# Thumb Up or Head Down? The Impact of Upvote on Social Media Self-efficacy

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*Abstract:* Social media platforms have precipitated a paradigm shift in the way individuals interact and perceive their social context. This research delineates the intricate interplay between social media self-efficacy (SMSE) and the one-click feedback behavior. It employs a systematic review of extant literature surrounding the theoretical underpinnings of SMSE, alongside user behaviors and purposes pertinent to online social engagement. Furthermore, the research unravels the sequences of how unitary behaviors swiftly culminate in the attainment of mastery experience, one of the four elements of SMSE, while casting no positive reverberations on the other three facets — vicarious experiences, social persuasion, and emotional states — especially when juxtaposed with in-person interactions. Moreover, the surfeit of information encountered on these platforms exacerbates the process, engendering depressive symptoms and pressure among social media users. In this narrative, the research elucidates potential interventions like decelerating users' viewing speed to ensure adequate cognitive processing, thereby nurturing a more wholesome digital interaction ecosystem. Through rigorous analysis, this study dissects the considerations for the design of interfaces on social media platforms to bolster positive user experiences and overall psychological resilience.

*Keywords:* social media, one-click feedback, self-efficacy

## 1. Introduction

Human cognitive development and emotional growth are fundamentally intertwined with social interactions and relationships. In the epoch of the digital landscape, social media is not just a repository of information, it is a dynamic conduit for global interaction. Platforms such as YouTube, Twitter, and Instagram have transformed the way we connect, introducing instant feedback mechanisms like the ubiquitous 'like' button. Compared to commenting, where users may encounter opposing replies and the uncertainties of harassment or cyberbully, 'like' facilitates quick interactive behavior and provides a simple-visualized form. Moreover, social media platforms employ algorithms that subsequently feed content that aligns with users' previous 'likes' records. At a glance, 'like' appears to be an interaction form to express agreements, and encourage continual internet usage among users. Nevertheless, this singular interaction could have negative individual psychological effects, such as the SMSE.

Emerging research indicates a paradox: frequent 'like' behavior is correlated with an uptick in depressive symptoms, suggesting a decrease in well-being and motivation, contradicting the

anticipated positive outcomes associated with the 'like' feature. An early study from Meta revealed that interactions devoid of substantive content have minimal impact on fostering genuine social connections [1]. Other potential incentives include the moral pressure related to social reciprocity [2], the social comparison and self-regulation on contents or online profiles [3]. The underlying psychological mechanisms of 'like' behaviors, and their effect on personal performance in social media spaces, are yet to be fully understood. These studies seeks to unravel the complexities of how simplistic forms of social media feedback, like 'like', might be eroding social media self-efficacy and precipitating negative emotional states in users.

In this paper, we examine the concept of SMSE within the realm of social media and the influence of feedback on individual cognition and emotion. Subsequently, through theoretical analysis, the research analyzes the correlation between the inadequacies experiences in each element of self-efficacy and 'like' behavior on social media, and provides suggestions that apply multiple emotional reactions (similar to functions already implemented on Instagram and Messenger) to replace unitary one-click elements. Additionally, this research offers insights into pertinent design questions for social media platforms, with the aim of devising more effective interaction strategies and recommendation systems. Our goal is to contribute to the development of a digitally interconnected society where online interactions enhance, rather than diminish, individual self-efficacy and mental well-being.

## 2. Related Works

### 2.1. Self-efficacy and social media self-efficacy

The term 'self-efficacy', as defined by Bandura [4] encapsulates an individual's belief in their capability to execute behaviors necessary to produce specific performance achievements. With the proliferation of digital networks, social media self-efficacy (SMSE) is applied to describe an individual's belief in their capability to execute behaviors necessary to achieve specific performance outcomes on social media platforms [5]. SMSE encompasses users' confidence in their ability to effectively navigate through social network site (SNS) content, forge and maintain online relationships, and adeptly adjust to the ever-evolving digital world.

Besides SMSE, researchers also introduced computer self-efficacy (CSE), also called technical self efficacy [6], addressing the technical difficulties that still emerge in operating computers or smartphones. Other types of self-efficacy, as indicated in Table 1, include emotional self-efficacy (ESE) [7] and internet self-efficacy scale (ISS) [8], were proposed to narrate different contexts when users interact with the internet. The distinctiveness of SMSE lies in its focus on individual interacting behaviors like content sharing, feedback provision, and online group communication. To evaluate individuals' self-efficacy in terms of their ability to overcome tasks and prevent bullying on SNS, Ruggieri's group [9] introduced the social network site self-efficacy scale (SNS-SES) for its integration of different types of self-efficacy into a comprehensive measure. This confluence highlights the interrelated nature of these self-efficacy domains. Individuals who exhibit a high degree of task-oriented self-efficacy in resolving technological issues are also likely to be proficient in social media navigational skills, such as using search functions, replying to comments, and sharing personal experiences online.

Existing research also suggests that individuals with varying levels of SMSE are predisposed to spreading ideas, assimilating information, and actively soliciting feedback within their online social networks [10]. The narrative further unfolds, showing that individuals with high SMSE tend to trust digital information more, often displaying a preference for online sources over offline, real-world counterparts [5]. This proclivity underscores their ingrained confidence in the digital ecosystem and the authenticity of its content.

Table 1: Types of Self-Efficacy in Existing Researches

| Term | Definition | Source |
|------|-----------|--------|
| SMSE | The belief in individuals' ability to effectively navigate various social media platforms, create contents, and manage online interactions. | [5] |
| CSE | The belief in using software applications, troubleshooting basic technical issues, and understanding related technologies. | [6] |
| ESE | The belief in managing individuals' own emotions, empathy, handling stress, and resilience during online interpersonal relationships. | [7] |
| ISS | The belief in abilities that include browsing, using search engines, understanding online security, navigating websites, and using online tools and resources. | [8] |

## 2.2. The interactions on social media

This section must be in one column. Interactions on social media are vital for virtual communities, encompassing a myriad of forms such as likes, comments, shares, and follows. Research efforts have sought to categorize the complex ways users engage with these interactive tools, examining how each form of feedback corresponds to users' underlying motivations for maintaining active presence on social networks. Ellison et al.'s conceptual model [11] posited that users exhibiting high levels of engagement in viewing and clicking content on social media may harbor transient intentions of time-investment towards relationships, irrespective of their affinity towards the content. Survey data from Meta revealed that one-click communications, such as 'likes', do not necessarily foster closer relationships, to the same extent as more elaborate interactions, including commenting or sharing with accompanying text. These online interactions have little impact on users' offline relationships with family members or childhood friends [1].

Simultaneously, as users also use the internet to search for information, existing studies have also explored the relationship between the nature of content and user intent. Bakhshi et al. [12] unveiled that social media posts featuring human faces are more likely to attract 'likes', which indicates that the type of content is one of the elements impacting users' interactions. Similarly, the follower count can increase the likelihood of engagement. Platforms that emphasize original content, such as expertise driven posts, tutorials, and forums, demonstrate a significant correlation between the value of content and user feedback, which, in turn, affects online engagement levels [13].

Overall, these explorations underscore the existing types of interactions on digital social networks. Feedback without clear attitudes seemingly exerts minimal impact, particularly on well-established offline relationships. The essence of interactions, time investments, and content emerges as cardinal elements in retaining users, transcending the varying forms of interactions.

## 2.3. The relation between individual psychological states and online feedback behaviors

As social creatures, our need for feedback is one of the ways to form our self-evaluation and social standing. In the impersonal realms of the internet, the feedback is often quantified by simple metrics, which can have profound effects on individuals' emotions and psychological states. Existing research from the sequential experiment by Verduyn et al. [14] noted that subjective well-being is negatively impacted by the passive usage of social networks, such as scrolling down feeds or watching others'

photos, profiles and statuses. This could be attributed to the narrative that active interaction alone is insufficient to enhance individual well-being.

From another perspective, the level of SMSE has been found to influence how users interact with social media feedback. According to Hocevar and colleagues [5], users who primarily seek information on social platforms tend to have higher levels of self-efficacy, which drives them to engage more deeply with content and take others' feedback into consideration. It's important to note that a high frequency of social network site usage does not necessarily equate to addiction. Individuals with high self-efficacy are able to focus their online activities on areas relevant to their objectives, as supported by the findings of Iskender and Akin [15], who identified a positive correlation between social self-efficacy and internet use but not addiction.

The simplistic feedback mechanisms like the 'like' button can have unintended negative consequences on mental health, even as they are used for identity construction and impression management. However, existing literature has not thoroughly explored the specific impact of such feedback on SMSE. Therefore, this paper propose to bridge that gap by employing theoretical and qualitative analyses to clarify the psychological mechanisms that underpin the relationship between SMSE and unitary social media feedback.

## 3. The analysis of the negative impacts of homogenized feedback on social media self-efficacy

The synthesis of existing research lays the groundwork for understanding the complex effects of digital interactions on SMSE. This section aims to build upon that foundation, critically examining the potential adverse effects of simple, instantaneous, one-click unitary feedback—most notably, the 'like' button—on SMSE. Our analysis draws on Bandura's four elements of self-efficacy [4]: mastery experiences, vicarious experiences, social persuasion, and emotional states. We aim to explore how these quintessential components are influenced by such interactions.

### 3.1. Mastery experiences

Mastery experiences are pivotal in building SMSE, representing the tangible rewards users gain from overcoming online challenges or achieving meaningful connections. The 'like' button, while offering immediate and accessible interaction, often results in superficial mastery experiences. This simplicity can undermine the depth and richness of learning and accomplishment traditionally associated with more complex tasks or interactions. Compeau and Higgins [6] emphasized the motivational power of tangible dividends, such as overcoming technical challenges or forming genuine connections, which the 'like' button might not fully provide due to its ease and instantaneity. In response, social media platforms have developed applications and refined interface systems, continuously diminishing the operational threshold of web applications to invigorate users' motivation for internet usage. The 'like' button emerges as one such feature, devised to reinvigorate inactive users on social networks and perceived as a catalyst for enhancing mastery experiences by facilitating instant social interactions.

Nonetheless, Nonetheless, cognitive processing through these methods often results in a fleeting sense of achievement, lacking the enduring satisfaction derived from more significant accomplishments. In conventional communication paradigms, such as direct verbal dialogues or personalized meetings, information recipients often had the time and space to delve deep, reflect, and tailor appropriate responses. Contrarily, the ease of operation characteristic of social media propels individuals towards replicating unitary behaviors, which eventually evolve into instant gratification behaviors devoid of clear expectancy [16]. This transition causes further problems of self-control including loss of focus and addiction [15].

## 3.2. Vicarious experience

Vicarious experiences, a critical component of SMSE, involve learning through observation and empathetic engagement with others' experiences. Traditionally, this empathetic conduit is manifested in physical interactions through actions like applauding or giving verbal accolades, serving as tokens of appreciation and acknowledgment. These are significant gestures for maintaining self-efficacy but are limited in digital media. Within the fragmented, fast-paced milieu of online content, users often lack ample time for profound emotional sorting and comprehensive cognitive engagement with the content before executing a clicking behavior.

Sherman's neural examination, which employed fMRI techniques [17] to investigate participants' neural responses during the provision of positive feedback on Instagram, delved into the cognitive activity occurring when participants 'like' content. The findings spotlighted a propensity among participants to lean on intuitive judgment, sidelining rational deliberations. This transient engagement during content browsing often leads users to 'like' content based on fleeting emotions, cursory judgments, or prevailing societal norms. Such interactions lack depth, as they overlook a meticulous consideration of the content creator's intent, background, or emotional state, thereby preventing users from deriving meaningful vicarious experiences from the content they ostensibly appreciate. In essence, the digital landscape's pace and structure might be hindering users from fully immersing themselves in, and benefiting from, the rich tapestry of shared experiences.

Additionally, the cognitive models of imitation, also known as 'mirror neurons' [18], highlight how these neurons facilitate empathetic connections and learning through observation. Users might unconsciously adopt behaviors, norms, or communication styles they observe online, which might be less activated in the rapid, one-click interactions. Additionally, the formation of echo chambers, where users are primarily exposed to content aligning with their pre-existing beliefs, can further limit the scope and depth of vicarious experiences.

## 3.3. Social persuasion

Social persuasion in social media involves influencing attitudes and behaviors through online interactions [4]. While many studies have explored the relationship between levels of content credibility [19] and the discrepancy between offline and online social persuasion [20], few studies have explored social persuasion from the standpoint of users who actively partake in 'like' actions on social platforms. Our analysis can begin with self-persuasion, a component of social persuasion that affects individual SMSE. Social persuasion includes both external persuasion and self-persuasion. In the context of social media, self-persuasion is the process whereby individuals persuade themselves, often without direct external influence. Users may feel compelled to 'like' popular content or engage in reciprocal liking, even if it doesn't resonate with their genuine interests or beliefs, leading to a phenomenon of 'social proof' [21] where the popularity of content sways individual opinions and behaviors.

When users click 'like', they may subconsciously expect likes in return on their own content [22]. Reciprocal actions can serve as a form of social persuasion. For instance, when a user likes or shares another user's content, it can persuade the recipient or others in the network to engage in similar reciprocal actions. This social exchange can potentially influence users' attitudes, behaviors, and perceptions. Moreover, users might be persuaded to engage in reciprocal activities due to social norms, expectations, or the desire to maintain positive social relationships on the platform. Over time, this reciprocal expectation can create a pressure to engage in liking behavior, even when users do not genuinely appreciate the content they are liking [23].

Furthermore, this external and self-persuasion through 'likes' creates a feedback loop, intensified by algorithms that tailor content based on these interactions, potentially reinforcing certain attitudes

and behaviors and creating a cycle that can be challenging to break. The idealized versions of reality often portrayed on social media can pressure users to conform to these ideals, leading to feelings of inadequacy and a dissonance between one's authentic self and their online persona.

### 3.4. Emotional states

The emotional states on social media are significantly influenced by the nature and depth of interactions [24]. Besides the content in specific contexts, the ability of users to gain or provide emotional support significantly affects their emotional states. Direct emotional support describes the engagement where users request or provide emotional support based on their genuine emotional needs within the social community. Li's group initiated an experiment [25] to instruct chosen testers to post a 'support-seeking' post that asks emotional, comfort or acceptance from others on their social network site (SNS). Their analysis, based on the collected data, indicated that a greater sense of support is perceived from comments than from one-click reactions, and the number of 'likes' is not affected by the positive or negative tones of posts.

Another type of emotional support involves users' expected virtual benefits, which translate into positive emotions, from interactions is interpersonal relationships, further impacting the intention to click the like button[26] [2]. While it seems that users with strong social networks receive more positive emotional support, pressure and anxiety can emerge when behaviors are obligated. Over time, this could lead to a form of emotional dissonance where there's a disconnect between one's displayed emotions and actual feelings. This dissonance can impact users' motivation to use the internet [27]. Users are aware that the likes they receive are more about networks than the content they share, further reducing users' SMSE as well. Additionally, if users feel the need to constantly engage in liking behaviors to maintain social appearances or relationships, this could further lead to fear of missing out (FOMO) [28] or worry about social standings, which will negatively impact the emotional conditions, and SMSE.

It's important to note that the four elements in SMSE are not mutually exclusive but deeply interconnected, each influencing and being influenced by the others. For example, the social persuasion through "likes" can affect individuals' emotional states, which in turn, can impact their mastery experiences and vicarious learning opportunities. The instant gratification derived from 'likes' may lead to a superficial sense of accomplishment, and over time, to desensitization, where the impact of content becomes diluted due to repeated exposure. On the other hand, users who seek valuable suggestions and emotional support do not receive profound responses from one-click feedback. These results combined lead to inadequate SMSE when users interact with the unitary function.

### 4. Discussion and conclusion

With meticulous analysis, this research builds upon a theoretical demonstration of the intricate relationship between SMSE and one-click feedback actions on social media platforms. The one-click feedback behavior on social media, though initially appearing beneficial, may not effectively motivate users due to its shallow nature of engagement. This simplistic interaction lacks the depth required to build genuine SMSE, particularly when compared to the stronger connections formed through more time-intensive and profound offline interactions like those in familial or marital relationships. A more nuanced and hierarchical feedback interface is needed to better support SMSE. While such interactions may bolster a sense of mastery, their impact on other key components of SMSE — such as vicarious experiences, social persuasion, and emotional states — is less significant than that of face-to-face interactions.

Notably, some platforms, such as Instagram and Apple Message, have evolved their feedback functions from a simple click to a 'long-click', allowing users to select an emoji representing their

specific emotional responses. As illustrated in Figure 1, this enhancement extends the duration of user engagement with a post, fostering more thoughtful cognitive processing and promoting a more categorized perception of content. It also enables algorithms to tailor content recommendations based on these more nuanced user responses. Further development of similar functions or experiments could be proposed in the future to enhance healthier digital interactions.

This research delves into a qualitative analysis process. Further quantitative research could explore the longitudinal impact of 'like' behaviors on the user's SMSE, investigate thresholds for content desensitization affecting SMSE, and examine the effects of dimensional social persuasions on SMSE, among other areas [29].
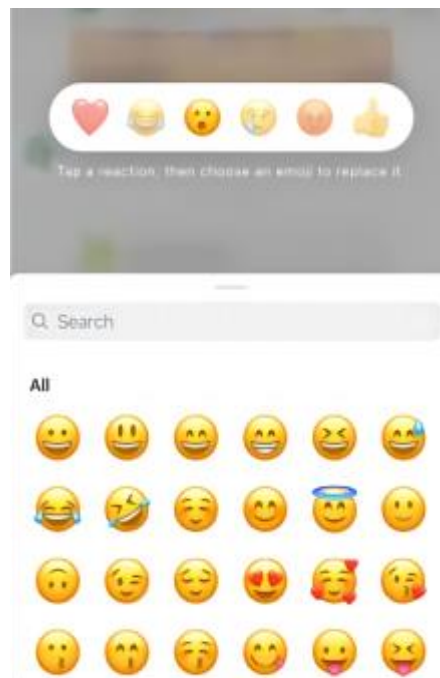


Figure 1: The Existing 'Long-click' Emoji Interface from Instagram

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