Brand Awareness and Digital Marketing: Measurement Tools and Data Analytics for Agricultural Industry

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A B S T R A C T

The current era has been going through significant transformations owing to the innovative technologies, digitalization, social media, and online business trends worldwide. In the rapid and dynamic environment, marketers are continuously focused on exploring new and digital ways to reach and engage customers in the agricultural industry. Therefore, digital marketing has been recognized as a critical tool for marketers, researchers, and customers to develop brand awareness, interact and build customer engagement over longer periods. Consequently, generating positive customer outcomes i.e., brand awareness, persuasion, customer satisfaction, brand loyalty, and positive word of mouth. The study aimed to evaluate the impact of digital marketing tools on the brand awareness of consumers in agricultural industry. By examining diverse social media channels, the study aimed to provide an analysis of quantitative techniques used to assess the effectiveness of digital marketing. The study furnishes insights for the practitioners to select effective social media tools according to their goal and objectives. The study enables social media marketers to optimize their digital marketing strategies by utilizing minimum organizational resources.

Keywords: Climate change, Climatic awareness, Traditional media, Social media, Mountainous areas.

INTRODUCTION

In today's fast-paced and ever-evolving digital landscape, the concept of brand awareness has taken on unprecedented significance in the realm of marketing (Febriyantoro, 2020). As the digital age continues to reshape the way businesses connect with their audiences, the process of building, measuring, and analyzing brand awareness has become both a strategic imperative and a formidable challenge. In today's digital age, where information flows incessantly through the vast expanse of the World Wide Web, the concept of brand awareness has taken on an entirely new dimension. The emergence of digital marketing as a formidable force has revolutionized the way businesses connect with their audiences (Lee & Cho, 2020). In this dynamic landscape, where every click, share, and like

holds immense value, understanding the intricacies of brand awareness and its measurement tools through data analytics has become paramount for enterprises striving to make their mark (Zhang *et al*., 2022).

In the contemporary landscape of agriculture, the integration of digital marketing strategies and the measurement of brand awareness have emerged as pivotal components for the sustainable growth and success of agricultural businesses (Hrustek, 2020). This research endeavors to delve into the intersection of agricultural brand awareness and digital marketing, scrutinizing the measurement tools and data analytics that shape the efficacy of these endeavors. As agriculture navigates through an era of technological advancements, the role of digital marketing in amplifying brand visibility cannot be overstated xxxxx. Traditional

paradigms are giving way to innovative methods, and understanding the nuances of brand perception in the digital realm becomes imperative. Agricultural brand awareness is more than just a logo or a tagline; it encapsulates the holistic recognition of agricultural entities, encompassing their values, practices, and impact (Onken & Bernard, 2010). In the age of information, where consumers are increasingly conscious of the origin and practices behind the products they consume, agricultural brand awareness becomes a strategic requirement (Lockie *et al.*, 2020). It not only influences consumer choices but also establishes a connection between agricultural producers and the broader community.

The advent of digital marketing has marked a pivotal shift in the business world. Gone are the days when traditional advertising methods alone could suffice. In the digital realm, brand awareness is not merely about plastering logos across billboards or airing catchy jingles on television (Krishnaprabha & Tarunika, 2020). It has evolved into a multifaceted entity, intricately woven into the fabric of the online ecosystem. Digital platforms, from social media giants like Facebook and Twitter to e-commerce behemoths like Amazon, have become the epicenters of brand interaction (Sundaram *et al.*, 2020). Every interaction, click, or view contributes to the narrative of a brand, shaping perceptions and influencing consumer choices. Consequently, understanding and harnessing the power of digital marketing tools to measure brand awareness has become an indispensable skill for businesses aiming to thrive in this competitive arena. The digital landscape generates a colossal volume of data daily. Every interaction on a website, every social media comment, every email open – all of these actions produce data points waiting to be harnessed. Data analytics, in this context, serves as the bridge between raw data and actionable insights.

At its essence, brand awareness is the degree to which a brand is recognized and remembered by its target audience. It is not merely about having a well-designed logo or a catchy tagline; it's about carving a distinct niche in the minds and hearts of consumers. When consumers not only recognize a brand but also connect with it on a personal level, a powerful bond is formed. This bond transcends mere transactions, and it fosters trust, loyalty, and advocacy in the digital realm, brand awareness takes on multifaceted dimensions. It encompasses a brand's presence across a myriad of online platforms, from social media channels to websites and search engines. It encompasses the content a brand disseminates, the interactions it engages in, and the emotions it elicits. In this interconnected digital ecosystem, brand awareness is not a static concept but a dynamic force that ebbs and flows in response to various stimuli and interactions (Davis, 2012).

As digital marketing continues to evolve with lightning speed, fueled by technological advancements and shifting consumer behaviors, the tools and data analytics used to measure and understand brand awareness have likewise undergone a profound transformation (Fronzetti Colladon & Grippa, 2020). Yet, the mere act of building awareness is not enough. Measuring the effectiveness of these efforts, understanding the impact on consumer behavior, and making data-driven decisions are imperative in the digital realm. To embark on this enlightening journey through the nexus of brand awareness and digital marketing, we pose several pivotal research questions that will guide our exploration:

- What are the key principles that underpin effective digital marketing in the context of brand awareness?
- How can the effectiveness of digital marketing campaigns be accurately measured?
- What are the nuances of social media analytics, and how can they be harnessed to elevate brand awareness strategies?
- What are the different types of social media analytics, and how do they contribute to brand awareness?
- What role does web analytics play in augmenting brand awareness efforts, and what are the layers of data analytics within this domain?
- What are the diverse tools and technologies available for analytics in the digital marketing sphere, and how can businesses leverage them effectively?
- How do UTM parameters in web analytics contribute to measuring the success of digital marketing campaigns?
- What ethical concerns surround data analytics in digital marketing, and how can these be addressed to ensure responsible and transparent practices?

This study embarks on a comprehensive exploration of the intricate relationship between brand awareness and digital marketing. Our aim is to delve into the tools and data analytics that underpin this critical facet of modern marketing strategy. This study will extensively explore the realm of social media, investigating how to measure the effectiveness of social media campaigns. Through an

extensive literature review, this study will also explore the layers of data analytics, various types of social media analytics, and the realm of web analytics. Additionally, it will address the parameters of web analytics and ethical concerns in data analytics that can be applied to measure brand awareness effectively.

BUILDING STRONG BRANDS

Developing a strong and enduring brand necessitates time, investment, and, most importantly, a clear alignment with the broader strategic direction of a business. These prerequisites, though seemingly straightforward, shed light on why small businesses have historically faced difficulties in competing with larger counterparts. It's crucial to note that the obstacle for small businesses isn't solely a lack of financial resources; rather, it lies in the failure to synchronize their brand identity with the actual ethos and operations of the business. In today's marketplace, consumers increasingly demand transparency and authenticity from brands. They expect a brand's claims to seamlessly match its real-world actions. Traditional brands, often overly focused on their image and marketing, tend to struggle in this regard, as illustrated by the notable example of McDonald's high-calorie salad incident. Conversely, small businesses that exhibit patience, strategic vision, transparency, and openness have a promising opportunity to compete effectively with these established brands.
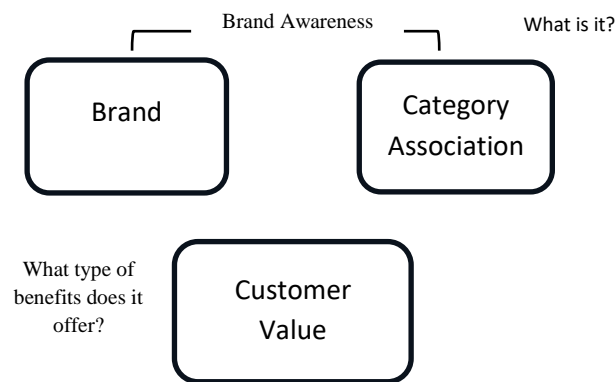

Figure 1. Brand awareness and category association.

The term 'branding' is widely used but often lacks a precise definition. However, Aaker offers a comprehensive interpretation of 'brand,' defining it as more than a mere name and logo (Aaker, 2014). According to his perspective, a brand signifies an organization's commitment to delivering not only functional benefits but also emotional, self-expressive, and social advantages to its customers. This definition underscores that brand awareness, often limited to recognizing a brand's name or logo, is just one facet of a brand's identity. Effective branding goes beyond this to answer three fundamental questions: What category does the brand belong to? Who is its intended user? What benefits does it provide? As depicted in the diagram (Figure 1), brand awareness represents the link between the brand and its category. Furthermore, brand awareness can be categorized into three distinct types, depending on how the buyer identifies the brand when considering a purchase decision.

BRAND AWARENESS

Brand awareness can be defined as the buyer's capacity to recognize a brand with enough detail to confidently make a purchase decision (Rossiter, 2014). It serves as a crucial prerequisite for shaping brand attitude. To illustrate its significance, consider a scenario where you hold equally favorable attitudes toward two cola brands, let's say, Coke and Pepsi, both rated at 9 out of 10 or 0.9 on a probability scale ranging from 0 to 1. However, suppose you are notably more likely to recall Coke when prompted by waiters in a restaurant, with your probability of recalling Coke first set at 0.8, while the likelihood of recalling Pepsi first stands at 0.2. Importantly, your preference for the two brands remains equal. Yet, over numerous such instances, you will opt for Coke far more frequently. This is because the probability of selecting Coke on any given occasion, considering your attitude toward each brand you recall, amounts to 0.8 multiplied by 0.9, equaling 0.72. Conversely, your choice probability for Pepsi is just 0.2 multiplied by 0.9, resulting in 0.18. This substantial difference in personal 'market shares' would be overlooked by researchers if they failed to measure brand awareness prior to assessing brand attitude. In essence,

brand awareness plays a pivotal role in guiding consumer choices, especially when attitudes toward competing brands are closely matched.

The primary objective of most businesses revolves around increasing sales and revenue. The ideal scenario is to not only attract new customers but also encourage repeat purchases. Brand awareness plays a pivotal role in achieving this goal, signifying how familiar customers and potential customers are with your business and its products. To illustrate, within just a week of its introduction, surveys indicated that over 90% of US consumers were aware of the iPhone, a testament to exceptionally high brand awareness. Ultimately, successful brand awareness means that your brand is widely recognized and easily identifiable, setting your product apart from competitors.

Brand awareness encompasses a multifaceted set of factors beyond mere conversion rates (Esch *et al*., 2006). It is a concept deeply intertwined with the development of marketing as a discipline. Traditional marketing practices, often driven by brand promotion and awareness, have primarily favored larger organizations capable of substantial investments in broadcast media advertising. In contrast, digital marketing challenges the traditional primacy of brand awareness. Online businesses have the opportunity to compete with larger "brands" by focusing on effective conversion tactics and engaging brand collateral. The digital landscape values a more social and open approach, which can deter businesses from appearing too impersonal or solely motivated by sales. In several markets, independent brands are esteemed for their quality, service, and attention to detail, marking a shift from mass consumerism principles.

Brand awareness and perceptions significantly influence consumer purchasing decisions (Supiyandi *et al*., 2022). In some instances, customers may buy despite having reservations about the brand due to a seamless conversion process, low prices, or limited alternatives. Conversely, strong brand pull can lead to purchases regardless of price, checkout complexities, or market competition. Measurement stands as a fundamental aspect of the marketing process. It allows for the evaluation of marketing success, including campaigns and brand building, facilitating improvements and enhancing practical knowledge. For digital marketing, in particular, measurement is regarded as an essential element. In fact, some assert that marketing without measurement cannot truly be considered marketing. This principle holds true for marketers of all levels, from the seasoned professional to the novice student of the subject.

Type of Brand Awareness

Another crucial aspect often overlooked by researchers is the importance of measuring the precise type of brand awareness ((Khurram *et al*., 2018). To pinpoint the appropriate type of brand awareness, researchers can draw upon their own understanding of consumers and the product category (Figure 2). Alternatively, if uncertainty persists, conducting around a dozen qualitative interviews, with about 20 usually sufficient as long as they represent a reasonably diverse sample of category buyers, can provide valuable insights. These interviews involve asking consumers to mentally recount their most recent purchase experience in the specific context, such as ordering a cola drink in an upscale restaurant, akin to the example above. This approach, termed the construction of a behavioral sequence (Rossiter & Percy, 2017), helps identify the prevailing choice process.

Brand recognition

when brand choice occurs at the point of purchase, such as in a physical store or an online catalog-like platform, the relevant type of brand awareness for managers to target is brand recognition(chaney *et al*., 2018). to achieve this, it's essential to consider what the potential buyer needs to identify. this could encompass recognizing the brand name when spoken, identifying the brand logo visually, or recognizing the stylized brand name also visually (rossiter & percy, 2017). consequently, in measuring brand recognition, the brand stimulus must be represented iconically, exactly as the consumer would hear or see it. moreover, the brand recognition measure should entail responses like 'yes,' 'no,' or 'not sure,' with only the 'yes' responses counted as correct recognition.

category-cued brand-name recall

When brands need to be recalled before the point of purchase, the only relevant type of brand awareness is category-cued brand-name recall. An example of this is when deciding, before leaving the office, which courier service, like FedEx or DHL, to use for an overseas delivery. This isn't a case of 'free recall,' but rather, it's recalling a brand name in response to the product or service category as the cue (Nedungadi *et al*., 2001). The measurement method should include this category cue, expressed in consumer-friendly language rather than technical jargon.
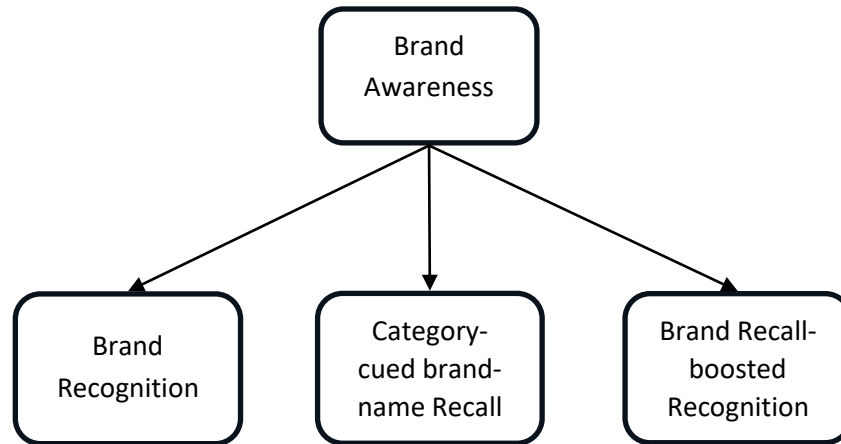
Figure 2. Brand awareness and its types.

Furthermore, the researcher must establish what qualifies as 'adequate-for-choice' name recall in advance. Lastly, the researcher needs to determine the cutoff for name recall, which can be accurately deduced from behavioral sequence model interviews. In time-sensitive choice scenarios, this cutoff is typically one brand. For low-risk or 'low involvement' choices, it's about two brands, and for 'high involvement' choices, around four brands, with reverse weighting (4, 3, 2, 1) based on the order of recall, as earlier-recalled brands are more likely to be selected.

Brand recall-boosted recognition

Brand recall-boosted recognition can be referred to as the potential buyer initially recalls the brand name or a visual element such as the brand's packaging or logo (Rossiter & Percy, 1987). Subsequently, they must recognize it at the point of purchase. The measurement process begins with category-cued brand-name recall, followed by the assessment of brand recognition. In this approach, only the recognized brands that are also recalled receive a positive score for brand awareness.

DIGITAL MARKETING: AN INTRODUCTION

Marketing's essence lies in understanding consumer behavior through targeted and timely offerings, often encapsulated in the right person, right place, and right time strategy. In the past, traditional marketing tools predominantly used offline methods like radio, print, television, and billboards (Pauwels *et al.*, 2016). However, today's digital world relies heavily on email, blog posts, and social media for marketing (Labrecque *et al.*, 2013). The emergence of digital marketing since the 1990s, an evolution from traditional methods, focuses on delivering the right message to the right audience at the right time (Schultz *et al.*, 2015). Neglecting digital platforms in contemporary business efforts means missing out on significant growth opportunities. Digital marketing is essentially an extension of traditional marketing, emphasizing online tactics like email marketing, social media marketing, and search marketing to promote and sell products and services(Busca & Bertrandias, 2020). It encompasses advertising and marketing through online channels, including email, search engine optimization, pay-per-click, and social media (Wetsch, 2012).

The internet's role in the growth of digital marketing is paramount. In 2018, global spending on digital transformation exceeded $1 trillion, expected to surpass $2 trillion in near future (Fitzpatrick *et al.*, 2020). The pandemic, specifically, pushed over 79% of organizations to increase their digital transformation budgets. This digital revolution has transformed customer behavior and expectations, with consumers embracing modern technology and giving feedback primarily based on their digital experiences (Kopalle & Lindsey-mullikin, 2003). The ease of accessing online services, such as buying and selling goods and services, has fueled the exponential growth of online marketing, providing a clear advantage for digital formats (Ghorbani *et al.*, 2021). One facet, inbound marketing, where customers find a brand, is instrumental in this growth. The core aim of digital marketing is to increase exposure, building trust-based customer relationships by informing more people about products or services (Tseng *et al.*, 2022).

Digital marketing, with its close ties to client/server systems, especially web servers and browsers, offers access to vast volumes of precise quantitative data at intricate levels of detail. These tools and data are readily available, leaving no room for a lack of campaign measurement or failure to assess an activity's value. However, the challenge for marketers lies in making sense of this massive "big data." Analytically, digital marketing's purpose can be broken down into conversion and brand awareness activities. Both are multifaceted concepts, and assessing marketing success often doesn't require considering every single element within them. Success evaluation should ideally consider both qualitative and quantitative inputs within the organizational and situational context.

Digital marketing is "the use of digital technologies to create an integrated, targeted, and measurable communication which helps acquire and retain customers while building deeper relationships with them" (Smith, 2007). Technology acts as a channel or platform for digital or e-marketing activities, facilitating actions related to positioning, measuring, and crafting. Several related ideas are connected to digital marketing. Direct marketing, for instance, involves measurable and targeted communications, often via email, to specific target groups or individuals. Databases play a crucial role in this approach, enabling campaigns to target buyers based on their behaviors and characteristics (Rygielski *et al.*, 2002). Interactive marketing builds upon this, emphasizing bidirectional and cross-platform conversations (Krishen *et al.*, 2021). The shift from interactive to digital marketing signifies the move toward one-to-many and many-to-many communications, initiated by consumers themselves.

Predictive data analytics techniques are used to understand consumer behavior in social media and analyze consumer perceptions and attitudes toward social media marketing (Chaudhary *et al.*, 2021). Backcasting from digital marketing goals is another growing area of research, with a focus on cloud databases and interfaces (Alam & Shakil, 2013). The complex intersection of web analytics, databases, and applications makes digital marketing an umbrella for interdisciplinary research. Data analytics systems enhance digital marketing infrastructure by employing various metrics tailored to specific applications (Saura, 2021). Metrics from social media communication platforms also play a crucial role in developing frameworks for web analytics and digital marketing (Peters *et al.*, 2013; Saura, 2021).

Digital marketing shares similarities with e-marketing, and although these terms are sometimes used interchangeably, distinctions can be made. E-marketing primarily involves internet-based marketing, while digital marketing encompasses a broader spectrum, including mobile apps, MMS, SMS, and databases accessible without the internet (Morris, 2009). The phrase "digital marketing" encompasses planning, implementing, tracking, and measuring marketing activities using technological applications. Over recent years, this term has gained more popularity than phrases like "interactive marketing" and "internet marketing," indicating a shift in terminology towards digital marketing (Chaffey & Smith, 2022).

SOCIAL MEDIA: AN INTRODUCTION

With 3.6 billion users in 2020 (Nau *et al.*, 2022) and an average daily use of 3 hours (Ivie *et al.*, 2020), social media has undeniably become an integral part of modern life. Numerous scholars have noted its transformative impact on how individuals, social groups, and organizations interact over the past decade (Bashir & Bhat, 2017; Guesalaga, 2016; Nisar *et al.*, 2019). The rapid expansion of social media, along with its diverse uses and user profiles, has captured the attention of both academics and professionals.

Defining social media is a challenge, as it spans various interpretations. Cambridge Dictionary describes it as "websites and computer programs that allow people to communicate and share information on the internet" (McIntosh, 2011). Investopedia defines it as "computer-based technology that facilitates the sharing of ideas, thoughts, and information through the building of virtual networks and communities." Similarly, Law Insider dictionary characterizes it as "all means of communicating or posting information or content of any sort on the Internet, including your own or someone else's weblog or blog, journal or diary, personal website, social networking or affinity website, web bulletin board, or a chat room, whether or not associated or affiliated with the company". While these definitions all mention websites, computer technology, the internet, and sharing and communicating, it's challenging to encompass the entire concept as simply "sharing on the internet." This aspect of internet sharing can be related to social network sites, which indeed fall under the umbrella of social media. However, social media extends

beyond social network sites, with "conversation" being the essential additional element that truly defines social media as it places the "social" in social media (Wright & Hinson, 2009).

Social Media Marketing

Businesses closely monitor consumer-generated content on social media, respond to these interactions, and incorporate them into shaping their strategic decisions. In managing this process, the goal is to ensure that marketing activities reach the intended audiences with appropriate messages, timing, and content. Social media marketing has gained prominence as businesses utilize existing or emerging social media platforms that align with their strategies and corporate identities. Through social media marketing, businesses efficiently deliver their brands and products to consumers with speed, ease, and cost-effectiveness. Consumers can readily provide feedback about brands through social media and access the comments of fellow consumers, which include valuable experiences and information about the brand. Consequently, social media marketing fosters interaction instead of one-way communication, setting it apart from traditional marketing.

Successful implementation of social media marketing aligns with business objectives and hinges on specific conditions. Key to these conditions is the execution of marketing activities guided by sound tactics and strategies, with room for planned development. Social media marketing often incorporates various strategic marketing approaches. One critical strategy involves integrating a business's brand-related efforts on social media platforms. While social media marketing offers advantages, it also presents challenges. Consequently, businesses must continually assess whether their implemented strategies yield results aligned with their objectives as they proceed in the next phases of their marketing endeavors.

Analytics Tools Based on Social Media Sites

Different social media platforms offer distinct analytical tools to help organizations gather insights into their online presence. For instance, Facebook provides Advert reports and Page insights, while Pinterest offers Pinterest Analysis. LinkedIn caters to individual users and business owners with its Analytics tools, and Twitter provides Twitter Analytics along with third-party options like SproutSocial, Quintly, Klout, Cyfe, and TweetReach (Yadav & Iqbal, 2022). Social media analytics goes beyond superficial metrics like 'likes' and 'shares' to reveal genuine consumer sentiments about products, services, and organizations. It aids in comprehending and enhancing content quality, thereby expanding user engagement.

Platforms like Pinterest and Instagram, which prioritize images, enable the evaluation of link, video, and image performance, helping identify which visuals resonate most with customers (Luttrell, 2018). Furthermore, social media analytics offers a competitive advantage by facilitating the monitoring of competitors' growth on social platforms, enabling businesses to develop strategic responses (Tsimonis & Dimitriadis, 2014). It fosters a deeper understanding of the audience or clients, leading to the refinement of marketing strategies through the analysis of both successful and unsuccessful initiatives.

Role of Social Media Analytics in Digital Marketing

The importance of establishing an online presence becomes evident when considering that approximately 57 percent of the world's population is now connected to the Internet. To engage with target customers effectively, digital marketing is essential, with analytics playing a pivotal role in achieving desired outcomes. The proliferation of social media platforms and their user base provides marketers with an opportunity to gather insights from a vast number of participants on selected platforms (Killian & McManus, 2015).

Among all paid media alternatives, organizations prioritize print, search engine optimization, and other paid digital media, including trade shows and partnerships. This shift towards digital marketing has underscored the need for analytics, giving rise to concepts like Web analytics and email analytics. Digitally marketed products are always readily accessible to consumers. Facebook, used by approximately 99 percent of digital marketers, leads the way, followed by Twitter (97 percent), Pinterest (69 percent), and Instagram (59 percent). Twitter, Facebook, and LinkedIn are the top three sites preferred by marketers (Yadav & Iqbal, 2022). Social media analytics plays a crucial role in collecting, monitoring, analyzing, and visualizing social media data, helping identify valuable patterns and insights (Fan & Gordon, 2014).

However, it's important to note that the landscape of social media and its analytics is constantly evolving, with rapid changes such as new tools, data sources, media platforms, and advanced devices like tablets and mobiles (Batrinca & Treleaven, 2015). Marketers face the

challenge of adapting their marketing strategies to this evolving digital landscape to achieve desired outcomes and objectives.

Social Media Measurement

In the realm of social media marketing performance measurement, two distinct methods are commonly employed: on-site measurements and off-site measurements (Zarrella & Zarrella, 2010). On-site measurements are designed to gauge activities taking place directly on the platforms where businesses are actively engaged. These methods encompass several important metrics, firstly, ROI (Return on Investment): One of the foremost concerns for marketers is quantifying the return on their investment. Robust analysis tools allow for tracking user activities on the sites they engage with, monitoring user behavior, evaluating the efficacy of social media platforms and other referring sites, and ultimately assessing resource efficiency. Secondly, engagement: A fundamental metric of loyalty for businesses is user engagement, which can be gauged by the number of pages viewed per visit and the amount of time spent on the site. The more time a visitor invests on the site, the deeper the relationship that is forged with the customer.

Off-site measurements are used to assess activities occurring on platforms where businesses interact with consumers. These measurements also include various specific metrics. Firstly, Twitter: In this microblogging social networking site, a key measurement is the number of followers. The followers represent a critical consumer base for businesses. Secondly, Facebook and LinkedIn: On these social networking platforms, a common metric is the number of individuals engaged with a business page. Thirdly, YouTube and Instagram: These media-sharing platforms primarily measure the number of videos, images, and viewers.

To facilitate these measurements, free tools like Boom Social and Google Analytics have been developed for monitoring businesses' social media accounts. Furthermore, institutions offering social media measurement, reporting, and analysis services are available. Businesses leveraging social media can utilize these applications and institutions to track various aspects, including the number of social media followers, the nature of reactions to their products, and the level of interest in their campaigns. The array of measurement tools continues to expand, promising more comprehensive and detailed insights for businesses

utilizing social media marketing applications in the future (Gümüş & Kütahyali, 2017).

Measuring Social Media Campaigns

Brand awareness is a challenging aspect to gauge accurately, primarily because it operates as a top-of-funnel strategy that influences customers throughout their journey. While it may not always be straightforward to attribute leads and customers directly to brand awareness efforts, its effectiveness is undeniable. Think of it like a robot vacuum – you may not notice it in action, but you can see the results in your clean floors. Similarly, brand awareness strategies work diligently to attract new customers to your business. To measure brand awareness effectively, consider the following metrics (Heitman, 2023):

1. Ad Clicks (and Conversions): Keep an eye on the number of clicks your ads receive and how many of those clicks lead to desired actions, like sign-ups or purchases.
2. Branded Search Volume: Monitor the frequency with which users directly search for your brand. An increase in brand searches signals growing brand awareness.
3. Overall Website Traffic: Analyze the total traffic to your website, as brand awareness efforts often contribute to increased website visits.
4. Direct Website Traffic: Measure visitors who arrive at your site directly by typing the URL. A rise in direct traffic indicates strong brand recall.
5. Referral Traffic + Backlinks: Track traffic generated through referrals and backlinks, which reflects the reach of your brand across the web.
6. Website Conversions: Assess the number of website visitors who complete desired actions, such as making a purchase or subscribing.
7. Social Media Engagement: Examine engagement metrics on your social media platforms, including likes, shares, and comments. Higher engagement levels are often associated with increased brand awareness.
8. Social Mentions: Keep tabs on how frequently your brand is mentioned across social media. An uptick in mentions suggests heightened brand recognition.
9. Marketing Attribution Reports: Employ marketing attribution reports to understand the contribution of various touchpoints to conversions. This helps identify the role of brand awareness in the customer journey.

In conclusion, while brand awareness measurement may present challenges, these metrics provide valuable

insights into the impact of your brand-building efforts.

SOCIAL MEDIA ANALYTICS

Social Media Analytics represents both the art and science of extracting valuable insights from the vast sea of semi-structured and unstructured data found in social media. This process enables businesses to make informed and insightful decisions. In the scientific realm, skilled data analysts employ advanced tools and techniques to systematically identify, extract, and analyze social media data, including tweets, shares, likes, and hyperlinks. This side of analytics necessitates sophisticated tools, technology, and reliable data to be executed effectively. However, merely mastering the science isn't sufficient. The other half of analytics, the art, involves interpreting and aligning the insights gained with business objectives.

Interpreting analytics results requires the ability to present data in meaningful ways, domain-specific knowledge, and training. To truly unlock value, analytics must align strategically with existing business goals. Without a well-crafted and aligned social media strategy, businesses will find it challenging to achieve their desired outcomes through analytics. Hence, to harness the full potential of social media analytics, mastery of both its scientific and artistic aspects is essential.

Social Media Analytics serves as a powerful tool for businesses, primarily aiming to facilitate informed and insightful decision-making through the utilization of social media data. Businesses employ social media for various purposes such as connecting and engaging, finding new customers, feedback, lead generation, traffic generation, brand loyalty, predictive forecasting, customer sentiment, keyword trends, content engagement, influential followers, competitor analysis, website connections, audience size, and network analysis.

Social Media Analytics Types

Delen and Demirkan (2013) categorized social media analytics into four main forms:

1. Descriptive Analytics: This form focuses on summarizing and interpreting historical social media data. It provides insights into past performance, user engagement, and trends. Descriptive analytics answers questions like "What happened?" by presenting data in understandable formats.
2. Diagnostic Analytics: Diagnostic analytics delves deeper into historical data to identify the causes of specific events or trends. It helps in understanding why certain social media outcomes occurred. Diagnostic analytics answers questions like "Why did it happen?" by uncovering patterns and relationships in the data.
3. Predictive Analytics: Predictive analytics uses historical data and statistical algorithms to forecast future social media trends and behaviors. It helps in anticipating user actions and trends, enabling proactive decision-making. Predictive analytics answers questions like "What is likely to happen?" by making predictions based on data patterns.
4. Prescriptive Analytics: Prescriptive analytics provides actionable recommendations based on predictive insights. It suggests strategies and actions to optimize social media performance and achieve desired outcomes. Prescriptive analytics answers questions like "What should we do about it?" by offering data-driven guidance for decision-makers.

Layers of Data Analytics

Social media data consists of eight layers, each holding valuable information for business intelligence (Khan, 2015). These layers can be used to develop measurable Key Performance Indicators (KPIs). Here are the eight layers of social media analytics:

1. Text: This layer encompasses written content such as posts, comments, and messages, providing insights into user sentiments, opinions, and interactions.
2. Networks: It includes data related to connections and relationships between users or entities within a social network, helping identify influencers and network structures.
3. Actions: Actions taken by users, such as likes, shares, and comments, reveal engagement levels and user preferences.
4. Hyperlinks: Information about shared links and references, both incoming and outgoing, offers insights into content popularity and external influences.
5. Mobile: Data regarding mobile device usage, including platforms and devices, helps tailor content for mobile users.
6. Location: Geographical data provides insights into where social media activities occur, aiding in targeted marketing and audience segmentation.
7. Multimedia: This layer encompasses images, videos, and other multimedia content, offering insights into visual engagement and content preferences.
8. Search Engines: Information related to social media

interactions with search engines, such as hashtags and SEO, aids in understanding discoverability and search-driven engagement.

Analyzing these data layers allows businesses to gain a comprehensive understanding of their social media presence and user behavior, enabling data-driven decision-making for improved strategies and outcomes.

WEB ANALYTICS TOOLS

The concept of digital analytics has evolved from web analytics, which is rooted in the measurement, collection, analysis, and reporting of internet data to understand and optimize web usage (Kaushik, 2009). Initially, web analytics primarily focused on websites but later expanded to encompass a broader range of online tools, such as mobile applications, search engines, and social media (Chaffey & Patron, 2012; Chaffey & Smith, 2022). Web analytics became closely associated with website analytics, limiting its scope. To address this limitation, the term "digital analytics" emerged as a more comprehensive concept. In fact, in 2012, the Web Analytics Association renamed itself the Digital Analytics Association to reflect this broader perspective (Zheng & Peltsverger, 2015). However, web analytics remains a fundamental component of digital analytics.

Another related term is "marketing analytics," which involves leveraging technology to gather market and customer data for data-driven decision-making (Huang & Rust, 2017). Digital analytics and marketing analytics share similarities in their technology-driven approaches to enhance decision-making through data. The key difference lies in their focus, with digital analytics primarily concentrating on behavioral data from various online and digital sources. Web analytics finds its origins in data mining (Singh & Singh, 2010), which deals with the analysis of big data to discover patterns and rules. Web analytics is specifically aimed at the objective tracking, collection, measurement, reporting, and analysis of quantitative internet data to optimize websites and web marketing initiatives. The goal is to understand and track user interactions with digital profiles like apps or web pages and then use this intelligence to design effective websites and improve online marketing initiatives.

In the past, web analytics primarily involved analyzing a website's log files, offering only basic data like page views. Nowadays, a prevalent method for data collection is JavaScript tagging, where a short code snippet is added to web pages. This tagging method allows for comprehensive data capture, including user actions and events on websites, and even extends to tracking social media interactions. Analyzing these logs unveils user behaviors, offering insights for website development, marketing campaigns, and more.

Web analytics tools have come a long way since the late 1990s when WebTrends emerged as one of the first commercial tools. Today, the market is flooded with various web analytics tools that appear quite similar at first glance. Key factors differentiating them include data storage, control ownership, open source or commercial nature, deployment as Software as a Service (SaaS) or in-house installation, and the need for additional support. Despite numerous options, only a handful of tools dominate the global market. Google Analytics, along with its related offerings, Facebook Analytics, Snowplow, Hotjar, and Matomo, are employed by over 100,000 website domains. Google Analytics Standard, introduced in 2005, reigns as the world's most widely used web analytics tool, boasting over 4.5 million registrations (*Web Analytics Software Market Share*, 2023).

Commonly used web analytics software includes Google Analytics, Google Universal Analytics, Google Global Site Tag, Facebook Analytics, Snowplow, Hotjar, Matomo, MonsterInsights, Baidu Analytics, Adobe Analytics, Yahoo Analytics, Urchin, and Crazy Egg. Many companies utilize multiple tools simultaneously, and the web analytics market continues to expand, encompassing areas like mobile and social analytics, targeted digital advertising, and marketing automation.

UTM Parameters in Web Analytics

Urchin Tracking Module (UTM) parameters, also known as UTM codes, are short text strings appended to URLs to track the success of specific online marketing campaign content (Hausmann & Williams, 2016). There are five key UTM parameters:

- Campaign (utm_campaign): Identifies a particular promotion or strategic campaign, grouping all content related to that campaign in your analytics.
- Source (utm_source): Specifies the traffic source, such as search engines or newsletters, that directed users to your website.
- Medium (utm_medium): Indicates the type of marketing medium where the link is used, like email or social media.
- Content (utm_content): Used to differentiate between different content types pointing to the same URL within the same campaign, source, and

medium. Often utilized in pay-per-click (PPC) campaigns or when multiple identical links exist on one page.
- Term (utm_term): Identifies the keywords paid for in a PPC ad.

When a user clicks on a tagged link, these codes are sent to various tracking tools. UTM parameters enable companies to evaluate the effectiveness of digital campaigns and pinpoint strategies to boost website traffic. For example, UTM parameters can distinguish traffic from a specific Facebook post from general website traffic. Twitter tweets can be tagged, allowing companies to compare their performance against overall website referrals.

However, UTM parameters have some limitations. The order of parameters matters; UTM parameters must precede any additional tracking parameters, or performance assessment may be inaccurate. Additionally, 301 redirects can remove tracking information, classifying PPC traffic as organic or direct. Despite these drawbacks, UTM codes are indispensable for tracking digital marketing campaigns, providing valuable insights to optimize advertising costs and campaign efficiency.

Ethical Considerations in Digital Marketing Research

The evolving landscape of digital marketing research and measurement has brought ethical concerns to the forefront. These issues stem from the interaction between communicators and consumers, and they demand structure and limitations. Professional associations in digital marketing and marketing research, often on a country level, play a key role in addressing these ethical dilemmas. One of the paramount ethical considerations revolves around privacy, a critical topic in consumer protection within the digital realm. To safeguard both consumer interests and foster online engagement, digital marketers must prioritize ethical behavior and the protection of consumer privacy.

Consumers' privacy thrives when individuals are well-informed about information practices and granted choices regarding data provision and utilization. Conversely, ethical concerns arise when personal data is gathered, or marketing contacts occur without consent. Resolving ethical dilemmas in marketing research, as with all ethical challenges in marketing, depends on the professionalism and personal values of marketing and research experts. However, three key aspects can

contribute to this ongoing process: informed consent, access to data, and robust data protection measures.

CONCLUSION

In the ever-evolving landscape of digital marketing, the ability to measure campaign effectiveness is paramount. The study has delved into various facets of this dynamic realm, from the intricate field of social media analytics to the multifaceted layers of data analytics. In concluding our exploration into the realms of agricultural brand awareness and digital marketing, it becomes evident that the synergy between these elements is crucial for the prosperity and sustainability of the agricultural sector. The journey through this research has uncovered multifaceted insights, reinforcing the notion that strategic brand cultivation and effective digital outreach are not mere luxuries but imperatives in the contemporary agricultural landscape.

In the digital age, where data reigns supreme, the ability to measure and analyze campaign effectiveness is a linchpin of successful marketing strategies. Social media analytics, web analytics, and data analytics tools provide marketers with the insights needed to make data-driven decisions. The journey into social media analytics has revealed its multifaceted nature. By mastering descriptive, diagnostic, predictive, and prescriptive analytics, businesses can unlock the full potential of their social media data. Understanding the layers of data analytics, especially within the context of social media, offers a holistic perspective on customer behavior and market trends. Web analytics, with the omnipresent Google Analytics leading the way, has become indispensable. It empowers organizations to optimize their online presence, improve user experiences, and enhance conversion rates. The advent of UTM parameters has further refined web analytics, allowing for precise tracking of campaign performance. However, as we navigate this data-driven landscape, ethical considerations must guide our actions. Protecting consumer privacy, obtaining informed consent, and maintaining transparency are non-negotiable principles. Data analytics, while powerful, should be used responsibly to build and preserve trust with consumers.

In the end, the association of brand awareness and digital marketing relies on effective measurement tools and data analytics. We've explored the different types of social media analytics, the significance of web analytics, and the tools that empower marketers in this data-

driven age. Additionally, we've examined UTM parameters in web analytics and addressed the ethical concerns surrounding data analytics. This study has provided a comprehensive overview of the strategies and tools available to modern marketers. By harnessing the potential of social media analytics, web analytics, and ethical data practices, businesses can thrive in the digital era and establish lasting connections with their audiences.

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