What Drives Creative Crowdsourcing?

An Exploratory Study on The Persuasion of Digital Storytelling

WEI XIAO, XIAOLING WANG, SENMAO XIA and PAUL JONES

Crowdsourcing enterprises increasingly seek to attract and persuade makers to contribute their creative and wisdom through digital storytelling, however, what are the effective components of digital storytelling and the persuasive effect of digital storytelling on creative crowdsourcing intention are still unclear. To bridge the gap, this study explores how digital storytelling persuades makers to generate creative crowdsourcing behavioral intention by utilizing Unified Theory of Acceptance and Use of Technology (UTAUT). Results reveal that the persuasion activity of digital storytelling has a positive effect on creative crowdsourcing intention. The effective components of digital storytelling are mainly composed of aesthetic perception, narrative structure and self-reference. Unified Theory of Acceptance and Use of Technology (UTAUT) and its four core concepts (performance expectation, effort expectation, social influence and facilitating condition) mediate the impact of digital storytelling on the creative crowdsourcing intention, which reveals the persuasive source of digital storytelling. We highlight the theoretical implications as well as the practical applications in creative crowdsourcing.

Key words: digital storytelling; creative crowdsourcing intention; Unified Theory of Acceptance and Use of Technology; creative crowdsourcing

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1. Introduction

In the process of pursuing innovation, many companies adopt open innovation methods and try to benefit from external creativity and invention (Przybylska, 2013; Cassiman & Valentini, 2016). Collecting ideas through crowdsourcing has become a common practice of open innovation (Bayus, 2013; Howe, 2006). The so-called "creative crowdsourcing" refers to the practice of a company or organization to freely and voluntarily hand over the creative work or tasks completed by the internal staff of the organization to the non-specific, scattered and large netizens in the form of social media and crowdsourcing platform (Howe, 2006).

Crowdsourcing enterprises increasingly seek to attract and persuade makers to participate in creative crowdsourcing projects by means of digital storytelling (Ingram Bogusz, Teigland, & Vaast, 2019). Vos, Yeh, Carter, and Tagg (2007) reported that businesses under three years old are the least reliant on institutional sources of creativity and that new technology-based ventures suffer the most from a creative gap. Interestingly, with the integration of digital technology into daily work and life,

the willingness and ability of netizens to participate in creative activities (Raghuram, Hill, Gibbs, & Maruping, 2019) have been significantly enhanced. By making use of digital technologies (such as games, film/video, and music), crowdsourcing companies can not only attract the attention of the audience, but also accurately grasp the market demand of users, and even successfully invite the majority of makers to solve the innovation "bottleneck" problem (Vuculescu & Bergenholtz, 2014). In crowdsourcing mode, persuasion campaigns in the form of digital storytelling take many specific forms, i.e. entrepreneurship roadshow (Manning & Bejarano, 2017), digital word-of-mouth (Kim & Hall, 2019), digital marketing and communication (Kim & Hall, 2019), digital heritage transmission (Bonacini, Tanasi, & Trapani, 2018) and crowdfunding projects aiming to attract financing (Omeragic, 2016).

The application of digital storytelling in the business crowdsourcing model has also aroused widespread concern in the academic. Digital storytelling refers to online interactive practice based on digital technologies i.e. pictures, videos, audio and virtual reality, in which interactive subjects establish and realize relationship experience by playing the roles of story tellers and story receivers, and jointly complete the content production and the creative dissemination of the story (Couldry, 2008). The most important content of digital storytelling mainly includes aesthetic perception, narrative structure and self-reference (Couldry, 2008; Akgün, Keskin, Ayar, & Erdoğan, 2015). As the role division (Hamari, Sjklint, & Ukkonen, 2015) and business logic (Heinonen & Strandvik, 2015) between creative crowdsourcing participants have gradually changed, corporations need to rely on digital technology to carry out whole-process dialogue with users. Digital storytelling provides a broad space for crowdsourcing enterprises to embed creative production and implementation process led by mass makers and realize crowd-based co-creation in the digital environment (Pera & Viglia, 2016). Makers who are brave in innovation and strive to turn their ideas into reality will participate in and complete creation, communication, interaction, sharing, comment, self-construction and presentation (Chen, 2012). Therefore, how to effectively use digital technology and content to attract and persuade users to carry out creative production and interactive activities in crowdsourcing platform is an urgent problem to be solved. Unfortunately, there is still a lack of empirical research on the effective components of digital storytelling and the persuasive effects of digital storytelling on creative crowdsourcing intention.

The UTAUT framework used in the existing literature to explore the behavior intention of actual technology acceptance and use provides theoretical inspiration for the persuasion mechanism exploration of digital storytelling. Venkatesh, Morris, Davis, and Davis (2003) integrated the theory of rational behavior and relevant studies in psychology and sociology, and put forward the Unified Theory of Acceptance and Use of Technology (UTAUT), so as to systematically study and explain the differences of users' acceptance and use of technology. The UTAUT model puts forward four direct determinants of technology use intention and use behavior, namely, performance expectation, effort expectation, social influence and facilitating condition. The subsequent research explored the acceptance and use mechanism of digital technologies based on UTAUT framework, including the impact of information technology on users' online purchasing decisions (Venkatesh, Thong, & Xu, 2012), the word-of-mouth guidance of users based on digital stories (Hassan, 2016), and how to develop customized applications for users (Im, Hong, & Kang, 2011; San Martín & Herrero, 2012). However, in face of the flood of digital information and the excessive use of digital technology, individual makers may choose to be silent or resist. Therefore, this study examines the role of digital storytelling in creative crowdsourcing in the UTAUT theory framework.

When creative activities become more and more individual, what can drive creative crowdsourcing participation? Digital storytelling might be a good entry point. Although storytelling empowered by digital technologies is significant in persuading audience involvement, research on digital storytelling in creative crowdsourcing has been substantially overlooked. This study creatively introduces digital storytelling into the field of creative crowdsourcing, and takes digital storytelling as the starting point for crowdsourcing enterprises to embed the creative process led by makers. Furthermore, UTAUT model and its core concepts provide an explanation framework for better identifying the persuasive sources of digital storytelling and thus uncovering the "black-box" of creative crowdsourcing interaction embedded in digital technology. Consequently, the purpose of this work is to develop and test a conceptually integrated model to better understand creative behavior by identifying the casual relationships of digital storytelling (aesthetic perception, narrative structure, and self-reference) and the four key UTAUT concepts in the context of the crowdsourcing sectors.

In order to accomplish the goal, this study puts forward two key research questions: how does digital storytelling influence the UTAUT model? And how does the UTAUT explain creative crowdsourcing behavior intention? In order to answer the questions, we review the literature and put forward our research hypotheses, analyze data collected from China, applying covariance based-structural equation modelling (SEM), including the reliability and validity analysis of the research scale and the common method deviation test. Finally, the conclusions, theoretical contributions, management implications and the main research limitations and further research opportunities of this study are discussed. Accordingly, this study provides theoretical and practical insights for academia and industry to persuade makers to participate in creative crowdsourcing.

2. Literature review

2.1 Theoretical framework

2.1.1 Creative crowdsourcing intention

Crowdsourcing refers to the practice by a company or organization to outsource tasks previously performed by employees to non-specific (and often large) public volunteers in a voluntary manner (Howe, 2006). The attributes of "public space" and "opinion platform" of digital media give makers more opportunities to express themselves and the right to participate in creative production. Through the support of interactive functions i.e. equal dialogue and open sharing of various digital media and platforms, the collective wisdom generated by user generated content (UGC) can be generated and transmitted independently (Ranjan & Read, 2016). However, the identity of users is constantly changing and migrating among receivers, searchers, interlocutors, disseminators and providers of knowledge and creative (Hamari et al., 2015). The researches on creative communication management point out that users decode and recode resonating creative symbols, texts or products, and recreate them in the process of adding their own experience and meaning (Chen, 2012).

Behavioral intention is the desire of the subject (without external constraints) to carry out an action (Ajzen, 1991). In this study, "creative crowdsourcing intention" refers to the willingness and tendency of users to provide, contribute and share their knowledge, ideas and creative, to communicate anticipated product or service needs, usage experiences, innovation "bottlenecks" and brand information as makers in social platforms or crowdsourcing communities. Public participation is the micro-foundation of the development of crowdsourcing model. In fact, makers participate in the dissemination of information related to creative content in social media or crowdsource

communities, or create and disseminate new content on the basis of original creative content, mainly through typical interactive ways (i.e. posts, replies and comments) (Boiko, Vedmid, & Okhrimenko, 2017).

In terms of explaining the influence mechanism of creative crowdsourcing intentions, scholars have explored from the perspectives of technology embedding (Algesheimer, Dholakia & Hermannn, 2005), platform support (Heinonen & Strandvik, 2015), individual motivation (Shang & Liu, 2016) and social network (Lee, Colle, & Noseworthy, 2010). However, it is obvious that compared with the individual characteristics of makers (represented by motivation and social network) and the characteristics of crowdsourcing projects (i.e. technical attributes and platform support), the logical relationship between the persuasion activity embedded in digital technology and the formation of creative crowdsourcing intention is more direct. We believe that the direct reasons and clues to explain the behavioral intention in creative crowdsourcing should be found in the specific process of online communication and interaction between the parties. Nevertheless, research on digital storytelling in creative crowdsourcing is only limited in theory-oriented contexts.

2.1.2 Digital storytelling

Storytelling is a fundamental part of human society and culture. Storytelling is an underrated, underappreciated art in the business world. In business application scenarios (i.e. introducing new ideas or transactions, attracting project investment, and promoting new business models), storytelling can quickly outline the prototype of an idea, which is a more reliable way to persuade people (Nie, Da Liang, & Chen, 2017). Digital storytelling mainly uses digital form to tell, store and exchange stories on websites and networks that would not exist without the Internet. At the same time, these stories have greater communication potential due to the restorative power of digital media (Couldry, 2008). Digital stories can make full use of user generated or contributed content by selecting themes, writing scripts, developing interesting stories and other traditional storytelling processes, and combining digital media and technologies (i.e. computer-based graphics, recorded audio, video clips, music and virtual reality) (Robin, 2008). While traditional storytelling focuses on audience listening and reading skills, digital storytelling focuses on broader skills (i.e. human-computer interaction, media embedding, and technical literacy) (Couldry, 2008; Gottschall, 2012).

Storytelling plays an important role in the digital paradigm. It can attract potential users through aesthetic appeal, resource allocation, consumer-oriented content design and other factors, making them be more interested in participating in the project (Manning & Bejarano, 2017; Omeragic, 2016). Literatures on digital storytelling tend to focus on three key dimensions: aesthetic perception, narrative structure and self-reference (Baumgartner, Sujan, & Bettman, 1992; Couldry, 2008; Akgün et al., 2015). Aesthetic perception refers to the perception that people, nature or artefacts with "artistically beautiful or pleasing appearance" (Lavie & Tractinsky, 2004), which influences audience attitude and behavior through powerful images (Freedberg & Gallese, 2007). The narrative structure emphasizes the chronology and logical causality of the story (Delgadillo & Escalas, 2004) in order to reasonably evoke the emotional response of the audience and the readers with resonance (Escalas & Stern, 2003). Self-reference refers to "past experience or memory that resonates emotionally with an audience" (Hsiao, Lu, & Lan, 2013). The self-reference in drama will arouse the audience's memories of the past experience, and people may be projected into the story of the scenarios, similar to a character or part of the emotional experience (Escalas & Stern, 2003). However, despite the technological and creative processes involved in digital storytelling, theoretically based research on digital storytelling in creative crowdsourcing has been neglected.

Thus, this study aims to examine the effect of corporates' digital storytelling in creative crowdsourcing on attracting makers to projects in the UTAUT theory context (Suki & Suki, 2017).

2.1.3 Unified Theory of Acceptance and Use of Technology

Venkatesh et al. (2003) put forward the Unified Theory of Acceptance and Use of Technology (UTAUT) by integrating rational behavior theory, technology acceptance model, incentive model, planned behavior theory, TAM and TPB joint model, PC utilization model, innovation diffusion theory and social cognition theory. Because the model is highly predictive, UTAUT has been highly utilized to investigate the acceptance and use of various technologies. UTAUT proposed that the four important factors affecting technology use intention and behavior are performance expectation, effort expectation, social influence and facilitating condition. Among them, performance expectation and effort expectation are related to the attributes and characteristics of the technology itself and belong to internal factors, while social influence and facilitating condition are related to the material and social environment and belong to external factors.

There is a literature basis for performance expectation in digital technology applications (Li, He, Song, Yang, & Zhou, 2018; Moon & Hwang, 2018; Venkatesh et al., 2003; Venkatesh et al., 2012). Performance expectation refers to the extent to which supporters believe that using information technology to interact will help them achieve, social interaction, social recognition and personal satisfaction (Li et al., 2018). Some scholars focused on the effort expectation of digital technology and defined it as "the degree of convenience for consumers to purchase products and services using operators' platform" (Escobar-Rodriguez & Carvajal-Trujillo, 2014). In terms of facilitating condition, research on technology application of crowdsourcing project shows that the infrastructure support can help to improve the degree of online users to use the system (San Martín & Herrero, 2012). In the context of digital storytelling, social influence can be described as "the influence and support from friends and social circles to encourage the use of digital technologies i.e. video and animation to participate in storytelling" (Colombo et al., 2015; Suki & Suki, 2017).

UTAUT was found to be an effective tool for understanding digital technology acceptance and use behavior in an organizational environment (Venkatesh et al., 2003; Venkatesh et al., 2012). There are also studies on the digital technology application of crowdsourcing platforms (Mollick, 2014). It was found that entrepreneurial storytelling plays a key role in digital paradigm to attract potential investors in crowdfunding (Moon & Hwang, 2018). The researchers also used UTAUT model to explore the application and diffusion process of mobile learning tools and online social network sites. The results verified that the values of open discourse environment include improving community atmosphere, increasing interactive participation, and providing platform participants with a smooth way to express their needs, ideas or creatives (Raman & Don, 2013). However, despite the significance of entrepreneurial storytelling in the crowdsourcing organizations, little research on UTAUT has been conducted on entrepreneurial digital storytelling in crowdsourcing projects. Furthermore, the UTAUT model has not previously been applied to creative crowdsourcing sectors. Therefore, this study aims to predict makers' creative crowdsourcing intention by using digital storytelling and concepts of the UTAUT model.

2.2 Hypothesis development

2.2.1 Relationship between digital storytelling and the four core concepts of UTAUT

Consumers are deeply influenced by digital stories (Hassan, 2016; Klimmt, Roth, Vermeulen, Vorderer, & Roth, 2012). Digital storytelling and its three components -- aesthetic perception,

narrative structure and self-reference -- have become powerful user link tools for digital technology application (Baumgartner et al., 1992; Delgadillo & Escalas, 2004; Hsiao et al., 2013). For example, the aesthetics of a computer interface is a key determinant of website visit intention (Freedberg & Gallese, 2007; Lavie & Tractinsky, 2004). Digital storytelling combines traditional storytelling methods with digital multimedia (i.e. audio, graphic visualization, video, and web publishing) to form a unique narrative form. Self-reference has also been credited with active online consumerism (Escalas & Stern, 2003; Freedberg & Gallese, 2007).

For the performance expectation of digital storytelling, as digital storytelling covers various information and communication technology (ICT) innovations (i.e. sense-based intelligent terminal devices, positioning technologies and multimedia content platforms), information and content in digital stories are being produced, copied and transmitted at an unprecedented scale and speed through symbolic forms (Couldry, 2008). There are also researches supporting the effort expectation of digital storytelling (Bonacini et al., 2018). In the context of virtual libraries, museums, art galleries, storytelling has always been considered to provide additional personal interpretation (Hall & McArthur, 1998). Narration based on social media has become a widely used tool to encourage users to visit and spread word-of-mouth (Akgün et al., 2015; Escalas & Stern, 2003). In terms of social influence effects, digital stories about tourist attractions (i.e. travel notes and blogs) can improve the reputation of tourist attractions (Akgün et al., 2015), arouse readers' empathy (Hsiao et al., 2013), and encourage tourists to share their travel experiences through digital media (Wu, 2006; Bassano, Barile, Piciocchi, Spohrer, Iandolo, & Fisk, 2019). At the same time, storytelling plays an important role in facilitating the acceptance and use of e-learning, mobile payment platform, smart medical system and other technologies (Sadik, 2008).

In crowdsourcing mode, the commercial application of digital storytelling provides a suitable hotbed for immersive telepresence when participants are absent (Wu, 2006). As an appropriate means of crowdsourcing, digital storytelling organically integrates the purpose, content and wireless value-added services of crowdsourcing projects into virtual practice (i.e. using virtual reality technology in virtual space and practicing in the form of digitalization) and virtual experience (i.e. judging the attribute and value of the product through sensory and behavioral experience stimulation in the virtual space) (Kim & Hall, 2019). Since digital storytelling applications in creative crowdsourcing are significantly supportive by UTAUT and the four key constructs, we propose four hypotheses from crowdsourcing makers as follows:

H1: Digital storytelling has a positive effect on the four core concepts of UTAUT in creative crowdsourcing;

H1a: Digital storytelling has a positive effect on performance expectation of creative crowdsourcing;

H1b: Digital storytelling has a positive effect on effort expectation of creative crowdsourcing;

H1c: Digital storytelling has a positive effect on the social influence of creative crowdsourcing;

H1d: Digital storytelling has a positive effect on the facilitating condition of creative crowdsourcing.

2.2.2 Relationship between the four core concepts of UTAUT and creative crowdsourcing intention

As an integrated research framework, UTAUT is often used to evaluate the possibility of successful application of digital technologies (Crespo & del Bosque, 2008; Kim, Chung, & Lee, 2011; San Martín & Herrero, 2012; Tan & Ooi, 2018). Some studies found that online consumption willingness

is jointly determined by the level of performance and effort expectation (San Martín & Herrero, 2012). The study on e-commerce websites found that the four components of UTAUT (including performance expectation, effort expectation, social influence and facilitating condition) would affect users' online purchase intention (Escobar-Rodriguez & Carvajal-Trujillo, 2014). In the context of mobile travel APP usage, users' intention to use is significantly affected by social influence, expected efforts and facilitating condition (Tan, Lee, Lin, & Ooi, 2017). Research on the use of mobile shopping APP shows that performance expectations, social influence and effort expectations have a positive impact on consumers' purchase intention and even the formation of shopping platform usage habits (Tan & Ooi, 2018).

In the commercial application of crowdsourcing, users' behavioral intention of using digital technologies to participate in storytelling is significantly affected by performance expectations, effort expectations and facilitating condition within the UTAUT theoretical framework (Suki & Suki, 2017). In crowdsourcing projects related to leisure and tourism, performance expectations have a significant impact on user participation intention and word-of-mouth evaluation (Kim & Hall, 2019). The public's willingness to participate in crowdfunding projects was also affected by performance expectation, social influence, effort expectation and facilitating condition within the UTAUT framework (Li et al., 2018). However, a study on crowdsourcing projects involving sustainable technologies revealed that social influence and expected effort input are the main factors driving public attention and participation (Moon & Hwang, 2018). Accordingly, we postulate four hypotheses regarding makers' creative crowdsourcing behavior intention applying the UTAUT framework as follows:

Therefore, the following hypotheses are proposed:

H2: The four core concepts of UTAUT have a positive effect on creative crowdsourcing intention;

H2a: Performance expectation has a positive effect on creative crowdsourcing intention;

H2b: Social influence has positive effect on creative crowdsourcing intention;

H2c: Effort expectation has positive effect on creative crowdsourcing intention;

H2d: Facilitating condition has a positive effect on creative crowdsourcing intention.

2.2.3 Mediation effect of the four core concepts of UTAUT

Digital storytelling is a complex and diverse marketing tool in the context of digital technology application. It includes research and application in different fields and perspectives, including story content (Fournier, 1998), audience memory and empathy (Nie et al., 2017), brand communication (Woodside, Sood, & Miller, 2008), user relationship (Gilliam & Flaherty, 2015), online encounters (Gilliam & Zablah, 2013), and digital learning (Padilla-Zea, Gutiérrez, López-Arcos, Abad-Arranz, & Paderewski, 2014). The UTAUT framework has been used to assess the likelihood of successful adoption of digital technologies and to better understand audience drivers (Venkatesh et al., 2003; Venkatesh et al., 2012). The simultaneous inclusion of the four core concepts of UTAUT (i.e. performance expectation, effort expectation, social influence and facilitating condition) will greatly enhance the explanatory power for the differences in the acceptance and willingness of users of digital technology (Venkatesh et al., 2012).

In crowdsourcing projects, digital storytelling is often an integral part of the digital technology usage (Boiko et al., 2017; Bassano et al., 2019). The UTAUT framework and its four key components provide strong support for the application of digital storytelling technology in crowdsourcing projects (i.e. product promotion, creative soliciting and brand communication)

(Weissenfeld, Abramova, & Krasnova, 2017; Ingram Bogusz et al., 2019). Wang, Li, and Law (2017) found that high quality images and social network support both affect crowdsourcing performance. According to Marchegiani (2018), crowdsourcing participants' perceived risks can be reduced through full disclosure of crowdsourcing information. Digital storytelling using audio and visual technology helps to encourage audience participation (Manning & Bejarano, 2017). How to use the "entrepreneurial story" to attract and encourage potential users to participate in the digital paradigm has attracted academic attention (Chen, Yao, & Kotha, 2009; Ingram Bogusz et al., 2019; Omeragic, 2016). To tell a story clearly, easily and movingly, an entrepreneur should at least give a coherent account of how to solve problems for customers, project technology maturity, development planning, and financing plan (Manning & Bejarano, 2017). In the promotion of entrepreneurial projects, virtual symbols (i.e. visual and auditory symbols) are used to outline the prototype of the project creative and convey the value, reward or benefit of the project (Weissenfeld et al., 2017), so as to create meaning for the audience with unique advantages (Omeragic, 2016).

On the one hand, digital storytelling has a positive impact on UTAUT; On the other hand, UTAUT can promote maker's intention to participate in creative crowdsourcing. In other words, good digital storytelling will promote users' evaluation of UTAUT and its four core components, so as to persuade them to participate in or even be involved in the creative crowdsourcing activities. Therefore, the following hypothesis is put forward about the mediating role of UTAUT in the persuasive mechanism of digital storytelling:

H3: The four core concepts of UTAUT play mediating roles in the relationship between digital storytelling and creative crowdsourcing intention;

H3a: Performance expectation plays a mediating role in the relationship between digital storytelling and creative crowdsourcing intention;

H3b: Social influence plays a mediating role in the relationship between digital storytelling and creative crowdsourcing intention;

H3c: Effort expectation plays a mediating role in the relationship between digital storytelling and creative crowdsourcing intention;

H3d: Facilitating condition plays a mediating role in the relationship between digital storytelling and creative crowdsourcing intention.

Drawing upon these hypotheses utilizing the UTAUT concepts, we suggest the integrated model in Fig. 1. This work investigates associations between the independent variable of digital storytelling as a second order factor (aesthetic perception, narrative structure, and self-reference), mediators (performance expectancy, social influence, effort expectancy, and facilitating condition), and the output variable of creative crowdsourcing intention.

(Figure 1 near here)

3. Method

3.1 Measurement

In order to verify the hypothesis proposed in this study, after extensive literature review, the initial questionnaire of this study was formed by combining the characteristics of creative crowdsourcing projects and the technical characteristics of crowdsourcing platforms. The questionnaire design mainly consists of two parts. The first part involves the basic demographic information of the subjects, including age, gender, education level, income level, as well as the basic information of the creative crowdsourcing programs, including creative crowdsourcing experience, crowdsourcing

community type and crowdsourcing community scale. Gender, age, education level, income level and creative crowdsourcing experience were included as control variables.

The second part is a formal question item, consisting of 31 questions and 8 constructs. Likert-7 scale was used to measure the main variables in this study. Among them, creative crowdsourcing intention is taken as the outcome variable. The measurement of creative crowdsourcing intention refers to the scale developed by Mollick (2014), which includes four measurement items. The sample item is "I am willing to participate in the creative crowdsourcing project".

Constructs related to digital storytelling include aesthetic perception, narrative structure and self-reference. The measurement of aesthetic perception, narrative structure and self-reference refers to the scale developed by Akgün et al. (2015). Aesthetic perception was measured by four items, including "I think this digital story looks beautiful". Narrative structure was measured by four items, including "Digital storytelling lets you know what the crowdsourcing party think and feel". Self-referential was measured by three items, including "When I saw this digital story, it made me think of similar situations that my friends had experienced."

Unified Theory of Acceptance and Use of Technology (UTAUT) includes four core concepts: performance expectation, effort expectation, social influence and facilitating condition. The measurement of performance expectation, effort expectation, social influence and facilitating condition in UTAUT is based on a scale developed by Venkatesh et al. (2003) and Venkatesh et al. (2012). Performance expectation was measured by four items, including "This crowdsourcing platform or project can bring me better products or services". Effort expectation was measured by four items, including "it is easy to participate in creative crowdsourcing projects using this crowdsourcing platform". Social influence was measured by four items, including "People around me encourage me to participate in creative crowdsourcing projects". Facilitating condition was measured by four items, including "The crowdsourcing platform can provide me with sufficient technical assistance to solve the problems that arise when I participate in creative crowdsourcing projects".

3.2 Data collection

Based on the website of www.wjx.cn, a professional questionnaire platform with 73.23 million users, this study completed the online questionnaire survey with the help of professional questionnaire survey service. The online survey was completed from December 1 to 15, 2019. Since the theoretical framework of this study contains 8 constructs and 31 items, we need about 400 valid samples. According to the statistics of the operation data of the survey platform, about 5% of the responses can usually be obtained from the questionnaire survey invitation. Therefore, the invitation letter of this survey was sent to 9710 questionnaire platform users by e-mail, of which 2616 opened the invitation email, and 2353 respondents participated in the survey by clicking the questionnaire link.

Each participant was asked the following screening question: "Have you ever participated in creative crowdsourcing projects in the past 12 months?". On this basis, the names of the creative crowdsourcing projects and their participation experiences were collected (see Table 1). Of the 1489 respondents who passed the screening, 485 completed the questionnaire. After deleting the respondents who answered too fast, used repetitive mode and did not give the name of the crowdsourcing project they participated in, 450 valid questionnaires were obtained, and the effective sample recovery rate was 30.2%. Respondents' profile (including demographic characteristics and creative crowdsourcing behavior characteristics) is shown in Table 2.

(Table 1 near here)

(Table 2 near here)

The data analysis of this paper is mainly based on Amos 22.0 statistical software. After testing the convergence validity and discriminant validity of variable measurement, we test the measurement model, path analysis and mediating effect of the collected data to evaluate whether the proposed research hypothesis and the theoretical model constructed on this basis can well describe the collected data.

3.3 Data analysis

Data collected was analyzed using analysis of moment structures (AMOS) 22.0 SEM based on Arbuckle (2013). SEM has been developed for assessing if the suggested model or hypothetical structure well describes the collected data (Hair et al., 2010). Using the double stage method of Anderson and Gerbing (1992), we tested the collected data for hypothesis and structural model after testing the convergence validity and discriminant validity.

The normality of the data has been examined applying maximum-likelihood estimation (MLE) in AMOS (Kline, 2011). The absolute values of the distortion and the kurtosis have ranges of 0.102 to 0.554 and 0.072 to 0.898 respectively that both belong to the traditional standard of multivariate normality (Hair et al., 2010). MLE has been used to check research models since it is more effective and less biased than other common approaches if the multivariate normality assumption is established (Byrne, 2001). Blunch (2008) asserts that MLE is a flexible method for assessment with the parameter values to attain optimal model suitability.

3.4 Common method deviation design

Several procedures are used to minimize the impact of common method bias. Firstly, a statement is provided at the beginning of the questionnaire to explain the research purpose and ensure the anonymity of the answers. Secondly, in the introduction, it is pointed out that there is no right or wrong answer to reduce the anxiety of the respondents. Thirdly, in order to ensure the validity of the response, the definitions and examples of digital storytelling, creative crowdsourcing and other related concepts have been given to make as detailed explanation as possible. Fourthly, the items belonging to the same construct and dimension will not appear at the same time. Fifthly, the order of items in each questionnaire is as different as possible.

4. Results

4.1 Common method deviation test

The following three statistical tests show that there is no serious common method bias in the questionnaire measurement. First, the exploratory factor analysis (EFA) was used to analyze all the items in the questionnaire by Harman single factor method (Harman, 1967). When a factor accounted for more than 50% of the variance of the variable, there was a common method deviation. The results showed that there were six factors, of which the variance of principal factors was 39.17%, followed by 10.58%, 6.78%, 4.63%, 4.49%, and 3.92%. So there was no high explanation rate of the variance of a single factor. Second, whether only one factor can be extracted from the sample data is tested. The results show that the hypothetical theoretical model can distinguish significantly (χ^2/df = 153.5, p < 0.001) from the single factor model, and has higher fitting ability. Thirdly, the common method factor is added to the structural equation model as a potential variable (Podsakoff et al., 2003), and the change of the structural equation model fitting after adding the potential variable is compared. The test results show that the fitting degree of the model to the data is not

significantly improved after adding the common method deviation factor ($\Delta\chi^2/\Delta df = 8.76$).

4.2 Model fitness test

In the process of confirmatory factor analysis (CFA), we modified the measurement model (Arbuckle, 2013) by eliminating three items that have large residual variance with other items (i.e. "It is very convenient to use this crowdsourcing platform ";"Crowdsourcing will increase my personal welfare ";"I will recommend this crowdsourcing project to my relatives and friends"). Finally, the measurement model was formed (see Table 3).

The fitness of the conceptual model was tested. Compared with the range of some important fitting indexes of the structural model, the fitting indexes of the six factor model in this study were all within the adaptation standard ($\chi^2/df \leq 3.0$, $p<0.001$; GFI=$0.931 \geq 0.9$; NFI=$0.920 \geq 0.9$; CFI=$0.985 \geq 0.9$; RMSEA=0.050), indicating that the conceptual model has a good fitting degree. It's worth noting that, compared with the structural equation model that includes both digital storytelling and UTAUT as first order factors (see M_2 in Table 4), the structural equation model that includes digital storytelling as a first order factor and UTAUT as a second order factor (see M_3 in Table 4), and the structural equation model that includes both digital storytelling and UTAUT as second order factors (see M_5 in Table 3), the 6-factor structural equation model, which includes digital storytelling as a second order factor and UTAUT as a first order factor (see M_1 in Table 4), has a better degree of fitness.

(Table 3 near here)

(Table 4 near here)

4.3 Reliability and validity test

Cronbach's α coefficient was used to test the measurement reliability of each variable (see in Table 3). The Cronbach's α of aesthetic perception is 0.857, that of narrative structure is 0.855, that of self-reference is 0.863, that of performance expectation is 0.764, that of effort expectation is 0.899, that of social influence is 0.896, that of facilitating condition is 0.806, and that of creative crowdsourcing intention is 0.855, and that of digital storytelling is 0.903, which indicates that the measurement of variables in this study has good reliability.

The results of confirmatory factor analysis showed that the standardized factor loads of all 31 items were significant and greater than 0.7, indicating that there was a strong correlation between each item and its corresponding factors. The CR and Cronbach's α of each factor are more than 0.7. The AVEs of all factors were more than 0.5, which indicated that the scale had good convergent validity. According to the correlation analysis results of each variable (see Table 5), the square root of AVE is significantly larger than its corresponding non-diagonal elements, and any two variables are not too similar, indicating that the discriminant validity of each variable measurement is good.

(Table 5 near here)

4.4 Measurement model

The second order factor of digital storytelling, which takes perception aesthetics, narrative structure and self-reference as sub-dimensions, has good reliability and validity (see Table 3). The factor loading is greater than 0.7, AVE = 0.616 (greater than 0.5), CR = 0.947 (greater than 0.7), Cronbach's α = 0.903 (greater than 0.7). Digital storytelling is also highly correlated with aesthetic perception ($\lambda = 0.860$, $P < 0.001$), narrative structure ($\lambda = 0.833$, $P < 0.001$) and self-reference ($\lambda = 0.717$, $P < 0.001$), and the factor loadings of the three paths are significantly higher than 0.7, which supports that aesthetic perception, narrative structure and self-reference are the three sub-dimensions of

digital storytelling (see Fig. 2).

<div align="center">(Figure 2 near here)</div>

4.5 Structure model

Structure model test results show that digital storytelling directly explains the variance of performance expectation ($R^2 = 0.533$), social influence ($R^2 = 0.248$), effort expectation ($R^2 = 0.502$) and facilitating condition ($R^2 = 0.584$). The difference of creative crowdsourcing intention ($R^2 = 0.486$) can be directly predicted by performance expectation, social influence, effort expectation and facilitating condition. In addition, digital storytelling, as a reflective second order factor, directly explains aesthetic perception ($R^2 = 0.738$), narrative structure ($R^2 = 0.692$) and self-reference ($R^2 = 0.513$).

The results of path analysis (see Figure 2) show that digital storytelling positively influence performance expectation ($\gamma = 0.731$, p < 0.001), social influence ($\gamma = 0.499$, p < 0.001), effort expectation ($\gamma = 0.709$, p < 0.001) and facilitating condition ($\gamma = 0.765$, p < 0.001), so H1 and its sub-hypothesis are verified. The results of path analysis (see Figure 2) show that creative crowdsourcing intention was positively influenced by performance expectation ($\beta = 0.252$, p < 0.001), social influence ($\beta = 0.198$, p < 0.001), effort expectation ($\beta = 0.163$, p < 0.05) and facilitating condition ($\beta = 0.273$, p < 0.01), so H2 and its sub-hypotheses are verified.

4.6 Mediating effect

Compared with other mediating test methods, bootstrapping can effectively overcome the problem of significant test failure caused by biased sampling distribution of mediating effect. Therefore, bootstrapping method is used to test indirect relationship (i.e. mediating effect) in this study, and 90% deviation correction confidence interval is constructed through 5000 repeated sampling.

The results of mediating effect test (see Table 6) showed that when performance expectation, effort expectation, social influence and convenience were included in the structural model, performance expectation ($\beta = 0.108$, t = 3.588, P < 0.001), effort expectation ($\beta = 0.115$, t = 3.438, P < 0.001), social influence ($\beta = 0.104$, t = 3.603, P < 0.001) and facilitating condition ($\beta = 0.121$, t = 2.962, P < 0.001) have significant and positive mediating effects on the relationship between digital storytelling and creative crowdsourcing intention, thus H3 and its sub hypothesis are verified.

<div align="center">(Table 6 near here)</div>

<div align="center">5. Discussion and conclusion</div>

5.1 Conclusion

This study built and verified a theoretically comprehensive research model including digital storytelling with three sub-constructs (aesthetic perception, narrative structure and self-reference) and the four core concepts of UTAUT (performance expectation, effort expectation, social influence and facilitating condition) by collecting and analyzing 450 valid online questionnaires.

The findings are as follows: digital storytelling for user customization plays an important role in attracting and persuading audience to support creative crowdsourcing. In other words, high-quality aesthetics (i.e. the aesthetic feeling, clarity and other characteristics of story screen, video or animation), well framed narration (i.e. the narration of initial events, turning points and conclusions provided by crowdsourcing products), and digital storytelling that evokes users' self-reference and empathy (i.e. allowing them to reflect on their own experiences or recall their own memories) will enhance their attraction to the audiences. Digital storytelling has different degrees of influence on

the attitudes of crowdsourcing participants to the facilitating condition, performance expectation, effort expectation and social influence of crowdsourcing platform based on UTAUT framework. That is to say, digital storytelling is conducive to driving potential supporters to form a positive evaluation on facilitating condition, followed by performance expectation, effort expectation, and social influence. Supporters' creative crowdsourcing intention is influenced by the factors of the UTAUT framework. Entrepreneurs need to highlight crowdsourcing platforms' facilitating conditions to better encourage support from potential makers, followed by more benefits relevant to performance expectancy.

5.2 Theoretical contribution

This paper provides the following major insights to theory formation and verification. The first theoretical insight is to identify the effective persuasive elements of digital storytelling by constructing and verifying its reflective second order factor model. An important research topic of information persuasion research is what factors can help enterprises locate consumers and carry out communicative persuasion (Armstrong, 2000). Previous studies have focused on the visual aesthetics of websites in human-computer interaction research (Lavie & Tractinsky, 2004); the relevance between the narrative structure and empathy of user generated content (Hsiao et al., 2013); the relationship between autobiographical memory and audience information processing (Baumgartner et al., 1992). The finding related to digital storytelling as a reflective second order factor consisting of aesthetic perception, narrative structure, and self-reference expands the research on the content of digital persuasive information (Akgün et al., 2015; Gottschall, 2012), and provides tool support and conceptual framework for the digital persuasion research.

The second theoretical insight is to identify the important role of actual acceptance and use of digital technologies in storytelling in makers' creative crowdsourcing intention by utilizing UTAUT framework, which reveals convincing persuasive sources for digital storytelling. Since digital storytelling is essentially a process of persuasion embedded in digital technology (Chen et al., 2009), the way that makers deal with persuasion information naturally becomes the key to participate in persuasion. Similar to other digital technology application scenarios, facilitating condition (San Martín & Herrero, 2012) and performance expectation (Li et al., 2018; Moon & Hwang, 2018) are the most critical elements in the process of receiving and using digital storytelling technology. UTAUT and its four core concepts provide a theoretical framework and perspective for exploring the differentiation / customization process of audience's actual acceptance and use of digital technology in storytelling interaction.

The third theoretical insight is to extend the research field of digital technology from collaborative consumption to collaborative innovation, thus expanding the explanatory power of UTAUT. The results related to the relationship between digital storytelling and UTAUT, and the relationship between UTAUT and creative crowdsourcing intention show that it is effective to take UTAUT as an integrated research framework in the actual acceptance and use process of the digital storytelling technology. As for the sponsors of crowdsourcing, only when they understand the user information processing method and provide customized content, can they successfully stand out from other content in the user subscription, successfully attract the audience's attention and encourage them to participate in it (Moon & Hwang, 2018).

5.3 Management practices

The findings of this paper provide practical management enlightenment for entrepreneurs on how

to embed into the crowdsourcing led by makers through digital storytelling.

First of all, crowdsourcing entrepreneurs should focus on improving the quality of digital storytelling, in which digital storytelling has the highest weight in aesthetic perception, which means that crowdsourcing stakeholders should focus on improving their aesthetics of digital storytelling. Building a digital story with good narrative structure, which pays attention to causality, transition from beginning to end should be considered. They can also construct digital story content suitable for their audiences, so as to evoke the audience's self-reference to past experience and memory, and stimulate their emotional resonance

In view of the mediating role of UTAUT and its core four concepts, if entrepreneurs want to get more and better ideas from potential supporters, the most effective way is to emphasize or enhance the convenience of the platform to make the platform visitors as comfortable as possible. The platform should highlight better interests and advantages, so as to improve consumers' performance expectations. Entrepreneurs should also pay attention to the social factors of crowdsourcing experience, consider incorporating social media platform into their creative crowdsourcing projects, and improve the compatibility between the platform and social media platform, so as to better monitor the behavior of participants' peers and provide corresponding support for the construction and maintenance of participants' social network.

5.4 Research limitations and prospects

Although this work offers theoretical and managerial implications to the field of creative crowdsourcing, there are several limitations that suggest future study directions. First, in order to better focus on the creative crowdsourcing mechanism driven by digital storytelling, this study focuses on the content quality of digital storytelling and takes the crowdsourcing projects of the whole digital creative industry as the research object. Other variables related to digital stories (i.e. digital story type, presentation mode, rhetoric strategy) and characteristics of crowdsourcing projects (i.e. crowdsourcing project type, crowdsourcing platform type) can be considered in the future. Second, the research on the "black-box" of crowdsourcing innovation process in the future can also draw lessons from the existing research in collaborative consumption fields (i.e. e-commerce, e-payment and online consumption) (Stuart & Mattsson, 2017; Vidya, Marianne, & Harmony, 2020). Third, future researches can take into account non information technology factors such as equal dialogue (Crespo & del Bosque, 2008), trust (Kim, Chung, & Lee, 2011), information quality (Kuan, Bock, & Vathanophas, 2008) and perceived security and privacy protection (Kim & Hall, 2019), so as to better predict crowdsourcing intention and behavior.

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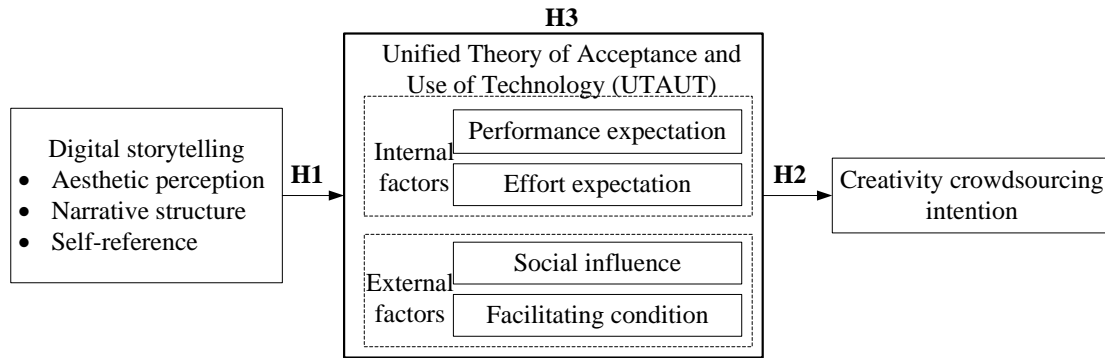
FIG. 1 Theoretical model of this paper

Source: Drawn in this paper.

Table 1 Statistics of creative crowdsourcing projects

Brand	Project	Number	Brand	Project	Number
NetEase Koala	Israel's "Journey to the Source"	32	Alibaba	A tribute to entrepreneurial women in the digital age	6
Tmall	"Forget about your ideal life" Campaign	44	WeChat	Let creation reflect value	39
Vipshop	6.16 Midyear national PK sale：Play live with goods	37	Tencent Video	Restoration of Cultural Relics, Meeting Civilization	25
Suning	AD "Lao Ceng"	23	Tencent music	Art exhibition "Searching For Landscapes: Flow"	12
NetEase news	Public image collection project	26	Huawei	Brand film "Monkey King"	34
Ctrip	Documentary "Landscape on Wheels"	25	P&G	"Disney Princess Group" themed activity	34
Uniqlo	Collect the world art, pass through the creative	14	Midea	"Wind Whisperer" experimental exhibition	16
Pepsi	Pepsi's "Gaius"	25	Palace Museum	Comic strip "Echoes of the Palace Museum"	8
BMW	Journey to the stars	15	Leica Camera	AD "Small bag big dream"	11
Tsingmung	Subway Exhibition "Good Content. Action Exhibition"	6	China UnionPay	Cloud Flash Payment: "Industry Baifutu"	18

Source: Compiled in this paper.

Table 2 Characteristics of sample demographic and creative crowdsourcing participation behavior

Attribute	Sample size (450)	Proportion (%)	Attribute	Sample size (450)	Proportion (%)
Gender			Crowdsourcing platform selection		
Male	232	51.6	Social media	203	45.1
Female	218	48.4	Knowledge Community	127	28.2
Age			Creative crowdsourcing platform	110	24.5
Under 20	33	7.3	Others	10	2.2

20-29	119	26.5	Crowdsourcing experience		
30-39	117	26.0	Less than 7 months	190	42.3
40-49	111	24.7	7-12 months	128	28.4
50-59	50	11.1	12-36 months	118	26.3
Up 60	20	4.4	More than 36 months	14	3.0
Education			Platform access frequency		
Senior high school	87	19.3	At least once a day	13	2.9
Junior college	42	9.3	At least once a week	62	13.8
Undergraduate	264	58.7	At least once a month	104	23.1
Graduate	57	12.7	At least once a season	145	32.2
Marriage			At least once a year	126	28.0
Single	227	50.5	Monthly creative contribution		
Married	213	47.3	Less than 3	66	14.7
Devoiced	10	2.2	3-10	125	27.8
Annual household income			11-20	187	41.6
Less than 100000 yuan	19	4.2	More than 20	72	15.9
100000-300000 yuan	114	25.3	crowdsourcing participation reasons		
300000-500000 yuan	136	30.2	Economic income and reward	179	39.8
More than 500000 yuan	181	40.3	Material rewards	144	32.0
Occupation			Social communication and relationship	77	17.1
Teachers and researchers	50	11.1	Virtual reputation	47	10.4
Freelance	28	6.2	Others	3	0.7
Government / institution employees	18	4.0	Crowdsourcing project content		
Employees of enterprises	203	45.1	Tourism and catering	12	2.7
Rural migrant Workers	14	3.1	Electronic commerce	136	30.2
Industry / service personnel	36	8.0	Information and communication technology	51	11.3
Private owners	3	0.7	Movies, entertainment, sports, leisure	27	6.0
Students	72	16.0	Online games	99	22.0
Unemployment	15	3.3	Culture and art	47	10.4
Others	11	2.4	Music	53	11.8
Your area belongs to			Others	25	5.6
First-tier cities	207	46.0	Participated in overseas crowdsourcing projects or not		
Second-tier cities	108	24.0	Yes	52	11.6
Prefecture level cities and below	135	30.0	No	398	88.4

Source: Compiled in this paper.

Table 3 Results of confirmatory factor analysis

Items	Factor loading	Cronbach's α	CR
Aesthetic perception		0.857	0.857
1. I think the digital storytelling looked beautiful.	0.781		
2. I think this digital story looked pleasant to tell.	0.764		
3. I think the digital storytelling looked fascinating.	0.788		
4. I think the digital storytelling looked very clear.	0.766		
Narrative structure		0.855	0.851
1. This digital storytelling let me know what the crowdsourcer think and feel.	0.796		
2. This digital storytelling revealed why things happen, what causes things to happen.	0.826		
3. This digital story told a clear beginning, process and end.	0.744		
4. This digital storytelling provided concrete, specific, rather than generalized, abstract events.	0.727		
Self-reference		0.863	0.864
1. When I saw this digital story, I thought of my friends who had gone through similar situations.	0.782		
2. When I heard the digital story, I thought about my own past.	0.854		
3. When I heard the digital story, I thought of my similar experience.	0.836		
Performance expectation		0.764	0.764
1. This crowdsourcing project helped improve the service experience.	0.792		
2. This crowdsourcing project increased my personal income.	0.813		
3. This crowdsourcing project brought more product convenience.	0.781		
4. The crowdsourcing project inspired me.	0.776		
Effort expectation		0.899	0.899
1. Using this crowdsourcing platform was easy to get involved in.	0.838		
2. It was convenient to participate in this crowdsourcing platform.	0.818		
3. Participating in this crowdsourcing platform was straightforward.	0.842		
4. Working on crowdsourcing projects through this crowdsourcing platform was a quick way to get started.	0.824		
Social influence		0.896	0.896
1. People around me encouraged me to get involved in this crowdsourcing project.	0.829		
2. Most of the people who are important to me want to be part of this crowdsourcing project.	0.872		
3. If my friends around me were encouraged to participate in this crowdsourcing project, I think they will soon follow suit.	0.781		
4. People around me gave me some advice to help me get involved in this crowdsourcing campaign.	0.822		
Facilitating condition		0.806	0.804
1. This crowdsourcing platform gave me enough technical and tool support to	0.710		

solve the problems I encountered when working on crowdsourcing projects.

2. The crowdsourcing platform was well compatible with other technology and tool platforms.	0.788	
3. The crowdsourcing platform created forums, chat groups, bulletin boards and other channels to facilitate communication between participants in crowdsourcing projects.	0.794	
4. This crowdsourcing platform provided expertise, information and resources for creative crowdsourcing projects.	0.781	
Creative crowdsourcing intention	0.855	0.856
1. I want to be part of this crowdsourcing project.	0.850	
2. I would like to encourage the people around me to participate in this crowdsourcing project.	0.787	
3. I am willing to participate in the crowdsourcing platform's creative projects on a regular basis.	0.750	
4. I would like to participate in the crowdsourcing platform's creative projects within a year.	0.843	

Source: Calculated and collated according to statistical software.

Table 4 Comparison of fitness of structural equation models

Model	Factors included	χ^2/df	CFI	GFI	NFI	RMSEA
M_1	6 factors：$A_1+A_2+A_3$; B_1; B_2; B_3; B_4; C	2.036	0.958	0.931	0.920	0.050
M_2	8 factors：A_1; A_2; A_3; B_1; B_2; B_3; B_4; C	2.073	0.953	0.924	0.915	0.057
M_3	5 factors：A_1; A_2; A_3; $B_1+B_2+B_3+B_4$; C	2.151	0.936	0.912	0.905	0.078
M_4	4 factors：$A_1+A_2+A_3$; B_1+B_2; B_3+B_4; C	2.264	0.912	0.879	0.881	0.096
M_5	3 factors：$A_1+A_2+A_3$; $B_1+B_2+B_3+B_4$; C	2.453	0.821	0.769	0.781	0.089
M_6	2 factors：$A_1+A_2+A_3+B_1+B_2+B_3+B_4$; C	2.629	0.819	0.788	0.714	0.123
M_7	1 factor：$A_1+A_2+A_3+B_1+B_2+B_3+B_4+C$	3.086	0.724	0.657	0.625	0.126

Note: A_1 = aesthetic perception; A_2 = narrative structure; A_3 = self-reference; B_1 = performance expectation; B_2 = effort expectation; B_3 = social influence; B_4 = facilitating condition; C = creative crowdsourcing intention.

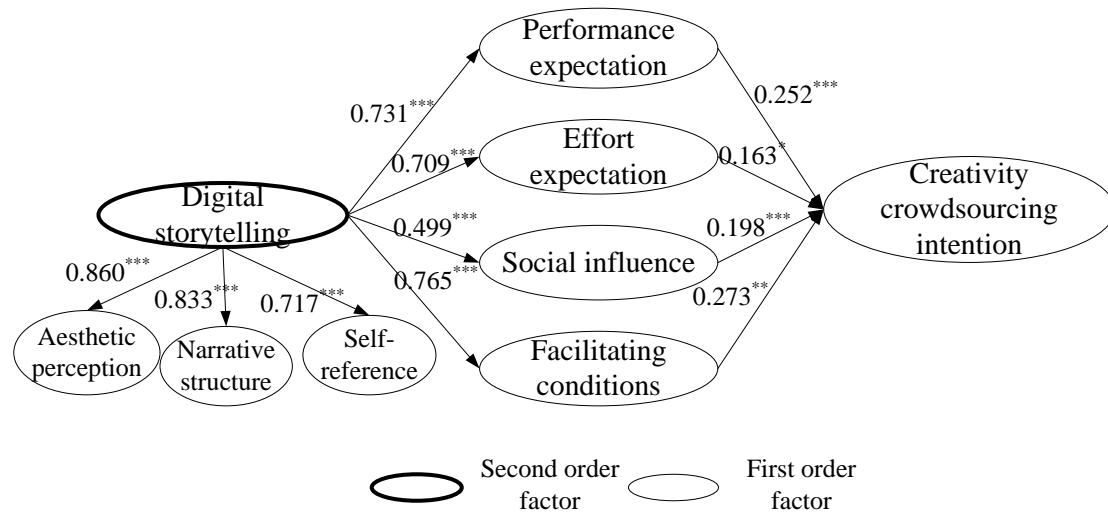Source: Calculated and collated according to statistical software.

Table 5 Results of mean, standard deviation and correlation analysis

Variable	1	2	3	4	5	6	7	8	9
1.Aesthetic perception	**0.882**								
2. Narrative structure	0.622***	**0.859**							
3. Self-reference	0.548**	0.494**	**0.771**						
4.Performance expectation	0.531**	0.418**	0.433**	**0.901**					
5. Social influence	0.548**	0.331**	0.464**	0.407**	**0.873**				
6. Effort expectation	0.522**	0.555**	0.301**	0.459**	0.237**	**0.877**			
7.Facilitating condition	0.495**	0.584**	0.317**	0.454**	0.343**	0.625**	**0.849**		
8.Creative crowdsourcing intention	0.465**	0.460**	0.346**	0.472**	0.415**	0.475**	0.498**	**0.836**	
9.Digital storytelling	0.882***	0.859***	0.770***	0.546**	0.479**	0.564**	0.569**	0.512**	**0.716**
Mean	4.658	4.834	4.340	4.767	4.022	5.026	4.749	4.842	4.610

Standard deviation	1.131	1.133	1.280	1.041	1.388	1.130	1.163	1.188	1.180

Note: * p <0.05, ** p <0.01, *** p <0.001; The bold on the diagonal is the square root of AVE.

Source: Calculated and collated according to statistical software.

FIG 2. Results of path analysis

Note: * p <0.05, ** p <0.01, *** p <0.001.

Source: Calculated and collated according to statistical software.

Table 6 Results of mediating effect test

Path	Mediating effect	T-value	p-value
Digital storytelling⟶Performance expectation ⟶Creative crowdsourcing intention	0.108***	3.588	<0.001
Digital storytelling ⟶ Effort expectation ⟶ Creative crowdsourcing intention	0.115***	3.603	<0.001
Digital storytelling ⟶ Social influence ⟶ Creative crowdsourcing intention	0.104***	3.438	<0.001
Digital storytelling⟶ Facilitating condition ⟶ Creative crowdsourcing intention	0.121**	2.962	<0.01

Note: * p <0.05, ** p <0.01, *** p <0.001.

Source: Calculated and collated according to statistical software.