Nigerian Public Relations Practitioners' Use of Social Media: Validation of an Online Interactivity Model Applying Structural Equation Modeling

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Two-way symmetrical communication has been described as the best practice in modern public relations. The advent of new media, specifically social media, provides public relations practitioners with the opportunities of engaging in effective two-way communication with their publics because of its interaction potentials.The aim of this paper, therefore, was to propose and validate an online interactivity model that explains how public relations (PR) practitioners use social media for the promotion of two-way balanced communication with their publics. Data were collected from 513 Nigerian PR practitioners through systematic random sampling and were analyzed using Structural Equation Modeling (SEM). The findings of the study suggested that the proposed and validated online interactivity model explained 82% of practitioners use social media for enhancing interaction with their publics.

Keywords: PR practitioners, social media, perceived interactivity, active control, two-way communication, synchronization

The idea of interactivity as the best public relations practice was conceptualized by Gruning and Hunt (1984) in their four models of public relations. Gruning identified press agentry and general information to improve on the simple concept of one-way communication. Gruning and Hunt pointed out that not all two-way is the same. Some two-way communication is asymmetrical – public relations practitioners engaged in the study and listen to the public but in their attempt to serve the interest of their organization. They stressed that public relations practitioners had a calling beyond asymmetrical approach: serving the organizational function that attempts to balance the interest of organization with those of their publics, a method called "symmetrical" communication Gruning and Dozier (2002).

Two-way symmetrical public relations attempts to balance the interests of the organization, and its public are based on research and uses communication to manage conflict with strategic publics. Gruning emphasized that two-way symmetrical communication is the best for effective communication and excellent public relations as it helps to maintain better and long relationships with the public more than other models of public relations. He also emphasized that symmetrical programs are executed in a more ethical way compare to other models as they yield a positive impact for both the organization and its publics. The public relations practitioners that adopt the symmetrical model have mixed-motive, serving the interest of their organization as well as its publics.

On the relevance of social media in the two-way communication Grunig (2009)

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highlights the significance social media can have on this dialogic communication. The new digital media have dialogical, interactive, relational, and global properties that make them ideally suited for a strategic management paradigm of public relations—features that one would think would force public relations practitioners to abandon their traditional one-way, message-oriented, asymmetrical and ethnocentric model of practice.

The different types of social media allow public relations practitioners to engage in interaction with their strategic publics. Through these interactions and information sharing, the interest of both parties is balanced. Kanter and Fine (2010) elaborated that an essential first step towards interactivity is to embrace the art of listening since organizations attempting to develop an online presence can use people's ideas, questions, and thoughts as a way of orienting themselves online. To subsequently begin to interact with the public, there are needs to be a transition towards engagement through sharing, conversing, and raising awareness. These opportunities could be obtained through the adoption and utilization of social media.

The use of social media by PR professionals has been an evolving topic to probe in various countries. A study has claimed that PR practitioners are adapting to social media in India. However, the PR community may take some more time for the optimum use of social media. The utilization of such media has become part and partial in business innovations and practices (Krishan, 2015). Sometimes, social media like Facebook are used to maintain the image and identity of celebrities (Bhatti, 2015). Therefore, social media and public relations are interrelated. However, the use of such media for PR activities differs from industry to industry and from countries to countries.

The objective of this study was to validate a proposed online interactivity model, which explains how practitioners could enhance interactions with the public through the utilization of social media. The model was an extension of the Technology Acceptance Model (TAM) of Davis (1985). Online interactivity in this study was measured from the three interactivity dimensions as developed and validated by Liu (2003). They are active control, two-way communication, and synchronization.

Literature review

Technology Acceptance Model (TAM) by Davis (1985) explained why a potential user of a specific Information System (IS) accepts or rejects it. Initially, the model was proposed to test the acceptance of computers among organizations workers. TAM was derived from the Theory of Reason Action (TRA) by Fishbein and Ajzen (1975), which explained the relationship between individual attitude and behavioral intention towards performing a behavior. The theory indicated that an individual's behavioral plan relies on his view about the behavior and subjective norms. The central thesis of TRA, according to Ajzen and Fishbein (1980), is "to predict and understand an individual behavior (p. 5). Davis (1985) proposed a model that provides an explanatory of user acceptance of Information Technology (IT), particularly in the work environment. The model was termed the Technology Acceptance Model (TAM), which now becomes a widely accepted conceptualization of IT acceptance.

According to Davis (1985), "a potential user's overall attitude towards using a given system is hypothesized to be a major determinant of whether or not he uses it" (p. 24). He further explained that attitude toward using is a function of two beliefs: perceived usefulness and perceived ease of use. Perceived ease of use has a causal effect on perceived convenience. Davis (1985) theorized the relationships in the TAM model to be linear, as the case in the TRA.

Davis (1989:2) defined Perceived usefulness as "the degree to which a person

believes that using a particular system would enhance his or her job performance." This was derived from the definition of the word useful, which means capable of being used advantageously. He also defined Perceived ease of use to refer to "the degree to which a person believes that using a particular system would be free of effort." This was also derived from the meaning of "ease," which means freedom from difficulty or great effort. Davis (1985) also defined used to refer "to the individual's actual direct usage of the given system in the context of his or her job."

Davis (1989) hypothesized that Perceived ease of use and perceived usefulness positively affect the attitudes toward an information system; and further, positively affect the individuals' intentions to use and the acceptance of the information system. Also, perceived ease of use positively affects the perceived usefulness, and both perceived ease of use and perceived usefulness are influenced by external variables. It is against this background, Davis (1985) summarized that the theoretical importance of perceived usefulness and perceived ease of use as determinants of user behavior is indicated by several diverse lines of research. Based on the TAM theorization, this study developed the following hypotheses:

H1: Perceived usefulness has a direct relationship with behavioral intention.
H2: Perceived ease of use has a significant relationship with perceived usefulness.
H3: perceived ease of use has a significant relationship with behavioral intention.
H4: Behavioral intention has a significant direct relationship with Social media use.

Interactivity

The concept of interactivity was given much attention from marketing, advertising, and public relations fields as a result of the emergence of new media. Blattberg and Deighton (1991) view interactivity to mean the facility for personal and organizations to communicate directly with one another regardless of distance or time. Their definition of the concept emphasized the elimination of distance and time offered by the new media technology. Interactivity, in this case, has to original features: the ability to address a person and to gather and remember the response of that person (Deighton, 1996). Rice (1984) defined interactivity as the capability of a computer-enabled communication system that allows the exchange of role between sender and receiver in real or delayed time so that communication can have more control over the pace, structure, and content of the communication. For Steuer (1992), interactivity refers to the extent to which users can participate in modifying the format and contents of a mediated environment in real-time. An interactivity definition was also provided by Wu (2000) when he defined interactivity as "the extent to which a person perceived he or she controls over interaction process, his or her communicative counterpart (a person, a mass-mediated environment, or a computer-mediated environment) personalizes and responds to his or her communication behavior".

Literature established that the concept of interactivity is multi-dimensional. Alba et al. (1997) viewed the idea from two angles: reciprocal communication and control. From the reciprocal point of view, interaction should always permit a two-way flow of information; the exchanged information should as well be in a sequence closely related to both the sender and the receiver. Secondly, the exchange of that information should be instantaneous and happen quickly Wu (1999). Ku (1992) conceptualizes interactivity to involve six mains variables; these include the immediacy of feedback, responsiveness; source diversity; communication linkage; equality of participation, and ability to terminate. The study of Ha and James (1998) established that interactivity has five dimensions:

playfulness, choice, connectedness; information collection; and reciprocal communication. Moreover, Dholakia (2000) proposed perceived interactivity to be measured from the perspectives of user control, responsiveness, real-time interactions, connectedness, personalization/customization, and playfulness. From the literature reviewed, it can be discerned that central to use interactivity is the ability of the sender and receiver to engage in a balanced two-way communication via an intermediary (usually machine), which is instantaneous with each of them assuming an equal level of control.

The current study employed the three dimensions of measuring interactivity developed and validated by Liu (2003) based on the multidimensional conceptualization of interactivity construct established by Liu and Shrum (2002). Liu and Shrum (2002) defined interactivity as "the degree to which two or more communication parties can act on each other, on the communication medium, and on the messages and the degree to which such influences are synchronized." They proposed three dimensions to summarize the many aspects of interactivity established by the literature, which they named: active control, two-way communication, and synchronization. Dynamic control describes a user's ability to participate involuntarily and instrumentally influence a communication; two-way communication, which captures the bi-directional flow of information; and synchronicity, which corresponds to the speed of the interaction. The current study interactivity scale was developed based on this conceptualization. Here interactive communication is defined as a communication that offers individuals active control and allows them to communicate both reciprocally and synchronously.

Several studies (Waters et al., 2009; Nordstrom, 2012; Lovejoy et al., 2013) established the relevance and impact of social media in promoting mutual interactions between organizations and their target constituents. Based on the reviewed literature, the following hypotheses were tested:

H5: The higher the social media use the higher the voluntary participation and communication between organizations and their publics (active control);
H6: The higher the social media use the higher the two-way communication between organizations and their publics (two-way communication);
H7: The higher the social media use, the higher the speed of interaction between organizations and their publics (synchronization).

The current study proposed an online interactivity model by integrating Technology Acceptance Model (TAM) with three interactivity scales to explain how public relations practitioners are using new media, specifically social media, for enhancing mutual interaction with their publics. The model carried seven constructs, namely, perceived usefulness; perceived ease of use; behavioral intention; social media use, which was measured from the dimensions of active control; two-way communication, and synchronization.

Methodology

The current study used a single research method, which was a survey. Data was collected from 513 Nigerian public relations practitioners nation-wide through a self-administered questionnaire. Structural equation modeling was employed for the analysis of the data using AMOS version 16.

The seven constructs used for validating this were model were measured using a 5-point Likert scale where 1 = strongly disagree to 5 = strongly agree. Perceived usefulness
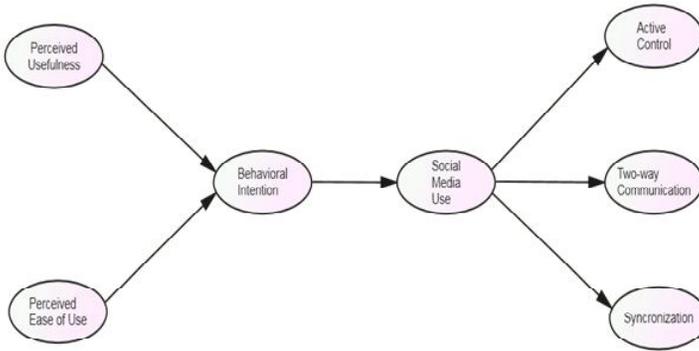
Figure 1. Hypothesized online interactivity model

was measured by 5 items; perceived ease of use 5 items; behavioral intention 5 items; active control contained 4 items; two-way communication 4 items; and synchronization was measured by 5 items as displayed in Figure 1.

The study found male practitioners accounted for 60%, while female practitioners were 40%.In terms of academic qualification, it was found that PR professionals who obtained Bachelor degrees with PR certificate were the majority (48%). Practitioners working with private organizations accounted for 51%, while government organization, PR consultancy, and own firm represented 32%, 10%, and 6%, respectively. In terms of the position occupied in their place of work, the findings showed that more than one-third of the respondents (39%) are the middle-level staff. A significant number of the respondents (43%) indicated that they are into PR practice for about ten years.

Table 1. Measurement of the constructs of the hypothesized model

Construct	Item	Measure	Loadings	Mean	SD	Alpha(α)
Perceived usefulness	PU2	Using social media makes the current relationship between my organization and its publics more effective.	.86	4.04	.764	.912
	PU3	Using social media enhances my performance in relating to my public.	.84	4.14	.781	
	PU4	Using social media makes it easier for PR personnel to communicate with their publics.	.83	4.10	.782	
	PU5	My publics find social media use in our relationship.	.81	4.04	.805	
	PU09	Generally, I find social media useful for enhancing organization-public relationships	.77	4.52	.8477	
Perceived ease of use	PEU3	Using social media to reach my publics saves me time.	.81	4.10	.818	.910
	PEU4	My interaction with my publics through social media would be clear and understandable.	.87	4.08	.845	
	PEU5	I find social media to be a flexible way of promoting a strong relationship with my stakeholders	.86	4.14	.793	

	PEU6	I find it easier to get to my target publics through social media.	.81	4.13	.855	
	PEU8	I find it easier to share information with my publics through social media.	.75	4.24	.829	
Behavioral intention	BI2	I believe that I am using social media because it makes my relationship with my public more effective.	.89	4.04	.790	.955
	BI5	I believe that my intention of utilizing social media is to enhance trust with my target publics.	.92	4.06	.826	
	BI6	I feel that my intention of utilizing social media is to enhance commitment in my relationships with my publics.	.93	4.07	.830	
	BI8	I believe that my intention of utilizing social media is to enhance interaction with my target publics.	.93	4.16	.849	
	BI9	Generally, I believe that my intention of utilizing social media is to enhance organization-public relationships.	.84	4.42	.903	
Active control	AC2	While my public is on my organization's social media, they can choose freely what they wanted to see.	.88	3.34	.945	.928
	AC3	While surfing social media, I had no control over what my stakeholders want to do on the account.	.94	3.26	.944	
	AC4	While surfing my social media, their action decided on the experience they will get.	.90	3.33	.934	
	AC5	Generally, I believe my publics has absolute control whenever they visited my organization's social media site.	.80	3.54	1.08	
Two-way communication	TC1	I feel that my organization's social media site(s) is useful in gathering visitors' feedback.	.91	3.98	.890	.981
	TC2	I believe that my organization's social media facilitates two-way communication between my organization and its publics.	.97	4.03	.883	
	TC4	Social media makes me feel, I wanted to listen to my publics	.78	4.09	.881	
	TC5	Social media does not at all encourage my publics to talk back	.74	4.27	.949	
Synchronization	SY1	My organization's social media processes my input very quickly.	.94	3.73	.785	.934
	SY2	Getting information from my organization's social media is very fast.	.97	3.75	.800	
	SY3	My public obtained the information they want from my organization's social media without any delay.	.91	3.74	.853	
	SY4	When my publics click on my organization's social media links, they felt they are getting instantaneous information.	.87 / .64	3.88 / 3.72	.920 / .964	
	SY5	My organization's social media is very slow in responding to my public's request.				

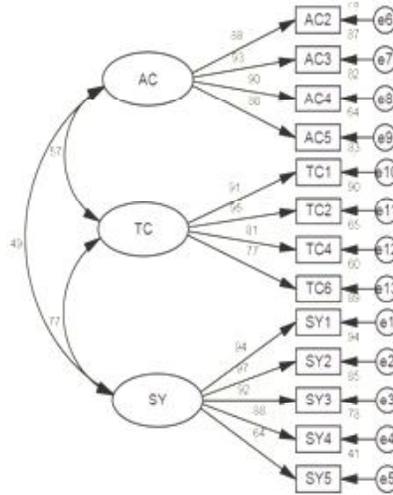|	
Chi-Square	290.793
CMIN/DF	4.690
Df	62
p	.000
CFI	.967
TLI	.958
RMSEA	.085

Figure 2. First order measurement model

The analysis of the second-order model indicated that the hypothesized three constructs model of interactivity was consistent with the data. The overall model fit was adequate, the relative Chi-square was extracted at 4.6; CFI = 967; TLI = .958 and RMSEA = .085. The path coefficients indicated significant relationships between social media use and interactivity constructs. Specifically, a significant relationship was found between social media use and active control (α = .60, p =.000); social media and two-way communication (α = .95, p = .000), and between social media use and synchronization (α = .81, p = .000). Also, the R^2 values showed that active control explained 36% of social media use; two-way communication explained 90%, and synchronization explained 65%.

Adequacy of the Causal Structure of the Interactivity Model

The assessment of the full-fledged model revealed a satisfactory goodness-of-fit index, as seen in Figure 3. The Normed Chi-square (CMIN/DF = 3.154) which is within the acceptable cut-score of 1.0 to 5.0. The Comparative Fit Index (CFI= .950) and the Tucker-Lewis Index (TLI=.945) were all found within acceptable levels of more significant or equal to 0.90. The Root Mean Square Error of Approximation (RMSEA= .065) was encountered at the recommended cut-score of less than 0.08. These satisfied the criteria for assessing the goodness-of-fit index of a model.

Comparative Fit Index (CFI= .944) and the Tucker-Lewis Index (TLI= .940) were all found within acceptable levels of more significant or equal to 0.90. The Root Mean Square Error of Approximation (RMSEA= .058) was encountered at the recommended cut score of less than 0.08. These satisfied the criteria for assessing the goodness-of-fit index of a model.

The path coefficient of all the constructs indicated significant relationships among the hypothesized paths. Specifically, a positive and highly significant correlation was found between perceived usefulness and perceived ease of use (α= .90, p= .000), another significant relationship was found between perceived usefulness and behavioral intention (α= .77, p= .000). However, a negative correlation was found between perceived ease of use and behavioral intention (α= -.01, p= .888). Moreover, the result signified a positive and significant relationship between behavioral intention and social media use (α= .90, p= .000).
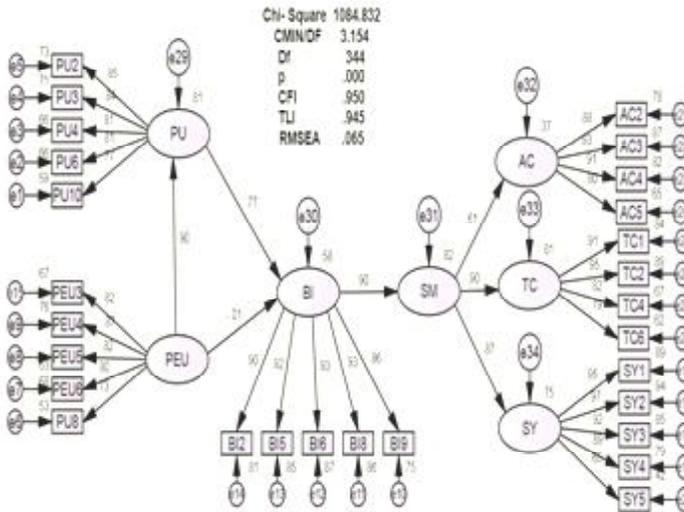
343

Figure 3. Full-fledge online interactivity measurement model

Also, the path Coefficient showed that social media use exerted considerable influence on active control (α= .61, p= .000), in the same vein, a positive and significant relationship was detected between social media use and two-way communication (α= .90, p= .000). Moreover, a positive association was also found between social media use and synchronization (α= .87, p= .000).

Discussion

The structural Equation Modeling analysis provided the findings regarding the causal relationships in the hypothesized online interactivity model. The first hypothesisposited a direct correlation between perceived usefulness and behavioral intention. The result supported this hypothesis PU ==> INT (α= .77, p= .002) and was consistent with the assumptions of the Technology Acceptance Model (Davies, 1989; Davis et al., 1989).

The second hypothesis assumed a relationship between perceived usefulness as the primary determinant of use and perceived ease of use as a secondary determinant as posited by TAM. This hypothesis was equally supported according to the results (α= .90, p= .000). This means that perceived ease of use was greatly influenced by usefulness was previously found (Venkatesh & Bala, 2008, Morton & Weidenbeck, 2009)

The third hypothesis posited a direct relationship between perceived ease of use and behavioral intention. The SEM analysis rejected this hypothesis, as a negative correlation was found between PEU and BI (α= -.01, p= .888). The findings suggested that ease of use does not determine the intention of practitioners to use social media. This could mean that the proliferation and diffusion of social media compelled practitioners to use of social media for interactions with their publics because of its users without considering its ease of use. Recent studies (Liu et al., 2009; Koenig-Lewis et al., 2011) that examined usefulness and ease of use as determinants of use of information system found PEU to have no significant influence on user's intention.

The fourth hypothesis examined the relationship between behavioral intention and social media use. The result suggested a significant positive correlation (α= .90, p= .000), indicating behavioral intention influenced social media use. Hence, this hypothesis

was accepted. Besides, behavioral intention explained 58% variance of social media use according to the R^2 value. This aligns with the assumptions of the Technology Acceptance Model (Devis et al., 1989) and as was found by (Park, 2009; Yang & Lin, 2011).

The rest of the three hypotheses of posited the use of social media for enhancing interactivity from the dimensions of active control; two-way communication and synchronization. The fifth hypothesis stated that the higher the social media use, the higher the voluntary participation and communication between the organization and its publics (active control). The result of the hypothesis confirmed a positive and significant relationship between social media use and dynamic control, SM ==> AC (α= .61, p= .000). This means that there wasvoluntary publics participate in communicating with their organizations through social media. At the same time, organizations and practitioners engaged their publics in communications voluntary through social media in Nigeria

Another hypothesis posited relationship between social media use and two-way communication. The Structural model analysis confirmed this assumption positively. A significant direct relationship was found between the two variables SM ==> TC (α= .90, p= .000). The result indicated that more practitioners use social media in communicating with their publics. The more they enhance two-way communication between them. The findings of this hypothesis were contrary to the previous findings (Waters et al., 2009; Nordstrom, 2012; Lovejoy et al., 2013), which found that organizations and practitioners were not taking the advantages of social media to maintain two-way communication with their strategic publics. However, the difference in the findings may not be unconnected to the fact that the previous studies were all conducted on non-profit non-governmental organizations (NGOs) who might not likely much interaction with their publics. In the current study, views of practitioners from multi-setting organizations were sought on two-way communication. Most of them are working with government organizations, private organizations, orindependent PR firms that require much feedback and interaction with their publics.

The last hypothesis tested the relationship between social media use and synchronization. The result indicated a significant relationship between them SM ==> SY (α= .87, p= .000). This result indicated that practitioners use social media as a means to enhance the speed of interaction between their organizations and target constituents. Specifically, the findings showed that practitioners believed their organizations' social media sites process their publics input very quickly. They also found that getting information from their organizations' social media is very fast. Hence, the public obtained the information they want from their organizations without any delay. The results also suggested that when publics click organizations' social media links, they get instantaneous information.

It is also imperative to note here that, among the three variables that explained the use of social media for interactivity, two-way communication proved to be the best predictor (α= .90, R^2= .81), among other predicting variables. It was followed by synchronization. Active control proved to be the least predictor (α= .61, R^2= .37) of social media use among the practitioners. This showed that there is still a specific restriction involuntary participation on organizations' social media sites by the public.

Conclusion

The validated online interactivity model has explained 82% variance of social media use for enhancing mutual interactivity. This showed good explanatory power of the model. Generally, the study found social media to be useful in strengthening reciprocal

relationships between practitioners and their publics. Maintaining two-way communication has the high explanatory power of social media use among the practitioners according to the structural equation modeling analysis. However, voluntary participation and total control of organizations' social media sites by the visitors have the least variance explain of 37%, which suggested that still, organizations allowed limited control of their social media sites by the visitors. This study found improvement in the utilization of interactive potentialities of social media by practitioners compared to what was found by studies of Nordstrom, 2012; Lovejoy, Waters and Saxton, 2013. The study also proved the relevance and impact of social media in modern public relations practice. It is, therefore, imperative for organizations and public relations practitioners to appreciates its relevance in the working environment and utilize for the achievement of organizational objectives.

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