

An Empirical Investigation into How to Use Visual Storytelling for Increasing Facebook User Engagement

Yu-Jin Kim*†

*Department of Visual Studies, Kongju National University

Abstract

In order to identify effective approaches for creating more viral Facebook posts, this research conducted an empirical content analysis of leading Korean brands' Facebook fan-pages (Samsung Mobile, SK Telecom, Kia Motors, and POSCO). Their distinctive visual storytelling and communication patterns were investigated as effective user engagement triggers. Through analysis of the research results, it was statistically proved that the different industrial attributes of the four brands, which are primarily characterized by their product (or service) types, affect their Facebook posting patterns by showing different engaging rates (measured by like, comment, and share metrics). In addition, the user engagement rates of the posts were influenced by their visual storytelling factors (i.e. ad objective, value scale, and visual media types). In line with these statistical findings, the distinctive visual storytelling strategies of the four brands were identified. Moreover, competitive and uncompetitive visual storytelling tactics were suggested according to the ad objectives and visual media types on Facebook.

Key words: Visual Storytelling, User Engagement, Social Media Branding, Facebook

1. Introduction

Facebook is the largest social network in the world with over 1.86 billion monthly active users (MAUs) and 1.23 billion people log onto Facebook daily (Facebook as of February 2017). Given that six new profiles are created every second (Regan, 2015), the number of the potential users of Facebook grows exponentially. With targeting its huge worldwide user base, Facebook allows companies to increase their brand awareness and purchase intension through enhanced targeted marketing and better advertising analytics (Hutter & Hautz, 2013;

Schivinski & Dabrowski, 2015).

Interestingly, most of the Interbrand Top 100 Global Brands use their Facebook pages as a core component of their online marketing mix. In 2014, a Simply Measured report announced that 77% of the 2014 Top 100 Interbrand companies had audiences of greater than a million fans on Facebook, and 65% of these best brands posted on Facebook five times a week or more. One of their social media strategies was to post more visuals including photos and videos, which caused higher user engagement. By creating eye-catching visuals that aligned with their brand strategies, these

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† 교신저자 : Yu-Jin Kim (Department of Visual Studies, Kongju National University)

E-mail : baramein@gmail.com

TEL : 041-850-0581

FAX : 041-850-0561

companies could evoke users' interests and their engagement, and then quickly spread memorable brand stories (Chua & Banerjee, 2015; Walter & Gioglio, 2014).

Meanwhile, over one-third of the total population (about 14 million) use Facebook in South Korea, which is well-known as a world leader in digital video and mobile social penetration rates (Social Media, 2016). In the current plethora of social networks, however, numerous social marketing or branding executives of Korean companies are faced with how to create effective Facebook advertisements, and some already have intention to decrease their marketing budget on this platform. Consequently, there has been an increasing necessity for strategic social management guidelines that contribute to increase the values of Facebook marketing or branding.

In this vein, this research aims to empirically investigate how leading Korean brands employ their Facebook pages, focusing on their visual storytelling tactics and strategies that trigger more user engagement. Through performing a content analysis, competitive visual storytelling approaches on Facebook were investigated both quantitatively and qualitatively.

2. Facebook Marketing and Visual Storytelling

Facebook "fan-pages" allow brands to deliver their messages to a huge number of their fans while opening up a constant and interactive dialogue platform. Moreover, consumers who become fans of these brand fan-pages tend to be loyal and committed to these companies, are generally more open to receiving information about these brands, and generate more positive word-of-mouth (Dholakia & Durham, 2010). In this way, fans can become more emotionally attached to these brands than non-brand fans can.

2.1. Facebook Ad Objectives and Value Scale Types

In order to get people to like and to engage on these fan-pages, their posts have to be created with clear and specific objectives. In this vein, Facebook recommends that brands first choose an advertising objective before even beginning to create an ad by suggesting the following ten types: (1) Clicks to websites, (2) Website conversions, (3) Page post engagement, (4) Page likes, (5) App installs, (6) Offer claims, (7) Local awareness, (8) Event responses, and (9) Video views. Hui (2015) also suggested another categorization of Facebook ad objectives: (1) Promoted posts, (2) Boosted posts, (3) Multi-product ads, (4) Video ads, (5) Domain ads, (6) App ads, (7) Event ads, (8) Offer ads, and (9) Page like ads. Besides these two classifications, Facebook ad objectives can vary according to the fan-page; therefore, this research modified these objective types by observing the collected posts.

Together with their objective types, Facebook posts can be categorized according to their advertising values. Up to now, several scholars conducted a variety of research projects in regards to advertising values, which are defined as a subjective evaluation of the relative worth or utility of advertising aimed toward a consumer (Ducoffe, 1995). Among them, three value scales - *Informativeness*, *Irritation*, and *Entertainment* - introduced by Ducoffe (1995) have been widely used to investigate the values of advertisements on television, Internet, and social media (Ducoffe, 1996; Dar et al., 2014; Malik & Dubey, 2013). According to the empirical research conducted by Lee et al. (2014) on the effect of Facebook marketing content on consumer engagement, informative content reduced engagement in isolation, but increased engagement as part of a combination of persuasive attributes (with humor or emotion), acting as a key driver of engagement. Therefore, this paper focuses on the Facebook advertising content by modifying Ducoffe's value scales

into *Informativeness*, *Informative entertainment*, and *Entertainment*. In particular, the *Irritation* was not considered because it is somewhat difficult to evaluate this negative feeling attribute objectively through a content analysis.

2.2. Facebook User Engagement Metrics

In order to discover which posts are most effective in their campaigns, social marketers should understand what should be measured first to ensure better future performance. Recently, the following six metrics have been commonly used for statistics tracking Facebook page performance (Emoult, 2013): (1) *Fan reach*: the number of fans of the Facebook page who have directly seen any given post; (2) *Organic reach*: the number of people (fans and non-fans) who have directly seen a given post; (3) *Engagement*: the number of people who clicked anywhere in a post; (4) *Storytellers* (or people talking about this): the number of people who “engaged” with that post by only showing their liking, commenting, and sharing actions; (5) *Click-through rate* (CTR): the number of people who have clicked on a link in your content, watched your video, or viewed a larger version of your photo; and (6) *Negative feedback*: the number of users who really did not like your content.

These metrics can be distinguishable in terms of their levels of user interests and engagement (or participation). Moreover, while the *Engagement* computes the number of likes, comments, and shares, as well as views of videos or clicks on links and photos, the *Storytellers* only measures three types of user engagement actions (liking, commenting, and sharing). As a viral metric, the *Storytellers* metric highlights how many people show their engagement-this literally means occupying the attention or efforts of a person-with a post while spreading and sharing it with their friends.

In marketing and branding practices, user engagement refers to the user's behavioral manifestation toward a

brand or firm, beyond a purchase (Van Doorn et al., 2010). In light of the increasing marketing effects of non-transactional user behavior in the social media marketing landscape, user engagement has been a central construct for describing the nature of users' interactions and participation (Kietzmann et al., 2011; Oliveira et al., 2016; Cvijikj & Michahelles, 2014). According to Islam & Rahman (2016), user engagement leads to user trust and word-of-mouth activities on Facebook brand communities. In this vein, this study mainly focuses on the *Storytellers* metric, which helps marketers distinguish effective advertisements on Facebook fan-pages based on user engagement statistics per post.

2.3. Visual Storytelling on Facebook

In line with the rise of using visuals to amplify social media engagement, Walter and Gioglio (2014) defined visual storytelling as follows: “Visual storytelling is the use of images, videos, infographics, presentations, and other visuals on social media platforms to craft a graphical story around key brand values and offerings.” They also said that the right picture enables users to feel emotions, to evoke memories, and even to make them act differently.

Like other social media platforms including Pinterest, Instagram, and Tumblr, people have spent more times on visual posts instead of text-heavy ones on Facebook. For example, Facebook posts with visuals resulted in 180% greater user engagement (Walter, 2013). HootSuite also revealed that videos can get 12x more shares than any other type of Facebook content by receiving numerous likes and comments as well (Uganec, 2013).

Along with the popularity and unprecedented usages of visuals on social media platforms, diverse types of visuals have been uploaded from images to videos, infographics, and presentations. Images include photography, graphs and drawings, user-generated images,

collages, images with text overlays, word photos, and others (Walter & Gioglio, 2014). In 2015, animated GIFs, which were supported only on certain platforms like Tumblr and Google+, also broke into Facebook. Multiple photos can be uploaded at once according to Facebook's photo rendering standards. This multi-photo function adds vitality to infographic posts (showing complex data and sequential processes) by supporting three types of multi-photo layout including square, landscape, and portrait formats on a desktop.

Moreover, some researchers have investigated the effects of visuals on user engagement in terms of their vivid characteristics. The degree of vividness can differ in the way that it stimulates multiple senses. Through analyzing over 4,000 brand-posts, Chuna & Banerjee (2015) confirmed that vivid posts were more likely to draw attention than dull ones on their Facebook pages. Other empirical studies showed that vivid brand posts enhanced the number of likes (De Vries et al., 2012).

3. Hypotheses

The primary aim of this study is to empirically investigate the influence of visual storytelling on Facebook user engagement. In order to reach this research aim, three hypotheses were formulated, focusing on two aspects of visual storytelling for Facebook advertising (i.e. Ad content-objective and value scale-and Ad visual-visual media):

- [H1] The user engagement rates of Facebook posts vary according to their ad objectives.
- [H2] The user engagement rates of Facebook posts vary according to their ad value scale types.
- [H3] The user engagement rates of Facebook posts vary according to their ad visual media types.

4. Methodology

4.1. Selection of Facebook Fan-pages

In order to identify the specific types of Facebook marketing, especially the visual communication patterns in the Korean social marketing landscape, we conducted a content analysis on multiple Facebook brand fan-pages. As shown in Table 1, four Korean brands-Samsung Electronics, Kia Motors Corporation, SK Telecom, and POSCO (steel industry)-were selected according to predetermined criteria. In particular, this study classified these brands into four different industries by distinct characteristics of their products (or services). First, as for brand value, these brands were in the upper ranks of the Interbrand Best Korea Brands 2015 Top 50. Additionally, they have been recently ranked in the Most Popular Facebook Pages Top 100 announced by Socialbakers, a well-known social media analytics company. In other words, these four domestic brands are recognized as some of the most valuable assets, and they actively manage their Facebook brand pages while interacting with a large number of fans and followers.

Table 1. Overview of the selected four brands

Brand (Industry)	Brand Ranking*	Facebook Fan-page	Facebook Popularity Ranking**	Posting Period
Samsung Electronics (Electronics)	#1 (\$45,297m)	Samsung Mobile Korea	#22 (732,109)	Dec. 31- July 03
SK Telecom (Telecom)	#4 (\$3,951m)	SK Telecom	#5 (1,367,567)	Dec. 31- Sep. 22
Kia Motors (Auto)	# 3 (\$5,666m)	Kia Motors Corp	#73 (297,243)	Dec. 31- Sep. 02
POSCO (Steel Industry)	#8 (\$2,364m)	POSCO	#75 (288,505)	Dec. 31- Sep. 11

*Domestic brand ranking data from the Interbrand 2015 Top 50 Brands; () means brand value. **Domestic Facebook Popularity ranking data retrieved from Socialbaker.com on March 9, 2016; () means the total number of fans.

Meanwhile, Samsung Electronics (ranked #7th by the Interbrand Top 100 Global and had a \$45,297m brand value in 2015) has four business units, which include consumer electronics, IT & mobile communication, device solutions, and others. Several of their Facebook brand pages specialize in each of the business units that are being operated domestically and globally. Among them, the present study chose the Samsung Mobile Korea Facebook page, a place to deliver the latest news and stories about Samsung's core products including mobile phones, tablets, and wearable tech devices to a large number of fans. Additionally, in the case of another global brand, Kia Motors (globally ranked #74th with a \$5,666m brand value as of 2015), its domestic official brand fan-page was investigated in this research.

4.2. Data Collection and Coding Process

After deciding on these four Facebook fan-pages, the past posts on their timelines, which uploaded before December 31, 2015, were tracked. Later on, these past 150 posts per brand were gathered in the beginning of March 2016 in order to diminish the changes of user engagement data because most of these posts were no longer reaching their target audiences. Due to their different posting frequencies, the period of the collected posts varied by brand (see Table 1). Eight coders including one author (two coders per brand for increasing data credibility) participated in the coding process. For increasing inter-coder reliability, one coder (the author) reviewed all the posts in the sample at the end.

Therefore, 600 posts in total were coded in reverse chronological order (with the day of the week), and brief descriptions about their core ad messages were entered. Among the coded posts, there was no post generated solely by users. Only 3.1% (19 out of 600 posts) were uploaded on the weekends. Other key

coding categories predetermined from the literature reviews were revised by observation on early posts by these brands as well as the discussion between the coders. These finalized categories (i.e. dependent and independent variables) in this coding system are explained in the 4.3 and 4.4 sections.

4.3. User Engagement Metrics

In the present study, user engagement metrics called the *Storytellers* (dependent variables) were used for measuring Facebook fan-page performance. The *Storytellers* indicator appraises three user engagement actions: (1) likes: the number of people who click the like button on a post; (2) comments: the number of people who comment on the post; and (3) shares: the number of times a user shares the post on his/her own page. The numbers of likes, comments, and shares were gathered per post. For video posts, the number of views was also coded. Furthermore, for industrial comparisons, the following total user engagement rate was computed using Eq. (1):

$$TE_x = L_x + C_x + S_x, \quad (1)$$

where TE_x , L_x , C_x , and S_x denote the total user engagement level of the x th post sample (from $x = 1$ to $x = 150$ per brand in this experiment), the number of likes, the number of comments, and the number of shares of the x th post case, respectively.

4.4. Influential Factors on User Engagement

Based on the literature reviews and the preliminary analyses of the early posts, this research defined the key factors (independent variables) that impact the degrees of Facebook user engagement, as listed in the Table 2.

Table 2. Influential visual storytelling factors on Facebook user engagement

Factors (Independent Variables)		Types (Levels)
Ad Content	Objec-tives	[B] Brand promotion [P] Product/service promotion [D] Daily life issues [E] Event hosting on a Facebook page [R] Event results notice [O] Offer claims/offline events [L] App installations/clicks to links
	Value Scales	[I] Informativeness [I+E] Informative entertainment [E] Entertainment
Ad Visual	Visual Media	[T] Texts [I] Images (photo, drawing graphics) [I+T] Images with text overlays (infographics) [V] Videos [G] GIFs

[] denotes abbreviation forms of each types (levels) for coding.

5. Results and Discussion

5.1. The influence of Ad Objectives on User Engagement

In order to classify the collected posts according to the seven objective types (see Table 2), the coders thoroughly investigated each post. As a result, it was discovered that over half of the posts were aimed at multiple objectives (two to four objectives). For example, a certain post was created to promote its product while hosting a quiz event and suggesting a related link (coded as PEL). Eventually, although 32 different objective types were found, 27 types were used by the following statistical analysis because the excluded five types were matched with only one post (case) among all the posts of the four brands.

Consequently, for the 595 posts (Samsung Mobile: $n = 150$, SKT: $n = 149$, KIA: $n = 147$, POSCO: $n = 149$), a two-way ANOVA was used to test if there was any interaction between two factors (industry types and objective types) on the total user engagement rate, which

yielded statistical significance ($F(40, 525) = 1.9, p < .001$). These results statistically support the influences of these posting objectives on the total user engagement across industries, thereby supporting the hypothesis 1.

As illustrated in the upper graph of Fig. 1, numerous posts were created for describing daily life issues (D: 18.5%) and promoting the products (P: 15.3%, PEL: 10.9, and PL: 9.9). There were noticeable patterns in the mean total engagement rates of these posts according to their objective types (see the lower graph in Fig. 1). The product promotion posts discussing relevant daily life stories (PD) showed the highest mean engagement value, despite being less frequent (just seven posts). Users were highly engaged with the product promotion posts accompanying events and link accesses (PEL), which encouraged fans to comment or share. On the other hand, the frequency of posts promoting a brand itself was relatively lower (6.1%) than those describing a product or a daily issue. These results support that, on the Facebook fan-pages, the current marketers tend to enhance their brand awareness indirectly through a variety of memorable and pleasant stories about their products and everyday lives related with their brands (e.g. introducing a Samsung Galaxy Gear S2 by highlighting sports issues resonating with active young fans).

In addition, there were noticeable differences in the influence of the objectives on the total user engagement across the industries. Samsung Mobile and SKT were more directly focused on their product promotions while Kia and POSCO dealt with daily issues more frequently. In particular, Kia successfully motivated their fans to engage with video posts produced with interesting, empathic narrative structures that indirectly emphasized the key features of Kia vehicles. For example, Kia's short sitcom video engaged numerous fans. The story of that video was that a man was driving a Kia K5 Diesel with his girlfriend, and then he awkwardly heard her stomach's loud growling due to the K5's low noise technology.

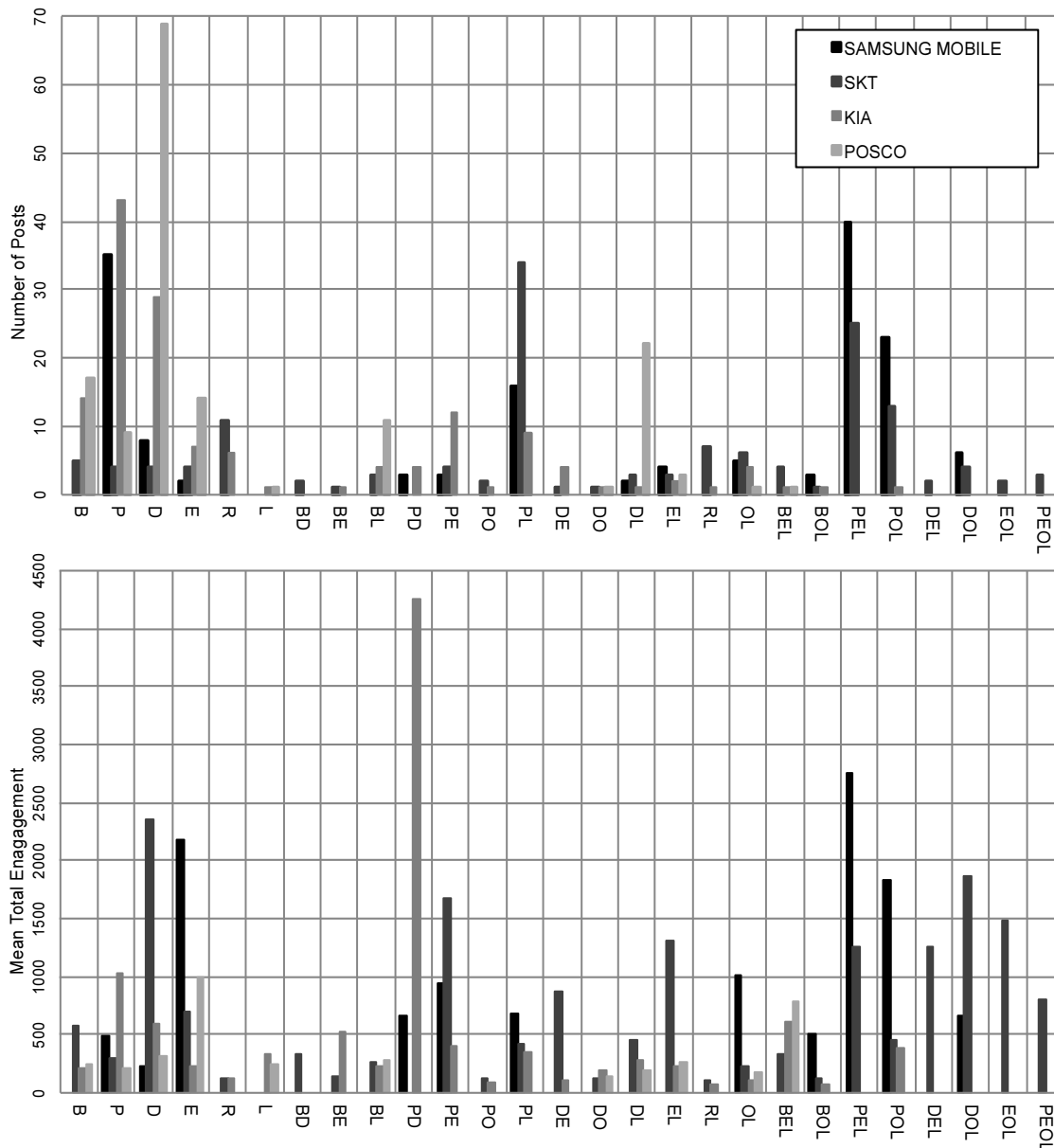
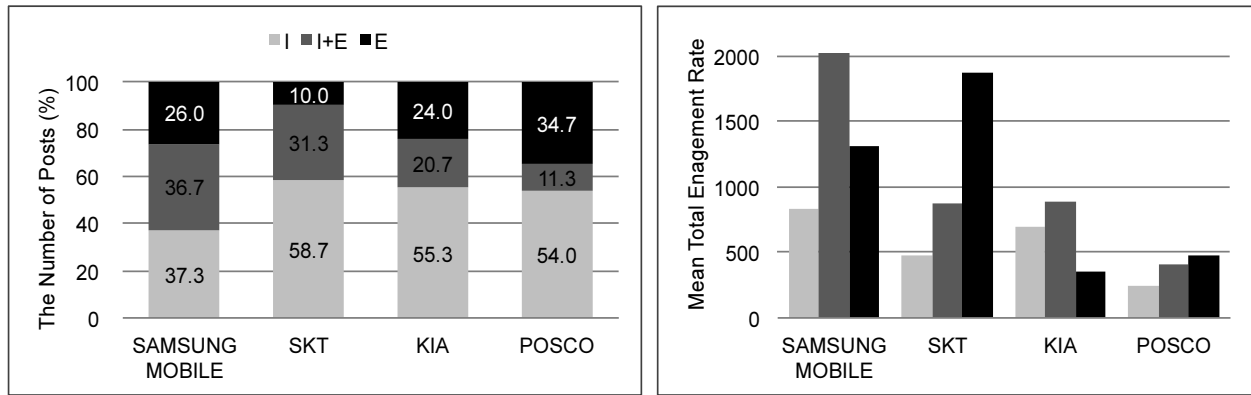


Fig. 1. (Top) the distribution of the 595 posts according to their 27 objective types for the four brands, and (Bottom) the mean total engagement values across the 27 objective types for these four brands

5.2. The influence of Ad Values on User Engagement

In order to determine whether the ad values and industrial types of all these Facebook posts affect the degrees of Facebook total user engagement, a two-way ANOVA was performed ($n = 600$ posts, two factors: 3 value scales X 4 industries). There was a statistically significant interaction effect between value scale and industry factors ($F(6, 588) = 4.3, p < .001$). These

statistics address the influences of these posting value scale types on the total user engagement across industries. The Facebook posts of the Samsung Mobile fan-page have a similar posting distribution across three value types while the other three brands created more informative posts (see the left graph in Fig. 2). Along with these comparisons for the total engagement levels, for each brand, a one-way ANOVA was performed (factor: three value scale groups) by three individual engagement metrics (likes, comments, and shares),



I: Informativeness, I+E: Informative Entertainment, and E: Entertainment

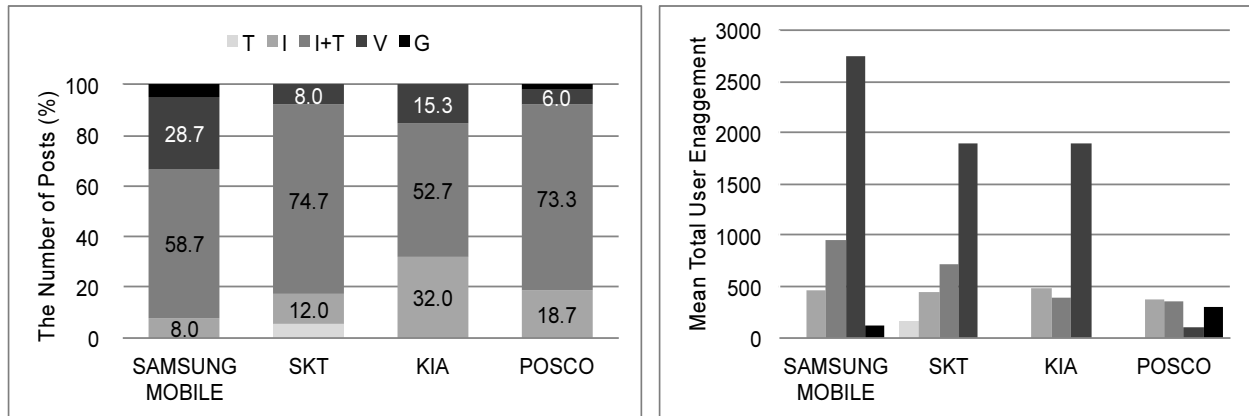
Fig. 2. (Left) The distribution of the 150 posts according to their value scales for the four brands (Unit: %), and (Right) the mean total engagement values across the three value scales for the four brand

respectively (see Appendix 1). For the brands whose significance level of the Levene's homogeneity test was < 0.05 , Welch's adjusted F ratio was used. In addition, the Scheffe (especially, the Dunnett T3 for the Welch's ANOVA) post hoc test were also carried out to detect significant mean differences (at $p < .05$) between the value scales for each brand.

As presented in Appendix 1, the hypothesis 2 was partially supported. The differences of the mean like metric rates across the three value groups were statistically significant (except for Kia). Therefore, for the collected Facebook posts, the like metric showed more clearly distinct variations of the three value scales. In the case of the comment metric, SKT and POSCO showed significant differences between the three value groups at an α level of 0.005. According to the Dunnett T3 results, on the Samsung's Facebook page, informative entertaining posts (I+E) were more highly engaged than the other value posts in isolation (I or E). SKT fans more frequently commented on informative entertaining posts than only entertaining ones. In addition, POSCO fans clicked more like buttons and wrote more comments on the amusing Facebook posts ($E > I$) in spite of the higher frequencies of these informative posts.

5.3. The influence of Ad Visual Media on User Engagement

A two-way ANOVA was conducted to examine the influences of the visual media and industrial type of the entire brand posts on the degrees of the total engagement rates (n : 600 posts, two factors: 5 visual media X 4 industries). This test yielded statistical significance for the interaction effect between the two factors ($F(7, 585) = 3.34, p < .005$) and confirmed that the variations of the total user engagement according to the visual media differ across the industries. In addition, all four of these brands created more than half of their post visuals using both images and texts (e.g. SKT: I+T, 74.7%); however, Samsung Mobile and Kia uploaded more videos (28.7%) and images (mostly, photos, 32%), respectively, than the other brands did (see the left graph in Fig. 3). On the other hand, the mean total engagement values of these video posts were evidently much higher than those of the other media posts (except for POSCO due to only seven video posts). Given that the vividness of media increases from text, to image, to video, these results suggest that the user engagement levels of the Facebook posts could be influenced by the vividness dimension of visual media. This is a consistent finding noted by



T: Text, I: Image, I+T: Images with text overlays, V: Video, and G: GIF

Fig. 3. (Left) The distribution of the 150 posts according to their visual media for the four brands (Unit: %), and (Right) the mean total engagement values across the five visual media for the four brands

Lisette et al. (2012) and Chua & Benerjee (2015) in which the higher the level of vividness of a post, the more popular the post.

Along with these comparisons for the total engagement levels, for each brand, a one-way ANOVA was performed (factor: from 3 to 5 media groups) by three individual engagement metrics (like, comment, and share), respectively (see Appendix 2). The Levene's homogeneity test ($p < .05$) and the Scheffé (or Dunnett T3) post-hoc test were also executed. For Samsung Mobile, SKT, and Kia, the differences of these mean values of the three engagement metrics across the five visual media types were statistically significant at $p < .001$ (except for the share metric of Kia). Thus, these statistics showed that the hypothesis 3 was partially supported.

According to the Dunnett T3 results, in the case of Samsung Mobile, the proportion of video posts (28.7%) was the highest amongst the other brands, and its three mean engagement values were also the highest, followed by the Image + Text type. Actually, Samsung Mobile focused on creating high-quality videos for their product promotions. On the SKT fan-page, the posts coded as the Image + Text type were more frequently engaged by their users than the text- and image-driven posts

(except for the Video type because the number of video posts was just 8 percent for the SKT). Actually, SKT has frequently introduced their complex service programs and events using multiple infographic images step by step (the I+T type, 74.7%). In particular, for the POSCO posts, there was no statistical significance for any of the three engagement metrics across the five visual media types. Their engagement values were barely influenced by the visual types. Among the five visual media, video type was the most effective for boosting user engagement, while text and GIF types were relatively ineffective visuals.

5.4. Compelling Visual Storytelling Tactics on Facebook

Along with the above key statistical findings, effective visual storytelling approaches were qualitatively scrutinized in comparisons between the most engaging posts and the least engaging ones. The four brands showed distinguishable communication patterns on Facebook in accordance with their industrial characteristics.

Firstly, Samsung Mobile has focused on encouraging active participation among users in their 20s and early

30s (e.g. tech-savvy men) with high-quality video posts that deliver entertaining stories that include useful information about their products/services. Video posts hosting free gift-related events on the Facebook page are more likely to boost their engagement rates. In regards to the video running times, an aesthetic short video (within 15secs) is appropriate for concisely emphasizing hands-on information about key features of the latest digital devices. On the other hand, an empathic long video (1-3mins) is used for exposing the products/services in a daily context. This type of video has to be produced with robust narrative structures, sometimes starring famous celebrities.

Secondly, as the largest, domestic wireless telecommunications operator, SK Telecom has over 1.3 million fans over a wider range of age groups (the majority of these fans are in the age group of 20-30s who tend to be a more active Facebook user group). For example, a recent offline celebrity marketing campaign with Kim Seoul-hyun, a Korean idol singer, influenced SKT's Facebook visual posts. A variety of visuals that used her images or videos were produced as a Facebook-only special marketing tool in order to gather interest as well as entice their fans to engage. Moreover, the fans expressed their interests in well-designed infographics (the I+T visual media) about complex services, convenient apps, and event participation processes.

Thirdly, Kia Motors managed their posts by using several themes, and their visual design styles were also consistent in terms of theme. For example, the posts in the K-shot and K-remember theme categories mainly used square-shaped photos of cars, while the K-quiz and K-knowhow posts were visualized with one or more images with text overlays for presenting information or knowledge in a clear and concise manner. In particular, the following two types of posts had more engagement:

the K-shot posts including high-quality photos of their recent cars and the K-knowhow posts including useful information about vehicle maintenance tips. The most popular posts were about the new models that included aesthetically pleasing pictures or rendering images of their exteriors and interiors, videos about their design or development stories, and so forth. Moreover, their primary fans were car enthusiasts, who tend to be very interested in technical automobile knowledge and are likely to share (sometimes, show off) their own knowledge; therefore, posts related with technical automobile issues received more engagement from the fans. Interestingly, some posts with quiz questions about a Kia car's special functions, even though no gifts or prizes were offered, encouraged a huge number of voluntary comments that further developed dialogues rather than merely answering the quiz questions.

Finally, compared with the other brands, a multinational steel-making company, POSCO has less touch-points with end-users. Due to its B2B situation, POSCO tried to show friendly, empathic photos of ordinary objects made of steel, sometimes using inspiring quotes. They also focused on telling and sharing unfamiliar and unknown knowledge about the history of steel, its manufacturing processes, or diverse types of steel by using animated infographics or impressive photos taken in the powerful, dynamic outdoor contexts. Admittedly, the most active POSCO fans were their employees or job seekers, so POSCO used Facebook as a public in-house communication platform by addressing hot internal issues. Furthermore, their Facebook was successfully used as a gateway to introduce their fans to their official blog pages, which shares a variety of the latest corporate news and information, despite the fact that doing so may end up decreasing engagement on Facebook.

Along with these distinct approaches by the four

brands, effective visual storytelling tactics that generally led to more engagement were found in comparison with ineffective ones that kept losing user engagement. Firstly, according to the ad objectives, competitive and uncompetitive development approaches were compared in Appendix 3. Regardless of the objective types, more attention was paid to posts accompanying free gift-related events. This was especially apparent in that attractive gifts led to increased fan participation and engagement. However, some posts without incentives were able to draw more attention if their visuals were highly appealing (Chua & Banerjee, 2015).

Meanwhile, due to lower posting frequencies, very few effective brand promotion approaches were found in this study. In the case of product/service promoting posts, a high number of users liked hands-on information about the latest products/services that was exclusively offered on Facebook. In addition, unknown daily issues and useful apps also appealed to users on Facebook.

Next, as depicted in Appendix 4, competitive usages of the diverse visuals were compared with their uncompetitive counterparts in terms of boosting user engagement. Vivid posts that include images or videos received more fan engagement than text-based posts; however, vivid visuals that lacked any hands-on information or amusing storytelling did not lead to active user engagement. Together with compelling content, the aesthetic considerations of Facebook visuals were also very important because low fidelity visuals tend to be easily neglected. No matter what types of visuals marketers are using, well-known popular visuals (e.g. television commercial videos, outdoor advertising images) did not motivate fans either. In particular, well-designed infographics (multiple images with text overlays) were appropriate to explain complex information, while short videos were a good method to highlight key information in an impressive and memorable way.

6. Conclusion

This study initiated an empirical investigation on how leading Korean brands employ their Facebook fan-pages, focusing on their strategic visual storytelling and communication patterns. Based on the literature review about influencing visual storytelling factors on user engagement (i.e. ad objective, value scale, and visual media), a content analysis of the four Korean brands from different industries was conducted.

Firstly, the quantitative analysis results proved that the different industrial attributes of the four brands affect their Facebook posting patterns by showing different engagement rates. These statistical results also supported the three hypotheses. That is, the Facebook user engagement rates (measured by likes, comments, share metrics) of the four brands are influenced by their ad objectives, value scales, and visual media types. Furthermore, Facebook brand posts are likely to aim at multiple objectives (frequently, accompanying event hosting) for boosting user engagement. Among these objectives, promoting the brand itself was largely ignored. In general, on Facebook brand fan-pages, companies tend to enhance their brand awareness indirectly and gradually through a variety of memorable and pleasant stories about their products and how everyday life issues related with their brands. Additionally, this research found that the engagement levels of the Facebook ad posts would systemically vary according to an entertainment dimension based on their content value, as well as a vividness dimension of their visual media.

Next, in line with these statistical findings, this study qualitatively investigated a range of Facebook posts made by these four brands and then suggested strategic Facebook visual storytelling tactics and strategies according to their defined objectives and visual media types considering the different balancing points between

the informative and entertaining value scales. Consequently, their key visual storytelling strategies were differentiated as follows: (1) Samsung Mobile: Interactive video-driven storytelling for highlighting hands-on product information; (2) SK Telecom: Visually appealing marketing with celebrity exposure; (3) Kia Motor: High-quality visual experiences for facilitating voluntary dialogues with car-enthusiasts; and (4) POSCO: Friendly and empathic visual storytelling for solidifying emotional bonds between in-house staff on the POSCO Facebook page.

Moreover, effective visual storytelling tactics that generally induce more engagement were found in comparison with ineffective ones that kept losing engagement (see Appendices 3 and 4). These tactics derived from actual marketing and branding cases will provide concrete guidelines for social media marketers and designers who are struggling with effective visual storytelling techniques that enable the attraction of loyal followers to their Facebook brand pages. Visual storytelling is more than just creating a variety of eye-catching visuals. To successfully incorporate visual storytelling into their Facebook fan-pages, companies have to clearly define competitive visual storytelling strategies in alignment with their key brand or marketing objectives, and then they have to implement them by developing relevant killer contents and stunning visuals, which can boost user engagement.

Finally, this study has achieved its primary aim through the empirical research on the leading Korean brands. Some extended research could improve the practical applicability of the present research results by including international brands or domestic brands in diverse industries, considering other influencing factors on user engagement, or by investigating other performance metrics of Facebook. It is hoped that this research will help to create an inflection point on the

importance of values when using Facebook marketing or branding.

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Appendix 1. The mean individual engagement ratings of these three value scale groups for these four brands and their relative statistics

Value scales	SAMSUNG MOBILE							SKT						
	N	Like		Comment		Share		N	Like		Comment		Share	
		M	SE	M	SE	M	SE		M	SE	M	SE	M	SE
I	56	467.9	766.8	228.6	355.0	134.4	239.1	88	325.8	460.1	60.5	166.8	97.6	635.1
I+E	55	1447.9	1557.0	388.8	515.9	180.3	273.2	47	513.5	436.7	265.3	281.2	92.9	100.3
E	39	947.3	1516.8	249.8	455.6	113.1	229.0	15	1187.7	1415.5	493.1	800.4	191.7	301.2
F statistics		Welch's F (2,77.3) = 9.3 <i>p</i> = .000****		Welch's F (2,86.6) = 1.9 <i>p</i> = .163		F (2,147) = 0.9 <i>p</i> = .402			Welch's F (2,33.3) = 5.0 <i>p</i> = .013*		Welch's F (2,30.9) = 12.1 <i>p</i> = .000****		F (2,147) = 0.3 <i>p</i> = .781	
Post hoc		I+E > I, E								I+E > E				
Value scales	KIA							POSCO						
	N	Like		Comment		Share		N	Like		Comment		Share	
		M	SE	M	SE	M	SE		M	SE	M	SE	M	SE
I	83	559.8	1763.9	62.3	191.5	80.5	137.2	81	219.7	165.5	11.0	17.8	13.7	40.9
I+E	31	673.9	1452.8	130.7	176.8	84.9	166.2	17	262.2	163.9	118.3	247.1	27.9	43.6
E	36	289.6	242.5	36.1	48.2	24.3	34.4	52	368.9	273.8	86.7	171.0	20.1	30.6
F statistics		F (2,147) = 0.6 <i>p</i> = .530		F (2,147) = 2.9 <i>p</i> = .056		Welch's F (2,64.5) = 7.6 <i>p</i> = .001***			Welch's F (2,44.2) = 6.2 <i>p</i> = .004***		Welch's F (2,32.6) = 6.5 <i>p</i> = .004***		F (2,147) = 1.2 <i>p</i> = .317	
Post-hoc									E > I		E > I			

Post-hoc Test: Scheffe or Dunnett T3 (especially for Welch's ANOVA) was used. Factors: 3 value scale groups, I: Informativeness, I+E: Informativeness + Entertainment, E: Entertainment (**p* < .05, ***p* < .01, ****p* < .005, *****p* < .001)

Appendix 2. The mean individual engagement ratings of the five visual media groups for the four brands and the relative statistics

Value Scales	SAMSUNG MOBILE							SKT						
	N	Like		Comment		Share		N	Like		Comment		Share	
		M	SE	M	SE	M	SE		M	SE	M	SE	M	SE
T	-	-	-	-	-	-	-	8	131.4	112.3	22.4	27.3	2.5	5.2
I	12	199.4	133.6	194.0	303.8	75.8	94.4	18	382.4	388.2	45.9	80.0	17.3	27.7
I+T	88	639.2	1172.5	213.0	410.9	99.8	198.0	112	458.0	659.6	182.2	378.1	70.7	132.8
V	43	1940.4	1504.2	529.7	524.9	282.2	330.5	12	948.8	959.6	314.9	353.6	631.8	1686.6
G	7	99.6	19.2	10.9	6.9	4.4	3.3	-	-	-				
F statistics		Welch's F (3,41.6) = 28.0 <i>p</i> = .000****		Welch's F (3,39.7) = 21.7 <i>p</i> = .000****		Welch's F (3,39.7) = 18.5 <i>p</i> = .000****			Welch's F (3,31.2) = 9.1 <i>p</i> = .000****		Welch's F (3,34.4) = 8.5 <i>p</i> = .000****		Welch's F (3,33.0) = 11.1 <i>p</i> = .000****	
Post-hoc		V > I+T > I, G		V > I+T > G V > I		V > I+T > G V > I			I+T > T		I+T > T, I		I+T > T, I	
Value Scales	KIA							POSCO						
	N	Like		Comment		Share		N	Like		Comment		Share	
		M	SE	M	SE	M	SE		M	SE	M	SE	M	SE
T	-	-	-	-	-	-	-	-			-	-	-	-
I	48	418.6	491.3	36.8	68.2	33.4	51.9	28	304.8	157.4	64.0	158.2	14.8	28.0
I+T	79	263.4	205.9	75.7	195.6	60.3	102.4	110	283.3	236.5	50.6	137.5	19.5	42.0
V	23	1603.7	3541.4	120.4	198.9	166.4	240.7	9	96.0	88.9	3.7	3.3	7.0	6.0
G	-	-	-	-	-	-	-	3	293.7	3.5	6.7	5.5	6.0	5.3
F statistics		Welch's F (2,42.4) = 3.7 <i>p</i> = .033*		F (2,147) = 2.1 <i>p</i> = .132		Welch's F (2,50.80) = 4.9 <i>p</i> = .011*			F (3,146) = 2.3 <i>p</i> = .081		F (3,146) = 0.5 <i>p</i> = .655		F (3,146) = 0.5 <i>p</i> = .711	
Post-hoc						V > I, I+T								

Post-hoc Test: Scheffe or Dunnett T3 (especially for Welch's ANOVA) was used. Factors: 5 visual media groups, T: Text, I: Image, I+T: Images with text overlays, V: Video, and G: GIF (**p* < .05, ***p* < .01, ****p* < .005, *****p* < .001)

Appendix 3. Comparison between competitive and uncompetitive tactics according to the ad objectives on Facebook

Objectives	High Engagement (What should be)	Low Engagement (What should not be)
Brand Promotion	- Accompanying events	- Corporate information and news or issues
Product/ Service Promotion	- Accompanying events - Easy and simple explanations - Product use cases within the context of daily life	- Just exposure of products in the daily life context without further information - Less-recognized or outdated products/services - Rare products appealing to limited user groups - Unrelated products with a brand
Daily-life Issues	- Accompanying events - Dealing with favorable, emphatic stories (e.g. Pets) - Unknown information or tips related with daily lives	- Seasonal or memorial greeting cards that look too plain
Event Hosting	- Gifts targeting couples (e.g., movie tickets, restaurant gift certificates) that encourage friends tagging and sharing - Desirable big, expensive gifts (e.g. Samsung mobile devices) - Easy participation - Events aligned with new product launches - Targeting users who have high purchase motivations (e.g. smartphones for high school graduates) - Video content utilization	- Targeting specific users (e.g. membership customers) - Meeting specific conditions (e.g. certain product purchasers, after using certain service) - Requiring additional participation outside of Facebook pages - Frequently advertised weekly or monthly events - Events without alignment with brands or products (e.g. book recommendation of Samsung Mobile) - Very few incentives
Offer claims / Offline events	- Receiving benefits through easy participation events	- Offline events
App download/ Clicks to links	- Useful app downloads - Links to further information about product launches and features	- Unfamiliar app downloads - Just a bridge to other sites (e.g. blogs)

Appendix 4. Comparison between competitive and uncompetitive tactics according to the ad visual types

Visual Media	High Engagement (What should be)	Low Engagement (What should not be)
Texts		- Event winners announcements - Links to other sites
Images (mainly, photos)	- New product photos - High-quality product shots - Emotional storytelling images - Lifestyle imagery resonating with fans	- Well-known product photos - Low-quality product shots - Non-storytelling images (e.g. event places) - Discussing personal concerns (especially, user-generated photos)
Images + Texts (mainly, info- graphics)	- Attractive event notices (e.g. schedule, how-to guides, gifts) - Useful product/service information (e.g. new features) - Uncommon, sharable knowledge and tips relevant to fans - Well-designed infographics with practical and aesthetic consideration - Photos with touching quotes	- Lack of information - Irreverent information to fans - Less consideration of aesthetics (e.g. amateur graphics) - Images overwhelmed by too much text
Videos	- Amusing, humorous storytelling (but avoiding excessive humor) - The latest videos, solely produced for social media, about new products - Shorter videos (under 15 secs) highlighting key features or useful tips related with products/services - Videos accompanying events - Casting popular celebrities or the recent most-talked-about people - Empathetic narrative structure with professional production	- Well-known videos (e.g., popular TV commercials) - Longer videos (over 1 min) without robust narrative structures - Lower engagement rates for a series of videos created by the same formats and plots - Informative videos about rare products and issues targeting specific users (e.g. smart beam) - Pushing loads of complex information - Themes mismatched with fans' interests
GIFs	- Telling bite-sized informative stories (e.g. key product features)	- Just eye-catching object movements - Iterative chopped videostyles