Humanities & Social Sciences Communications

ARTICLE

https://doi.org/10.1057/s41599-025-04882-0 OPEN

Information seeking and affective relationship building in influencer marketing: the role of social media affordances

Rang Wang[1], Sylvia Chan-Olmsted[2] & Qi Zhou[3,4]✉

Influencers' persuasive power is rooted in the informational and emotional support they offer to followers through a certain form of relationship. With a focus on the role of "platforms" in the process, this study adopted the technology affordance lens and a national survey to examine how affordances of visibility and engagement affect followers' information seeking and affective relationship-building activities in influencer marketing, and consequently contribute to purchase intention. Additionally, the differences in the patterns among three major influencer marketing platforms (i.e., Instagram, YouTube, and Facebook) were explored. Through a national online survey in the US, the results revealed that product visibility, triggered engagement, and social presence engagement were positively related to information seeking; visibility control, social presence engagement, and synchronous engagement were positively associated with affective trust development. The three platforms differed in some of the association strengths between affordances and follower activities. The study added to the literature by revealing the underexplored contextual roles of media technology affordances in influencer marketing and offering platform-specific granular insights.

[1] School of Journalism and Information Communication, Huazhong University of Science and Technology, Wuhan, Hubei, China. [2] College of Journalism and Communications, University of Florida, Gainesville, FL, USA. [3] Center for Studies of Media Development(CSMD) of Wuhan University, Wuhan, Hubei, China. [4] School of Journalism and Communications, Wuhan University, Wuhan, Hubei, China. ✉email: jennyzq1020@gmail.com

The advancement of social media technologies and the emergence of social media influencers have largely changed how we perform daily activities such as shopping. Today, influencer posts are a primary way for consumers to receive product information and shopping inspirations (SlickText, 2021), and those contents are much more trusted than traditional advertisements (IZEA, 2022). Working as content producers, fellow consumers, and community managers, influencers offer followers not only informational (e.g., product information) but also relational, especially emotional, values (e.g., emotional bonds) (Campbell and Farrell, 2020; García-Rapp, 2017). Followers consider influencers as both trusted information sources and remote friends with whom they develop affective ties (Berryman and Kavka, 2017; Lou, 2021). These characteristics of influencer-follower relationships made influencer marketing effective.

While there has been research on information seeking and affective relationship building in influencer marketing (e.g., Lou, 2021; Morton, 2020), prior research concentrated on factors related to influencers and followers, largely overlooking the role of "platforms" in these processes (Sundermann and Raabe, 2019). As the most critical technology infrastructure supporting influencer marketing, platforms have the potential to shape communication processes and consequent consumer behaviors (Yadav et al., 2013). Understanding the relationships among platform characteristics, follower activities on the platform, and outcomes of influencer marketing efforts contribute to not only theoretical aspects for better comprehension of the human experience constructed by media technologies and marketing communications on social media, but also practical applications as there are media planning and management implications from the perspective of both advertisers and media brands.

In an attempt to bridge the research gap, the current study draws on the technology affordance perspective (Hutchby, 2001). This perspective focuses on distinct platform characteristics, instead of platforms as a whole, to offer more nuanced and durable theoretical implications (Fox and McEwan, 2017). Whether a media platform becomes less popular or fades to obsolescence, the identified relationships between platform characteristics and outcomes would persist (Fox and McEwan, 2017). It is thus a helpful lens to investigate the ever-changing social media landscape. In addition, with the core proposition that neither technologies nor users individually are sufficient to explain technology use, the affordance perspective considers not only the objective properties of media platforms but also the divergent user perceptions and experiences within the platforms (Evans et al., 2017; Fox and McEwan, 2017). Such an integrated approach provides a meaningful way to bridge the gap among platform characteristics, user activities, and marketing outcomes. The perspective thus helps us better conduct influencer marketing on social media.

Centered on the two essential user activities in relation to influencer marketing, namely information seeking and affective relationship building, this study examined how platform affordances associated with the two activities and consequently contributed to followers' intentions to purchase influencer-recommended products. In addition, to offer a more granular insight into the affordance perspective in the context of influencer marketing, this study compared Instagram, YouTube, and Facebook, three major platforms for influencer marketing, in terms of the paths and strengths of affordance-behavior associations.

Literature review

In this section, we first reviewed the technology affordance perspective and clarified some key conceptual inconsistencies in the literature. Next, we introduced social media affordances of visibility and engagement to establish their associations with information seeking and affective relationship building. The latter was indicated by affective trust building in this study. Finally, we discussed how information seeking and affective trust building contribute to purchase intention.

The technology affordance perspective. Originally coined by ecological psychologist Gibson (1986) to refer to actors' perceptions of possible actions on an object, the concept of affordance was applied to technology by Hutchby (2001) to describe "the relationship between properties of the artifacts and capabilities of the users that establishes the way that the artifact would be used" (Norman, 2013, p. 11). While agreeing on the broad conceptualization of affordances as action possibilities and the notion that it address the mutuality between users and technologies (Evans et al., 2017), researchers adopting the umbrella term of affordance actually have diverse focuses. Existing explications may lean more toward either the technology side (e.g., Sundar, 2008) or the human side (e.g., Zhao et al., 2013). To increase the theoretical consistency and analytical integrity of affordances scholarship, Evans et al. (2017) argued that an affordance should neither be (1) the technology or a feature of the technology, (2) a human outcome, or (3) an invariant. They suggested that an affordance should not garner a particular action or lead to a particular outcome, however, indicates diverse and even contradicting actions and outcomes. They thus reputed several affordances proposed by previous scholars and offered examples of affordances meeting these criteria, including anonymity, persistence, visibility, and engagement (Evans et al., 2017).

While this narrow definition helps to demarcate the concept of affordances, it makes it difficult to investigate the relationship between an affordance and a consequence, since every affordance is multifaceted and does not imply a specific outcome. To bridge the gap and examine the consequences of technology use, it would be helpful to adopt a micro- and higher-level view of affordance. In the process of affordance manifestation as effects of actions, a goal-oriented user would only recognize the facets of an affordance that are most relevant to their goals and then act on the recognized facets to achieve intended outcomes (Pozzi et al., 2014). These facets of the affordance, which can be considered micro-level affordances, are thus associated with specific outcomes. For example, Cabiddu et al. (2014) discussed three aspects of the social media affordance of engagement (conceived as three affordances in their paper) associated with three outcomes: persistent engagement, customized engagement, and triggered engagement. Alternatively, several affordances could come together to support an intended outcome collectively. From the user's perspective, these affordances together contribute to a higher-level action possibility. For example, Lin and Kishore (2021) documented three social media affordances of this type: affordance for social learning, community co-creation, and social relationships. As such, several micro-level affordances derived from different mother affordances could contribute to one human outcome. This micro- and higher-level view of affordance offers researchers an opportunity to understand how affordances predict user behaviors.

Built on these views, this study investigated social media affordances for information seeking and affective relationship building (corresponding with the higher-level view) in influencer marketing, and their associations with followers' purchase intentions. The examined micro-level affordances derived from two essential affordances of social media, visibility and engagement, as both have been proposed to affect information seeking and relationship formation (Evans et al., 2017; Gibbs et al., 2013;

Treem and Leonardi, 2013). As such, this study was able to deepen our understanding of the persuasion mechanism of influencer marketing on social media by fully capturing the chain from platform affordances to follower activities on the platforms and ultimately to marketing outcomes.

Visibility and engagement affordances for information seeking and affective relationship building. By offering the right combination of informational and emotional support, social media influencers exhibited remarkable persuasive power (García-Rapp, 2017). Researchers in relevant areas have indicated that such information exchange and relationship formation activities might be relevant to the visibility and engagement affordances of social media platforms (Dong and Wang, 2018; Gibbs et al., 2013; Lin et al., 2019; Treem and Leonardi, 2013). However, since these studies either concerned non-commercial settings (e.g., organizational communication) or focused on consumer-seller interaction and relationship instead of that between consumers and intermediaries like influencers, those studies may not be fully applicable in the context of influencer marketing.

By definition, visibility refers to social media's ability to make user "behaviors, knowledge, preferences, and communication network connections" visible to others (Treem and Leonardi, 2013, p. 150), and engagement concerns the technology's ability of attracting and preserving user attention by providing quick and easy interactions and constant updates (Gibbs et al., 2013). To link the two multifaceted mother affordances with specific user behaviors in the influencer marketing context and to advance the affordance perspective, the current study investigated five micro-level affordances derived from them, each addressing a specific facet critical in the context. The five affordances (1) focus on the influencer-follower dyad instead of the whole community because of the former's vital role in the context, and (2) have the potential to affect either information seeking or affective relationship building. Together, the affordances capture the visibility of both product and communication, and the attentive, temporal, and sensorial aspects of engagement.

Consumers regard product information from influencers as credible, authentic, and relevant (Gamage and Ashill, 2022). The existing research has demonstrated that characteristics of content (e.g., quality and commercial orientation), influencer (e.g., credibility and popularity), sponsor (e.g., influencer-brand congruence) and viewer (e.g., involvement and skepticism) could somehow affect viewers' evaluation of the information and their information seeking behaviors (for a review, see Vrontis et al., 2021). Few studies on influencer marketing have touched on the impact of platforms on information seeking so far, though studies in other contexts have consistently suggested such an impact (e.g., Xu et al., 2023).

In influencer marketing, affective relationship is an umbrella term that encompasses a variety of affective qualities, such as intimacy, emotional attachment, identification, and affective trust (Vrontis et al., 2021; Zhang and Mac, 2023). This study focused on affective trust, a concept of increasing importance. Trust is a key quality of influencer-follower relationships (Ki et al., 2023; Kim and Kim, 2021). Established trusting relationships are a prerequisite for influencers to effectively deliver brand messages (Kim and Kim, 2021). As paid advertising becomes more common in influencer content, a trust issue arises and it is more difficult for influencers to sustain followers' trust (Ki et al., 2023). Understanding factors affecting trust thus becomes necessary. Previous studies on influencer marketing mostly concentrated on the cognitive aspect of trust (e.g., trustworthiness; see Vrontis et al., 2021), leaving the affective aspect underexplored. Recognizing trust as a key relationship quality in the context of influencer marketing and to further understand the role of its affective facet, this study investigated affective trust as an indicator of the affective relationship between influencers and followers.

Product visibility. Product visibility is an aspect of visibility affordance that describes how well product pictures, information, and knowledge are presented and easy to access (Dong and Wang, 2018). It is afforded through technological features such as multimedia publishing, length/space limit of content, and filters.

Either actively searching for information or passively exposed to information, users are able to access diverse knowledge sources on social media considering the technology's visibility affordance (Treem and Leonardi, 2013). Such visibility afforded by social media could facilitate information seeking by shifting user perceptions of information availability and accessibility, and improving the efficiency of information seeking (Treem and Leonardi, 2013). To make informed purchase decisions, consumers use various strategies to collect product information. The availability and visibility of abundant product information and real experiences shared on social media by individuals including influencers would be of significant assistance in the process (A. Chen et al., 2017). In fact, more consumers now discover new products and brands through influencers than through traditional TV ads (Oracle, 2022). As gathering product information from influencers becomes a common need, how well a platform supports product visibility is likely to associate with users' willingness to receive information from influencers on that platform.

H1. Product visibility is positively associated with information seeking in influencer marketing.

Visibility control. This aspect of visibility affordance, adapted from Fox and McEwan's (2017) concept of privacy, addresses the visibility of communication and, specifically, the situation when such visibility is undesired. It refers to the extent to which communication with the intended recipient could be invisible to other users on the platform. On social media, the affordance is supported by functions such as direct messages, self-destructive messages, and privacy settings. Social media platforms differ in this affordance. Platforms like Twitter have a rather public nature and thus render less control; others like Instagram and Facebook can be relatively controllable through changing privacy settings; those equipped with specialized functions, such as Snapchat that is well-known for self-destructive messages, could offer higher levels of perceived visibility control.

Visibility control is likely to be an important enabler of affective trust building. Being able to stay invisible to unintended individuals is an important affordance that facilitates social relationships (Sutcliffe et al., 2011). Its positive impact on the affective aspect of relationships is in particular noticeable since it encourages self-disclosure (H. Liang et al., 2017), which bolsters various affective relationship qualities in online environments, including affective trust (Huang, 2015). On social media platforms that afford higher levels of visibility control, people would be more willing to express the actual and true self (Choi and Sung, 2018). When able to keep communications invisible to others, both influencers and followers will be more comfortable making personal, sincere, and intimate communications that foster affective ties.

H2. Visibility control is positively associated with affective trust building in influencer marketing.

Triggered engagement. Triggered engagement considers the attentive aspect of engagement. The concept originates from Majchrzak et al., 2013 idea of triggered attending, which was

defined as "engaging in the online knowledge conversation by remaining uninvolved in content production or the conversation until a timely automated alert informs the individual of a change to the specific content of interest" (p. 42–43). The original conceptualization has been challenged as it only addresses a feature of the social media technology (i.e., automated alerts) instead of an affordance; the actual affordance associated with automated alerts is in fact engagement (Evans et al., 2017). This study thus adopted the concept of triggered engagement to refer to users' perception of the extent to which they can stay engaged with their product of interests in a timely and effortless fashion.

In addition to automated alerts, social media features affording triggered engagement include the content posting function and content prioritizing algorithms. Triggered engagement allows consumers to receive immediate updates about products of interests without excessive effort. For example, a consumer interested in fashion would get notifications when a subscribed fashion influencer posted a new video about a recent shopping haul, or the video would be automatically added to the personalized feeds that algorithms made for the consumer and simply appear as the consumer swipes. Such immediacy and effortlessness are key determinants of information seeking (Borgatti and Cross, 2003). In addition, triggered engagement will stimulate consumers' curiosity to check the information and learn more about the products (Dong and Wang, 2018). It thus increases active information seeking.

H3. Triggered engagement is positively associated with information seeking in influencer marketing.

Social presence engagement. Social presence is "the feeling that interactants are near and sharing the same experience together" (Fox and McEwan, 2017, p. 302). It can be seen as an aspect of the engagement affordance relating to sensorial experiences. This engagement is afforded through technological properties such as media formats and interaction functions. Users perceive platforms as offering diverse levels of social presence engagement based on factors including the delay from message transmission to receipt, response speed, media richness, content immediacy, and so on (Fox and McEwan, 2017; X. Lin and Kishore, 2021).

In the context of influencer marketing, social presence engagement has the potential to contribute to both information seeking and affective trust building. Information channels with high levels of social presence are often preferred because we tend to value information acquired directly from other people (J. D. Johnson, 1997). Social presence is also able to increase information acquisition behaviors from a source by creating a sense of parasocial interaction (Rubin and Step, 2000). It is likely that the feelings of communicating and interacting directly with influencers would encourage consumers to seek more information. This affordance thus increases information seeking in influencer marketing. Relationship wise, with users not knowing each other online, social presence enables the capability to connect with each other and facilitate social interaction (Nadeem et al., 2020). It enables users to socialize and create emotional bonds, such as affective trust, with network members including influencers (E. Johnson and Hong, 2020). In online settings, social presence also works as a cue indicating the other's benevolence (Lu et al., 2016), which is a source of affective trust (Colquitt et al., 2007). Social presence engagement could therefore promote affective trust development in influencer marketing.

H4a. Social presence engagement is positively associated with information seeking in influencer marketing.

H4b. Social presence engagement is positively associated with affective trust-building in influencer marketing.

Synchronous engagement. Synchronicity, or alternatively termed as immediacy, is the degree to which instant conversations and immediate responses are enabled (Zhou et al., 2019). Synchronous engagement considers the temporal dimension of engagement (Evans et al., 2017; Gibbs et al., 2013); it refers to users' perception of the extent to which they could engage with others on a social media platform through quick and prompt conversations. Technology features related to this affordance include instant messaging, notifications, and comments/replies. (Gibbs et al., 2013).

Since seeking product-related information from influencers primarily involves consuming content rather than having real-time conversations, synchronous engagement is posed to have a limited impact on information seeking. However, its contribution to affective relationship building is remarkable. The more frequent and deeper the communications are in a virtual community (e.g., an influencer community), the greater the emotional attachment and social support would be (Rotman and Preece, 2010), nurturing the development of trust. It has been found in livestreaming e-commerce that synchrony or real-time communication could enhance trust by improving the sense of interactivity and shortening psychological and emotional distances between consumers and streamers (M. Zhang et al., 2022). It is likely that social media platforms rated high in synchronous affordance could facilitate real-time conversations between influencers and followers and therefore foster deeper affective trust in influencers.

H5. Synchronous engagement is positively associated with affective trust building in influencer marketing.

Information seeking, affective relationship building, and purchase intention. The positive association between information seeking intention and purchase intention has been repeatedly documented (Hajli et al., 2017; Lu et al., 2010). As online purchases inherently involve certain levels of risk and uncertainty (Featherman and Hajli, 2016), information seeking from trusted sources works as a risk-handling strategy that increases purchase intentions (Murray, 1991). The more consumers rely on an influencer for information, the higher the likelihood that they would purchase products recommended by the influencer, because of the influencer's ability to offer sufficient informational support that reduces perceived risk and uncertainty associated with the purchases.

H6. Consumers' information seeking from an influencer is positively associated with their purchase intention of products recommended by the influencer.

The positive association between affective relationship strength and purchase intention is also well established (T.-P. Liang et al., 2011; Wang et al., 2022). In consumer communities, people tend to trust members who provide sufficient emotional support, and this trust will increase their willingness to depend on members' words, actions, and decisions to make purchase decisions (J. Chen and Shen, 2015). As such, consumers' affective trust in influencers is likely to supplement information seeking to affect their purchase intentions.

H7. Consumers' affective trust in an influencer is positively associated with their purchase intention of products recommended by the influencer.

Exploratory analysis: platform differences

While the affordance perspective allows us to transcend specific platforms to systematically evaluate the associations between platform characteristics and user behaviors, it is necessary to recognize how affordances support or constrain user activities remain context-dependent (Evans et al., 2017). Each platform is a

specific digital environment that interacts with users to form affordances that shape user behaviors (Bucher and Helmond, 2017). It is possible that the hypothesized associations would change in strengths across platforms. To make sense of and reflect on such contextual relationality, this study compared three major influencer marketing platforms (IZEA, 2022): Instagram, YouTube, and Facebook.

The three platforms have been found to have distinct functions and be associated with different user motives, gratifications, and using contexts. For example, it was discovered that YouTube was used for focused learning or entertainment, Instagram was used for routine, casual, and quick social interactions, and Facebook was used for exploring and collaborating (Kweon et al., 2020; Luchman et al., 2014). In the context of influencer marketing, Facebook was rated high on meeting the needs of navigation, bandwagon, and novelty, while Instagram and YouTube were similar to each other in terms of that coolness, play/fun, and navigation were the top three gratifications obtained from the platforms (Lou et al., 2023). In addition, media richness positively predicted brand awareness on Facebook, but not on the other two platforms; it also positively predicted purchase intention on Facebook and YouTube, but not on Instagram (Lou et al., 2023). These studies suggested that the proposed associations may differ in strength across the three platforms.

RQ1. How do the strengths of the hypothesized associations differ among Instagram, YouTube, and Facebook?

Method

Sampling and procedures. The population of the current study is US consumers who follow at least one influencer on any social media platform and have seen the influencer(s) recommending products recently. A national online survey was administrated to collect data. The participants were recruited through a panel company; gender and age quotas were applied to represent the composition of typical target audience of influencer marketing practices (NapoleonCat, 2020; ThinkNow, 2019). In the survey, participants were first instructed to recall influencers they follow and write down one influencer who recommended a product recently. Thereafter, they indicated the platform they primarily used to follow this influencer. Next, participants' general purchase intention of products recommended by the influencer was measured, followed by measures of affective relationship building, information seeking, and the five platform affordances. Demographic information was collected toward the end of the survey.

The sample (n = 1033) was generally balanced in gender, with 49.4% being male, 50.1% being female, and 0.5% being other genders. The mean age of the participants was 34.9 years old ($SD = 12.06$). The 18–34 age bracket accounted for 60.0% of the sample, and the remaining 30.0% and 10.0% falling into the age groups of 35–54 and above 55 respectively. Regarding races and ethnicities (measured by multi-check questions), 72.7% of the participants were white, 13.8% were Black or African American, 5.8% were Asian, 1.7% were American Indian or Alaska Native, and 2.5% belonged to other categories and 16.8% were of Hispanic origin. Regarding educational level, 2.0% of the participants had a less than high school degree, 17.0% were high school graduates, 31.3% had attended college, 29.5% had received a bachelor's degree, and 20.1% had received a master's degree or above. Concerning the social media platform they primarily used to follow the identified influencer they indicated, YouTube (n = 325), Instagram (n = 424), and Facebook (n = 165) together accounted for 88.38% of the sample. The other participants indicated using another platform and were thus excluded from this study.

Measurement. 5-point Likert scales were adapted from previous studies to measure the constructs under investigation. The items and their sources are listed in Table 1.

Data analysis. The empirical assessment of the research model was conducted using the partial least square structural equation modeling (PLS-SEM) technique based on path coefficients and respective significance levels. In recent years, PLS-SEM has been a predominant method in social science disciplines (Hair et al., 2010). It is capable of tackling complex research models that require conceptualization and operationalization of different types of theoretical concepts such as behavioral intentions and the estimation of their relationships (Benitez et al., 2020). This study employed the Smart PLS 3 Version 26 software for analysis. A bootstrapping procedure with 5000 subsamples and 95% bias-corrected and accelerated confidence intervals was adopted to estimate the statistical significance of the parameter estimates.

Common method bias and multicollinearity. In survey research, common method bias usually occurs when all variables are measured in one questionnaire and by self-reporting (Hair et al., 2010). Three approved techniques were used to examine the common method bias and potential multicollinearity issue in this study, including Harman's single-factor test, variance inflation factors (VIF), and the examination of substantive variance and method variance of the data (Hair et al., 2010; Liang et al., 2007). Serious multicollinearity or common method bias issues were not recognized, with the maximum variance explained by the unrotated factors around 42.26%, VIF values below 3.83, and the ratio of average substantive variance to method variance being 0.824/0.002.

Measurement model assessment. The construct reliability, convergent validity, and discriminant validity of the model were assessed via various methods. The model exhibited good reliability and validity. First, to assess construct reliability, Cronbach's alpha values were used. All the values were above the recommended cutoff value of 0.80, indicating good reliability. Next, convergent validity was assessed using three criteria (Hair et al., 2010). First, all the item loadings on the intended constructs were greater than the recommended threshold of 0.70 and statistically significant. Second, the composite reliability (CR) values, which assess the internal consistency of the constructs, were greater than the suggested cutoff point of 0.70. Third, the average variance extracted (AVE) values, which measure the extent of the variance explained by the latent constructs, were greater than the threshold of 0.50. The results revealed that the measurement model had satisfying convergent validity. Table 1 presented the actual values of Cronbach's alpha, item loadings, CR, and AVE. Next, discriminant validity was evaluated by comparing the square root of a construct's AVE and the absolute value of its correlations with other constructs (Fornell and Larcker, 1981). All the square root values were greater than the correlation values (see Table 2), demonstrating satisfactory discriminant validity. Furthermore, discriminant validity for variance-based estimators was assessed by heterotrait-monotrait ratio (HTMT) and their 95% bias-corrected confidence intervals (Henseler et al., 2015). The HTMT values ranged from 0.382 to 0.753, less than the threshold value of 0.90, and none of the confidence intervals covered 1 (Benitez et al., 2020). Hence, the discriminant validity of the model was established. With all the criteria met, it is safe to conclude that the constructs proposed in the research model were reliable and valid.

The structural model. The structural model was used to test the hypotheses in the research model. First, the standardized path

Table 1 Assessment of reliability and convergent validity.

Indicators	SL	α	CR	AVE
Product Visibility (Dong and Wang, 2018)				
[Platform] helps me to visualize products like in the real world.	0.90	0.89	0.93	0.81
[Platform] makes product attributes visible to me.	0.92			
[Platform] makes information about how to use products visible to me.	0.89			
Visibility Control (Fox and McEwan, 2017)				
[Platform] helps keep my communication with them private.	0.92	0.90	0.94	0.83
My communication with them is private on [Platform].	0.94			
I expect my communication with them to be private on [Platform].	0.87			
Triggered Engagement (Dong and Wang, 2018)				
[Platform] informs me of product upgrades in a timely fashion.	0.92	0.92	0.95	0.86
[Platform] informs me of product improvements in a timely fashion.	0.94			
[Platform] informs me of any changes to my products of interest in a timely fashion.	0.92			
Social Presence Engagement (Fox and McEwan, 2017)				
On [Platform], I feel like they were present when I view their content.	0.90	0.91	0.94	0.85
On [Platform], I feel like they were close by when I view their content.	0.93			
On [Platform], I feel like they were really with me when I view their content.	0.93			
Synchronous Engagement (Fox and McEwan, 2017)				
[Platform] allows instant communication between them and me.	0.92	0.90	0.94	0.83
[Platform] allows me to quickly send messages to them back and forth.	0.91			
[Platform] helps me to give and receive timely feedback from them.	0.91			
Information Seeking (Chu and Kim, 2011)				
When I consider new products, I like to consult their content on [Platform].	0.92	0.91	0.94	0.85
I like to get their opinions on [Platform] before I buy new products.	0.93			
I feel more comfortable choosing a product when I have gotten their opinions on it from [Platform].	0.91			
Affective Trust (McAllister, 1995)				
I can talk about difficulties I am having in life and they will listen.	0.90	0.90	0.93	0.76
They and I can both freely share ideas, feelings, and hopes.	0.89			
Both they and I have made considerable emotional investments in our relationship.	0.89			
I feel secure with them because of their sincerity.	0.82			
Purchase Intention (Hsiao et al., 2010)				
Generally speaking, I am willing to buy products/services recommended by them.	0.91	0.89	0.93	0.82
Generally speaking, I am likely to buy products/services recommended by them.	0.92			
Generally speaking, I would consider buying products/services recommended by them.	0.88			

SL standardized loading, *α* Cronbach's α, *CR* composite reliability, *AVE* average variance extracted.

Table 2 Fornell-Larcker test results.

Constructs	1	2	3	4	5	6	7	8
1-Affective trust	**0.873**							
2-Information seeking	0.487	**0.921**						
3-Purchase intention	0.441	0.509	**0.906**					
4-Visibility control	0.499	0.403	0.348	**0.910**				
5-Product visibility	0.415	0.565	0.409	0.412	**0.902**			
6-Social presence engagement	0.601	0.542	0.487	0.549	0.491	**0.921**		
7-Synchronous engagement	0.436	0.404	0.484	0.531	0.365	0.491	**0.912**	
8-Triggered engagement	0.452	0.576	0.451	0.424	0.679	0.517	0.393	**0.928**

Diagonal values in bold are the square roots of the average variance extracted (AVE). Others are the absolute values of correlation coefficients among the constructs.

coefficients and their statistical significance levels were estimated for the hypothesized paths. Thereafter, the coefficient of determination R^2 and blindfolding-based cross-validated redundancy measure Q^2 were computed for endogenous variables to evaluate the predicted power of the model. The global goodness-of-fit (GoF) criterion, calculated as the geometric mean of the average communality and R^2, was 0.610, surpassing the recommended threshold of 0.360 (Tenenhaus et al., 2005).

Results

The hypothesized associations. As Fig. 1 demonstrates, all hypothesized paths were significant and in the predicted directions. Product visibility ($\beta = 0.25$; $p < 0.001$), triggered engagement ($\beta = 0.26$; $p < 0.001$), and social presence engagement ($\beta = 0.29$; $p < 0.001$) were positively related to information seeking, supporting H1, H3, and H4a. Visibility control ($\beta = 0.20$; $p < 0.001$), social presence engagement ($\beta = 0.44$; $p < 0.001$), and synchronous engagement ($\beta = 0.12$; $p < 0.001$) were positively related to affective trust, supporting H2, H4b, and H5. Information seeking ($\beta = 0.22$; $p < 0.001$) and affective trust were positively associated with purchase intention ($\beta = 0.11$; $p < 0.01$), supporting H6 and H7. The association testing results and corresponding t-values and effect size values were presented in Table 3.

A summary of the mediation effect results is provided in Table 4. The results revealed that information-seeking and affective trust building either partially or fully mediated the relationships between platform affordances and consumers' purchase intention.

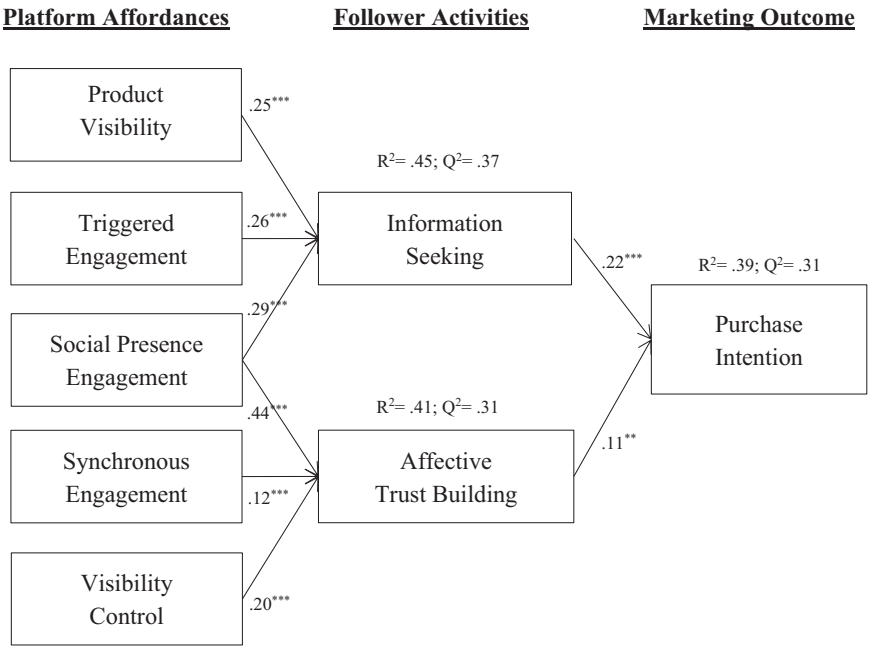

Fig. 1 SEM results of the research model. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Table 3 Hypothesis testing results.

Hypothesis	t-value	f^2	Decision
H1. Product visibility→Information seeking	5.933	0.06	Supported
H2. Visibility control→Affective trust	5.974	0.04	Supported
H3. Triggered engagement→Information seeking	6.301	0.06	Supported
H4a. Social presence engagement →Information seeking	8.291	0.10	Supported
H4b. Social presence engagement →Affective trust	13.864	0.21	Supported
H5. Synchronous engagement→Affective trust	3.689	0.02	Supported
H6. Information seeking→Purchase intention	4.527	0.04	Supported
H7. Affective trust→Purchase intention	3.098	0.01	Supported

Exploratory analysis. To explore RQ1, a multi-group analysis was performed. All hypothesized paths were significant for Instagram and YouTube, however, some were not for Facebook (see Table 5). Considering information seeking, social presence was the strongest predictor on Instagram ($\beta = 0.35$, $p < 0.001$), product visibility and triggered engagement were the strongest on YouTube ($\beta_{\text{Product visibility}} = 0.30$, $p < 0.001$; $\beta_{\text{Triggered engagement}} = 0.30$, $p < 0.001$), and triggered engagement was the strongest on Facebook ($\beta = 0.35$, $p = 0.006$). Considering affective trust building, social presence was the strongest predictor on all platforms ($\beta_{\text{Instagram}} = 0.45$, $p < 0.001$; $\beta_{\text{YouTube}} = 0.27$, $p < 0.001$; $\beta_{\text{Facebook}} = 0.53$, $p < 0.001$), though on YouTube it was closely followed by visibility control ($\beta = 0.25$, $p < 0.001$). The multi-group analysis indicated that platform differences centered on social presence engagement. It had a significantly stronger association with information seeking on Instagram than on YouTube ($\beta_{\text{diff}} = 0.20$, $p = 0.012$). In addition, its association with affective trust was significantly stronger on Facebook ($\beta_{\text{diff}} = 0.26$, $p = 0.013$) and Instagram ($\beta_{\text{diff}} = 0.19$, $p = 0.014$) than on YouTube.

Discussion

While researchers have investigated informational exchange and relationship formation in influencer marketing from various aspects, knowledge regarding the role of social media technologies in these processes is limited. The current study drew on the technology affordance perspective to address this issue. The study also explored the differences among the three top influencer marketing platforms in this context. Next, we will interpret the findings, offer theoretical and practical implications, address limitations, and elucidate future directions.

Results interpretation. All hypothesized associations were supported by the empirical data, indicating that platforms do play a role in shaping followers' activities and marketing outcomes in influencer marketing. Visibility and engagement, two affordances that have been predicted to affect information seeking and affective relationship building in other contexts (Dong and Wang, 2018; Gibbs et al., 2013; Lin et al., 2019; Treem and Leonardi, 2013), exhibited influence again in a context featuring a complex combination of social, relational, commercial, and transactional components. The strong associations that social presence engagement had with both information-seeking and affective trust-building signal that the advantages of influencer marketing rely largely on social media technologies' ability to create a sense of being together. Such a feeling is the foundation of active follower-influencer interactions and the consequent communication and marketing outcomes. Moreover, while it has been argued that one affordance could lead to different and even contradictory consequences through different mechanisms (Majchrzak et al., 2013), this study steps further to find that affordance-behavior associations could be even more sophisticated as one affordance might affect an outcome through various paths, similar to the identified positive effect of social presence on

Table 4 Mediation effects.

Indirect effects	Product visibility → Purchase intention	Visibility control → Purchase intention	Triggered engagement → Purchase intention	Social presence engagement → Information seeking → Purchase intention	Social presence engagement → Affective relationship → Purchase intention	Synchronous engagement → Purchase intention
Coefficient value	0.055	0.021	0.058	0.064	0.046	0.013
Significant level	0.000	0.007	0.000	0.000	0.003	0.020
LLCI -2.5%	0.029	0.008	0.032	0.036	0.018	0.004
ULCL -97.5%	0.091	0.040	0.094	0.101	0.078	0.026
Mediation effect	Partial	Partial	Partial	Partial	Partial	Full

LLCI Lower-level confidence interval bias-corrected, *ULCI* Higher-level confidence interval bias-corrected.

purchase intention through both information seeking and affective trust building.

The exploratory analysis illustrates that how affordances foster or constrain user activities is indeed context-dependent (Evans et al., 2017). While the associations between affordances and follower activities are relatively consistent across platforms, the strengths of the associations vary. Such differences could derive from the natures of the platforms and the motives of the platform users. For example, on YouTube, product-related affordances, including product visibility and triggered engagement, outperformed social interaction-related affordance (i.e., social presence engagement) in predicting information seeking. A possible explanation is that YouTube is well-known for long-form, tutorial/review-type videos, and influencers on this platform normally post less frequently (e.g., once or less than once a week). Hence, information of high quality and great depth that focuses on the product is what consumers seek. In contrast, on Instagram, social presence engagement was the strongest predictor of not only information seeking but also affective trust building. This is probably because that Instagram is usually used for casual, quick, and daily social interactions; visually attractive photos and short videos with simple captions dominate the platform, and influencers tend to post more frequently (e.g., multiple times a week or even a day). Consumers thus value social presence more than the other factors. Concerning Facebook, the finding that product visibility was not relevant to information seeking is possibly due to the prevalence of written content on the platform. Consumers therefore do not expect "seeing" product attributes. It is also interesting that synchronous engagement did not contribute to affective trust building on Facebook, while social presence engagement was a strong predictor. It seems that the formation of affective trust on this platform does not rely on real-time interactions, but rather on the feeling of "being there together," which is supported by functions such as groups, virtual events, polls, and live.

Theoretical and practical implications. The current study adds to the literature on influencer marketing and technology affordances from three aspects. First, concerning influencer marketing, the study addressed the research gap of overlooking the role of platforms in explaining followers' information-seeking and affective relationship-building behaviors in this context. While factors related to other components of the communication process, such as influencers, messages, consumers, and contexts, are important, the media channel plays a distinct role and could affect communication results.

Second, concerning technology affordances, the study helps to refine the concept of affordance by delineating its dimensionality. For example, the affordance of visibility encompasses both product visibility and communication visibility. More importantly, it concerns not only the action possibility of being visible, but also that of being invisible. The affordance of engagement can also be decomposed to, for example, attentive (e.g., triggered engagement), temporal (e.g., synchronous engagement), and sensorial (e.g., social presence engagement) aspects. As there has been much confusion resulting from the popularity of list-based articles presenting sets of purported affordances in various specific contexts (Evans et al., 2017), the current study showcases a viable way for researchers from different disciplines to work from a shared foundation (e.g., a set of agreed-upon highest-level affordances) without limiting creative adaptation of the concept to different contexts.

Third, on a related note, by integrating and building upon the object-affordance-outcome explication (Evans et al., 2017) and the existence-perception-actualization-effect chain of affordance

Table 5 Comparing path coefficients among Instagram, YouTube, and Facebook.

Paths	Instagram (n = 424)	YouTube (n = 352)	Facebook (n = 165)
Product visibility → Information seeking	0.18***	0.30***	0.20
Visibility control → Affective relationship	0.16***	0.25***	0.23**
Triggered engagement → Information seeking	0.28***	0.30***	0.35**
Social presence engagement → Information seeking	0.35***	0.15*	0.28***
Social presence engagement → Affective relationship	0.45***	0.27***	0.53***
Synchronous engagement → Affective relationship	0.15**	0.15*	0.03
Information seeking → Purchase intention	0.15*	0.31***	0.23
Affective relationship building → Purchase intention	0.12*	0.12*	0.06

manifestation (Pozzi et al., 2014), the study further illustrates how multidimensional affordances shape behaviors by establishing the affordance-activity-outcome chain. The study proposes that an affordance can be perceived by users as multiple micro-levels, actualizable affordances associated with specific behavioral implications. Users would take advantage of these affordances and perform activities of informational and relational types, which then lead to various outcomes. The study thus provides a feasible way to bridge the gap among affordances, user activities, and communication outcomes.

Tactically, this study suggests that, in influencer marketing practices, to help consumers find product information, platforms need to improve their ability of providing timely updates about consumers' products of interest, illustrating product attributes in an authentic way, and creating a sense of being present. To foster affective relationship between influencers and followers, platforms should focus on facilitating immediate and private conversations in addition to improving the feeling of social presence.

For example, platforms could work on developing a more effective ranking algorithm that displays the most relevant content to viewers. Moreover, a more sophisticated notification system that allows consumers to better customize the types of content they want to be notified of, may be helpful. Furthermore, media richness is important. While videos could accommodate more product details and improve social presence, it is better for platforms to support various media formats so that consumers have more options. For example, consumers could view pictures when not connected to Wi-Fi or when they only want a quick look. This connectivity at all times and places, is an important booster for product visibility and social presence. Livestreaming appears to be a promising feature for platforms to embed as it enhances both visibility and engagement. As users seem to desire quick, direct, and private communications that cannot be satisfied by the conventional comment/reply function, platforms need to devise a better interaction system that assures the visibility-invisibility balance. Strategically, the results here illustrate the importance for brands to take into account how social platforms differ in the aforementioned aspects as influencer marketing is integrated into their brands' marketing/media plans. In addition, media managers of social platforms might consider how some of these aspects might be used as a differentiator.

Limitations and future research. Certain limitations of the current study are worth noting. First, limited by its scope, this study only examined five micro-level affordances that are related to two primary affordances (i.e., visibility and engagement). The investigation focused on the perception and actualization stages of affordance manifestation. Further research can expand the research scope by incorporating more affordances or going deeper to integrate the other stages. Researchers interested in platform differences could also explore from perspectives other than affordances.

Second, this study only compared YouTube, Instagram, and Facebook considering their salience in influencer marketing and wide popularity among various demographic groups. It will be interesting to investigate other influencer marketing platforms that target a niche population, such as TikTok that is popular with teenagers and young adults. Future studies can examine these platforms' affordance characteristics and their associations with consumer activities or communication outcomes, and the mechanisms underneath.

Finally, when the dataset was split for platform comparison, certain predicted paths in relation to Facebook turned insignificant. There is a possibility that it is the relatively small sample size (n = 165) that caused the insignificance. We encourage researchers to further validate the associations with larger samples.

Data availability

The processed data required to reproduce these findings cannot be shared at this time as the data also forms part of an ongoing study.

Received: 16 March 2024; Accepted: 8 April 2025;
Published online: 20 April 2025

References

Benitez J, Henseler J, Castillo A, Schuberth F (2020) How to perform and report an impactful analysis using partial least squares: guidelines for confirmatory and explanatory IS research. Inf Manag 57(2):103168

Berryman R, Kavka M (2017) 'I guess a lot of people see me as a big sister or a friend': the role of intimacy in the celebrification of beauty vloggers. J Gend Stud 26(3):307–320

Borgatti SP, Cross R (2003) A relational view of information seeking and learning in social networks. Manag Sci 49(4):432–445

Bucher T, Helmond A (2017) The affordances of social media platforms. In J Burgess, AE Marwick, T Poell (Eds), *The SAGE handbook of social media* (pp 233–253). SAGE Publications

Cabiddu F, Carlo MD, Piccoli G (2014) Social media affordances: enabling customer engagement. Ann Tour Res 48:175–192

Campbell C, Farrell JR (2020) More than meets the eye: the functional components underlying influencer marketing. Bus Horiz 63(4):469–479

Chen A, Lu Y, Wang B (2017) Customers' purchase decision-making process in social commerce: a social learning perspective. Int J Inf Manag 37(6):627–638

Chen J, Shen X-L (2015) Consumers' decisions in social commerce context: an empirical investigation. Decis Support Syst 79:55–64

Choi TR, Sung Y (2018) Instagram versus Snapchat: Self-expression and privacy concern on social media. Telemat Inform 35(8):2289–2298

Chu S-C, Kim Y (2011) Determinants of consumer engagement in electronic word-of-mouth (eWOM) in social networking sites. Int J Advert 30(1):47–75

Colquitt JA, Scott BA, LePine JA (2007) Trust, trustworthiness, and trust propensity: a meta-analytic test of their unique relationships with risk taking and job performance. J Appl Psychol 92(4):Article 4

Dong X, Wang T (2018) Social tie formation in Chinese online social commerce: the role of IT affordances. Int J Inf Manag 42:49–64
Evans SK, Pearce KE, Vitak J, Treem JW (2017) Explicating affordances: a conceptual framework for understanding affordances in communication research. J Comput-Mediat Commun 22(1):35–52
Featherman M, Hajli N (2016) Self-service technologies and e-services risks in social commerce era. J Bus Ethics 139:251–269
Fornell C, Larcker DF (1981) Evaluating structural equation models with unobservable variables and measurement error. J Mark Res 18(1):39–50
Fox J, McEwan B (2017) Distinguishing technologies for social interaction: the perceived social affordances of communication channels scale. Commun Monogr 84(3):298–318
Gamage TC, Ashill NJ (2022) # Sponsored-influencer marketing: effects of the commercial orientation of influencer-created content on followers' willingness to search for information. J Prod Brand Manag 32(2):316–329
García-Rapp F (2017) Popularity markers on YouTube's attention economy: the case of Bubzbeauty. Celebrity Stud 8(2):228–245
Gibbs JL, Rozaidi NA, Eisenberg J (2013) Overcoming the "ideology of openness": probing the affordances of social media for organizational knowledge sharing. J Comput-Mediat Commun 19(1):102–120
Gibson JJ (1986) *The ecological approach to visual perception*. Erlbaum
Hair JF, Black WC, Babin BJ, Anderson RE (2010) *Multivariate Data Analysis* (7th Edition). Prentice Hall
Hajli N, Sims J, Zadeh AH, Richard M-O (2017) A social commerce investigation of the role of trust in a social networking site on purchase intentions. J Bus Res 71:133–141
Henseler J, Ringle CM, Sarstedt M (2015) A new criterion for assessing discriminant validity in variance-based structural equation modeling. J Acad Mark Sci 43(1):115–135
Hsiao K, Chuan-Chuan Lin J, Wang X, Lu H, Yu H (2010) Antecedents and consequences of trust in online product recommendations: an empirical study in social shopping. Online Inf Rev 34(6):935–953
Huang L-S (2015) Trust in product review blogs: the influence of self-disclosure and popularity. Behav Inf Technol 34(1):33–44
Hutchby I (2001) Technologies, texts and affordances. Sociol- J Br Sociol Assoc 35:441–456
IZEA (2022) *Trust in influencer marketing*. https://izea.com/resources/insights/2022-influencer-marketing-trust/
Johnson E, Hong S (2020) Instagramming social presence: A test of social presence theory and heuristic cues on Instagram sponsored posts. *Int J Bus Commun, Online first*, 232948842094446
Johnson JD (1997) *Cancer-related information seeking*. Hampton Press
Ki C-W, Chow TC, Li C (2023) Bridging the trust gap in influencer marketing: ways to sustain consumers' trust and assuage their distrust in the social media influencer landscape. Int J Hum–Comput Interact 39(17):3445–3460
Kim DY, Kim H-Y (2021) Trust me, trust me not: a nuanced view of influencer marketing on social media. J Bus Res 134:223–232
Kweon S-H, Kang BY, Ma L, Guo W, Tian Z, Kim S, Kweon H (2020) Social media competition for user satisfaction: a niche analysis of Facebook, Instagram, YouTube, Pinterest, and Twitter. In T Ahram (Ed), *Advances in artificial intelligence, software and systems engineering* (pp 239–249). Springer International Publishing
Liang H, Saraf N, Hu Q, Xue Y (2007) Assimilation of enterprise systems: the effect of institutional pressures and the mediating role of top management. MIS Q 31(1):59–87
Liang H, Shen F, Fu K (2017) Privacy protection and self-disclosure across societies: a study of global Twitter users. N. Media Soc 19(9):1476–1497
Liang T-P, Ho Y-T, Li Y-W, Turban E (2011) What drives social commerce: the role of social support and relationship quality. Int J Electron Commer 16(2):69–90
Lin J, Luo Z, Cheng X, Li L (2019) Understanding the interplay of social commerce affordances and swift guanxi_ an empirical study. Inf Manag 56(2):213–224
Lin X, Kishore R (2021) Social media-enabled healthcare: a conceptual model of social media affordances, online social support, and health behaviors and outcomes. Technol Forecast Soc Change 166:120574
Lou C (2021) Social media influencers and followers: theorization of a trans-parasocial relation and explication of its implications for influencer advertising. J Advert 0(0):1–18
Lou C, Taylor CR, Zhou X (2023) Influencer marketing on social media: how different social media platforms afford influencer–follower relation and drive advertising effectiveness. J Curr Issues Res Advert 44(1):60–87
Lu B, Fan W, Zhou M (2016) Social presence, trust, and social commerce purchase intention: an empirical research. Comput Hum Behav 56:225–237
Lu Y, Zhao L, Wang B (2010) From virtual community members to C2C e-commerce buyers: trust in virtual communities and its effect on consumers' purchase intention. Electron Commer Res Appl 9(4):346–360
Luchman JN, Bergstrom J, Krulikowski C (2014) A motives framework of social media website use: a survey of young Americans. Comput Hum Behav 38:136–141
Majchrzak A, Kane G, Azad B, Faraj S (2013) The contradictory influence of social media affordances on online communal knowledge sharing. J Comput-Mediat Commun 19:38–55
McAllister DJ (1995) Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations. Acad Manag J 38(1):24–59
Morton F (2020) Influencer marketing: An exploratory study on the motivations of young adults to follow social media influencers. J Digit Soc Media Mark 8(2):156–165
Murray KB (1991) A test of services marketing theory: Consumer information acquisition activities. J Mark 55(1):10–25
NapoleonCat (2020) *Distribution of Instagram users in the United States as of August 2020, by age group*. Statista. https://www.statista.com/statistics/398166/us-instagram-user-age-distribution/
Nadeem W, Khani AH, Schultz CD, Adam NA, Attar RW, Hajli N (2020) How social presence drives commitment and loyalty with online brand communities? The role of social commerce trust. J Retailing Consum Serv 55:102136
Norman DA (2013) *The design of everyday things: Revised and expanded edition* (Revised edition). Basic Books
Oracle (2022) 37% of Consumers Trust Social Media Influencers Over Brands. https://www.oracle.com/news/announcement/consumers-turn-to-social-media-influencers-2022-05-03/
Pozzi G, Pigni F, & Vitari C (1 August 2014) *Affordance theory in the IS Discipline: a review and synthesis of the literature*. 20th Americas Conference on Information Systems, AMCIS 2014
Rotman D, Preece J (2010) The "WeTube" in YouTube—creating an online community through video sharing. Int J Web Based Communities 6(3):317–333
Rubin AM, Step MM (2000) Impact of motivation, attraction, and parasocial interaction on talk radio listening. J Broadcast Electron Media 44(4):635–654
SlickText (2021) *Do consumers trust social media influencers? Here's what statistics show*. SlickText. https://www.slicktext.com/blog/2021/06/social-media-influencer-statistics-survey/
Sundar SS (2008) The MAIN model: a heuristic approach to understanding technology effects on credibility. In MJ Metzger, AJ Flanagin (Eds) *Digital media, youth, and credibility* (Library West HM851 D543 2008; pp 73–100). The MIT Press
Sundermann G, Raabe T (2019) Strategic communication through social media influencers: current state of research and desiderata. Int J Strateg Commun 13(4):278–300
Sutcliffe AG, Gonzalez V, Binder J, Nevarez G (2011) Social mediating technologies: social affordances and functionalities. Int J Hum–Comput Interact 27(11):1037–1065
Tenenhaus M, Vinzi VE, Chatelin YM, Lauro C (2005) PLS path modeling. Comput Stat Data Anal 48(1):159–205
ThinkNow (2019) ThinkNow Social: Social media influencers and privacy concerns. http://campaigns.thinknow.com/downloads/files/thinknow-social-media-report-2019.pdf
Treem JW, Leonardi PM (2013) Social media use in organizations: exploring the affordances of visibility, editability, persistence, and association. In CT Salmon (Ed), Communication Yearbook 36 (pp 143–189) Routledge
Vrontis D, Makrides A, Christofi M, Thrassou A (2021) Social media influencer marketing: a systematic review, integrative framework and future research agenda. Int J Consum Stud 45(4):617–644
Wang X, Xu F, Luo XR, Peng L (2022) Effect of sponsorship disclosure on online consumer responses to positive reviews: The moderating role of emotional intensity and tie strength. Decis Support Sys 156:113741
Xu J, Qiao G, Hou S (2023) Exploring factors influencing travel information-seeking intention on short video platforms. Curr Issues Tour 26(24):3985–4000
Yadav MS, de Valck K, Hennig-Thurau T, Hoffman DL, Spann M (2013) Social commerce: a contingency framework for assessing marketing potential. J Interact Mark 27(4):311–323
Zhang M, Liu Y, Wang Y, Zhao L (2022) How to retain customers: understanding the role of trust in live streaming commerce with a socio-technical perspective. Comput Hum Behav 127:107052
Zhang Y, Mac L (2023) Social media influencers: the formation and effects of affective factors during online interactions. Int J Consum Stud 47(5):1824–1837
Zhao Y, Liu J, Tang J, Zhu Q (2013) Conceptualizing perceived affordances in social media interaction design. Aslib Proc 65(3):289–303
Zhou Q, Lee CS, & Sin JS-C (2019) Beyond mandatory use: probing the affordances of social media for formal learning in the voluntary context. *Proceedings of the Association for Information Science and Technology*

Acknowledgements

This project was partially supported by the Humanities and Social Sciences Fund, Ministry of Education of China [grant number 24YJC860023], internal funding from the University of Florida, and the National Natural Science Foundation of China [grant number 72402073].

Author contributions

Rang Wang: Conceptualization, Methodology, Writing—original draft, Writing—review & editing, Validation, Funding acquisition. Sylvia Chan-Olmsted: Supervision, Writing - review & editing, Funding acquisition. Qi Zhou: Data curation, Visualization, Writing—original draft, Writing—review & editing.

Competing interests

The authors declare no competing interests.

Ethical Approval

This project was approved by the Institutional Review Board of the University of Florida (approval number IRB202001833) as exempt on August 4, 2020, because it posed minimal risk. All research was performed in accordance with relevant guidelines and regulations.

Informed Consent

Informed consent was obtained from all participants at the beginning of the survey before they answered any questions. The form includes the following sections: purpose of the study, what participants will be asked to do in the study, time required to complete the study, risks and benefits, confidentiality, compensation, funding source, how to withdraw from the study, and contact information of the researchers and the IRB office. Only participants who selected "I agree to participate" participated in the survey.

Additional information

Correspondence and requests for materials should be addressed to Qi Zhou.