Instagram Posts for Canadian Small Businesses: Types and Effectiveness

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Disclaimers

The opinions and analysis in this report reflect those of the primary researcher and do not represent the position of the University of Alberta.

Abstract

Now more than ever, small business owners are relying on social media, such as Instagram, to find customers, connect with them, build relationships, and provide value by offering their products/services. Instagram users scroll rapidly through their feeds and see photos, videos and captions and spend only seconds looking at each before moving on to the next. What types of content are Canadian small businesses sharing on Instagram and how effective are they at capturing engagement? This research uses Semiotic theory to evaluate the photographic elements in a selection of posts; and uses Uses and Gratification theory to evaluate the captions of the posts for message strategies. The resulting categories were compared to the record of engagement in the form of likes or comments. The findings demonstrate that users engage more with certain types of content such as product-centered images, posts that mention giveaways, and genuine expressions of emotion. Small business owners may use these findings as a starting point for assessing their use of Instagram and other social media platforms and for developing their own content strategy.

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Chapter 1: Introduction

Social media is a microbusiness's most direct form of communication with their customers. While outsourcing certain business elements can be beneficial (access to expertise, the potential for cost savings, greater flexibility, ability to focus), most microbusinesses do not have the financial resources to do so (Floyd & Alasadi, 2014). Content marketing is used to reach audience segments, increase brand awareness, brand loyalty, and purchase intention. These business measures can be accomplished by creating and executing a marketing and communication strategy. Since social media is essentially free to use, it is the most accessible tool that microbusinesses have. On social media, engagement factors such as likes, comments, and shares are the standard for measuring a post's success. The more likable a post is, the more consumers will interact with it. Therefore, engagement levels are the easiest key performance indicator for how effectively a marketing campaign is being executed. A successful marketing campaign means a business is connecting with its target audience which is the group of people that are most likely to be interested in purchasing a product.

The average consumer makes a first impression in only 50 milliseconds (Lindgaard et al., 2006), and on Instagram that means users could be swiping or scrolling to another business just as quickly. The majority of past research on consumer engagement on social media has focused on Facebook. Instagram is one of the most widely used photo-sharing social media platforms, with a potential audience of 1.16 billion (*Global Social Media*, 2021). The selection of Instagram as the focus for this research is based on the platform's accessibility and usability for both business owners and consumers. The platform's use of visual media such as photographs to showcase products and visible records of public interactions, such as likes, also makes it

conducive to analysis. Instagram is continuously releasing new features for the app that benefit business owners such as Instagram Shop, product tagging (posts, reels, and stories), a dedicated link in bio, product links in stories, Instagram Live, interactive elements for stories (stickers, quizzes, polls, and question boxes); as well as data "insights" so business owners can see data on the number of views (for video posts, reels, and stories), likes, comments, shares, and saves that their content receives. According to the app, 90% of people on Instagram follow a business account (Instagram Internal Data, 2019 as cited in*, Instagram for Business: Marketing on Instagram,* 2021). 130 million people tap on Instagram product tags each month (*Insights to Go from Facebook IQ*, 2021).

Instagram allows microbusiness to find their audience, connect with them, build relationships, and offer their products and services to the global community. According to recent statistics, small businesses (1-99 employees) make up 97.9% of all Canadian businesses (Government of Canada, 2020). Of those 1,200,571 small businesses, 57.7% are microbusinesses with one to four employees. In British Columbia, 73.5% of microbusinesses are operated by individual self-employed solo operators with no paid assistance (B.C. & Ministry of Jobs, Economic Recovery and Innovation, 2021). Small and micro businesses make up a vital part of the Canadian economy; however, there is a lack of research that provides practical advice for how these businesses can capitalize on social media marketing with limited financial resources.

In 1971, social scientist Herbert A. Simon famously coined the term *attention economy* which described how "a wealth of information creates a poverty of attention" (1971, as cited in, Valentini et al., 2018, p. 362). Now more than ever before, we are faced with a near-infinite amount of information pulling our attention in all directions. Advertising tactics have quickly emerged from within social media platforms, providing consumers and businesses alike with a

wide range of ways to connect. Businesses must ensure their products stand out against their competitors both large and small. This research aims to provide small business owners with empirical evidence that can be used to create a more effective social media content strategy. This literature review will outline past research on consumer engagement in social media and is grouped into the following themes: consumer engagement, the effect of visuals, and the effect of text content. The literature is then summarized and used to provide comparisons and to identify gaps that need to be addressed.

My study will respond to this gap in research by examining what type of content Canadian handmade microbusinesses are posting on Instagram and its relationship to consumer engagement, guided by the research question:

What types of content are Canadian businesses sharing on Instagram and how effective are they at capturing engagement?

Chapter 2: Literature Review

To begin my search, I used the University of Alberta's library to find relevant databases. I searched within Academic Search Complete, Business Source Complete, Communication and Mass Media, and ABI Inform Collection. I used simple tables to record the date, database, search terms and limiters for each search I conducted to avoid duplication later on.

Criteria

The chosen search keywords resulted in a limited selection of articles after inaccessible and duplicate articles were excluded, therefore only a few criteria were used to refine these results. Only relevant and peer-reviewed content was included in my search. I selected these as the criterion for my search to ensure that the sources of informing my research were of high quality. To determine if a source was relevant, I initially looked for the words *engagement* and any mention of *social media* in the title.

Initial Findings and Refinements

The first round of searches used the keywords: *business and social media engagement, marketing theory, social media marketing, and consumer engagement.* For the second round of searches, I used the terms *social media, branding, consumer psychology, engagement, social media marketing, message content, and message strategy*. After I read through the titles and abstracts, deleted duplicates and inaccessible documents, I had 8 remaining articles.

Consumer Engagement on Social Media

According to Valentini et al., “early research in digital engagement has identified major content-specific, media-specific and person-specific factors that increase the “likeability” and shareability of content” (2018, p. 363). Liking and sharing content is a direct form of active participation or engagement. Since the internet has hosted a variety of online platforms that support participation and engagement, there is a large body of literature discussing how and why people spend so much time participating in online communities (usually) with strangers. A 2005 study determined that the strongest motivators Wikipedia users were cognitive (“learning new things"), affective (“pleasure”), and integrative (“sharing my knowledge with other Wikipedians") (Rafaeli et al., 2007, p. 11). In investment blogging communities, sense of belonging, entertainment value, and perceived usefulness were significant factors of both intention to share and intention to seek information (Park et al., 2014, p. 7). Intrinsic motivations such as community citizenship, moral obligation, and generalized reciprocity are some of the motivations for contributing to online communities (Tedjamulia et al., 2005).

Bishop (2007) formed a 3-level framework that describes why users of online communities participate. Level 1 is driven by the users’ *desires*: social, order, existential, vengeance, creative. Level 2 is the users’ *cognitions* (goals, plans, values, beliefs, and interests). Individuals will attempt to make their beliefs align with these cognitions. Level 3 is the users’ means to interpret and interact with their environment. This level is made up of abilities such as sense of touch, auditory abilities, sense of sight, capacity to image visual images, etc. Bishop states that the user is driven to act out their desires rather than just “satisfy” a need (2007, p. 1885). The desires they do act on will depend on their existing goals, plans, values, beliefs, and

interests. The user will also act based on how they perceive their own environment (Bishop, 2007, p. 1884 - 1887). *Social needs* (to interact with others, to make new friends), *self-expression needs* (allows the user a creative expression of themself, as a source of confidence, symbolizes personal history), *trust* (the people are honest, the community is reliable, the community is concerned about others), and *identification* (sense of belonging towards to the community, proud to be a member of the community) have also been found to influence participation of members of virtual communities (Han et al., 2007**,** p. 8-10). While online users have varying motivations and goals for participating in online platforms such as virtual communities and blogs, consumerism has also moved online.

Consumer engagement/participation has been characterized on a continuum of low to high activity (Muntinga et al., 2011). Muntinga et al. (2020), described the three levels as *consuming* (viewing, listening, watching, following, reading), *contributing* (rating, joining, engaging, commenting), and *creating* (uploading content, writing reviews). Social media is being used as an interactive tool to "strengthen brand engagement and relationships with customers independent of location" (Felix et al., 2017; Sashi, 2012, as cited in, Osei-Frimpong et al., 2020, p. 1236). The 2020 study revealed that perceived social pressure drives individual social media use as well as motivates consumers to follow brands on social media. The study noted that the effect of perceived social relatedness on perceived social pressure is "suggestive of the importance of a person's desire to feel related to significant others and, therefore, eager to participate in social media brand engagement (SMBE) activities" (Osei-Frimpong et al., 2020, p. 1248). Evidence was also found to show that consumers are more likely to engage with brands that they trust which supports previous opinions that a consumers' attitude towards a brand is associated with their likelihood of engaging (van Doorn et al., 2010, as cited in, Osei-Frimpong

et al., 2020, p. 1236). Kang et al., (2016) found that personalized service had a significant positive effect on brand community engagement. While we have a better understanding today of the intrinsic motivations behind users need to seek out and engage with social media content there are many other factors that can affect this complicated element of business communication. For instance, the content itself is the main feature of Instagram and therefore has a large influence on customer engagement.

The effect of brand post content/design is not as widely studied as the previously mentioned elements of consumer engagement on social media. A number of broad factors have been identified which affect consumer engagement with social media posts. For example, the content must be relevant and high quality to engage the viewer. Multiple elements can contribute to how relevant a brand posts it and its quality. Visually the content should be vivid and interactive (De Vries et al., 2012; Cvijikj & Michahelles, 2013; Luarn et al., 2015; Lei et al., 2017), and demonstrate media richness (Sabate et al., 2014). Other elements that have been studied include image characteristic effect (Li & Xie, 2020), gaze and product salience (Valentini et al., 2018), contrast and symmetry (Kostyk & Huhmann, 2021). Regarding the caption of the post, it must be relevant to what the consumer is searching for, literally or figuratively. A wide variety of categories have been utilized in order to classify the social media posts such as uses and gratifications theory (De Vries et al., 2012; Park et al., 2009; Cvijikj & Michahelles, 2013; Luarn et al., 2015; Sigurdsson et al., 2020), and content categories (Ashley & Tuten, 2015; Schultz, 2017; Li-Chun Huang & Li-Chun Chen, 2018; Tafesse & Wien, 2018, Thongmak, 2019).

As Instagram is considering bringing back the chronological format of the feed (Murphy Kelly, 2021), time and day of week of each post may be an area of interest as it is an influential factor in the engagement levels of a post (Dai & Wang, 2021; Dolan et al., 2017; Sigurdsson et al., 2020; Coursaris et al., 2016).

Visual Imagery's Effect on Social Media Engagement

Most studies on consumer engagement have taken a social or psychological perspective delving into how social media content provokes certain behaviors. This raises the question of what visual elements are connected to engagement behaviors. *Semiotics* is "the study of signs and signals, sign systems, and sign processes" (Moriarty, 2002, p. 20) and may be used to help identify and categorize important visual elements. Past research on the visual content or media type has primarily focused on two aspects: the presence of media, and the vividness and interactivity of the visuals. The presence of media was a particularly interesting trigger of consumer engagement on social media because two of the most popular social networking sites, Facebook and Twitter, began as text-focused platforms. When Instagram launched in October of 2010 it was solely a photo-sharing platform. Instagram's mobile-only interface was unique when compared to the other popular social media platforms since it could only be accessed on a cell phone. Instagram launched with seven unique filters that you could add to photos with the click of a button (Johnson, 2017). The filters conveniently made cell phone photos look much better considering the newest iPhone at the time only had an 8-megapixel camera (Apple, 2011). Today, the majority of photos posted to Instagram are not quick snaps which are uploaded within the same moment. The photos are carefully planned, curated, and edited.

Interactivity and vividness are two of the most used categories for analyzing the media posted to social networking sites. *Vividness* is described as **"**the richness of a brand post's formal features; in other words, it is the extent to which a brand post stimulates the different senses" **(**Steuer, 1992, as cited in, De Vries et al., 2012, p.84). Vividness is made up of a number of elements including the use of dynamic animations and (contrasting) colors or pictures (Cho 1999; Drèze and Hussherr 2003; Fortin and Dholakia 2005; Goldfarb and Tucker 2011; Goodrich 2011, as cited in, De Vries et al., 2012, p. 85). According to Coyle and Thorson, "the degree of vividness can differ in the way that it stimulates multiple senses (2001, as cited in, De Vries et al., 2012, p.85). For example, a video is more vivid than a still image as it stimulates not only sight but also sound. *Interactivity* is defined as "the degree to which two or more communication parties can act on each other, on the communication medium, and on the messages and the degree to which such influences are synchronized" (Liu and Shrum 2002, p. 54, as cited in, De Vries et al., 2012, p. 85, 2012). Examples of interactivity in a brand post include links, questions to the viewers, etc. Posts with high vividness (a video) were found to be positively related to the number of likes. Posts that featured contests (medium-level interaction) were positively related to the number of likes. Posts with a high level of interaction (questions) were negatively associated with the number of likes but positively associated with the number of comments (De Vries et al., 2012). Cvijikj & Michahelles (2013), studied 100 sponsored brand pages for fast-moving consumer goods (food and beverages specifically). Post media type was found to be a significant predictor for all measures of engagement (likes, comments and shares). Videos (highly vivid) were found to result in high levels of likes which supports the evidence from De Vries et al (2012). For posts with the same level of interactivity, those with a higher level of vividness trigger a higher number of likes.

Other studies look at visual content in terms of media richness. Media richness categorizes the type of media that is attached to a post by its "capacity for immediate feedback" (Sabate et al., 2014, p. 1003). The varying breadths and depths of the media stimulate different senses which may "increase the users' propensity to look at the content of the message compared with those posts with only text" (Sabate et al., 2014, p. 1003). A 2014 study on Spanish travel agencies found that content with high media richness had a positive impact on the number of likes a post received, but they did not find evidence that videos influenced the number of comments (Sabate et al., 2014). The study found that links have a negative effect on comments and there was no significant relationship between links and the number of likes. Inconsistent with the previously mentioned studies on interactivity and vividness, Luarn et al., (2015) found that users were more likely to like, comment on, and share posts that had a medium level of vividness compared to a high level. The authors also found that posts with a high level of interactivity (questions and quizzes) were more likely to be liked, commented on, and shared which did not match the results from previous studies (De Vries et al., 2012). Lei et al., (2017) found that the use of images and videos leads to higher engagement of all types which corresponds to previous studies. Regarding interactivity, this study specifically looked at posts that used the phrases "call to win" or "call to act" and found that they both significantly increase engagement levels. Posts that merely posed a question without an incentive attached did not result in a significant relationship between the post and engagement levels which partially supports the findings from De Vries et al (2012).

Other studies which look at the effect of visual elements on engagement take a more semiotic approach. A 2018 experimental study specifically looked at a digital image's ability to "attract, involve and engage with the viewer" (Valentini et al., 2018, p. 365). The study used the

interpersonal and compositional meta functions which represent the relationship between the image and the viewer (Kress and Van Leeuwen, 1996, as cited in, Valentini et al., 2018, p. 364). The interpersonal function is expressed as how those represented within the image engage with viewers. According to Jewitt and Oyama, "the contact created by a direct gaze is considered as a key factor to enacting social interactions, as it establishes a first direct contact with viewers" (2001, as cited in, Valentini et al., 2018, p. 365). The compositional function shows how it is possible to distinguish which of the elements in an image's composition are more "salient" or prominent. There are a number of characteristics that make elements stand out, therefore making it more salient to the viewer (e.g., size, color contrast, and position within the image) (Kress and Van Leeuwen, 1996; Jewitt and Oyama, 2001, as cited in, Valentini et al., 2018, p. 365). The authors (Valentini, Romantic, Murtarelli, and Pizzetti) examine the position of the viewer in relation to the gaze of the person/animal in the image (Valentini et al., 2018, p. 366). A 2 (gaze: direct or indirect) x2 (product salience: high or low) experiment revealed that purchase intention was higher when the product was in the foreground and the subject showed a direct gaze. When the product was in the background, the photo with the indirect gaze was "more effective in stimulating intention to purchase" (Valentini et al., 2018, p. 371). These results indicate that direct gaze and high product salience have a significant positive effect on digital visual engagement. This study coincides with preliminary findings about the power that images with human faces have on influencing social media engagement (Valentini et al., 2018, p. 371).

A 2012 study has investigated how the structural properties of an Instagram photo can affect processing fluency. *Processing fluency* is defined as "the ease with which information flows through the cognitive system" (Reber, 2012, p. 225). Using the structural properties of symmetry and contrast in Instagram photos, the experiment found that symmetrical photos

(vertical or horizontal symmetry) with high contrast, improved processing fluency and the number of likes. High contrast vertical images also showed a higher number of likes than those with low contrast. The study did reveal that image contrast has a more significant positive effect on engagement (liking and commenting) than either type of symmetry (Reber, 2012).

Based on the summarized literature, it is clear that vividness and interactivity both have significant effects on the engagement levels of social media content. Media richness also showed a strong relationship with engagement. Since Instagram is focused mainly on the media content and there is no option for a text-only post, it would not be a matter of if the media affects engagement but what other elements increase or decrease its effect. The studies that focus on the structural elements of photography (contrast, symmetry, gaze, and salience) also provided compelling results. It may be of interest to identify additional elements that could be tested and analyzed in similar ways on Instagram.

Text Content's Effect on Social Media Engagement

Previous research that has studied consumer engagement on social media posts have done so under many different approaches. The text content of social media posts is almost always evaluated using content analysis. The posts are classified using a variety of systems and typologies such as uses and gratifications theory, content categories, message appeals, and message strategies. Uses and gratifications theory is one of the most widely used classifications for content analysis of social media posts. Uses and gratifications theory categorizes each message appeal as being rational (processed intellectually) or emotional (targets emotional characteristics) (Laskey *et al.*, 1989, as cited in, Dolan et al., 2019, p. 2217). Rational message

appeals can be further categorized as informational or remunerative, and emotional appeals as entertaining or relational (Dolan, 2019, p. 2218).

De Vries et al., (2012) investigated the data of 11 international brands on Facebook ranging from food to cosmetics but found no significant relationship between the level of engagement and its classification as informative or entertaining. However, Cvijikj & Michahelles (2013), found that entertaining content had a significant positive effect on the number of likes, comments, and shares, which is consistent with an early study by Park et al., (2009). Cvijikj & Michahelles found that entertaining content also had the most significant effect compared to content classified as informative or remunerative (2013). The study also showed that informative content had a positive effect on likes and comments, but not shares. Remunerative content was found to have a significant negative impact on likes which was not expected. In 2015, a study on top brand Facebook pages such as Dove, Adidas, Nissan, and Starbucks revealed that viewers were more likely to like brand posts related to remuneration than those related to information or entertainment (Luarn et al., 2015). This directly opposes results found by Cvijikj & Michahelles. Luarn et al., found that social and entertaining posts resulted in a higher number of comments than informative and remunerative posts (2015). Entertaining and informative content also showed a significantly higher rate of sharing than remuneration and social posts, which partially contrasts the results found by Cvijikj & Michahelles regarding information posts (Luarn et al., 2015). Sigurdsson et al., (2020) found that within the aviation industry, social posts positively impacted the number of likes, shares, and reactions while promotional posts are negatively related to the number of comments and reactions. Even though the above-mentioned studies referenced uses and gratifications theory, each study did not explicitly use all of the categories

(informational, remunerative, entertaining, and relational). Using all of the classifications would have provided a more detailed picture of the relationships that were present.

Another form of categorization is content categories. This approach categorizes the social media posts in a number of different ways based on the main theme present. Ashley and Tuten (2015) initially used the categories of message strategies, sales promotions, or user generated content to classify the content from 28 top brands from Facebook, Twitter, MySpace, along with other blogs, video sharing platforms and microsites. The most used message strategy (used by 25 out of the 28 brands) was *functional appeal* which describes the utility or functionality of the product/service (p. 21). *Resonance* was the second most used strategy (19 out of 25) which was defined as "an echoing between the image and words (e.g., buried treasure)" (Ashley and Tuten, 2015, p. 21). This study did not measure specific engagement metrics, but instead, overall indicators such as total followers. Brands that tweeted the most in a one-week period had the highest following. Brands that offered incentives for followers to post user-generated content had more Twitter and Facebook followers. A 2017 study on apparel and food retailing did not reveal any significant positive relationships between content category and the number of likes (Schultz). Posts that were classified with the categories charity, competition, and human resources had negative impacts on the level of engagement (Schultz, 2017). In 2018, a study was completed that investigated the message strategies that Florists use on Facebook (Li-Chun Huang & Li-Chun Chen). Li-Chun Huang & Li-Chun Chen did find that post content had a significant effect on the level of engagement from users which is consistent with findings from other studies (Cvijikj and Michahelles, 2013; Luarn et al., 2015). The most liked posts were from the categories: sales promotion, brand event, sharing feelings, business information, and holiday greetings. For comments the top categories were brand event, business information, and sales

promotion. Sharing was most popular with posts from the categories charity event, business information, sharing feelings, and holiday greetings. Even among the most popular categories there were some differences in engagement levels. For example, holiday greetings typically encouraged likes but not comments or shares. Product information posts encouraged all three types of engagement. Tafesse and Wien (2018) collected brand posts from 20 top brands on Facebook. The results indicated that message strategy had a significant effect on engagement levels. Posts that used transformational messages (emotional, brand resonance, social causes) had a higher level of engagement than those that used informational messages (functional or educational). Transformational posts also had higher engagement than interactional content (current event posts, personal posts, brand community posts). Transformational message strategies proved to be the most effective driver of engagement as an individual strategy or paired with another. Thongmak's study on Facebook brand communities included brands from industries such as fast-moving consumer goods, food, electronics and financial (2019). The results showed a positive relationship between both price, promotional, and entertaining posts, and the number of comments. Emotional posts also had a significant positive relationship with the number of shares (Thongmak, 2019). These results do challenge some past research. De Vries et al., (2012) did not find that informative or entertaining posts had a significant effect on engagement levels. This study is consistent with other studies that found that entertaining content had a significant positive effect on engagement (Cvijikj & Michahelles, 2013; Luarn et al., 2015) as well as how emotional content can be a driver for engagement (Tafesse and Wien, 2018).

Overall, most of the studies found evidence that post content type does have a significant effect on engagement levels. A number of patterns and similarities have shown up throughout the research on this topic. Due to the wide variety of industries analyzed there could be a number of

reasons why these studies did not produce the same results. While the variety of research does make it difficult to compare the findings, each study brings evidence to refine the pattern of effects. One issue with some of these studies is that the resources that were included to describe how the posts were coded were too vague to be conducive for other researchers replicating the studies. Also, in many of the studies, it was not specifically mentioned if the classification of the post was based on the image, the caption text, or both which may be of interest for future studies.

Summary

The above literature review provided an initial understanding of the complexity of consumer engagement on social media. Overall, the literature review does support the goals of this research project to gain a better understanding of how content type influences consumer engagement behavior for handmade goods. The studies which evaluated the visual elements or media of the post provided insight on how microbusiness owners may be able to pinpoint specific tactics they can use to create more engaging content that fits their brand. The research which examined the structural properties of a photo (contrast, symmetry, gaze, and salience) appear to have provided the most concrete results on what does or does not affect engagement. The effect of interactivity on engagement was particularly relevant and might be something to consider adapting to fit Instagram as it is a very interactive platform. Based on the available literature content type does have a significant impact on the levels of engagement, but the results can vary from depending on the industry.

Although this is a fairly new research area there is still a considerable amount of literature. Each study taking a new approach adds to the body of literature and supports future research. While this study uses relevant findings and theories from research on consumer

behavior and psychology of advertising, (such as uses and gratifications theory) the scope and resources for this project do not allow for or require a deep examination of the extensive research on these topics. I classified each research article as either visual or text which are the two main factors that affect engagement.

Chapter 3: Research Design and Methodology

For this research project, I completed a directed content analysis study (Hsieh & Shannon, 2005, p. 1281), by collecting and analyzing a sample of Instagram posts taken from 10 Canadian businesses to identify and explore how they use various photographic elements and message strategies to communicate their products to their followers. The purpose of this study is to expand the existing body of literature on social media engagement with a specific focus on Canadian small businesses which is a gap in the current research. The content analysis of the Instagram posts is in three phases. The first phase will focus on the social media metrics such as the number of likes and comments for each post, and the day and time of the post. The second phase will focus on the images of the Instagram posts, and the third phase will focus on the message strategy/theme of the posts. This research project utilized qualitative and quantitative content analysis to answer the following research question:

What types of content are Canadian businesses sharing on Instagram and how effective are they at capturing engagement?

Qualitative and Quantitative Content Analysis

Content analysis is the "systematic, objective, quantitative analysis of message characteristics" (Neuendorf, 2017). This type of research method provides a "flexible method for analyzing text data (Cavanagh, 1997, as cited in, Hsieh and Shannon, 2005, p. 1277). Content analysis is not limited to text data, visual content can also be analyzed. *Visual content analysis* is a "systematic, observational method used for testing hypotheses about the ways in which the media represent people, events, situations, and so on" (Bell, 2004, p. 8). Overall, content analysis

is an effective method for analyzing Instagram content as it is naturally occurring without the manipulation of variables in an experimental setting (Neuendorf, 2017).

My research question looks to explore and analyze possible relationships between qualitative and quantitative features present in Instagram posts. The qualitative features are the message strategies present in the caption. The message strategies represent qualitative data since the unit of analysis may be written words. This data will be turned into quantitative data during the process of coding. The quantitative data include the visual characteristics that are present in the Instagram photos as well as the number of likes and comments each post received as well as the day and time of the post. Each type of data on its own is important and valuable, but by taking all of the data together I will be able to gain a more well-rounded understanding of the topic.

Both the photos and captions will be coded on the presence of themes which will be determined by the presence of manifest content such as particular words, or latent content which implies an overall meaning or representation of a theme (Merrigan et al., 2012). The photos will be coded using the semiotic dimensions of representation, interaction, composition, and modality as seen in Table 1 (Kress & Van Leeuwen, 2006). The message strategy shown in the posts will be coded using a pre-existing framework based on uses and gratifications theory as presented by Dolan et al., 2019, as seen in Table 1.

Table 1: *Semiotic Dimensions*

Dimension	Focus	Variables
Representation	Who or what is being represented	- who/what - activities - movement - clothing - content - background
Modality	Credibility of a subject through a lens	- color saturation - color differentiation - color modulation - contextualization - representation of detail - depth - illumination - brightness
Interaction	Interaction between the viewer and the image	- interaction - gaze - power relations - social distance
Composition	The arrangement of elements that result in different meanings	- text - lines - shapes - textures - patterns - colors -objects

Sample Criteria

The content analysis will be directed in the sense that the sample will be chosen based on specific criteria. The criteria are as follows:

A. Located in Canada

B. Makes handmade products

C. Between 1500-2000 followers

D. Focuses on one type of product

This criterion has been set for a number of reasons. I specifically wanted to expand the existing literature on micro-small businesses in Canada, so the first two criteria are essential. I chose to select only businesses that create handmade products as I am passionate about this sector. I personally operate a business where I create handmade products, so it is of particular interest to me to research other similar businesses. This specific requirement means that many microbusinesses in Canada will not be represented in this study including those in the industries of service, construction, transportation, finance, etc. The third eligibility criteria I included was that each included Instagram account should have between 1500 to 2000 followers. This is important because the number of followers an Instagram account has is an indicator of the time and effort spent to maintain it. Having a minimum follower count of 1500 means that the chosen businesses will be of a similar standard and are more likely to be considered a micro-business (1-4 employees). This benchmark also means that thousands of microbusinesses will not even be considered.

Population Selection

A number of search requests were made on Instagram utilizing functions like search and hashtags to find businesses in Canada. Once they passed the initial criteria (Canadian, handmade products, and between 1500-2000 followers) they were added to a Google Sheet which was sectioned into categories of products. I wanted to have only one business from each category for the study so that it covers a wide range of businesses.

Methodology

Phase 1 - Social Metrics

The metrics that are available to view on Instagram are currently the most tactile representation of engagement that we have access to. Instagram provides a variety of metrics that business owners can use to gauge how successful their posts are, but for the public, we can only see the number of likes and comments. While these are helpful, Instagram as an application is controlled by various algorithms which can skew the results. “To some extent, counts reflect opaque algorithmic decision making as much as they reflect expressions of interest” (Baym, 2013, 5.2.1. Skew section). According to Gillespie et al., algorithms are made to seem “hands-off”, they are supposed to be objective formulas within the applications themselves that provide relevant and credible results based on the users’ input (2014, p. 179). It is important to understand that there is a direct relationship between users and the algorithms and to understand it “not as a one-directional influence, but as a recursive loop between the calculations of the algorithm and the ‘calculations’ of people” (Gillespie et al., 2014, p. 183, para. 2).

Since the Instagram feed is currently not shown in chronological order, there is some debate on whether the day of the week and time of day an Instagram post was made makes a difference on engagement levels. As of December 2021, there is reason to believe that users may have the ability to view their feed chronologically again soon (Instagram Comms, 2021). Dolan et al., indicated that previous studies have shown that there are significant differences in the number of likes throughout the week, but the number of comments stayed stable (2017, p. 10). The engagement was also found to be lower in the morning and early afternoon compared to the evening and nighttime (Golder et al., 2007, as cited in, Dolan et al., 2017, p. 10). These variables

along with the corresponding engagement levels for the data set are important to collect and analyze. Small business owners have the opportunity to pre-schedule their social media content which not only saves them time but also allows them to maximize the chance that their content will be seen and interacted with during peak times.

Phase 2 - Visual

Photos are the foundation of Instagram. Instagram launched in 2010 and quickly grew in popularity. The mobile app provided users with the ability to take images, edit and post them directly from within the application. A typical Instagram feed around this time would have been filled with spontaneous images edited with heavy filters. It was normal to see candid selfies and quick snaps of Sunday brunch. Today, most Instagram feeds are extremely calculated and planned out. For businesses especially, creating a strategy and planning the content they want to post is not uncommon. As the saying goes, “a picture is worth a thousand words”, and an Instagram photo of a business’ product can communicate a lot, very quickly. Whether we realize it or not, every image we see showing a business’s product is telling us a story. Semiotics is the communication and interpretation of meaning through visual signs and symbols. According to Kress & Van Leeuwen, there are four semiotic dimensions (representation, interaction, composition, and modality).

Representation is “the ability of semiotic systems to represent objects and their relations in a world outside the representational system or in the semiotic systems of a culture” (Kress & van Leeuwen, 2006, p. 42). Representation is the examination of who or what is represented in the image and includes activities, movement, clothing, content, background, etc., (Durrani, 2021).

Interaction is “the ability of semiotic systems to represent objects and their relations in a world outside the representational system or in the semiotic systems of a culture” (Kress & van Leeuwen, 2006, p. 42). Interaction includes methods such as gaze (direct or indirect), which “conveys a sense of interaction between the depicted person and the viewer” (Kress & van Leeuwen, 2006, p. 43) supported by the study by Valentini et al., (2018). Durrani notes that this can be achieved using different techniques and visual cues like power relations (“conveyed with the help of camera angles—high, low, or equal angle”) and the distance at which the image was taken, or “social distance” (2021, p. 138).

Composition is “the ability of semiotic systems to represent objects and their relations in a world outside the representational system or in the semiotic systems of a culture” (Kress & van Leeuwen, 2006, p. 43). Composition is the varying arrangements of the elements that result in different meanings. Elements can include text, lines, shapes, textures, patterns, colors, objects, etc. Elements coded in this category include symmetry, information value, product salience, and framing. Kostyk & Huhmann studied the effects of symmetry and found that those with high contrast and either vertical or horizontal symmetry had a higher chance of being *liked* on Instagram (2021). Information value pertains to where high importance elements are placed in an image and what that placement means (p. 180). The study by Valentini et al., (2018) also supported this by investigating product salience, where some images showed the product in the foreground and others in the background. Framing is described as “devices which connect or disconnect elements of the composition” (Kress & Van Leeuwen, 2006, p. 176).

Kress & Van Leeuwen describe information values as either left and right, top and bottom or center and margin. The authors depict a two-page women’s weekly magazine spread,

the content on the left side of the page is said to be “given” (something the audience already knows or a familiar concept in society), and the content on the right side of the page is “new” or the message or current issue at hand (2006, p. 180). Media that uses this left or right information value is utilizing the vertical axis, by presenting one piece of information on the left the creator is presenting it as if it already has value or importance to the reader. Whether or not the information resonates with the viewer, they must read it within that left/right structure either way. The information value of top and bottom is described as the “ideal and real”. As you can see in Figure 1 (see Appendix), the top portion represents the “promise of the product” or “what might be”, and the lower portion tells the reader factual information (Kress & Van Leeuwen, 2006, p. 186). Within the concept of center/margin information value, items placed in the center are presented as “the nucleus”, to which all other surrounding elements are dependent (Kress & Van Leeuwen, 2006, p. 196). A visual representation of the information values can be seen in Figure 2.

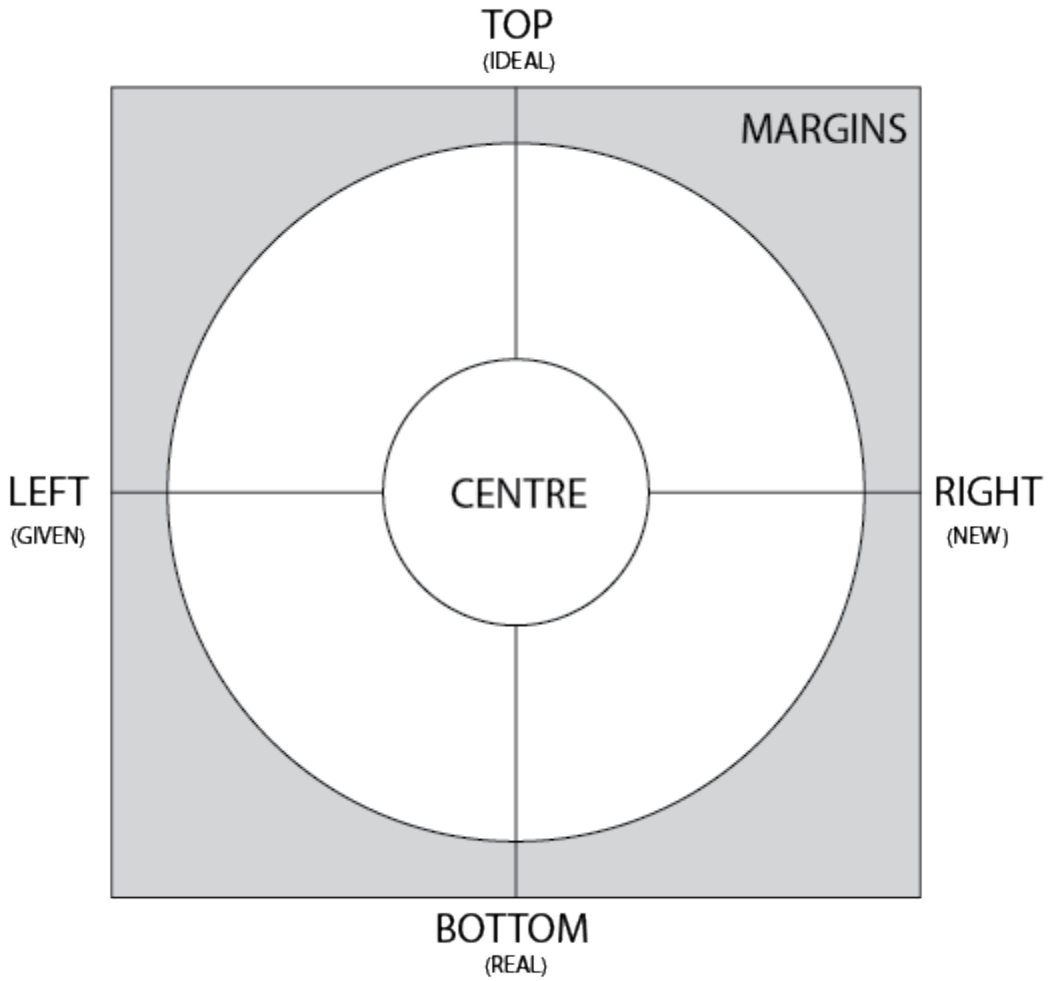


Figure 2: *Dimensions of Visual Space*
Note. Adapted from *Reading Images : The Grammar of Visual Design.* (2nd ed., p. 197), by G. Kress., & T. Van Leeuwen, 2006, Routledge. Copyright © 1996, 2006, Gunther Kress and Theo van Leeuwen

Modality is the truth or credibility of a subject through a social semiotic lens of a particular construct (Kress & van Leeuwen, 2006, p. 154). The chosen construct is "naturalism" as defined by Kress and van Leeuwen (p. 158). Kress and Van Leeuwen discuss how one of the "crucial issues in communication is the question of the reliability of messages" which is especially important on social media platforms such as Instagram (2006, p. 154). They describe the "modality markers" which are various scales used as markers of an image's representation of

reality. The authors detail eight markers including color saturation, color differentiation, color modulation, contextualization, representation, depth, illumination, and brightness (Kress & van Leeuwen, 2006, p. 160). The authors note that the modality markers are used under a naturalistic coding orientation, as opposed to other orientations such as the technological or sensory coding orientation which evaluate an image's effectiveness scientifically or emotionally rather than if it represents reality.

I will be using the eight modality markers, each on a scale of one to five. Kress and van Leeuwen describe how to determine if a photo is "natural" or not by observing the photo and determining if what is represented could be observed in reality by the human eye, they note that the benchmark for comparison is what a standard 35mm camera would capture. In this case, the point of highest modality on each scale is at three and any movement to the left or right results in lower modality.

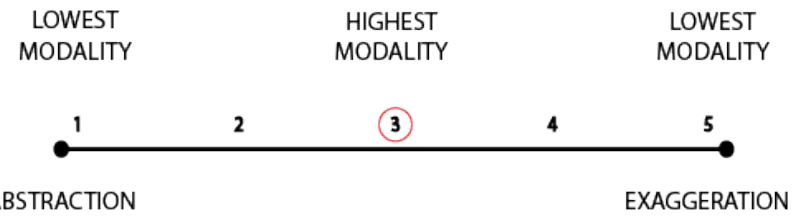


Figure 3: *Modality Scale*
Note. Adapted from *Reading Images : The Grammar of Visual Design.* (2nd ed.), by G. Kress., & T. Van Leeuwen, 2006, Routledge. Copyright © 1996, 2006, Gunther Kress and Theo van Leeuwen

Phase 3 - Caption Message Strategy

The theoretical framework that guided the analysis during phase three was uses and gratifications theory by Elihu Katz and David Foulkes (1962). The theory presents the idea that people use media to satisfy their own needs. At the time of Katz and Foulkes study, most research was asking the question "What do the media do to people?" but Katz and Foulkes flipped the question to "What do people do with the media?" (Elihu Katz & David Foulkes, 1962, p. 379). This introduced the concept that people are more than just bystanders of mass media but are active participants. The authors discussed a number of situations in which society uses mass media to fulfill their own needs (such as using television as an escape) (p. 379).

Uses and gratifications theory explains how "different people can use the same mass medium for very different purposes (Severin and Tankard, 1997, as cited in, Ko et al., 2005, p. 58). Katz and Foulkes initially identified escapism as one of the main motivational factors that push users to seek out types of media to satisfy those intrinsic needs (1962). Since uses and gratifications theory is an "axiomatic theory" its principles can be applied to a number of different situations (Lin 199a, as cited in, Ko et al., 2005, p. 58). Based on many prior frameworks, Ko et al. created a measurement model for interactive advertising on the internet. This model featured four motivational categories: information, convenience, entertainment, and social interaction (2005).

Over the years, many categories of uses and gratifications have been created in order to fit the varying needs of new research studies based on a wide range of media types, and genres (Muntinga et al., 2011). Muntinga et al., discussed the popular categorization by McQuail (1983) along with two additional categories that have emerged from social media motivation literature.

The categories are entertainment, integration and social interaction, personal identity/information motivations, and remuneration and empowerment.

The classification framework being used for this study was adapted by Dolan et al., (2019) and is based on the theoretical foundation of uses and gratifications theory as well as a number of other studies (Cvijikj and Michahelles, 2013; De Vries *et al.*, 2012; Lee *et al.*, 2013, Ashley and Tuten, 2015; Tafesse & Wien, 2017) and includes the categories: informational, remunerative, entertaining, and relational. These are further categorized into being either a rational (informational and remunerative) or emotional message strategy (entertaining or relational).

Rational appeals typically include elements such as product information, features, performance specs, etc. This type of information appeals to customers who are guided by logic, information, and facts (Schiffman and Kanuk, 2004, as cited in, Dolan et al., 2019, p. 2219). Emotional message appeals are tailored towards the psychological and social needs of the consumer (Ashley and Tuten, 2015, as cited in, Dolan et al., 2019, p. 2220). Examples of emotional message appeals include those that discuss brand personality, community, emotions, holidays, humorous content, etc. Many studies have explored the factors that influence the effectiveness of rational versus emotional message appeals. In general, messages containing rational appeals require the viewer to use the central processing path as described by the elaboration likelihood model and emotional message appeals allow the viewer to use the peripheral processing path (Petty et al., 1983).

The classification framework in Table 2 (Dolan et al., 2019, p. 2218) will be used to code the message strategies used in the Instagram posts. There is also a coding dictionary from this

study which can be used as a reference (see Appendix 1). The sub-categories will be changed and adapted to fit my sample if needed.

Table 2: *Social Media Content Categories*

Message appeal	Variable	Definition	Sub-categories
Rational	Informational content	Informational content represents the extent to which the social media content provides users with resourceful and helpful information	Brand name, general information, product image, vineyard image, winery image, price, website address or link, venue image, product review image, product award image, tasting and sampling, product variety, product region/origin, product, product making and/or processing, vineyard, opening hours, year made, contact details, brand fact or news, service, wine show awards and reviews, information about an event, product description
	Remunerative content	Remunerative content refers to the extent to which the social media content provides monetary or incentive rewards	Deal or offer, purchase instructions, competition image, sales or promotion image, competition
Emotional	Entertaining content	Entertaining content refers to the extent to which social media content is fun and entertaining to media users	Food or recipes, food with product image, emoticon, weather, humor, fun fact or historic image, scenic image, occasion image, celebrity, meme image, animal image, animal, slang
	Relational Content	Relational content refers to the extent to which the social media content meets the consumer's need for integration and social interaction and desire for social benefits	Questions, thanking fans, quiz or game, holiday or event occasions, affection, ask for action, child or baby image, inspirational or motivational quote, customer image, employee image, community involvement image, friends and fans, family, employee name, emotions including happy, caring, depression, inadequateness, fear, confusion, hurt, anger, loneliness and remorse

Note. Adapted from "Social media engagement behavior: A framework for engaging customers through social media content," by R. Dolan., J. Conduit., C. Frethey-Bentham., J. Fahy., S. Goodman, 2019, *European Journal of Marketing, 53*(10), p. 2218 (http://dx.doi.org/10.1108/EJM-03-2017-0182). Copyright © 2019, Emerald Publishing Limited

Data Collection

After finalizing the sample population, I identified the Instagram post published nearest to the date of December 20th, 2021, for each business. This post was used as the starting point for data collection. Utilizing Microsoft Excel, I input the business name, the number of followers the account had at the time of collection, a code to identify each photo, the number of likes and comments for each photo, the date, day of the week, and time the photo was posted to Instagram based on the time zone of the business and the photo's caption into the Excel sheet.

Data Set Description

As seen in Table 4, the data set consists of 100 posts from 10 Canadian businesses. 10 posts were captured from each business beginning on December 20th, 2021 (or the closest day) and moving backwards. Each business actively and regularly posted on Instagram, had a public account, and mainly focused on one type of product.

Table 4: *Business Overview*

	Category	# of Followers	Location
Business 1	Pottery	1656	Ontario
Business 2	Pet Accessories	1924	Quebec
Business 3	Candles	1542	British Columbia
Business 4	Apparel	1887	Alberta
Business 5	Stationery	1996	Alberta
Business 6	Art	1631	Ontario
Business 7	Stained Glass	1558	Ontario
Business 8	Wood Signs/Home Décor	1680	Alberta
Business 9	Knit Hats/Accessories	1595	Manitoba
Business 10	Jewelry	1521	New Brunswick

Coding

Phase 1: Initial Data Collection

This phase was completed first as it served as the initial step of data collection. I set up Excel so that each phase was in a separate tab but used formulas to carry over information from the initial data collection into the remaining two tabs. The information that was carried over included the business name, the sample photo number, the number of likes, and the number of comments. This made it easier to compare the efficiency of various themes and messages within each phase. The first phase of this project did not require any coding as I simply had to input the data into their corresponding columns on Excel.

Phase 2: Coding Images

Each of the semiotic dimensions (representation, interaction, composition, and modality) and their subcategories were input into Excel across columns at the top of the page. The business names, photo reference numbers ,and engagement metrics were automatically populated from the Excel tab used in Phase 1. I created a codebook with definitions of the various types of answers for each column and gave each a number (Table 5). Going from left to right, I picked a column and then coded each image by row. For example, I started with the subcategory “their product” and looked at each of the 100 images and either coded a 1 if the image showed the business’s product or a 0 if it did not. By coding column by column, it was easier to stay concentrated on the variable at hand and provide more consistent results.

The second phase included the categories representation, activity, movement, digital text, and product arrangement. A detailed view of the categories and their subcategories can be found in Table 5. The category of modality has 8 variables and was the most difficult to code. This coding scheme is based on the scales used by Kress & Van Leeuwen, (2006). The authors provided minimal examples of the scales in use, so I designed a set of scales with visual examples and referred back to this during the coding process (Figure 4, Table 5 - see Appendix). The color saturation scale runs from the absence of color to full color saturation, color differentiation runs from monochrome to a maximally diversified range of colors, color modulation from plain color to fully modulated, contextualization from the absence of a background to a fully articulated and detailed background, representation of detail runs from maximum abstraction to maximum pictorial detail, depth runs from the absence of depth to exaggerated depth (such as fisheye), illumination runs from an absence of the play of light and shade to an exaggerated presence, and the brightness scale runs from minimal difference between the lightest/darkest areas to an image with high contrast. Since the modality section was coded using the naturalistic coding orientation as defined by Kress & Van Leeuwen, many of these variables were not applicable to digitally created images. These images received a code of 0 to represent not applicable. Other images which presented difficulty were those that were a collage of multiple separate images and those that featured both a traditional photograph and digital elements like a text overlay. For certain categories such as information value, each image may have one or more elements that are placed in different areas of the image making it difficult to choose which was the most important.

Phase 3: Coding Captions

The business information, photo reference number, captions, and engagement metrics for each post were automatically populated from the Excel tab used in Phase 1. Across the top of the sheet, the columns were divided into the four categories of the uses and gratifications theory message strategies (rational or emotional) and their subcategories (informational, remunerative, entertaining, emotional). Based on the codebook from Dolan et al., (2019), I input any relevant coding variables under the appropriate subcategories, for example, under "informational" I used the same variables of "brand name", "price", "contact details", etc. The 2019 study by Dolan et al., was in reference to vineyards, so there were some categories that were not relevant to my study. I also coded the captions column by column, reading each coding variable and scanning each caption to see if it was present. New coding elements were added as needed to the relevant subcategories, throughout this phase.

The framework from Dolan et al., (2019) acted as the foundation for the third coding phase and categories were adjusted as needed to fit the study purposes. For example, I added to the variable of "website" to include the mention of the words "website, shop, store, Etsy, and Shopify" in the post caption as well as if the business typed out their website link in the caption. The category "product name" was only marked as present if the product's actual name was used such as "Christmas Village Bowtie" or "The Cranberry Tart" not just the word "bowtie" or "candle" which would be considered under the variable "product mention". For variables like "product variety", the presence of this variable depended on the caption including factors such as mentioning multiple products, different styles, patterns, shapes, scents, etc. Any mention of a product included product features such as "double layer beanie", "crackling wood wick", "pink

glaze", and "ultra soft, distressed vintage print". Any insinuation of limited availability or phrases such as "a few left", "last one", "a couple in the shop", and "limited edition" were coded under limited availability/quantity. Examples of calls to action include questions, stating that the link is in their bio to their shop/product, asking followers to sign up for a newsletter, asking to tag the business in photos or share a review, giveaway instructions, etc. Mentions of a holiday included words like "gift", "holiday shopping", "Christmas", "elves", etc. I not only read through the captions to scan for the presence of each variable, but also used the "control find" function on Excel to search for specific words.

Methods of Analysis

I utilized the data analysis features on Microsoft Excel. Since the data in my Excel sheets were converted to corresponding numbers, the analysis features on Excel provide many options. PivotTables were used to compare two or more columns to each other. These comparisons were primarily engagement versus a specific variable. I also used the data analysis features to populate figures to demonstrate the percentage of the sample which used each visual variable or message strategy to provide summaries. The correlation function was used to investigate the possibility of a statistically significant relationship between engagement and the mentioned variables.

Ethical Considerations

This study is free of concerns regarding privacy and permissions, as all the images were obtained from publicly viewable social media accounts. The nature of a content analysis means that the data will be aggregated, and the individual businesses will not be identifiable.

Chapter 4: Findings and Discussion

Findings

The findings of this study are presented in three parts that coincide with the phases of the data collection and coding process (Phase 1: Social Metrics, Phase 2: Visual Themes, Phase 3: Message Strategies). The tables and figures below show overviews of relevant information, comparisons of averages of engagement to specific variables (e.g., time, day of week, caption length, etc.), as well as visual representations of the percentage of the sample that used each type of visual element or message strategy (e.g., human models, nature, symmetrical images, digital graphics, product framing, etc.). The correlations were calculated from the coding spreadsheet and are used to reflect each variable and its possible relationship to engagement. While the results are limited due to the small sample of 100 posts, they do help demonstrate where patterns and relationships are already present.

Phase 1: Social Metrics

The findings from phase one cover data such as follower count, published day and times of the posts, caption length, and engagement levels in the form of likes and comments. Tables and figures were used to summarize this data and to represent interesting patterns that were presented. Calculations were made between each of the major categories and engagement to show any correlations.

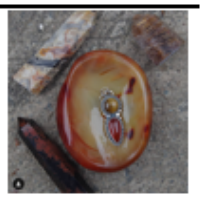
Table 6: *Engagement Levels by Business*

Column1	Category	# of Followers	Average % of Followers Engaging		Overall Engagement	Average		Highest		Lowest	
			Likes	Comments	likes + comments	Likes	Comments	Likes	Comments	Likes	Comments
Business 1	Pottery	1656	3.00%	0.21%	3.21%	50	4	75	14	23	0
Business 2	Pet Accessories	1924	3.72%	0.63%	4.35%	72	12	128	79	53	2
Business 3	Candles	1542	2.31%	0.15%	2.46%	36	2	58	5	20	0
Business 4	Apparel	1887	1.77%	0.12%	1.89%	33	2	79	8	9	0
Business 5	Stationery	1996	2.85%	0.07%	2.92%	57	1	94	3	32	0
Business 6	Art	1631	2.61%	0.25%	2.86%	43	4	86	12	24	0
Business 7	Stained Glass	1558	2.77%	0.38%	3.15%	43	6	69	15	26	2
Business 8	Wood Signs/Home Décor	1680	1.37%	0.15%	1.52%	23	3	37	4	12	0
Business 9	Knit Hats/Accessories	1595	1.34%	0.09%	1.43%	21	1	33	5	16	0
Business 10	Jewelry	1521	11.07%	0.59%	11.65%	168	9	487	23	57	0
AVERAGE			3.28%	0.26%	3.54%	49	3	124	11	17	0

Table 7: *Correlation of Social Media Metrics*

	Likes	Comments
Caption Length	0.33	0.24
Follower Count	-0.10	0.01
Day of Week	0.06	0.08
Time	0.07	0.04

Table 8: *Top Posts by Likes*

Photo					
Business	10	10	10	10	10
# Likes	487	274	201	197	146
Photo					
Business	2	10	5	6	5
# Likes	128	121	94	86	85

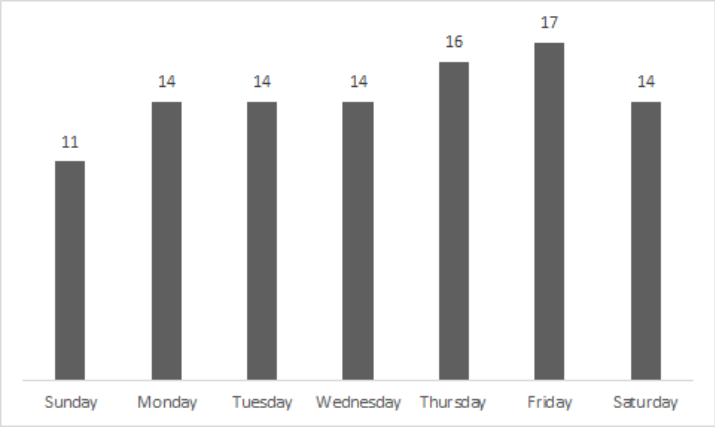


Figure 5: *Posts by Day of the Week*

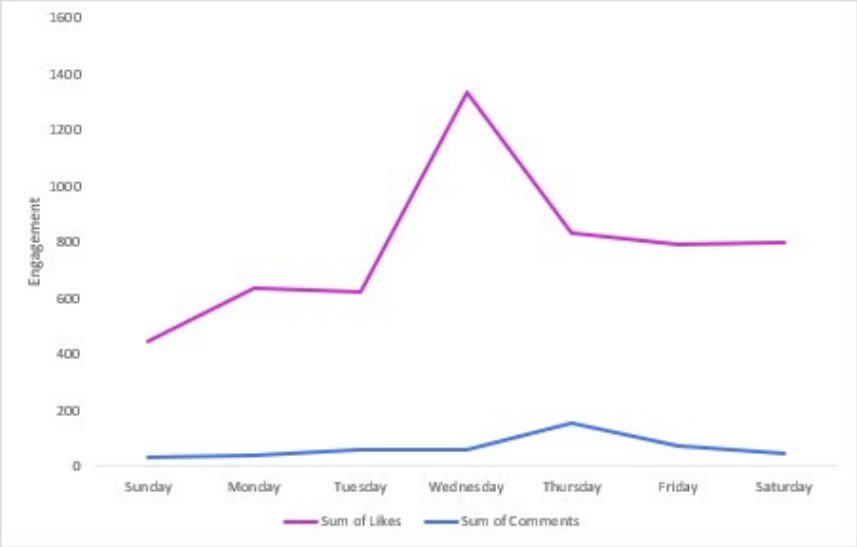


Figure 6: *Engagement by Day of the Week*

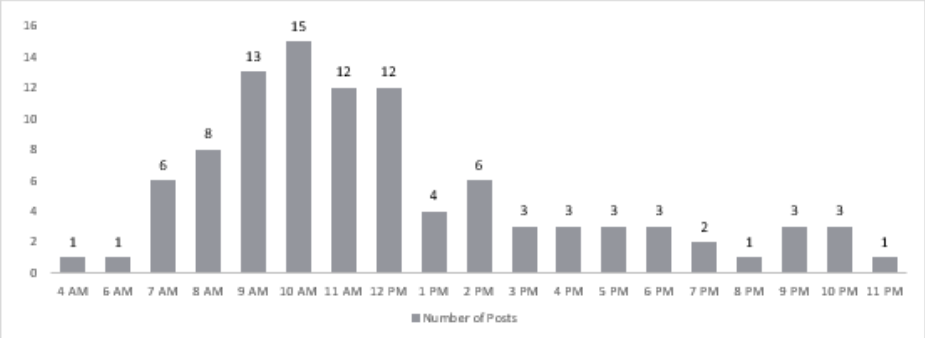


Figure 7: *Time of Posts*

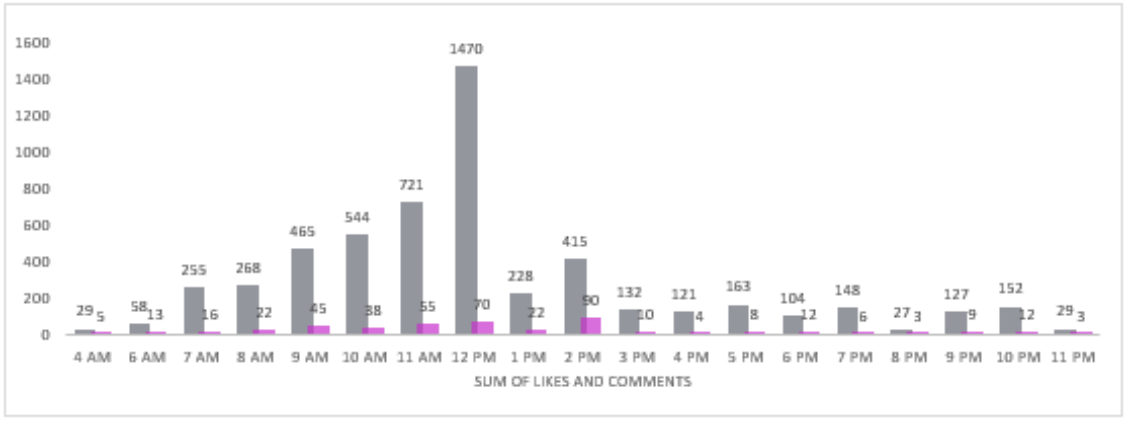


Figure 8: *Number of Likes per Post by Time*

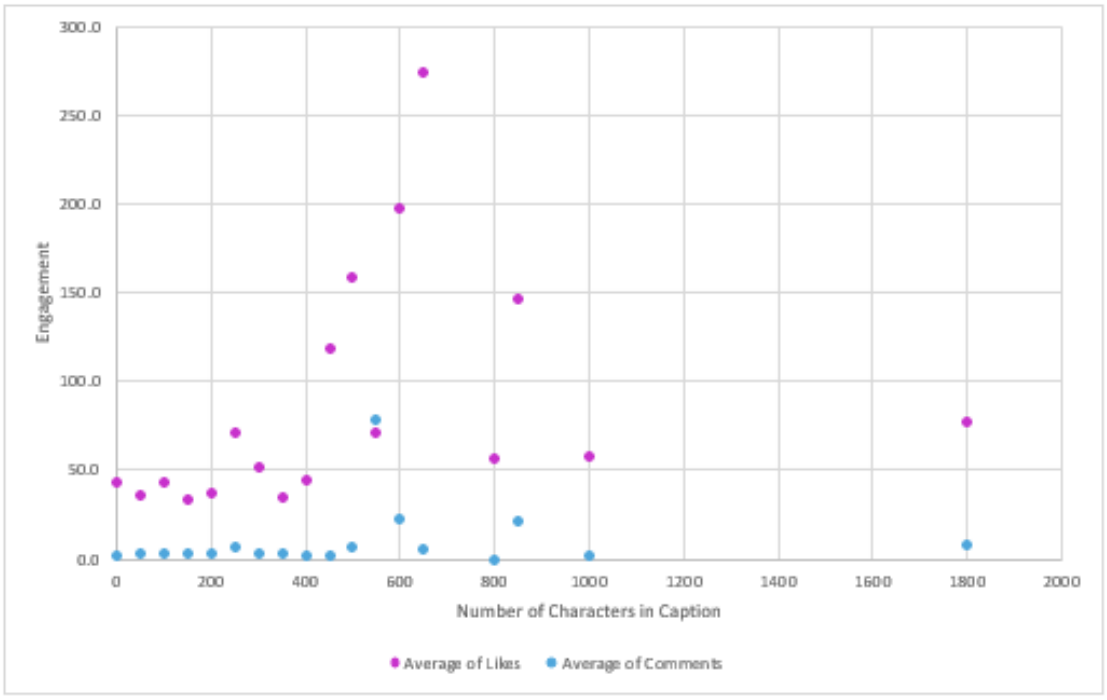


Figure 9: *Caption Length and Engagement*

Phase 2: Visual Themes

The findings in phase two cover the semiotic dimensions of representation, interaction, composition, and modality. Average engagement metrics are used to show patterns with various visual elements, and counts reveal the number of posts in the sample that were observed to demonstrate top visual elements. Correlations between each of the semiotic dimensions and engagement metrics are included to convey possible relationships and patterns.

Table 10: *Representation, Interaction and Composition Correlation*

	Likes	Comments		Likes	Comments
Representation			**Interaction**		
Who/What			Gaze		
Their Product	0.09	-0.16	N/A	0.00	0.05
Person/Model	0.05	-0.08	Direct	-0.01	-0.02
Animal/Model	0.09	0.01	Indirect	0.00	-0.05
Photography Props	0.11	-0.06	Power Relations		
Other Business' Product	-0.07	-0.02	N/A	-0.08	0.22
Nature	0.30	0.13	Low	0.06	0.03
Personal photo/Other	-0.03	-0.06	Equal	0.14	-0.04
Making Of (product/design/packaging)	-0.04	-0.05	High	-0.08	-0.11
Pet	0.03	-0.06	Multiple	-0.08	-0.06
Digital Graphic	-0.13	0.20	Social Distance		
Event Announcement	-0.09	-0.07	N/A	-0.06	0.25
Sale/Promotion	0.00	0.62	Close Up	-0.12	-0.07
Info about Product	-0.06	-0.05	Middle	0.25	0.00
Owner/Employee	-0.06	-0.04	Long	-0.11	-0.12
Customer Quote/Review	0.00	-0.03	Multiple	-0.08	-0.06
Activity			**Composition**		
Staged photo	0.17	-0.09	Symmetry		
Flat Lay (photo taken from above)	0.00	0.02	N/A	0.03	0.05
Solid Background	-0.08	-0.07	Horizontal	0.00	0.00
Candid	0.17	-0.09	Vertical	-0.04	-0.06
Upload/Scan	-0.03	0.34	Diagonal	0.02	0.02
Stock Photo	-0.06	-0.02	Information Value		
Movement			N/A	-0.08	0.18
Still	0.08	0.06	Left/Right	-0.05	-0.04
Movement	-0.09	-0.08	Top/Bottom	-0.05	-0.04
Product Arrangement			Centre/Margin	0.23	0.01
N/A	-0.12	0.12	Multiple	-0.17	-0.09
Solo	0.02	-0.08	Product Salience		
Pair	0.20	0.09	N/A	-0.08	0.16
Group	-0.07	-0.07	Low	-0.10	-0.08
Digital Text			Moderate	-0.06	-0.08
Yes	-0.14	0.19	High	0.15	-0.06
No	0.14	-0.19	Product Framing		
			N/A	-0.12	0.12
			Low	-0.08	-0.09
			Moderate	0.10	-0.06
			High	0.07	-0.01

Table 11: *Representation, Interaction and Composition Count and Engagement Comparison*

	%	Average Likes	Average Comments
Representation			
Who/What			
Their Product	86%	56.6	3.9
Person/Model	8%	66.3	2.0
Animal/Model	8%	73.7	4.7
Photography Props	35%	63.1	3.7
Digital Graphic	10%	31.3	9.5
Other Business' Product	3%	30.3	3.3
Nature	8%	114.1	8.1
Making of Product (design/in	2%	37.5	1.5
Personal Photo/Other	5%	45.6	2.2
Pet	2%	68.0	1.0
Event Announcement	5%	31.8	1.8
Sale/Promotion	2%	54.0	42.0
Info about Product	1%	20.0	0.0
Customer Quote/Review	4%	55.3	3.3
Owner/Employee	1%	17.0	1.0
Activities			
Staged Photo	45%	64.9	3.8
Flat Lay (from above)	18%	51.8	4.5
Candid	19%	41.4	2.2
Upload/Scan	9%	45.8	13.0
Solid Background	7%	48.6	3.9
Stock Photo	2%	31.5	3.0
Movement			
No	93%	55.5	4.5
Yes	7%	42.3	3.0
Product Arrangement			
N/A	17%	39.1	6.7
Solo	51%	55.9	3.7
Pair	11%	88.5	6.5
Group	21%	46.1	3.2
Digital Text			
Yes	11%	31.6	9.1
No	89%	57.4	3.9

	%	Average Likes	Average Comments
Interaction			
Gaze			
N/A	87%	63.9	14.0
Direct	7%	53.3	4.0
Indirect	6%	55.0	3.0
Power Relations			
N/A	8%	47.9	14.3
Low	4%	73.0	5.8
Equal	34%	64.0	3.6
High	53%	49.0	3.4
Multiple	1%	17.0	0.0
Social Distance			
N/A	5%	42.0	21.8
Close Up	52%	49.0	3.9
Middle	35%	70.0	4.1
Long	8%	35.0	1.4
Multiple	1%	17.0	0.0
Composition			
Symmetry			
N/A	90%	54.5	4.6
Horizontal			
Vertical	9%	54.2	2.7
Diagonal	1%	66.0	6.0
Information Value			
Left/Right	16%	45.3	3.4
Top/Bottom	10%	40.5	1.8
Centre/Margin	66%	62.0	5.3
Multiple	8%	29.6	3.0
Product Salience			
N/A	12%	44.9	9.0
Low	6%	29.5	1.7
Mid	5%	44.8	1.6
High	77%	58.6	4.1
Product Framing			
N/A	10%	45.2	9.8
Low	11%	40.4	2.6
Mid	11%	68.7	2.5
High	68%	55.9	4.2

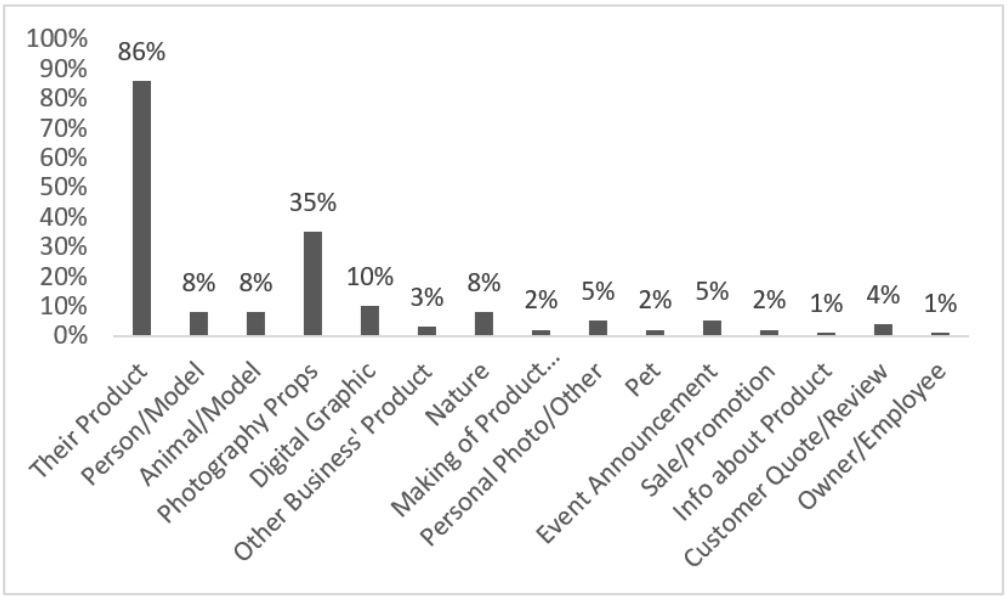


Figure 10: *Use of Representation (Who/What)*

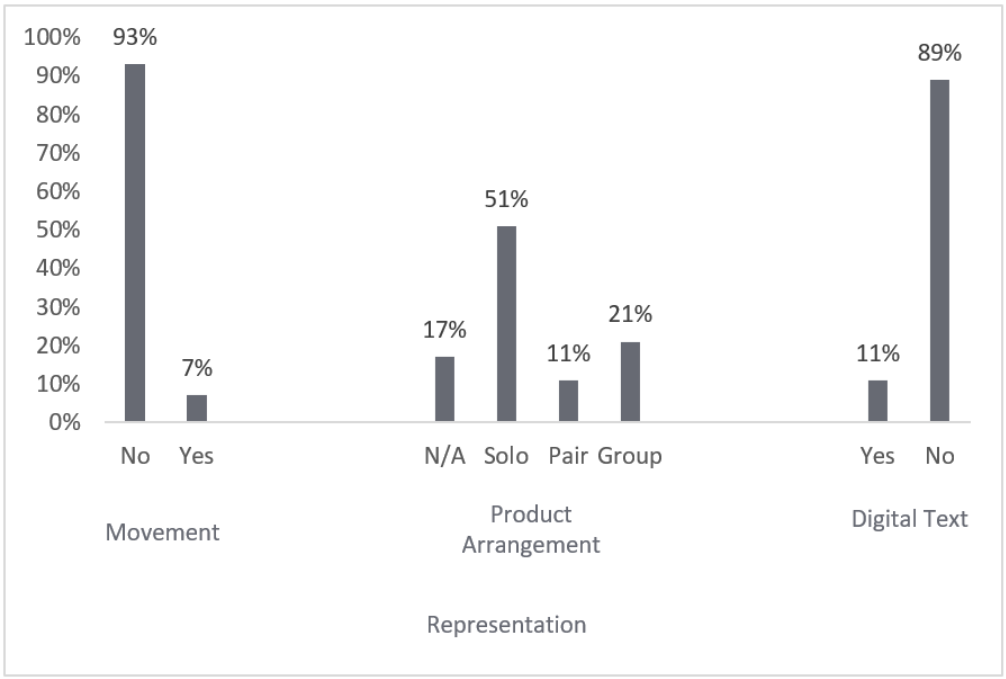


Figure 11: *Representation by Use*

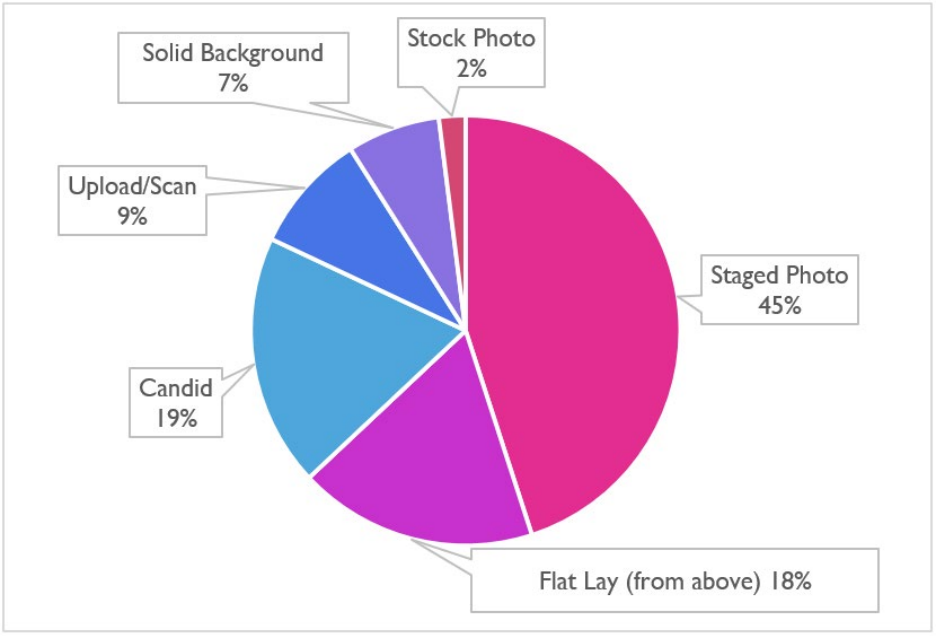


Figure 12: *Representation (Activity) by Use*

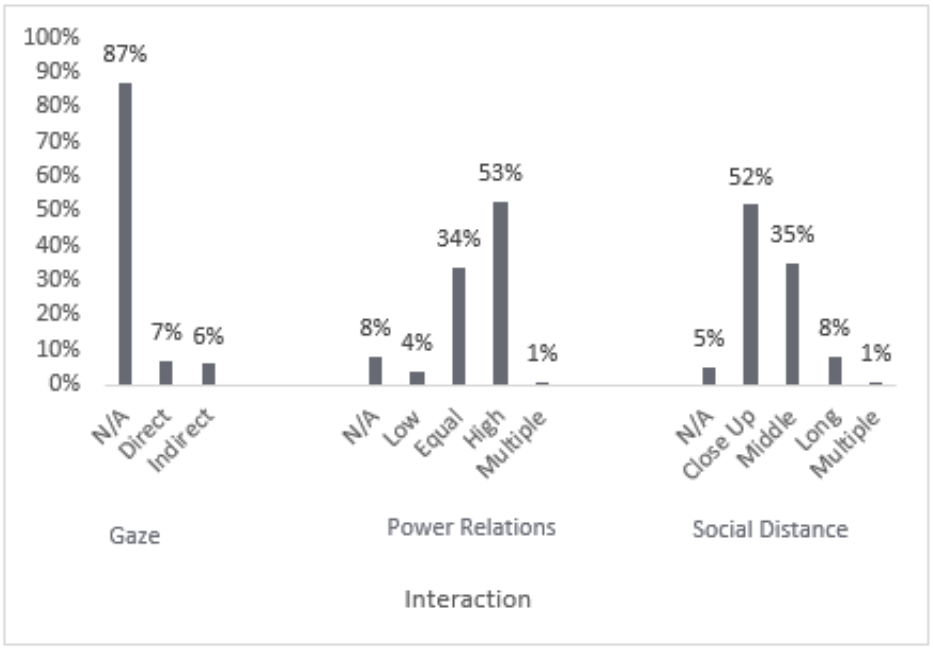


Figure 13: *Interaction by Use*

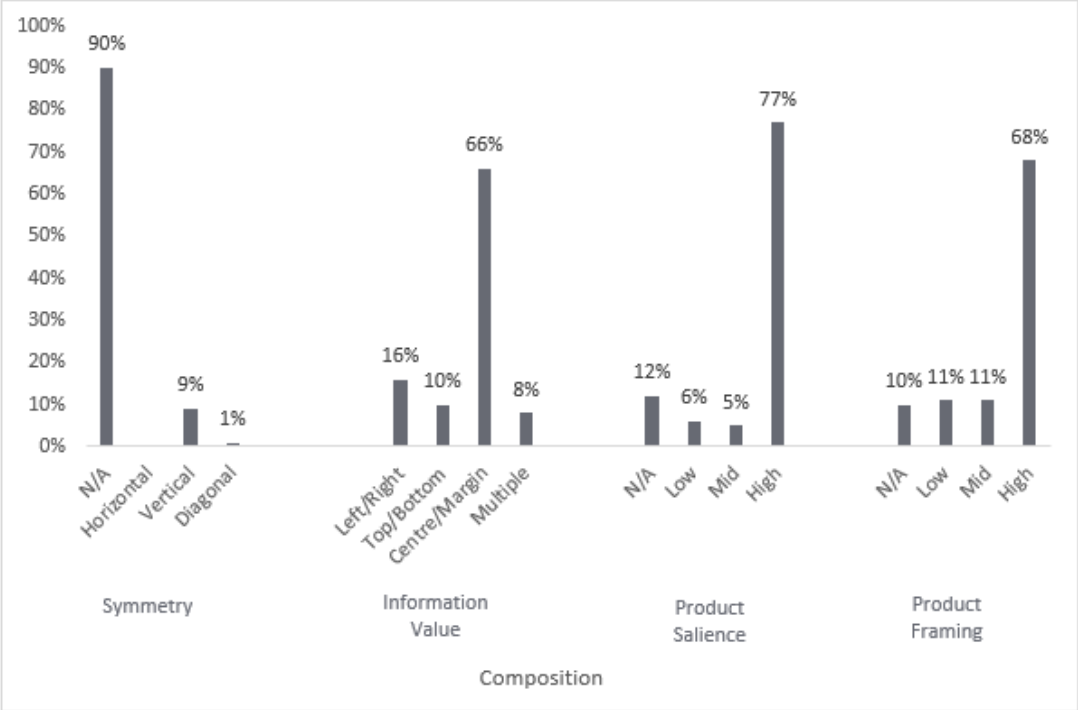


Figure 14: *Composition by Use*

Table 12: *Number of Posts at Each Modality Level*

	N/A	1	2	3	4	5
Color Saturation	0	0	6	64	23	7
Color Differentiation	0	0	8	86	4	2
Color Modulation	0	19	10	58	13	0
Contextualization	8	11	33	47	1	0
Representation	8	1	17	66	9	0
Depth	12	28	18	42	0	0
Illumination	8	6	15	64	7	0
Brightness	8	1	16	49	23	3

Table 13: *Modality Levels and Engagement*

Color Saturation	0	1	2	3	4	5
#			6	64	23	7
Avg Likes			48	58	51	39
Avg Comments			3	5	4	4

Color Differentiation	0	1	2	3	4	5
#			8	86	4	2
Avg Likes			41	56	46	63
Avg Comments			12	4	5	8

Color Modulation	0	1	2	3	4	5
#		19	10	58	13	
Avg Likes		41	41	64	45	
Avg Comments		7	3	4	5	

Contextualization	0	1	2	3	4	5
#	8	11	33	47	1	
Avg Likes	48	79	57	47	121	
Avg Comments	14	4	4	3	2	

Representation	0	1	2	3	4	5
#	8	1	17	65	9	
Avg Likes	48	29	52	43	154	
Avg Comments	14	5	3	3	8	

Depth	0	1	2	3	4	5
#	12	28	18	42		
Avg Likes	43	55	90	42		
Avg Comments	10	4	5	3		

Illumination	0	1	2	3	4	5
#	8	6	15	64	7	
Avg Likes	48	31	71	57	27	
Avg Comments	14	5	3	4	3	

Brightness	0	1	2	3	4	5
#	8	1	16	49	23	3
Avg Likes	48	24	96	45	54	24
Avg Comments	14	0	5	3	5	3

Table 14: *Modality Correlation*

	Likes	Comments		Likes	Comments
Color Saturation			Representation of Detail		
1	0.00	0.00	1	-0.04	0.01
2	-0.03	-0.03	2	-0.02	-0.06
3	0.08	-0.03	3	-0.28	-0.22
4	-0.03	-0.03	4	0.53	0.11
5	-0.07	-0.03	5	0.00	0.00
			N/A	-0.03	0.34
Color Differentiation			Depth		
1	0.00	0.00	1	0.01	0.00
2	-0.07	0.27	2	0.28	0.04
3	0.06	-0.24	3	-0.18	-0.18
4	-0.03	0.01	4	0.00	0.00
5	0.02	0.05	5	0.00	0.00
			N/A	-0.07	0.22
Color Modulation			Illumination		
1	-0.11	0.12	1	-0.10	0.00
2	-0.08	-0.05	2	0.12	-0.09
3	0.18	-0.08	3	0.05	-0.09
4	-0.06	0.02	4	-0.13	-0.06
5	0.00	0.00	5	0.00	0.00
			N/A	-0.03	0.34
Contextualization			Brightness		
1	0.14	-0.04	1	-0.05	-0.05
2	0.03	-0.04	2	0.31	0.01
3	-0.13	-0.12	3	-0.16	-0.19
4	0.11	-0.03	4	-0.01	0.02
5	0.00	0.00	5	-0.09	-0.04
N/A	-0.03	0.34	N/A	-0.03	0.34

Phase 3: Message Strategy

The findings included in phase three represent the categories of rational or emotional message strategies and their subcategories: informational, remunerative, entertaining, and relational. The counts of observed message strategy use provide the opportunity to generalize about the types of content used most and least often. Usage of each message strategy is also compared to engagement levels and correlations show the degree to which each strategy has a positive or negative relationship to engagement.

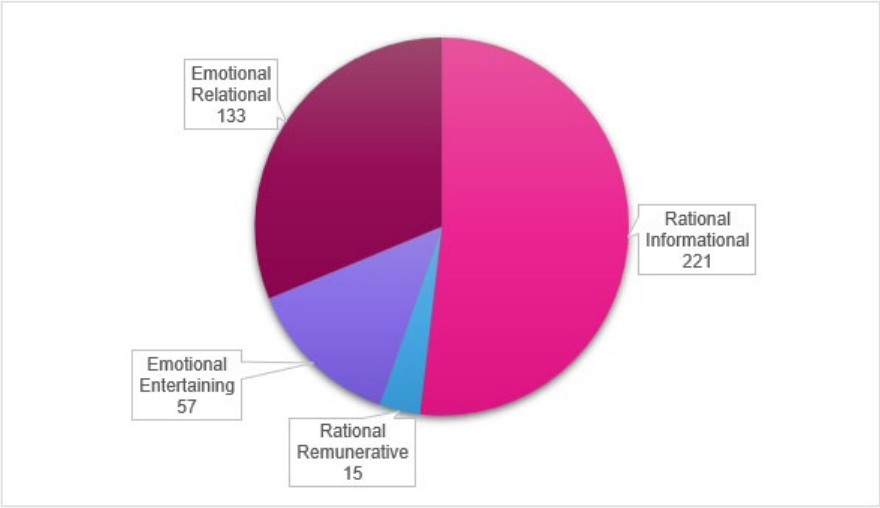


Figure 15: *Count of Message Strategy Use (by Category)*

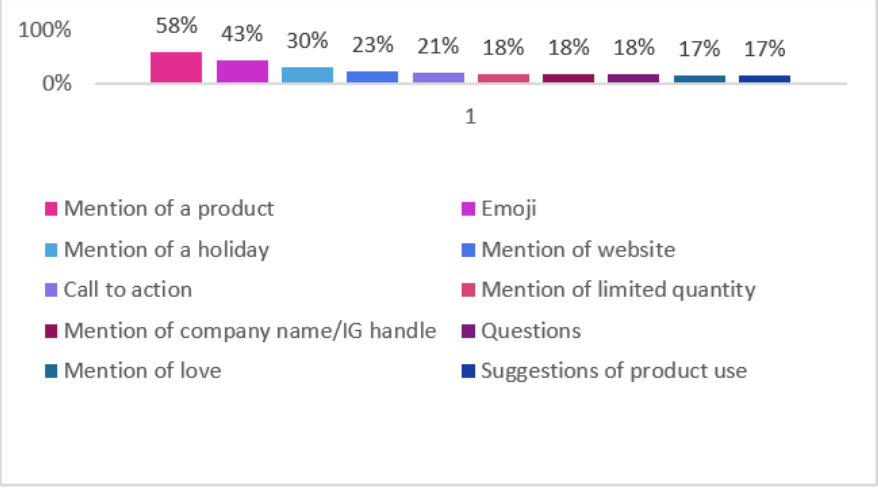


Figure 16: *Top Used Message Strategies*

Table 15: *Message Strategy Correlation*[1]

	Likes	Comments		Likes	Comments
Rational			**Emotional**		
Informational			Entertaining		
Mention Company Name or @ tag	-0.01	0.22	Emoji	-0.11	0.11
Mention "link in bio"	-0.05	-0.07	Humor	0.05	0.02
Mention "website" "shop" etc,.	0.13	0.02	Use of a Hashtag as part of Description	-0.09	-0.04
Product Name(s)	-0.02	-0.05	Relational		
Price	-0.01	-0.02	About the Owner/Personal	0.04	0.00
Suggestion on Product Use	-0.05	0.00	Motivational/Inspirational	0.04	0.04
Mention event information	0.03	0.00	Community Involvement	-0.03	0.01
Contact Info	-0.04	-0.04	Question	-0.01	-0.02
Product Review /Customer Photo	0.00	-0.03	Call to Action	0.11	0.14
Product Variety	0.01	-0.01	Holiday/Event/Day	-0.11	-0.13
Product Dimensions	0.15	-0.05	Happy	-0.04	-0.08
Any Mention of a Product	-0.04	-0.02	Excitement	0.15	0.00
Mention "handmade"	0.01	0.00	Thankful	0.02	0.29
Making of Product	0.18	0.07	Love	0.39	0.19
Shipping Info	-0.06	-0.05	Grateful	0.02	-0.02
Limited Quantity/Availability	0.09	0.02	Caring	0.64	0.17
Remunerative			Skepticism	-0.01	-0.04
Sale/Offer	0.36	0.09			
Giveaway/Contest	0.53	0.46			

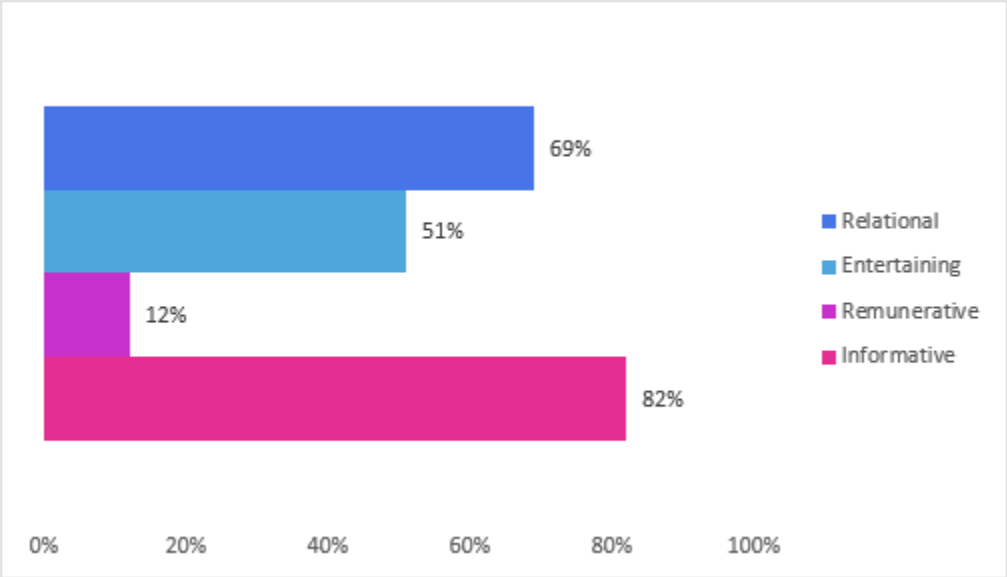


Figure 18: *Percentage of Posts which used each Message Strategy*

[1] *Note:* Only variables that were observed in the sample are included in this table.

Table 16: *Message Strategy Use and Engagement Comparison*

	%	Average Likes	Average Comments
Rational			
Informative			
Mention company name or @ tag	18%	53.44	8.44
Mention "link in bio"	8%	44.88	2.38
Mention Website	23%	68.17	4.74
Product Name(s)	14%	51.71	3.36
Price	2%	50.00	3.00
Product Use/Reason to Purchase	17%	47.76	4.47
Mention Event Information	13%	59.46	4.46
Where to buy (Stockist/retailer)	2%	57.00	4.00
Contact Info	3%	41.67	2.67
Product Review/ Customer Photo	5%	58.00	9.00
Product Variety	13%	56.08	4.23
Product Dimensions	6%	89.00	2.67
Mention of a Product	58%	52.64	4.31
Mention "handmade"	4%	58.50	4.25
Making of (Design/Inspiration/Packaging, etc)	10%	86.30	6.30
Info About Shipping	10%	44.30	3.20
Reference to Limited Quantity	18%	64.50	4.61
Remunerative			
Sale/Offer	8%	125.38	7.13
Giveaway/Contest	5%	191.00	21.80
Emotional			
Entertaining			
Emoji	43%	47.09	5.53
Humor	7%	64.86	5.00
Intentional use of Hashtag	7%	34.71	3.29
Relational			
About the Owner/Personal Info/Story	16%	60.25	4.44
Motivational/Inspirational Message	1%	77.00	8.00
Community Involvement	1%	35.00	5.00
Question	18%	53.39	4.00
Call to Action	21%	67.33	6.71
Holiday/Event/Day	30%	44.33	2.67
Happy	4%	42.50	1.25
Excitement	5%	93.40	4.40
Thankful	7%	57.86	13.43
Love	17%	104.82	8.06
Grateful	2%	61.00	3.00
Caring	10%	168.30	8.90
Skepticism	1%	49.00	1.00

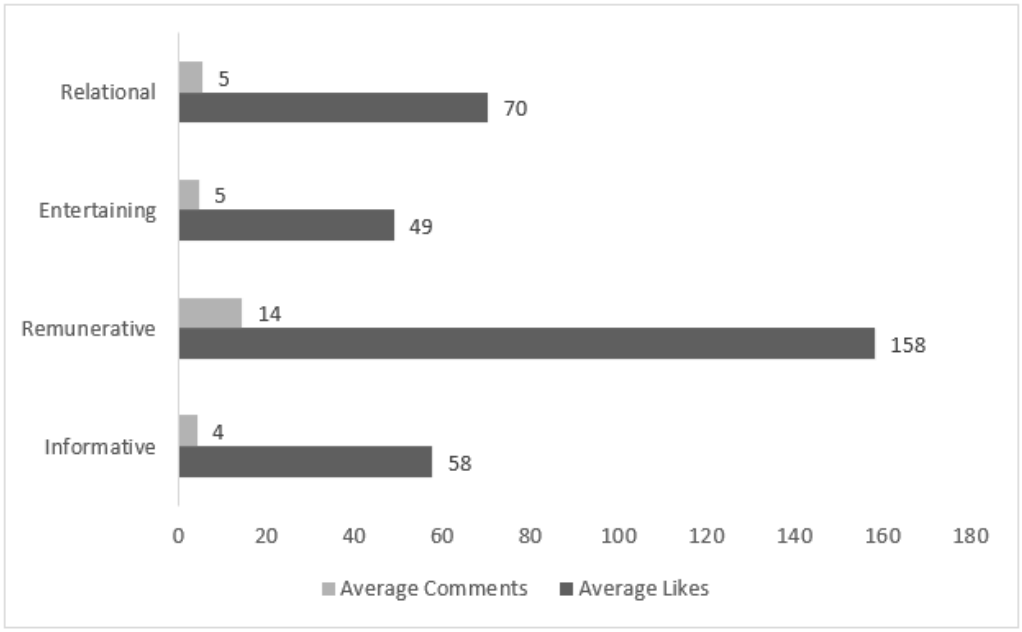


Figure 19: *Average Engagement by Message Strategy Category*

Results and Comparison

The section below points out relevant quantitative results such as average engagement, percentage of the sample that utilized each variable, and correlations which tell the statistical significance of the relationship between two variables. Comparisons are also made between my findings and prior research mentioned in Chapter 2 when there are overlapping results of interest.

Phase 1: Social Metrics

As seen in Table 6, business 10 had the highest average engagement overall at 11.65%, even though it had the least number of followers. The second-highest average engagement came from business 2 (pet accessories) at 4.35%. The business with the most followers (business 5 - stationery) had a below-average engagement at only 2.92%. Business 9 (knit accessories) had the lowest overall engagement at 1.43%.

Table 8 shows the 10 photos with the top likes. Out of the top 10 most liked images, the top 5 were from the jewelry business. This business did have the fewest followers at only 1521 which supports the findings that follower count and number of likes had a weak negative relationship. In comparison, the business with the most followers was the stationery business with 1996 followers. This business also had mostly product focused images, but they only saw engagement from 2.92% of their audience (Table 6). Interestingly, there was a weak negative correlation found between follower count and number of likes (Table 7). The top 10 commented on posts can be seen in Table 9 (see Appendix).

The posts were fairly distributed across each day of the week as seen in Figure 5. Thursday and Friday were the most popular days to post, reaching 16 and 17 posts over the collection period. While the most posts were published on Fridays, the posts made on Wednesdays received the most likes (1335), and posts on Thursdays received the most comments (152) (Figure 6). The least amount of likes and comments both occurred on Sunday. The slight peak in likes on Wednesdays fits the results of prior research by Dolan et al. (2017). Previous studies have found that peak activity from users is between Monday to Friday (Golder et al., 2007, as cited in, Dolan et al., 2017, p. 10), compared to my results found in Figure 6. Interestingly, I found that the most posts were made on Fridays and the least were posted on Sundays, whereas Dolan et al., found that Thursdays had the most activity and Saturdays the least (2017, p.10).

Figure 7 shows the range of posting times over the collection period, contrary to previous studies, my analysis showed that engagement was higher between 7 AM and 2 PM and dropped significantly after this time. Per my data set, only 24% of the 100 posts were posted outside of 7 AM to 2 PM. The authors noted that the reasoning behind this is due to the fact that social media

users had been found to engage less during the morning and early afternoon compared to the evening (Golder et al., 2007, as cited in Dolan et al., 2017, p. 10). Since the Instagram feed no longer shows the user content chronologically this could explain the difference in engagement levels in my data set as users are not necessarily seeing content that has been recently posted.

10-11 AM was the most popular posting time with 15 posts being published during that time over the study period. Overall posts made between 9AM-1 PM received the highest number of likes. The highest comments were for posts at 2 PM and the most concentrated engagement for all posts was between 7 AM and 2 PM (Figure 8). There were no significant correlations between the day or time of posts and the amount of engagement received (Table 7). Out of curiosity, I calculated the correlation between the length of the caption and engagement, and it showed a weak positive relationship for comments and a moderate positive relationship for likes (Table 7).

Phase 2: Visual Themes

The top representation variables that occurred the most included showing the business' own product, photography props, making of product/design/packaging/shipping, and digital graphic/element (Figure 10). Most of the categories under representation did not have a statistically significant relationship to likes or comments (Table 10). Nature showed a moderate positive relationship with the number of likes, and posts about sales/promotions had a moderate positive correlation to the number of comments. Staged photos, photos with a solid background and flat lay photos taken from above the product were the most popular style of photo posted (Figure 12), there was a moderate positive relationship between direct upload images and the number of comments which is likely due to a digitally designed photo which was a giveaway

announcement which required comments to enter. A weak positive relationship was found between both staged photos and products shown in pairs with the number of likes the image received (Table 10).

The subcategories of interaction are represented in Figure 13. Considering only 18% of the sample featured a person or animal, the results for gaze are very low. 6% of posts featured direct eye contact, and 7% featured in-direct eye contact. Gaze was the least used visual variable, only six photos had direct eye contact whether it was a person or animal. Photos taken from an equal height as the subject showed a positive weak correlation to the number of likes. Photos which utilized close up or long-range photography had very weak negative correlations to the number of likes, compared to photos taken from a moderate distance which had a weak positive relationship to the number of likes (Table 10).

Figure 14 shows that the majority of the sample featured high product salience (77%) and each photo received an average of 58.6 likes (Table 11). Similarly, 68% of posts showed high product framing and received an average of 55.9 likes. Images with the information value residing in the center area had a weak positive correlation to likes (Table 10). Images which utilized many information value areas in one photo showed a weak negative correlation to likes. There is some evidence of weak positive correlations to high product salience and moderate product framing to likes (Table 10) which matches the results from the 2018 study from Valentini et al.

As seen in Table 12, all but three categories (contextualization, depth, and brightness) resulted in the majority of the sample scoring at a 3 (highest modality) on their individual scales. 9 out of the 100 posts in the sample received an 8/8 on modality, meaning those images were the

truest representations of what the eye would see. I did not find a significant relationship between the image's overall representation of reality (modality score) and likes.

Level four of representation of detail showed a moderate positive relationship with the number of likes (Table 14). These images showed more detail than would normally be seen, meaning the images were sharp, the backgrounds were in focus to a greater degree. Level two of depth showed a weak positive relationship to the number of likes. These are images taken from directly in front of the subject, not at an angle (see Table 5 in the Appendix for examples). On the brightness scale (contrast), photos at a level two also had a weak positive relationship to likes (Table 14). Photos coded as a two for brightness were slightly less bright than what they eye would see or had a sort of hazy look. This directly opposes the results from Reber (2012) which found that images with high contrast had a more positive effect on engagement.

Phase 3: Message Strategy

Figure 15 shows an overview of which message strategy categories were used in the sample. Each post used an average of 4 strategies, 2 businesses did not use any of the coded message strategies. The most frequently used message strategies can be seen in Figure 16, along with the least used strategies in Figure 17 (see Appendix).

Captions which discussed love and caring showed moderate positive correlations with both likes and comments, and those which discussed being thankful showed a moderate positive relationship with comments (Table 15). The informational categories *mention of website, product dimensions,* and *product making/design* showed weak positive relationships to number of likes, while the category *mention company name* showed a weak positive relationship with comments (Table 15).

Figure 18 shows the total percentage of posts that used one of the message strategies at least once. 82% of posts used 1 or more informational message strategies and the most used strategy was any mention of a product including its features, color, shape, material, etc., with 58% of the sample using this tactic and 23% of posts mentioned the business' website or other online platforms. Only 12% of posts used a remunerative tactic (mentioning a sale or giveaway). These findings are consistent with the 2017 study from Dolan et al., (p. 11).

De Vries et al., did not find any significant relationship between message strategy category and engagement levels (2012), yet Cvijikj & Michahelles (2013) and Park et al., (2009) both found that entertaining content had a significant positive effect on engagement levels which was not found in my sample. Contrary to Cvijikj & Michahelles (2013), my data showed a moderate positive relationship between remunerative content (sales and giveaways) and likes, and specifically between giveaways and comments (Table 15). Posts mentioning sales, promotions and giveaways received the highest engagement on average (Table 16).

Research Limitations and Future Research

There are a few limitations that require explanation. As this research was conducted as part of my capstone project, for completion of the Master of Arts in Communication and Technology program at the University of Alberta, it was limited to only my input. While I worked as objectively as possible, I was the only coder of the engagement metrics, images, and text; so, there is a potential for bias without confirming intercoder reliability. It was important to me to be as systematic as possible in the coding process which is why I chose to use the preexisting classification framework from Dolan et al., (2019) for the coding of the message strategies as it is based on previous research. It is important to note that the findings are unique

to this content and the results are reflective of myself as the sole coder. By choosing a predetermined framework for the coding in phase two, creating a descriptive matrix for the codes used and including those in my paper for reference, it is my intention that I am upholding reliability and replicability standards and that this could be recreated in the future according to Neuendorf (2017).

I only used publicly available engagement metrics for the number of likes and comments, but future research could request access to the full engagement insights from each business to gain a better understanding. For the scope of this assignment, I did not collect or analyze the individual comments or hashtags for each Instagram post which may provide useful information. If there were multiple images (a carousel post), only the first image was considered. This study also did not include videos. The images could also be coded using the sensory coding orientation as defined by Kress and Van Leeuwen which can be useful for advertisements since they tend to use sensory or emotional strategies. In the future, if this study were to be recreated, I would recommend only select posts that include the business' own product and that are photographs. Digitally created images could be analyzed by altering the method I used.

Summary of Key Findings

- Business 10 (jewelry) received the highest average likes per post (168) and also received the highest sum of likes (1683)
- Business 2 (pet accessories) received the highest average comments (12) and sum of comments (122)
- The business which had the most popular posts had the fewest followers overall
- Thursday and Fridays were the most popular days for a business to post on
- Engagement by likes peaked on Wednesdays
- Engagement by comments peaked on Thursdays
- The majority of posts fell on level 3 of the modality scales
- 82% of posts utilized informational message strategies
- 12% of posts utilized remunerative message strategies
- Captions mentioning giveaways received the highest number of likes and comments
- Captions with relational information received higher engagement than the remaining categories (informational and entertaining)

Summary of Correlations

- No statistically significant relationship between the industry and the engagement levels
- Posts with captions between ~400-600 characters received the most likes (115)
- Moderate positive relationship between caption length and number of likes and comments received (+0.33) and (+0.24)

- Few weak positive relationships were found with images that showed nature (+0.30), staged photos (+0.17), products shown in pairs (+0.20), photos taken from an equal angle (+0.14), and photos taken from a moderate distance (+0.25) with the number of likes received
- Photos with a center information value (+0.23), high product salience (+0.15) and moderate product framing (+0.10) also showed low positive correlations to the number of likes received
- The modality variables representation of detail *(*level four) depth *(*level two), and brightness (level two) all had weak positive correlations to the number of likes an image received (+0.28 - 0.53)
- Captions which discussed information such as websites, product dimensions, and info about how the product is made or designed showed a positive correlation to likes (+0.13 - 0.18)
- Captions mentioning sales had a positive relationship with likes (+0.36)
- Captions mentioning giveaways or contests showed a positive correlation to likes (+0.53) and comments (+0.46)
- Captions that discussed emotions such as love, caring, and being thankful resulted in positive correlations to engagement (+0.39 - 0.64)

Discussion

The previous discussion presented the results of statistical analysis in the form of quantitative summaries and correlations. This section provides an overview of the findings in order from social metrics to visual elements, and finally message strategies. By reiterating the results, I am also striving to provide clarification on their meaning in the context of small business social media marketing.

Since the findings showed that the business with the least number of followers had the most engagement and there were no significant relationships found between industry and engagement, it suggests that any business has the ability to be successful using Instagram. While Thursdays and Fridays were the most popular days for posts to be published, since Instagram does not give us data to show *when* the engagement is happening for a particular post more information is needed about when users are most active on the platform. There was a moderate relationship found between caption length and engagement, and the posts with the most likes were mostly between ~400-600 characters in length. There were some outliers that had shorter/longer captions which still received high engagement which may point towards the specific content *in* the caption rather than its length.

The positive correlations between visual representation and engagement appear to show consumers interest in product focused images. Taken together, the visual modality variables that had a positive relationship to engagement would describe an image that has a product centered in the image, shows the full product and some context (background), is taken from an equal angle to the product (not from a higher angle or to the side), has a lower contrast which creates a

"softer" image instead of a harsh contrast between light and dark areas, but also is sharp and detailed and even exaggerates detail/clarity to highlight the product and its features.

There were a number of strong correlations between caption content and engagement. Overall, the findings reveal that consumers are more likely to engage with posts that discuss informational topics such as the business' website, and product information such as features, dimensions and insight into how it is made. Captions that mentioned sales and giveaways had a very strong correlation to engagement, this is most likely due to the fact that most giveaways hosted on Instagram require the user to like and comment on the post to enter into the giveaway. Interestingly, captions that discussed genuine expressions of emotions such as love, caring and being thankful resulted in much higher engagement than other message strategies. Posts such as these may include the business owner thanking their customers for support, wishing the reader a good day or weekend, discussing how their business impacts them, etc.

Recommendations

The recommendations made in this section are the direct result of the findings derived from the study and the logical reasoning I provided of their context for small business owners. Based on the lack of correlation between follower count and industry and the negative correlation between follower count and engagement, it may be more beneficial to stimulate engagement with the followers the business already has versus focusing solely on increasing followers. Keep an eye on the users that are regularly interacting with posts, reply to their comments, etc. It may be useful to also sift through the accounts that follow the business and delete any spam accounts. I also recommend that businesses should be actively posting content (including stories and reels which were not in the scope of this study). Content scheduling tools

can be used to experiment with posting on varying days of the week and times. Posting late at night or even during the early hours of the morning may be useful as Instagram content is not shown chronologically and could be seen at any time. Caption length can also be experimented with, take a moment to describe what is going on in the image attached to the post, explain the process of making the product, the inspiration behind the design, or just general features.

The images a business owner posts on Instagram undeniably are one of the most important aspects to focus on as it is a visual-centric platform. Since customers are following a business because they like the product that is being sold, the product should almost always be the main focus of the images used. Prior research has also shown that human faces in social media photos increased engagement (Valentini et al., 2018, p. 371), so this is also a great tactic. Business owners could have a friend take photos of them where they create their products, or at events and use these types of photos to show their followers who is behind the brand! Photos taken at an equal angle, from a moderate distance away (to show the entire product without it being cut off) may be helpful for customers. Photos which show some context (background) are also helpful for customers to not only imagine what this product will be like in their life and also to understand the size if it is not discussed in the caption. For example, an image of a candle on a table with a white background does not tell a "story", but the candle on a small table beside a bathtub tells a story of how the product could be used and the bathtub provides a reference for size. Also experiment with increasing the clarity and sharpness of the images so all features stand out. If a business operates solely online, a photo may be as close as a customer gets to the product before purchasing it. Care should be taken to edit photos in a way that enhances the product but does not distort it from what it looks like in real life.

Since the caption is below the photo on Instagram, the caption should be used to also discuss what product is shown. This can include product information such as size, scent, color, texture, how it was made, the products actual name, where it can be found on the business' website, other complimentary products etc. Posts which featured captions that discussed love, caring and being thankful resulted in more engagement from followers. One of the perks of purchasing from a small handmade business is getting to know the person behind the product. A post caption is a great tool for business owners to communicate with their customers. There were only 4 posts out of the 100-post sample that mentioned that the products were handmade, and no significant relationship was observed but I do believe that it is important to show and emphasize that the products that users are seeing are handmade!

Conclusion

The results from this content analysis provide an interesting insight into the types of content from small businesses that social media users choose to engage with. The results, discussion, and recommendations are meant to be used as a starting point for businesses to begin thinking strategically about what type of content they post on Instagram. Since small and micro businesses are typically operating with very little extra financial resources, free social media platforms such as Instagram are the obvious go-to for marketing products and creating customer relationships. These insights can provide a framework for different visual and text variables that can be changed and adjusted to find the right type of content for the specific business and its followers. The themes that emerged as most important to the consumer reflected an interest in genuine human interaction and true reflections of products. That being said, each handmade

business is completely one of a kind and their social media content should be designed to embrace those unique characteristics.

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Appendix

Figure 1: *Bushell's instant coffee advertisement*
Note. Bushell's advertisement in Women's Weekly 1987. From *Reading Images : The Grammar of Visual Design.* (2nd ed., index), by G. Gunther., & T. Van Leeuwen, 2006, Routledge.

Table 3: *Coding Definitions from Dolan et al., (2019)*

Informational Content Codes		Dictionary for Text Analysis
1	Brand name	[insert brand name]
2	General Information	Newspaper and magazine press coverage, new website announcements, media mentions, hiring and job availability advertisements
3	Product image	Image contains a picture of the product: wine bottle, wine label, glass of wine
4	Vineyard image	Image contains a picture of the vineyard
5	Winery image	Image contains a picture of the winery: winery facilities, production
6	Price	[$], [price], [dollar]
7	Website	Post contains a link or reference to the company website [http] [www] [.com]
8	Venue image	Image contains a picture of a review or award: medal, wine review screenshot or newspaper/magazine clipping, trophy
9	Product review image	Image contains a picture of a review or award: medal, wine review screenshot or newspaper/magazine clipping, trophy
10	Product award image	Image of a trophy, medal or certificate awarded to the brand.
11	Tasting and sampling	[tasting], [taste], [tried], [samples], [try], [trying]
12	Product variety	[Chardonnay], [Pinot Grigio], [Riesling], [Sauvignon Blanc], [Viogner], [Chenin Blanc], [Gewürztraminer], [Semillon], [Verdelho], [Cabernet Sauvignon], [Pinot Noir], [Tempranillo], [Carmenere], [Durif], [Grenache], [Sangiovese], [Zinfandel], [Mouvedre], [Mataro], [Syrah], [Savignin], [Traminer] [colombard] [Muscat Gordo Blanco] [Muscat a Petits Grains Blanc] [Malbec]. [Nebbiolo] [Ruby Cabernet] [Petit Verdot] [Dolcetto] [Durif] [Barbera] [Cabernet Franc] [Muscat a Petits Grains Rouge] [Merlot] [Pinot Gris] [Roussane] [Sultana] [Trebbiano] [Arneis] [Crouchen] [Marsanne] [Tarrango] [Touriga]
13	Product region/origin	[Barossa Valley], [Eden Valley], [High Eden], [Currency Creek], [Kangaroo Island], [Langhorne Creek], [McLaren Vale], [Southern Fleurieu], [Coonawarra], [Mount Benson], [Padthaway], [Wrattonbully], [Robe], [Bordertown], [Riverland], [Adelaide Hills], [Lenswood], [Piccadilly Valley], [Adelaide Plains], [Clare Valley], [North West], [Tamar Valley], [Pipers River], [East Coast], [Coal River], [Derwent Valley], [Southern Bendigo], [Goulburn Valley], [Nagambie Lakes], [Heathcote], [Strathbogie Ranges], [Upper Goulburn], [Gippsland], [Alpine Valleys], [Beechworth], [Glenrowan], [Rutherglen], [Murray Darling], [Swan Hill], [Geelong], [Macedon Ranges], [Mornington Peninsula], [Sunbury], [Yarra Valley], [Grampians], [Henty], [Pyrenees] [Peel], [Perth Hills], [Swan Valley], [Blackwood Valley], [Geographe], [Great Southern], [Albany], [Denmark], [Frankland River], [Mount Barker], [Porongurup], [Manjimup], [Margaret River], [Pemberton] [Murray Darling], [Perricoota], [Riverina], [Swan Hill], [Central Ranges], [Cowra], [Mudgee], [Orange], [Hunter Valley], [Broke Fordwich], [Northern Rivers], [Hastings River], [Northern Slopes], [South Coast], [Shoalhaven Coast], [Southern Highlands], [South Australia], [Victoria], [New South Wales], [Western Australia], [Tasmania], [Australian Capital Territory], [SA], [WA], [NSW], [VIC], [TAS], [ACT]
14	Product	[range] [wine] [product]
15	Product making and processing	[winemaking], [ferment], [crop], [pick], [harvest], [crush], [bottle], [bottling], [press], [rack], [barrel], [blend], [vintage], [veraison], [bud burst], [fertilise], [spray], [plant], [prune], [decant]
16	vineyard	[vineyard], [vines], [winery]
17	Opening hours	[open], [closed], [hours], [opening], [times], [shut], [am], [pm]
18	Year made	[19XX], [20XX]
19	Contact details	[phone], [email], [contact], [address], [location], [website], [get in touch], [reach], [connect]
20	Brand Fact/News	[did you know], [fact], [news], [update], [blog]
21	Service	[service], [facility], [facilities], [venue], [event], [function], [occasion], [wedding], [party], [celebration], [set up], [setting up]
22	Wine show, awards and reviews	[wine show], [win], [won], [award], [awarded], [received], [achieved], [successful], [medal], [trophy], [result], [points], [score],[review], [silver], [gold], [bronze], [presented], [presenting], [star], [judge], [named], [listed], [finalist], achievement], [success], [rating], [wine of the year],
23	Event	[event], [tickets], [festival], [fork in the road], [sea and vines]
24	Product description	[red], [white], [fruit], [tannin], [oak], [fresh], [clean], [crisp], [elegant], [soft], [smooth], [bold], [chocolate], [rich], [full bodied], [yum], [tasty], [delicious,] [spice], [zest], [acid], [aroma], [dense], [palate], [flavour], [fragrance], [balanced], [caramel], [complementing], [citrus], [chalky], [characters], [notes], [raisin], [mocha], [tannic], [toffee], [tannin], [vibrant], [colour], [sweet], [sugar]
Entertaining Content Codes		Dictionary for Text Analysis
1	Food/Recipe	[recipe], [food], [cooking], [baking], [breakfast], [lunch], [dinner], [oven], [stove], [boil], [grill], [cooked], [eat], [chef], [chicken], [duck], [peach], [chocolate], [dessert], [morning tea], [porchetta], [pork belly], [chorizo], [scallops].
2	Emoticon	[☺] [;-)]
3	Weather	[weather], [forecast], [sun], [shine], [rain]. [cold], [wind], [chilly], [frosty], [sunshine], [humid], [mild], [freezing], [icy], [foggy], [hot], [heat], [cloudy], [stormy], [winter], [summer], [spring], [autumn], [hail], [snow], [storm], [fire], [rainbow], [sleet], [cloudy], [thunder], [lightening], [fog], [sunrise], [sunset], [degrees], [temperature].
4	Humour	[Fun], [funny], [banter], [joke], [gag], [happy], [joking], [kidding], [April fools], [hilarious], [cool], [whimsical], [exciting], [haha], [hehe], [entertain], [laugh], [giggle], [humour], [priceless], [amusing], [laughable], [laughing]
5	Interesting/Fun fact/Historic image	Image contains and interesting artefact, relates to the history of the brand or provides a fun fact
6	Scenic Image	Image is a scenic photo of the vineyard
7	Occasion image	Image includes customers or staff at event, special occasion or party hosted by the brand
8	Food and produce image	Image includes pictures of food, produce and recipes used by the brand
9	Celebrity	Image includes a celebrity of popular figure
10	Meme Image	Image or picture, typically humorous in nature, often in cartoon or pictorial form
11	Animal Image	Image contains a picture of an animal or pet
12	Animal	[Cat], [dog], [kitten], [puppy], [pet], [animal [bird], [kitty] [budgie]
13	Slang	[Lol], [omg], [jk], [wtf], [l8r], [plz], [ttyl], [cheers], [guys], [wow], [arvo], [aussie], [gr8], [mate], [m8]
Remunerative Content Codes		Dictionary for Text Analysis
1	Deal/Offer	[Special], [discount], [exclusive], [deal], [sale], [promotion], [clearance], [bargain], [on sale], [marked down], [low price], [free], [gift]
2	Competition image	Image contains details and instructions about a competition/contest and/or prize
3	Sale/Promotion image	Image contains details about a sale, discount, promotion or special price.
4	Competition	[Win], [reward], [free], [prize],
Relational Content Codes		Dictionary for Text Analysis
1	Question	[?], [question] [ask you] [what do you think] [can you suggest] [suggestions] [ideas] [help]
2	Congratulations and thanking fans	[congrats], [congratulations], [well done], [thanks], [thank you].
3	Quiz/Game	[Quiz], [game], [test], [guess], [challenge]
4	Holiday/Event/Day	[Birthday, [Christmas], [Easter], [Boxing Day], [New Year], [Australia Day], [Good Friday], [Anzac Day], [Queen's Birthday], [Labor Day], [holiday], [public holiday], [Melbourne Cup], [April fool], [Father's Day], [Mother's Day], [Monday], [Tuesday], [Wednesday], [Thursday], [Friday], [Saturday], [Sunday], [festive season]
5	Affection – x and o	[xo], [xx], [x]
6	Ask for action	[comment if], [like if], [share if]
7	Child/baby image	Image contains a picture of a child or baby
8	Inspirational/ motivational quote	Image contains an inspirational or motivational quote, wordplay or text
9	Customer image	Image contains a single customer or group of customers
10	Employee image	Image contains a single employee or group of employees
11	Community involvement image	Image contains a reference to community involvement through local events, charities and causes

12	Friends and fans	[friends], [fans], [customers], [supporters]
13	Employee name	Post includes a name of employee, customer or pet [Tim], [Nigel], [Rebecca], [Christie], [Emily], [Tony], [Rachel], [Marc], [Pamela], [George], [Glen], [Claire], [Adam], [Travis], [Steve], [James], [Liam], [Eric], [Johann], [Charles], [Wendy], [Michael], [Jeremy], [Corrina], [Brioni], [Kieran], [Don], [D'arry], [Chester], [Jack], [Jay], [Smithy], [Robert], [Dan], [Paul], [Sam], [Hayley], [Mel], [Ryan], [Andreas], [Prue], [Justine].
14	Emotion 1 - Happy	Delighted, ebullient. ecstatic, elated, energetic, enthusiastic, euphoric, excited, exhilarated, overjoyed, thrilled, tickled pink, turned on, vibrant, zippy, aglow, buoyant, cheerful, elevated, gleeful, happy, in high spirits, jovial, light-hearted, lively, merry, riding high, sparkling, up.
14	Emotion 2- Caring	Adoring, ardent, cherishing , compassionate, crazy about, devoted, doting, fervent, idolizing, infatuated, passionate, wild about, worshipful, zealous, admiring, affectionate, attached, fond, fond of, huggy, kind, kind-hearted, loving, partial, soft on, sympathetic, tender, trusting, warm-hearted, appreciative, attentive, considerate, friendly, interested in, kind, like, respective, thoughtful, tolerant, warm toward, yielding.
14	Emotion 3- Depression	Alienated, barren, beaten, bleak, bleeding, dejected, depressed, desolate, despondent, dismal, empty, gloomy, grieved, grim, hopeless, in despair, woeful, worried, awful, blue, crestfallen, demoralized, devalued, discouraged, dispirited, distressed, downcast, downhearted, fed up, lost, melancholy, miserable, regretful, rotten, sorrowful, tearful, upset, weepy, blah, disappointed, down, funk, glum, low, moody, morose, sombre, subdued, uncomfortable, unhappy
14	Emotion 4 - Inadequateness	Blemished, blotched, broken, crippled, damaged, false, feeble, finished, flawed, helpless, impotent, inferior, invalid, powerless, useless, washed up, whipped, worthless, zero, defeated, deficient, dopey, feeble, helpless, impaired, imperfect, incapable, incompetent, incomplete, ineffective, inept, insignificant, meagre, puny, tenuous, tiny, uncertain, unconvincing, unsure, weak, wishful, lacking, lame, overwhelmed, small, substandard, unimportant
14	Emotion 5 – Fear	Alarmed, appalled, desperate, distressed, frightened, horrified, intimidated, panicky, paralysed, petrified, shocked, terrified, terror-stricken, wrecked, afraid, apprehensive, awkward, defensive, fearful, fidgety, fretful, jumpy, nervous, scared, shy, skittish, spineless, taut, threatened, troubled, wired, anxious, careful, cautious, disquieted, goose-bumpy, shy, tense, timid, uneasy, unsure, watchful, worried.
14	Emotion 6 – Confusion	Baffled, befuddled, chaotic, confounded, confused, dizzy, flustered, rattled, reeling, shocked, shook up, speechless, startled, stumped, stunned, taken-aback, thrown, thunderstruck, adrift, ambivalent, bewildered, puzzled, blurred, disconcerted, disordered, disorganised, disquieted, disturbed, foggy, frustrated, misled, mistaken, misunderstood, mixed up, perplexed, troubled, distracted, uncertain, uncomfortable, undecided, unsettled, unsure
14	Emotion 7 – Hurt	Abused, aching, anguished, crushed, degraded, destroyed, devastated, discarded, disgraced, forsaken, humiliated, mocked, punished, rejected, ridiculed, ruined, scorned, stabbed, tortured, annoyed, belittled, cheapened, criticised, damaged, depreciated, devalued, discredited, distressed, impaired, injured, maligned, marred, miffed, mistreated, resentful, troubled, used, wounded, let down, minimised, neglected, put away, put down, rueful, tender, unhappy
14	Emotion 8 – Anger	Affronted, belligerent, bitter, burned up, enraged, fuming, furious, heated, incensed, infuriated, intense, outraged, provoked, seething, storming, truculent, vengeful, vindictive, wild, aggravated, annoyed, antagonistic, crabby, cranky, exasperated, fuming, grouchy, hostile, ill-tempered, indignant, irate, irritated, offended, ratty, resentful, sore, spiteful, testy, ticked off, bugged, chagrined, dismayed, galled, grim, impatient, irked, petulant, resentful, sullen, uptight.
14	Emotion 9 – Loneliness	Abandoned, black, cut off, deserted, destroyed, empty, forsaken, isolated, marooned, neglected, ostracised, outcast, rejected, shunned, alienated, alone, apart, cheerless, companionless, dejected, despondent, estranged, excluded, left out, leftover, lonely, oppressed, uncherished, blue, detached, discouraged, distant, insulated, melancholy, remote, separate, withdrawn
14	Emotion 10 - Remorse	Abashed, debased, degraded, delinquent, depraved, disgraced, evil, exposed, humiliated, judged, mortified, shamed, sinful, wicked, wrong, ashamed, contrite, culpable, demeaned, downhearted, flustered, guilty, penitent, regretful, remorseful, repentant, shamefaced, sorrowful, sorry, blushing, chagrined, chastened, crestfallen, embarrassed, hesitant, humble, meek, regretful, reluctant, sheepish.
15	Family	[brother], [sister], [daughter], [cousin], [grandfather], [grandpa], [pop], [pa], [nan], [grandmother], [grandma], [mum], [mother], [generation], [father], [dad], [papa], [family]

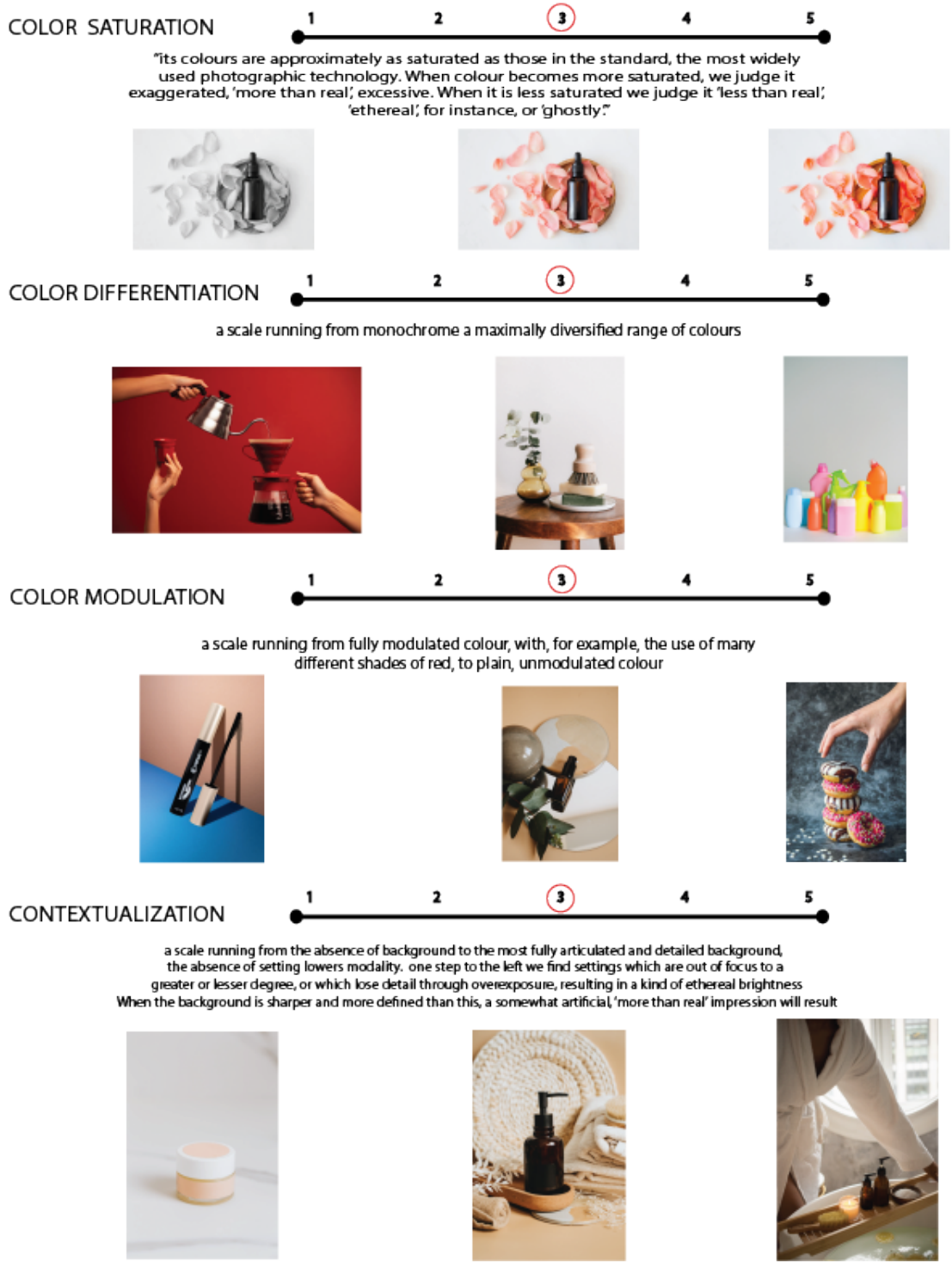
Note. From "Social media engagement behavior: A framework for engaging customers through social media content," by R. Dolan., J. Conduit., C. Frethey-Bentham., J. Fahy., S. Goodman, 2019, *European Journal of Marketing, 53*(10), p. 2242. (http://dx.doi.org/10.1108/EJM-03-2017-0182). Copyright © 2019, Emerald Publishing Limited

Table 5: *Codebook and Examples*

Representation		
Who/What	1 their product 2 person/model 3 animal/model 4 props 5 digital graphic 6 other business' product 7 nature 8 personal photo/other 9 pet	
Activity	1 Staged photo 2 flat lay (from above) 3 solid background 4 candid 5 upload/scan 6 stock photo	
Movement	1 No 2 Yes	
Digital Text	1 Yes 2 No	
Product Arrangement	1 solo 2 pair 3 group 0 N/A	
Modality		
Color Saturation	a scale running from black and white to full (exaggerated) colour saturation	1- no color - B/W 2- limited saturation 3- natural 4- moderate saturation 5- high saturation
Color Differentiation	a scale running from monochrome to a maximally diversified range of colours (exaggerated).	1- monochrome (single color) 2- mostly monochrome - 1-2 colors 3- normal - 3-4 colors 4- mostly colorful - 5-6 colors 5- full color spectrum (red, orange, yellow, green, blue, purple) (exaggerated)
Color Modulation	a scale running from unmodulated (flat) color to the use of many different shades of colors.	1- plain/flat folor 2- mostly flat colors 3- natural 4- more modulation 5- fully modulated colors
Contextualization	a scale running from the absence of background to the most fully articulated and detailed background.	1- out fo focus background, hazy or white background 2- plain color background 3- some background context 4- moderate 5- fully articulated context
Representation of Detail	a scale running from maximum abstraction to maximum representation of pictorial detail.	1- maximum abstraction 2- blurred portions (like background) 3- natural detail - as seen through the naked eye 4- mostly shows detail 5- maxium detail - extreme detail - through closeup/microscope, etc
Depth	a scale running from the absence of depth to maximally deep perspective.	1- no depth (everything is at one focal length - such as a flat lay) 2- photos at equal angle, only depth is from overlap between subject and background 3- "natural" = frontal-isometric, angular-isometric or in central angles 4- moderate depth 5- exagerated depth (like fisheye)
Illumination	a scale running from the absence of light and shadow to the fullest representation of the play of light and shade	1- absence of light/shade (no shadows where they should be) 2- minimal use of light and shadow 3- natural presence of light source and shadows 4- moderate light/shadow 5- exaggerated use of light/shadow
Brightness	a scale running from a maximum number of different degrees of brightness to just two degrees: black and white, or dark grey and lighter grey, or two brightness values of the same colour.	1- low contrast, hazy effect 2- few degrees of contrast 3- natural 4- moderate contrast 5- high contrast - bright whites, dark blacks (exaggerated)
Interaction		
Gaze	1 Direct 2 Indirect 0 N/A	
Power Relations	1 Low 2 Equal 3 High 4 Multiple 0 N/A	taken from an angle lower than the subject equal angle, there is no perspective on the subject, appears as 2D taken from higher than the subject, can see more sides images with multiple photos taken at different angles (collage) Used for content that is not taken from a camera (digital graphics)
Social Distance	1 Close Range 2 Mid Range 3 Long Range 4 Mulitple 0 N/A	•Tightly frames a person or an object with no reference to its surroundings • part of subject may even be cut off • typically only 1 main subject • Shows some part of the subject in more detail with some reference to surroundings • shows a lot of surrounding • may be multiple subjects Used for content that is not taken from a camera (digital graphics)

Composition		
Symmetry	1 Horizontal	
	2 Vertical	
	3 Diagonal	
	0 N/A	Image doesn't show use of symmetry
Information Value	1 Left/Right	
	2 Top/Bottom	
	3 Centre/Margin	
	4 Multiple	Image uses multiple info positions
	0 N/A	Used for content that is not taken from a camera (digital graphics)
Product Salience	1 Low	Product is not the main subject
	2 Moderate	product draws you in but is not the only element
	3 High	Product draws you in
	0 N/A	Used for content that is not taken from a camera (digital graphics)
Framing	1 Low	subject is not framed
	2 Moderate	product draws you in but is not the only element
	3 High	intentially framed by props, photography angle, cropping, etc to make the product "pop" also can be a 2 photo of the product that fills the entire image
	0 N/A	Used for content that is not taken from a camera (digital graphics)
		Message Strategy
		Rational
Informational	Mention company name or @ tag	
	Mention "link in bio"	
	Mention website/platform	[website name], [website.com], [shop], [store], [Etsy], [Shopify]
	Product Name(s)	
	Price	[$], [dollars}
	Suggestion on Product Use/ Reason to Purchase	
	Event Information	[event name], [@tag], [location], [address], [hours of operation]
	Where to buy (Stockist/retailer)	
	Contact Information	
	Product Review Screenshot/Quote, or Customer Photo	[photo from], [photo by - @]
	Product Variety	mentions multiple products, mentions different styles/patterns of a product, different scents
	Product Dimensions/Size	[LxWxH], [s/m/l], [unisex]
	Mention of a Product (features, colors, shape, materials etc)	[double layer beanie], [cracking wood wick], [pink glaze], [ultra soft], [distressed vintage print]
	Mention "handmade"	
	Making of (design, inspiration, packaging, etc)	meaning/inspiration behind product, mention product feature,
	Info about Shipping	shipping service, delays, price, time
	Reference to Remaining/Limited Quantity	insinutation of limited availability - [few left], [last one], [couple in the shop], [limited edition]
	Brand Fact or Other News	
Remunerative	Sale/Offer	[sale], [15% off], [Black Friday Sale]
	Giveaway/Contest	[giveaway]
		Emotional
Entertaining	Mention of Collaboration with other Company	
	Meme	
	Emoji	
	Humor	
	Meme	
	Slang	
	Fun Fact	
	Use of a hashtag intentionall as part of the description	[#shoplocalyyc], [#sorrynotsorry], [#callmeflakey], [#marketcollective], [#rayofsunshine]
Relational	About the OwnerPersonal	personal info
	Mention Family/Friends	mention of family/friend
	Motivational/Inspirational Image/Quote	
	Community Involvement	talk of charity or other community initiatives
	Question	[?]
	Call to action	[link in bio], [?],
	Holiday/Event/Day	[gift], [holiday shopping], [christmas], [elves]
	Affection	
	Happy	
	Caring	
	Love	
	Nostaligia	
	Thankful	
	Grateful	
	Excitement	
	Surprise	
	Depression	
	Inadequateness	
	Fear	
	Confusion	
	Hurt	
	Anger	
	Loneliness	
	Worry	
	Skepticism	
	Remorse	

Figure 4: *Modality Scales and Examples* [2]



[2] Note: Images used from Pexels.com and require no attribution.

REPRESENTATION

1 2 3 4 5

there is a point beyond which a further increase of detail becomes 'hyper-real' and hence lower in modality from the point of view of 'photographic' naturalism



DEPTH

1 2 3 4 5

FRONT OR TOP VIEW without overlap

DEPTH FROM OVERLAPPING ONLY

EXAGGERATION (fisheye)




ILLUMINATION

1 2 3 4 5

Naturalistic depictions represent participants as they are affected by a particular source of illumination. Less naturalistic images, on the other hand, may abstract from illumination, and show shadows only in so far as they are required to model the volume, especially of round objects



BRIGHTNESS

1 2 3 4 5

Brightness values can also contrast to a greater or lesser degree: In one picture the difference between the darkest and the lightest area may be very great (deep blacks, bright whites), I n another the difference may be minimal, so that a misty, hazy effect is created.



Table 9: *Top Posts by Comments*

Photo					
Business	2	10	10	10	7
# Comments	79	23	21	20	15
Photo					
Business	1	7	6	2	7
# Comments	14	13	12	9	9

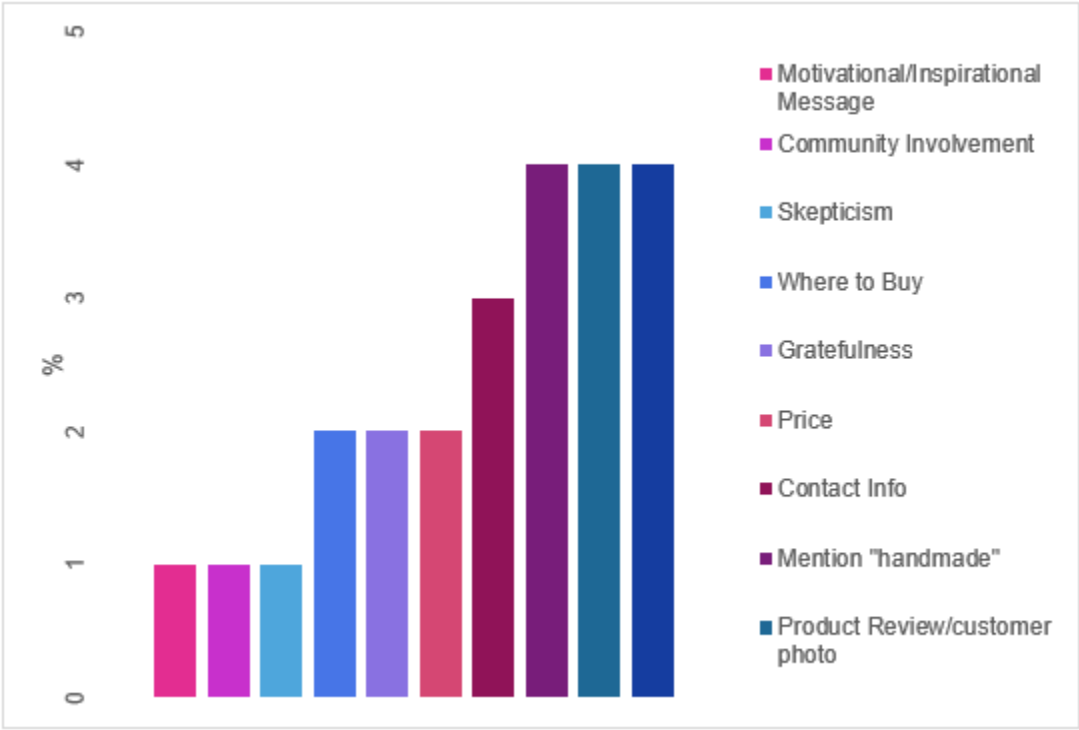


Figure 17: *Least Used Message Strategies*