

Identification of the Preferences Signals of Facebook Algorithm in Prioritising Page Posts on Users' Feeds

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Abstract

With an objective to deliver a relevant experience to its users, the social media platform Facebook employs a backend algorithm to select and identify the page posts, to further populate them on the user's newsfeeds. The algorithm receives indications or signals from the user activities/actions on the platform w.r.t the posts uploaded/ publicly communicated by the pages. In this article, the authors have studied the important user actions from the Facebook algorithm point of view through a systematic analysis of academic and industry-based literature to unearth the user action preferences of the secret and always-changing Facebook algorithm. Basis the findings, the authors have also suggested a conceptual model that drives higher user engagement for the pages. Results reveal that at the page level, 'Follow' and 'Share' are positive indicators for the algorithm, while 'Unfollow' and 'Page Block' are negative signals that impact a page's visibility on the users' newsfeed. At the post level, 'Share', 'Comments' and 'Reactions' are the positive signals of rankings whereas 'Unfollow', 'Hide' and 'Snooze' are a negative set of user actions. The findings of this article are extremely vital for the millions of Facebook page owners/marketers to optimise the overall results.

Keywords

Consumer marketing, social media, Facebook, e-marketing, internet, digital marketing

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Introduction

Among all social media platforms, Facebook is the largest; all thanks to its whopping 2.6 billion monthly active user base. Since brands follow the consumers (Ashley & Tuten, 2014) hence Facebook becomes a natural choice for marketers to explore the best use of the platform to leverage its popularity and establish a deeper relationship with the users that go beyond the purchase (Park & Kim, 2014). According to Facebook's 4th quarter financial results for the year 2019, around 90 million small businesses use Facebook (Martin, 2022). Through brand pages, Facebook allows businesses to connect and engage with the audience. These pages act as an identity for the businesses on the platform (Marrs, 2020). Use of Facebook brand pages is relevant for the marketers to build relation with the customers (de Silva, 2019). Users follow or connect with the brand pages by 'Liking' them (Jahn & Kunz, 2012). User's interaction with the brand page or its content is termed as 'user engagement' which originates out of certain actions taken by the users on the pages and its content. These actions can be in the form of liking, commenting or sharing a post, clicking on a link or even tagging or checking-in on a page (Heiss et al., 2018). User engagement is considered a benchmark to define success for a brand page on Facebook (Tafesse & Wien, 2017). Earlier, marketers used to believe that boosting the number of 'Like', 'Comment' and 'Share' is an indicator of a successful marketing strategy on Facebook (Lipsman et al., 2012), while every user action on Facebook is an indicator of a unique behaviour (Lou & Koh, 2017); as a result Facebook algorithm treats and weighs all user actions distinctly and prioritise brand posts on user newsfeed accordingly (Kim & Yang, 2017). Therefore, it is important to understand user actions and their distinctiveness from the Facebook algorithm perspective. Previous studies such as Alhabash et al. (2015), Kaur et al. (2019) and Obamiro et al. (2020) have studied user actions such as Like, Comment and Share, particularly at the content level. In this article, authors have attempted to study user-driven actions holistically, that is, at the page as well as at the post or content level considering their impact on Facebook algorithm through a systematic review of academic and industry literature.

The article is further organised as follows. At the onset, literature identification criteria have been discussed. Using the defined criteria, further, the review of four relevant streams of literature has been done. These streams are Facebook brand pages, types of pages, Facebook algorithm, user engagement and its importance on Facebook and various user actions on the platform. The next sections talk about the user action preferences of the Facebook algorithm which is the result part of the study and then the proposed conceptual framework both at the page and post level. Post the framework, the theoretical bonding of the findings and theoretical contribution of the study has been discussed. Lastly, the managerial implications of the study have been mentioned along with the opportunities for future research.

Literature Identification

In this study, a systematic review of the extant literature in the domain of Facebook algorithms, user actions and user engagement has been conducted. The systematic

literature review (SLR) is a unique and organised method of reviewing literature that focuses on the 'specific and practice-relevant questions' (Briner & Walshe, 2014).

This study has explicit goals to explore the rapidly changing Facebook algorithms and to find out its subsequent impacts in terms of user actions and user engagement. With this precise agenda, the study puts down the grounds for contributing to this field of study and then provides the possible directions for future research. SLR adopts a structured approach with a set of broad principles for selecting themes and journals. The authors have collected academic, industry and peer-reviewed journal articles that addressed Facebook algorithms, user actions and user engagement. First, an orderly electronic search using several databases including ABI/INFORM Global (ProQuest), Elsevier, Social Science Citation Index, Science Citation Index, Science Direct, Springer and Emerald has been carried out. Literature based on relevant keywords such as 'Facebook', 'Facebook algorithm', 'user action', 'user engagement' and 'priority signals' has also been explored. Second, the authors have manually reviewed the journals dealing with management information systems, consumer psychology and marketing management (e.g., *Information, Communication & Society*; *Journal of Product & Brand Management*; *Applied Cognitive Psychology*; *Journal of Consumer Psychology*; *Computers in Human Behavior*; *Journal of Interactive Marketing*; *Journal of Business Research*) to ensure covering all the significant articles on Facebook and its algorithms.

Following the rules of SLR, inclusion and exclusion criteria have been set for the group of studies that are considered for analysis. The inclusion criteria ensured that the publications should be academic, industry and peer-reviewed with prime focus on Facebook algorithms and their related user actions. The studies without the proper academic background/structure or deep analysis of the usage of Facebook have been excluded. Using the criteria, 61 articles related to the Facebook algorithm and user actions published in the last 18 years, that is, between 2002 and 2020, have been identified for the study.

Results of SLR

Facebook Brand Pages

Many companies use brand pages to communicate and interact with their customers (Palazon et al., 2019; Pöyry et al., 2013) and have described Facebook brand pages as a 'social network-based online brand community'. According to Luarn et al. (2015), Facebook brand pages facilitate communication between businesses and customers, hence they are an extremely popular channel of social media marketing. Facebook brand pages enable relationship building between businesses and prospective customers (Popa et al., 2016) and enhance the probability of purchase (Lee & Hong, 2016). Facebook brand pages trigger a sense of belongingness among its users and enable them to express their sentiments about the brand to other users and thus eliminating the mental separation between users and brand (Kudeshia et al., 2016). Facebook pages help in the creation of user-generated content (UGC) for brands (Mukherjee, 2019).

Types of Facebook Pages

Facebook classifies pages into two broad categories, namely ‘business or brand pages’ and ‘community or public figures’ (Facebook Help Centre, n.d.). By default, Facebook offers similar features and tools to all the pages. These features are mainly core and custom in nature. Core features are the ones that come mandatory with the pages such as Like, Follow, Share and Messaging. Core features cannot be disabled by page admins. While, the custom features on the pages can be activated or enabled by the page admins, based on the nature and business requirements. For example, appointment scheduling, events posting, jobs and groups. This study majorly focuses on the core user actions related to the business or brand pages.

Facebook Algorithm

Algorithms are the set of instructions programmed to make certain judgments (Usher-Layser, 2016) while Knuth (2014) termed algorithms as ‘the instructions those are planned carefully to follow a sequence’.

According to Barnhart (2022), the ordering and sequencing of Facebook posts are controlled by its algorithm as a result users only see the most relevant posts, while to Cooper (2022), marketers who do not pay attention to Facebook algorithm often struggle to reach a larger audience for their branded content which ultimately results into fewer user engagement. The Facebook algorithm has gone through major changes in recent years to improve the newsfeed of the users by prioritising quality content (Boyd, 2019). The Facebook algorithm selects posts on user newsfeed based on certain ‘ranking signals’ and these signals are based on user actions on the posts (Lua, 2017). Posts on a Facebook newsfeed depend on the actions of multiple stakeholders (Thorson, 2019). Gollin (2021) in his study has mentioned that Facebook algorithm changes reflect the platform’s endeavour to counter biased and fake news. After 2018, the algorithm started considering multiple user actions to judge authentic posts and prioritise them.

User Engagement and Its Significance on Facebook

With the emergence of Web 2.0, the term engagement has evolved as a non-transactional construct that is employed to explain the specific interactions and/or interactive experiences of the participants (Pletikosa Cvijikj & Michahelles, 2013; Vivek et al., 2012) have defined engagement as the intensity of an individual’s participation with business offerings and activities. Brodie et al. (2013) in their study have mentioned that in an online community user engagement is the ‘interactive experiences between community members and the brand, and/or among the other members of the community’. The study has also indicated that engagement is supremely context-dependent and dynamic in nature which changes over time and situation. For McAlexander et al. (2002), the role of user engagement is crucial in online brand communities. User engagement impacts organic or unpaid reach for a Facebook page and its content (De Vries et al., 2012; Sabate et al., 2014). Various

terms such as ‘participation’, ‘interaction’ and ‘involvement’ are often used to talk about ‘engagement’ (Poorrezaei & Heinze, 2014). For marketers, engaging users with the page and its content on the platform is quite a challenge (Swani & Milne, 2017) and thus ‘user engagement’ has emerged as a science.

Table I. User Actions on Facebook.

Page Level		
Sr. No.	Action Type	Description
1	Like	Primary action for users to connect with a page
2	Follow	When a user likes a page it also follows it by default. Further, a user can unfollow the page without unliking it.
3	Share	The share button allows the users to share a page on their timeline, in groups or with their friends via a Facebook message.
4	Save	Action to save a page link for later use
5	Suggest edits	This action enables users to suggest page information that might be missing or incorrect, such as phone number, email, address or even the page category to page admins.
6	Invite friends	This action help the users to invite their friends to Like or Follow a particular page
7	Block page	Blocking a page stops its interaction with the users, i.e., replying to a comment or posts. This action automatically unlike and unfollow the page
8	Find support or report page	This action is for users to report the page which they feel is inappropriate in nature.
9	Call to action	CTA button drives the user’s action as per the business need. For example, website visits, sign-ups, calls, bookings, app downloads, watch video. Generally, this action is used to fulfil a macro business objective
10	Send message	Page messaging helps businesses conveniently and privately connect with the users about multiple topics such as customer services, information on products and services.
Post Level		
1	Reactions	Action that enables the users to express their feelings on the posts
2	Like	Like shows user’s agreement for a post/content
3	Comment	Comment allows users to respond to a post
4	Share	Through this action, a user can share a particular post among Facebook friends
5	Hide post	This action allows users to hide posts that they see on the newsfeed
6	Save post	Action to save a post link for later use
7	Report post	This action is for users to report the posts which they feel are inappropriate in nature.
8	Snooze	Action to temporarily hide posts from a page. Generally, a page can be snoozed for 30 days at once.
9	Unfollow the page	By this action, a user can choose to stop seeing posts from a page without unliking it.
10	Turning on the notifications	By turning the notification on for a post, a user can enable receiving all comments on it.

Source: Facebook Insights.

Facebook Algorithm and Its Preference

In this section, user actions deemed significant behavioural signals by the Facebook algorithm have been identified by studying the recent updates on the algorithms. Industry-based literature has been reviewed to uncover these actions (Table 1).

Page Level

The ‘Liking’ of a brand’s Facebook page is a way to give positive feedback and connect the user with the brand (Halaszovich & Nel, 2017). For the Facebook algorithm, liking a page is the basic criterion to show page posts on the user’s newsfeed (Maree & Heerden, 2020). According to Facebook, when a user likes a page, it reflects its support for the page. Whereas when a user follows a page, it shows the intent to receive updates from the Page in the newsfeed. Users who like a page will automatically follow it. A page can be unfollowed even without disliking the page to stop getting updates from the page. Similarly, a page can be followed, even if it is not liked by the users

The Facebook algorithm considers page ‘unfollow’ as an important signal of user intention (Kirkbride, 2021) and weighs more than ‘follow’ as the latter comes as a default feature for all the users liking a page. For users, a page ‘share’ is a way to recommend a page to a larger audience by sharing it on their own timeline, groups events or as a message whereas ‘invite a friend’ enable users as well as page owners/admins to invite specific friends to Like or Follow the page (Yalove, 2020). Both page ‘share’ and ‘invite a friend’ helps in the organic growth of the page. ‘Save’ and ‘Suggest Edits’ for a page are similar to that on the posts which allow users to visit a page later in the future and suggest edits to the page information, respectively. There is no evidence of any weightage given to these two actions by the Facebook algorithm. Blocking a page is a strong signal of negative user behaviour and automatically dislikes and unfollows the page for the users thus restricting any interaction between the user and the page (Delfino, 2019).

Call to action (or CTA) is an important user action to fulfil business objectives but Facebook considers it very seriously. If the Facebook algorithm detects any attempt to mislead the users through the CTA action like driving traffic to a low-quality website or web page having more bounce rate then the page can get penalised by getting lower reach and ultimately the user engagement. Using the ‘send message’ action, users can privately communicate with the pages. This action counts as an interaction but does not impact ranking signals. Page Check-in and Page Tagging are a set of user actions that positively impact page organic growth and are treated as a vital sign of user engagement by the Facebook algorithm. These two features are custom in nature and can be activated as per nature and the need of the business. ‘Check-in’ is significant for businesses with physical locations only while tagging can be done for all page types.

Post Level

In 2020, Facebook’s focus was to make its platform transparent by giving more power to the users to decide what to see (Cooper, 2022). To rank posts on user’s

newsfeed, Facebook employs a backend logic called 'ranking signals'. These signals consider multiple factors to decide on the rankings and are divided into two classes 'active signals' and 'passive signals'. Active signals get generated through user actions while passive signals are based on user behaviour.

'Likes', 'Share', 'Comment' and 'Reactions' have been considered as vital behaviour as it indicates the level of user engagement with the branded content (Antoniadis et al., 2019). The 'Like' feature on Facebook is a vital indicator of positive feelings (Hossain et al., 2019). According to Teehan (2016), everything on Facebook is not likeable hence the role of reactions becomes more important both for the users and the platform. Facebook algorithms give more weightage to Reactions than a simple 'Like' and consider them prominent user behaviour. In April 2020, Facebook added 'care' emoji reactions (an emoji with a heart) to let users show their support during the COVID-19 crisis for their loved ones (Lunden, 2020). Through 'Reactions', Facebook endeavours to map user behaviour more specifically.

According to Piolat et al. (2005), the creation of a message on social media needs more cognitive effort than consuming a message and thus manifests a higher level of psychological effort. On Facebook, comments are the equivalent of electronic word of mouth (eWOM) which shows users' opinions of the brand post (Lee et al., 2020). User comments on a post are another important factor that impacts ranking signals. Multiple comments on a particular post are considered a sign of a 'meaningful interaction' (Gollin, 2021) and the algorithm prioritise such posts (Montti, 2019). Also, with the recent update on the Facebook algorithm, now the emphasis is more on the personal relationships or affinity audience and thus post by friends gets priority in ranking over those posted by the brands (Cote, 2021) which underline the importance of post share and thus making it a vital ranking signal. A post share is considered a recommendation that does not just appear on the newsfeed of the friends but also on the profile of the users who share it. Hence, it shows the strategic behaviour of self-presentation that needs more effort (Ng, 2016; Van Dijck, 2013). From the algorithm point of view, a post share is the most important signal of user engagement.

Turning on the notification for a post is a way to receive a notification when other users comment on that post. Users would not get notified when someone replies to a comment. This action has no significant weightage on ranking signals whereas 'Save' a post allows users to visit the post later. External webpage links on the posts are also a vital signal for Facebook algorithm and lower the reach of posts containing links to low-quality web pages (Montells, 2017).

There are many negative actions that users can perform on the posts. These actions negatively impact ranking signals:

1. Hide a post: Action to hide a particular post to disable its appearance on the newsfeed
2. Snooze the page for 30 days: This action allows users to temporarily stop seeing posts from a page for the next 30 days
3. Unfollow the page: Through this action, users can tell Facebook to stop showing posts from a particular page.
4. Report the post: Users can flag post inappropriateness by reporting it.

Conceptual Framework for Page-level and Post-level User Actions

Based on the above review of literature, we propose conceptual frameworks for user actions at page (refer to Figure 1) and post (refer to Figure 2) levels respectively.

The Facebook algorithm treats user actions basis the intention. These actions are positive and negative in nature. At page level positive user actions, namely 'Follow' and 'Share' are treated significantly by the Facebook algorithm which impacts organic reach for the page and its posts whereas the negative set of actions such as 'Unfollow' and 'Page Block' are the important indicators of the user's preferences.

On the post front, 'Share' followed by 'comments' and 'reactions' are positive indicators for the algorithm.

Negative user actions on the post such as 'Hide', 'Snooze' and 'Unfollow' help algorithm to understand about users disliking. The literature review has also highlighted that posts shared by friends hold greater importance for the algorithm than posted by the pages.

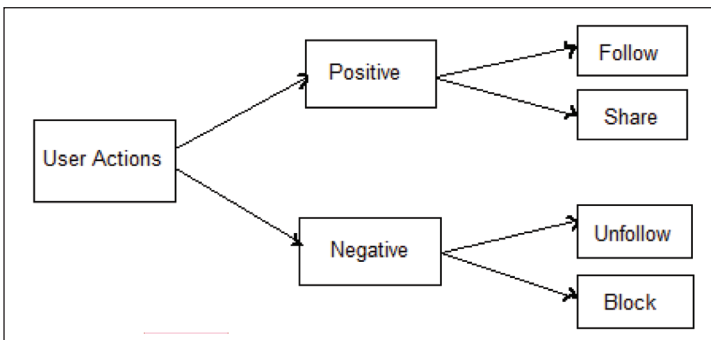


Figure 1. Page Level User Actions.

Source: Facebook Insights.

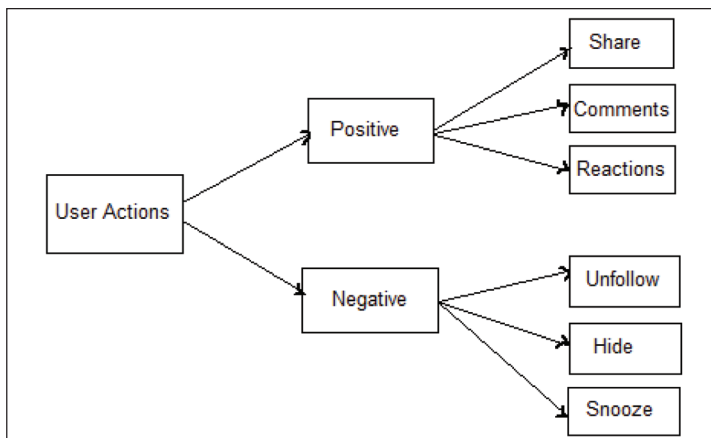


Figure 2. Post-level User Actions.

Source: Facebook Insights.

Theoretical Bonding of Significant User Actions

In this section, the authors have mapped user actions and their behaviour discussed at the page and post level with multiple behavioural theories. The next few paragraphs discuss all those theories.

The social identity theory explains multiple user actions w.r.t online communities. According to this theory, people construct their own identity by getting affiliated with group identity (social identity). This social identity contributes to brand attachment and a result of a sense of belongingness for the brand community. This belongingness triggers interaction among its members (Thomson et al., 2005). This argument validates 'comments' as an important indicator of user behaviour on an online community like the Facebook page. This theory, further proposes that people like to maintain a positive social identity to boost self-esteem and in the event of an unsatisfactory identity people may seek to leave the group (Brown, 2014). This proposition explains about 'following' and 'unfollowing' of brand pages by the users.

The theory of planned behaviour suggests that an individual's attitude influences their behaviour (Maxian et al., 2013). In a Facebook brand page context, 'attitude' can be seen as a user's feeling or bonding about the brand which may influence the consumption of the branded content and action on it.

According to the self-expansion theory (Sprecher et al., 1988), individuals seek to expand their selves by acquiring perspectives, resources and identities to enhance their ability to achieve goals. From a Facebook brand page perspective, this argument also highlights 'interaction' and 'sharing' as significant user behaviour.

Theoretical Contribution

This study as a pioneering effort has explored the likings and disliking of the Facebook algorithm that directly impacts user engagement rate for millions of brand pages and their content on Facebook. Based on the literature review the authors have concluded that Facebook advocates for better user experience within its platform and hence uses a backend algorithm to decide about the posts to be shown on the user's newsfeed. This algorithm gets signals from the user actions and thus decides upon the ranking and priority for the posts.

All user actions are not equally weighted by the algorithm. Actions that represent user intention and behaviour are considered indicators of significance whether positive or negative in nature. Thus, it can be underlined that user action is the first step towards user engagement on a Facebook page. Without having an understanding of significant user actions all efforts towards generating engagement can be a futile exercise.

Managerial Implications

The business objective of using Facebook pages is to engage with prospective and current customers. The significance of 'user engagement on Facebook' can be realised by the outcome of the Google search engine results that reflect over 657 million listings for the search query 'how to get higher user engagement on Facebook'. In this quest to attain significant user engagement with branded content,

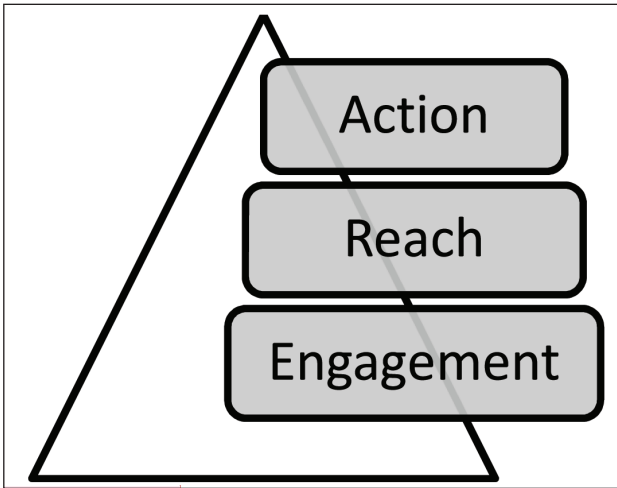


Figure 3. Steps of User Engagement.

Source: Result of SLR.

millions of businesses across the globe spend billions of dollars every year along with huge investments in tools and technologies. But on the other hand, for Facebook, as a platform user experience, is 'supreme' which defines its usability and ultimately its existence (Figure 3). Through its data-driven backend algorithm, Facebook decides on the page's/post's visibility and priority on the user's feed. The information source for the sophisticated algorithm is the user actions which particularly reflect intentions of the users on the platform. This study is significant for Facebook business page owners/admins to understand important user actions from the Facebook algorithm perspective. Generally, the numbers of 'Likes' are considered an indicator of post popularity. This study has shown that the Facebook algorithm prefers 'Reactions' over 'Likes'. User engagement on a Facebook page defines its success but the engagement is the outcome of user actions. By focussing on the important user actions, the organic reach of the page and its posts can be increased, that is, visibility for the branded content on the newsfeed of the users. Since user engagement is the function of reach hence the probability of a post's consumption and interaction with the users becomes much higher. Also, by enabling custom page features such as 'Page Check-ins' and 'Page Tagging', new followers can be organically acquired.

The COVID-19 pandemic has compelled most businesses to go online and explore economical ways for customer outreach. Channels like Facebook pages can be a vital source for product/service exhibition and customer interaction. But to cut the clutter in the large Facebook page ecosystem, page admins need to focus on the important user actions to organically enhance page's/post's visibility among the target audience present on the platform.

Limitations and Future Scope of Study

This study has examined the extant literature in detail to study Facebook algorithms and develop conceptual frameworks for user actions which can provide a direction

for future researchers. However, this study has adopted the SLR approach which is qualitative in nature. Hence, it has provided a base for researchers to empirically test the findings to establish their analytical validity.

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