

Gender and Instagram Hashtags: A Study of #Malaysianfood

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Abstract

Launched in October 2010, Instagram has become a leading photo-sharing platform, popular mobile phone application and social media site. An Instagram function, hashtags, helps classify photo categories, build social connections and express feelings. This study investigates gender difference in hashtag use on Instagram, and classifies hashtags into informative and emotional hashtags, and positive and negative hashtags. The results show that in general, women tend to use more emotional and positive hashtags while posting photos on Instagram, however, men have a higher potential in using informative and negative hashtags for photos on #Malaysianfood. The study findings add to the limited literature on hashtags and Instagram, and support studies of gender differences in computer-mediated communication. From an industry perspective, gender differences in hashtag application could help industries in selecting promotional hashtags based on gender preferences.

Keywords: Gender, Instagram, #Malaysianfood, hashtag category.

1 Introduction

The popularity of photo sharing on the Internet has attracted photo-based social media research. Instagram, launched in October 2010, has become a leading photo-sharing and popular social networking site. Hashtag, the significant function on Instagram, it allows users to provide photo description and link users with similar interest (Hu et al., 2014). Nowadays, hashtags have been used frequently in the business events or promotions since the high search ability and visibility online.

Despite the proliferation of studies on social media and gender in technology, research of hashtag is limited. Most hashtag studies tend to focus on Twitter (Eva, 2013). Similar to hashtags on Twitter acting as a topic management tool, Instagram hashtags help in photo classification and expressing feelings (Hu et al., 2014). More studies are needed for better understanding the potential business opportunity in hashtag usage based on different types of users' preferences.

This study adds to the limited research on photo-based sites in the food sector. To the authors' knowledge, the one such Instagram study is in fast-food and focuses on crisis communication management (Jeanine et al., 2014). The limited studies also highlight the opportunities to investigate Instagram's impact on the food sector. Additionally, this study extends existing studies on gender in computer-mediated environment by

investigating gender differences in Instagram hashtag use. More specifically, this study attempts to answer the following questions:

- a) Does gender differ in using emotional and informative hashtags on Instagram?
- b) Does gender differ in using positive and negative hashtags on Instagram?

This study began with a review of hashtags, Uses and Gratification Theory and gender differences in computer-mediated communication. The literature review leads to two hypotheses, followed by a methodology for hypotheses testing. Next, the study closes by presenting results, contributions, limitations and recommendations.

2 Literature Review

2.1 Hashtag

Wang et al. (2011) define hashtags as non-spaced words, abbreviations, phrases following the # sign. Jeanine et al. (2014) studied on hashtag use in hospitality and highlighted that the hashtag is the popular application on Instagram, which could be used for building brand image and public relationship.

Emerging research examines the possible categorisation of hashtags. Tamara (2011) classified hashtag into informing and commentary hashtag (opinions, judgments) and found around 71% of tweets on Twitter were informing hashtags. Wang et al. (2011) classified hashtags into topic (*#Malaysia*), sentiment (*#love*) and sentiment-topics (*#IloveMalaysia*) and found that most hashtags served for marking topics or annotating key words. Studies also classify hashtag based on sentiment. Emotional hashtags show user sentiment, mood and affects (Scherer, 2005) while informative hashtags are expressions about data, knowledge or objects (Wicker & Kim, 2003). Besides, positive and negative hashtags, similar with comments or reviews, hashtags express satisfaction by including strong sentiment word (Pang et al.'s, 2002).

2.2 Uses and Gratification Theory

Uses and Gratification Theory (U&G) is a humanistic theory used to examine why and how users seek appropriate media to meet specific needs. Since the 1970s, U&G Theory has linked human needs with media gratification. For instance, traditional media like newspaper or radio help in gratifying needs of informing or enjoying (Ruggiero, 2000). U&G Theory assumes users have total authority in media selection from multiple alternatives for gratifying specific human needs (Ruggiero, 2000).

Development of information communication technology extends the application of U&G Theory into a wide range of media from mobile devices to the Internet and across various social media. For example, needs of socialisation, immediate accessibility and entertainment could be easily gratified by using smartphones and the Internet (Ruggiero, 2000). Joinson (2008) concludes that uses and gratifications in Facebook are social connection, entertainment and event engagement. As more new social media are competing nowadays, identifying specific needs is significant.

This study is perhaps the first to apply U&G Theory in social media. In this study, the hashtag application and photos posted is the mean used for different users (male and female) in gratifying the needs of emotion via (emotional and informative hashtags) or satisfaction (positive and negative hashtags) expression.

2.3 Gender and Computer-Mediated Communications (CMC)

Computer-mediated communications deliver messages with organised words or patterns via computers. Studies suggest that CMC differs significantly due to gender, expectations and mindsets (Hargittai, 2008). For example, females are more outgoing, self-disclosing and less anxious to express deep feelings in emotional language (Rice & Markey, 2009). Males however, tend to talk about news or social facts online and use less emotional expressions or flowery words. Research also supports that women are softer in criticism and tend to ignore the unsatisfied experience while men are aggressive and have a high tendency of writing negative comments and risky messages online (Hargittai, 2008). Lee (2003) studied reactions to unsatisfied experiences in restaurant and found that males are braver in showing anger online for recommending friends do not enter in similar situations.

2.4 Hypotheses

Hence, based on findings from previous gender in computer mediated studies, this study proposes:

Hypothesis₁: Compared to males, females use more emotional hashtags while posting Malaysian food photos on Instagram.

Hypothesis₂: Compared to males, females use more positive hashtags while posting Malaysian food photos on Instagram.

3 Methods

This study uses content analysis as a research method for collecting data directly from Instagram by analyzing online-based content. An important methodological step was defining, coding and recording categories. Variables involved in the coding sheet are post number, gender (female and male), emotional hashtag, informative hashtag, positive hashtag and negative hashtag. For instance, gender was operationalised by the profile photo. Emotional hashtags (*#love*, *#amazing*) includes emotional words related to Scherer's (2005) five models of emotion: cognitive appraisal, bodily symptoms, action persuasions, facial expression and feelings, while informative hashtags (*#nightparty*, *#friendsgathering*) only delivered information and non-emotional descriptions (Wicker & Kim, 2003). Positive (e.g. *#delicious*, *#nice*) and negative hashtags (*#terrible*, *#sucks*) involve words expressing positive and negative feelings, similar to Pang et al.'s (2002) method in classifying reviews into positive and negative by recognising the key sentiment word involved such as *tasty* or *bad*.

The population for this study was all Instagram posts with the *#Malaysianfood* hashtag, a popular food hashtag in Malaysia. The study sample includes 1,382 Instagram posts with *#Malaysianfood*, collected on the 1st, 8th, 15th, 22nd and 29th of March 2015 (Sunday of the week), which are explained in Malay or English language. The researcher collect all post using this hashtag but exclude post with these six elements: group users, non-food photos, videos, gender of users could not be identified, post with wrong spelling such as *#tradision* and unclear shortcuts such as *#cposl*. Seven hundred and thirty three posts were excluded as it failed to fulfill the criteria leaving the final sample to 649 posts. Sunday was selected as the high

awareness and activeness during the weekend. Face validity was checked by two marketing experts to validate coding sheet and research design. Two independent coders were involved in data collection. The inter-coder reliability statistic, Cohen's kappa, to check the agreement between coders in assessing messages was 0.81, which indicates high reliability (Krippendorff, 2013).

4 Results

The 649 valid posts yielded 6698 hashtags for analysis. Of the 649 posts, 390 were classified as male posters (60%) and 259 female (40%). From the 6,698 hashtags, 5,090 hashtag were informative (76%) and 1,608 were emotional hashtags (24%). To classify hashtags as positive or negative feelings, the coders took a conservative approach and classified 5,077 (76%) as neutral hashtags. Of the remaining 1,621 hashtags, 1,606 (99%) expressed positive feelings and only 15 (1%) expressed negative feeling towards Malaysian food (e.g. *#sucks*).

Results of Mann-Whitney U test showed significant gender difference in hashtag selection. Females used emotional hashtags more (Mdn=4) than males (Mdn=0) [$U=19194.50$, $p<0.001$], while males (Mdn = 6) used more informative hashtags than females (Mdn=5) [$U=44928.00$, $p =0.015$], supporting H_1 . Secondly, females (Mdn=4) used positive hashtags more than males (Mdn=0) [$U=19291.00$, $p<0.001$], while male (Mdn=1) used more negative hashtags than female (Mdn=0), [$U=49463.00$, $p =0.034$], supporting H_2 . Figures show bubble-plots for gender in hashtag selection.

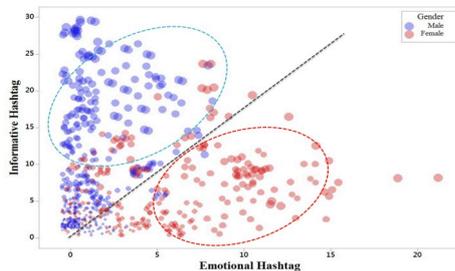


Figure 1: Gender Difference in Emotional And Informative Hashtag Choosing

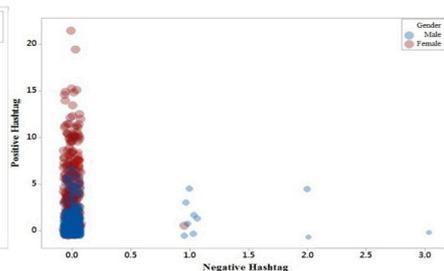


Figure 2: Gender Difference in Positive and Negative Hashtag Choosing

Each bubble represents one Instagram post. The numbers on X- and Y-axis represent the quantity of each hashtag category. Red and blue bubbles, respectively, indicate female and male posts. Figure 1 shows females tend to use more emotional hashtags per post based on the red clustered areas. Figure 2 shows most of bubbles line up on $X=0$ and females have a higher presence of positive hashtag than males.

5 Conclusion and Discussion

The result show that compared to females, males use more informative hashtags for food posts on *#Malaysianfood*, such as hashtags about food category (*#Desserts*), colour (*#colorful*), taste (*#spicy*), partner (*#lovers*) or event (*#party*). Females however, tend to attach emotional hashtag for expressing feeling. Females also prefer

to use positive hashtags more than males. The results support prior studies on gender difference in CMC. Females are more emotional in online communication while males are more task-oriented online (Jeanine et al., 2014). Facing a dissatisfied situation, male is braver in expressing anger and disappointment online, but females care about politeness and prefer to ignore unhappy situations (Hargittai, 2008).

Explained by U&G Theory, different types of users select different media or applications to gratify specific needs (Ruggiero, 2000). For instance, female users prefer to gratify needs of expressing feeling, satisfaction and building positive images and by using emotional and positive hashtags, while male users mainly gratify needs of informing or discussing events through informative hashtags on Instagram.

This study contributes to the existing body of work on U&G Theory, Instagram and hashtag use. In addition, gender differences in hashtag use add to the literature on gender difference in CMC. Companies can apply these results for promotion based on gender preference. Beauty companies who target on female customers should use more emotional hashtags such as #silkskin or #beautiful lady in promoting business online, however, computer hardware store should promote mostly with informative hashtags for introducing speed or function of the product. Furthermore, industry could measure satisfaction by positive and negative hashtags on Instagram.

This study focuses on gender difference in hashtags, based on individual users' Instagram photo. Future research could divide users based on lifestyle, age or income level to explore hashtags using behaviour. Secondly, video is highly recommended for future studies due to video's richer content than photos.

In conclusion, hashtags used with food photos seems a popular trend for future Instagram posts due to the popularity of hashtags and the attractiveness of photos. Combining and using these two important features correctly, Instagram could become more powerful and useful in the future.

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