagement is a sense of being connected with a brand and a brand's app, in which the engagement grows out of experiencing the apps in a certain way (Calder & Malthouse, 2008). Mobile apps provide consumers with unique experiences that are not available with traditional mobile web experiences (Mocerri et al., 2011). Hence, it is important for marketers to understand how these engaging experiences affect consumers' perceptions of brands and their likelihood to be loyal.

Brand Preference: Informative content provides users with information at their fingertips, making information searching easier. This ease can build upon a brand preference heuristic, in which consumers prefer certain brands because they know that it is easy to find information with that brand through their app. Multimedia can act as a form of information when used for learning. Some users use apps to watch fashion shows and learn about upcoming trends. By providing instant access to the latest information through videos, multimedia attributes can contribute to brand preference.

Brand Advocacy: Additionally, multimedia provides entertainment for app users. When consumers are involved in this type of hedonic experience, they are likely to share that information and spread word-of-mouth about the brand. By spreading information about a brand, consumers are engaging in brand advocacy. In a sense, when word-of-mouth is being spread, consumers are being interactive, in that they are sharing information as well as socializing. Hence, interactions also promote brand advocacy.

Behavioral Loyalty: At times, brands provide incentives to their customers by engaging them via online social platforms. They offer coupons, discounts, or rewards through their apps to

promote their brand or boost sales. Many consumers know that they can receive these "online only" special offers, and so they choose to join the brand's community of admirers. When consumers redeem these offers, they are spending their money with the brand, thus demonstrating behavioral loyalty.

Through a phenomenographic interpretive approach (PIA) and content analysis, mobile fashion apps were categorized by attribute typology. Eight key attributes were identified for fashion apps, including informational, location-based, multimedia, photo sharing, organizational, community, social network, and shopping, which correspond to the mobile marketing design elements of informative content, multimedia, interactions, and product promotions. Through these marketing/branding design elements, we propose that the eight key app attributes contribute to building brand community for fashion brands. Below is the proposed research model demonstrating how mobile app attributes can build brand community through mobile marketing elements.

V. Implications

Mobile technology has changed consumer behavior, and marketers need to keep up with these trends to understand the evolving needs of their customers. Mobile apps present much opportunity for marketers to engage consumers, however not all apps provide enough functions for their targeted audience. Non-brand fashion apps are mainly effective with informational and shopping attributes in conjunction with photo sharing and community building functions. While there are no community or photo-sharing attributes in brand fashion apps, the three

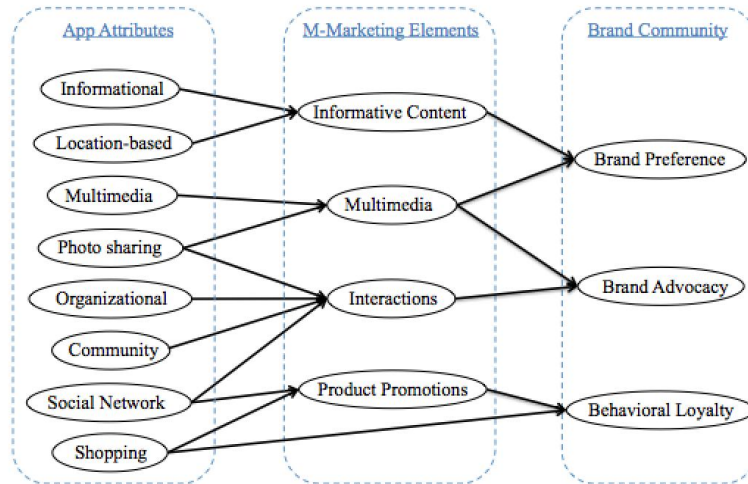


Figure 5. Proposed Conceptual Framework

attributes of informational, location-based, and shopping are noteworthy in operating. Marketers must design mobile apps in ways that will appeal to their target market. While fashion apps apply to a certain set of consumers, these examples represent how mobile apps can be used to build brand community with consumer engagement.

Brand fashion apps

From this study, we have found that the majority of brand fashion apps have implemented informational and location-based attributes, but they are lacking organizational, community, and photo-sharing features. While the community attribute may not be important, since brands have social media presence instead, it would be crucial for brands to include photo sharing as part of their consumer engagement strategy. Many brands enable customer reviews on their website, allowing previous customers to post photos of themselves wearing the items they have purchased, but this capability is not available in

the app version. This is especially critical for retailers who carry several brands because customers can display the various items they were able to purchase “all in one place” to further promote the brand. Mobile apps are extensions of brands’ websites, thus they should transfer this usability function.

Non-brand fashion apps

The non-brand fashion apps in this study were found to be mostly informational and shopping oriented, however, they lack social network, location-based, and multimedia features. In contrast to brand fashion apps, non-brand fashion apps focus more on their own community within the app instead of linking to social media platforms, thus have less need for the social network attribute. The only non-brand apps that provided multimedia were magazine apps, such as Vogue and Marie Claire. The focus of these apps is to provide high definition graphics to reproduce the magazine experience, therefore multimedia is not critical for other non-brand apps to develop as part of

their consumer engagement strategy.

On the other hand, location-based features would be useful, especially for shopping apps, which there are many of. Shopping apps provide several outlets for consumers to find and purchase items they are looking for, but are limited only to online stores. These apps could implement location-based features that would enable consumers to shop for items in physical stores by searching for stores nearby that sell the item or similar items that they are searching for.

VI. Suggested Future Research

The proposed framework serves as an initial step for understanding the challenges of building brands using mobile technology. Further studies include empirically testing this proposed model and quantifying how much each app attribute contributes to building brand community.

This study examined the attributes of fashion mobile apps to understand its impact on brand community. While only 50 fashion brands were analyzed, there are many more fashion brands that need to be explored and assessed for their effectiveness to engage consumers. Likewise, non-brand fashion apps need to be further explored, as only 60 were examined for this study. Additionally, only fashion apps were studied, thus looking at brands and apps in other industries would provide valuable insight to marketers and brand managers.

Furthermore, fashion is subjective and interest varies from culture to culture. It would be worthwhile for future research to study fashion mobile apps in other countries to understand how they affect different types of consumers in terms of mobile technology and branding.

References

- Aaker, D.A. (1991). *Managing Brand Equity: Capitalizing on the Value of a Brand Name*. Free Press: New York.
- Ailawadi, K. L., & Keller, K. L. (2004). Understanding retail branding: conceptual insights and research priorities. *Journal of retailing*, 80(4), 331-342.
- Allen, K. (2011). Cross-border Ecommerce Sales Should Deliver A Nice Holiday Surprise. Pitney Bowes. Retrieved from <http://blogs.pb.com/ecommerce/2011/11/14/cross-border-ecommerce-sales-should-deliver-a-nice-holiday-surprise>.
- Bagozzi, R. P., & Dholakia, U. M. (2006). Antecedents and purchase consequences of customer participation in small group brand communities. *International Journal of Research in Marketing*, 23(1), 45-61.
- Barnard, A., McCosker, H., & Gerber, R. (1999). Phenomenography: a qualitative research approach for exploring understanding in health care. *Qualitative Health Research*, 9(2), 212-226.
- Boone, L.E., & Kurtz, D.L. (2011). *Contemporary Marketing*. South-Western Cengage Learning: Stamford, CT.
- Bowden, J. A. (2000a). The nature of phenomenographic research. In J. A. Bowden & E. Walsh (Eds.), *Phenomenography* Melbourne, Australia: RMIT University. 1-18.
- Boyd, S. (2014). 12 Fashion App And Style Services That Are Reinventing The Acquisition Of Fashion Goods. *Forbes*. Retrieved from <http://www.forbes.com/sites/sboyd/2014/11/25/12-fashion-app-and-style-services-that-are-reinventing-the-acquisition-of-fashion-goods/>.
- Bureau of Labor Statistics. (2012). *Fashion*. Retrieved from <http://www.bls.gov/spotlight/>

- 2012/fashion/.
- Calder, B. J., & Malthouse, E. C. (2008). Media engagement and advertising effectiveness. *Kellogg on advertising and media*, 1–36.
- Carlson, B. D., Suter, T. A., & Brown, T. J. (2008). Social versus psychological brand community: The role of psychological sense of brand community. *Journal of Business Research*, 61(4), 284–291.
- González, C. (2010). What do university teachers think eLearning is good for in their teaching? *Studies in Higher Education*, 35(1), 61–78.
- ITU World Telecommunication. (2011). The World in 2011: ICT facts and figures. Retrieved from www.itu.int/ITU-D/ict/facts/2011/index.html.
- Karjalainen, T. M. (2007). It looks like a Toyota: Educational approaches to designing for visual brand recognition. *International Journal of design*, 1(1), 67–81.
- Kawamura, Y. (2004). *Fashion-ology: an introduction to fashion studies*. Berg.
- Kim, E., Lin, J. S., & Sung, Y. (2013). To app or not to app: Engaging consumers via branded mobile apps. *Journal of Interactive Advertising*, 13(1), 53–65.
- King, J. (2013). Net-A-Porter's invite-only social app builds branded community. *Luxury Daily*. Retrieved from <http://www.luxurydaily.com/net-a-porter-launches-invite-only-social-media-app/>.
- Kitto, H.D.F. (1951). *The Greeks*. New York: Penguin.
- Khan, U. (2015). Why Fashion Retailers Can't Afford to Ignore Mobile. *BuildFire*. Retrieved from <http://buildfire.com/fashion-retailers-mobile-apps>.
- Magrath, V., & McCormick, H. (2013a). Branding design elements of mobile fashion retail apps. *Journal of Fashion Marketing and Management: An International Journal*, 17(1), 98–114.
- Magrath, V., & McCormick, H. (2013b). Marketing design elements of mobile fashion retail apps. *Journal of Fashion Marketing and Management: An International Journal*, 17(1), 115–134.
- Marton, F. (1986). Phenomenography—a research approach to investigating different understandings of reality. *Journal of thought*, 28–49.
- Marton, F. (1994). On the structure of awareness. In J. A. Bowden & E. Walsh (Eds.), *Phenomenographic Research: Variations in Method*. Melbourne: Office of the Director EQARD, RMIT. 89–100.
- Mau, D. (2014). Why some luxury brands still don't sell online. *Fashionista*. Retrieved from <http://fashionista.com/2014/03/why-some-luxury-brands-still-dont-sell-online>.
- McManus, J. (2009). Research Design Options: Phenomenography. *UNSW Connections Series*. Retrieved from http://blogs.unsw.edu.au/connections/files/2009/11/research-design-options_phenomenography_Nov-2009.pdf.
- McMillan, D. (1976). *Sense of community: An attempt at definition*. Unpublished manuscript, George Peabody College for Teachers, Nashville, TN.
- Meeker, M. (2015). Internet Trends 2015 – Code Conference. *KPCB*. Retrieved from kpcb.com/InternetTrends.
- Mocerì, P., Smud, D., Vitulich, D., Wright, N. (2011). Native App or Web Site? Deciding Your Next Step in Mobile. Retrieved from http://www.siiia.net/Portals/0/pdf/ib_nativeapp.pdf.
- Muniz, A. M., & O'Guinn, T. C. (2001). Brand community. *Journal of consumer research*, 27(4), 412–432.
- Nie, Y., & Fortunati, L. (2013). Between Fashion

- and Technology: Investigating Mobile Fashion Applications. *CIRN Prato Community Informatics Conference 2013*. Refereed Paper.
- Okonkwo, U. (2007). *Luxury fashion branding: trends, tactics, techniques*. Palgrave Macmillan.
- Poq Commerce. (2013). Luxury fashion's take on the app world. *Insights*. Retrieved from <http://poqcommerce.com/2013/07/luxury-fashion-take-on-the-app-world-2/>.
- Purcell, K., Entner, R., & Henderson, N. (2010). The rise of apps culture. *Pew Internet & American Life Project*, 14.
- Radwanick, S. (2011). Mobile Shopping Goes Mainstream: Majority of U.S. Smartphone Owners Performed Shopping Activities on Their Phone in September. *comScore*. Retrieved from <http://www.comscore.com/Insights/Press-Releases/2011/12/Mobile-Shopping-Goes-Mainstream>.
- Sjöström, B., & Dahlgren, L. O. (2002). Applying phenomenography in nursing research. *Journal of advanced nursing*, 40(3), 339–345.
- Sweeney, J. C., Soutar, G. N., & Mazzarol, T. (2012). Word of mouth: measuring the power of individual messages. *European Journal of Marketing*, 46(1/2), 237–257.
- Turban, E., King, D., Lee, J., Warkentin, M., & Chung, H.M. (2002). *Electronic Commerce 2002: A management perspective*. Prentice Hall, Pearson Education Limited, Essex.
- Zhao, Z., & Balagué, C. (2015). Designing branded mobile apps: Fundamentals and recommendations. *Business Horizons*, 58(3), 305–315.
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