



A Study on the Use of Social Media for Construction Project Delivery

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Abstract - This study aimed at assessing the use of social media for construction project delivery in Nigeria, a case study of Ado and Akure metropolis. It also considered critical issues and trends in social media which impacts profoundly in construction project delivery, and how the resources of social media can be effectively harnessed to improve the profession. The study adopted survey method for collecting data. Random sampling technique was used, and a sample size of 75 respondents was drawn from the study population. The questionnaires administered to professional in both private and government agencies. The result of the study reveals that social media has helped in facilitating construction project delivery in Nigeria. The study also showed that the trend in social media has enhanced the growth and development of construction industry. More so, the study reveals low adherence in the uses of social media within the construction industry in Nigeria. The result further shows that social media resources can be effectively harnessed to improve construction project by mainstreaming a robust social media in construction management curriculum in higher institution. The study recommends the creation of more awareness of social media packages by mainstreaming a robust social media programmes in such a manner that students and professionals can grasp and apply it. Continuous professional development (C.P.G) effort should be channeled towards social media as a matter of urgency, including deadlines for compliance.

Keywords: Project, Social Media, Construction, Project Delivery

1. Introduction

Our society according to (Kakulu, 2003) as cited by (Halim, 2015) is a complex structure of people and institution that interact in a multitude of ways. The social and technological revolutions that alter this structure are no less complex. Long ago, we had the Ice Age, and Neolithic time or period. We later move in to the Agriculture age and the Renaissance period. In the recent time, the society has moved into yet another age that has brought a far-reaching change in human history. It is called Information and Communication Technology age.

The simple truth today, is that no profession can effectively succeed in solving her 21st century development challenges, unless the professional visions, aspiration, mission and strategies are fundamentally anchored in the realm of knowledge creation, and strategically driven by information and communication technology (ICT).

Information and Communication Technology (ICT) has enhanced construction projects delivery in Nigeria. A simple example is the use of mobile phones for social media that has helped to improve communication in the course of everyday assignments. Field staff can make immediate contact with their head office and send to them the picture of the progress of work when issues arise while out in the field. In the past, such staff would have had to return to base to deal with such issues. The use social media has also made it possible for construction firm to operate on several sites and have an instance update from the sites with more ease than previously was the case. Professional reports may be vetted online and the exchange of documented information has been greatly enhanced with social media. Social Medias are perfect tools for working with information and information can be sent to be seen by group of people on social media which would otherwise be difficult to manage manually. It can organize information very efficiently with all

content properly identified and indexed making it possible to find whatever is required easily. In terms of speed, social media can send information to 100 people in a minute. Ekanem (2005).

2. The Concept of Construction Project

In the modern industrialized world, construction usually involves the translation of designs into reality. A formal design team may be assembled to plan the physical proceedings, and to integrate those proceedings with the other parts. The design usually consists of drawings and specifications, usually prepared by a design team including Architect, civil engineers, mechanical engineers, electrical engineers, structural engineers, fire protection engineers, planning consultants, architectural consultants, and archaeological consultants. The design team is most commonly employed by (i.e. in contract with) the property owner. Under this system, once the design team completes the design, a number of construction companies or construction management companies may then be asked to make a bid for the work, either based directly on the design, or based on drawings and a bill of quantities provided by a quantity surveyor. Following evaluation of bids, the owner typically awards a contract to the most cost efficient bidder. Baen (1998)

3. Social Media

Social media is the technologies that facilitate the creation and sharing of information, ideas, career interests and other forms of expression via virtual communities and networks. The variety of stand-alone and built-in social media services currently available introduces challenges of definition. The social media has emerged as the most frequently used platform on the internet for interaction and communication. Bryer & Zavattaro (2011) describe the social media as technologies that facilitates social interaction, make possible collaboration and enable deliberation across stakeholders. Social media is also a group of internet-based application that allows the creation and exchange of user generated content (Kaplan & Heinlein, 2010).

The Social Media has obtained a fairly broad meaning, the term 'social networking sites' generally refers to Internet-based locations that allow individuals and groups to interact. Social network sites specifically refer to those Internet-based services that promote online social interaction between two or more persons within a bounded system for the purposes of friendship, meeting other persons, and/or exchanging information. Sites such as Facebook, WhatsApp, 2go, Myspace and Twitter etc. Internet use overall, and the use of social networking sites in particular, have grown significantly since 2000 (Pew, 2009). In terms of membership and daily usage, Facebook 750 million users worldwide; LinkedIn over 100 million members; Twitter having over 177 million tweets per day; and YouTube having over 3 billion views each day (Chen, & Bryer, 2012)

3.1 Impact of Social Media on Construction Industries

Over these past 3 years, there has been a real shift within construction organizations, from generally not wanting to engage with social media, to some companies now fully embracing what it can offer in terms of engaging with clients, people and communities. Yet there lies a long road ahead to realize its full potential, albeit one that will deliver real benefit.

Experience in project management and business improvement suggests that the root of the majority of construction problems are communication related. Communication failings can come from not sharing or updating information, not involving the right people at the right time and even from withholding information for company or personal gain. Social media should be seen as a key component in addressing and improving communication issues. There are several apps, such as Woobius Eye and ConstructCO2, which are designed for this purpose.

4. Research Methodology

This project work justifies several mixed-mode research approaches and prior theoretical knowledge extracted from the literatures, case-study projects, interviews and visitation to sites.

Statistical Package for Social Sciences (SPSS) version 16 was used, One- way ANOVA, Frequency and Mean Item Score MIS was used as statistical tool for testing the objectives.

This chapter is concerned with the presentation and analysis of data gathered from the study. Percentage was used to analyse the data. Copies of questionnaire were collected from the respondents and the responses were used to deduce findings of the study.

5. Analysis and Discussion of Findings

5.1 Social Media Tools Available for Construction Project

The research identified the social media tools available for construction projects, the outcomes shown on table 1 revealed that Google plus was ranked first because it helps in posting project case studies, enticing imaginary and video content, collection of project executed on profile and boast the construction firms local search on the web and presence on the Google map. Ranked second is Email, it enables exchange of real time information, get updates on progress of work on site and approvals to get some work done on site. WhatsApp is one of the widely used tools ranked third because it enables instant exchange of messages, information and images from site operatives to project managers on things happening on site. Ranked fourth is YouTube; it helps in uploading videos of construction processes and the use of new materials that other professionals can learn from. Other tools available for construction projects includes Instagram, Facebook, snapchat, vine, Q zone etc.

Table 1: Social Media tools available for construction projects.

Social Media Available	SA	A	U	D	SD	Total	Mean	Rank
E-mail	63	3	0	0	0	66	1.31	2
Whatsapp	61	4	1	0	0	66	1.30	3
LinkedIn	12	19	33	2	0	66	0.96	12
Facebook	54	5	0	2	0	66	1.18	5
Instagram	47	12	1	4	2	66	1.18	5
Twitter	13	5	31	16	1	66	0.84	14
Google+	65	1	0	0	0	66	1.32	1
Pinterest	7	3	45	3	8	66	0.78	15
Tumblr	32	21	2	9	2	66	1.08	8
Flickr	2	13	34	10	7	66	0.76	16
YouTube	45	21	0	0	0	66	1.24	4
Snapchat	52	3	1	0	0	66	1.10	7
Quora	3	47	10	4	2	66	0.97	11
Vine	21	37	6	2	0	66	1.10	7
Periscope	44	13	5	3	1	66	1.18	5
BizSugar	7	13	15	30	1	66	0.77	17
Stumbleupon	18	22	20	4	2	66	0.99	10

Delicious	19	21	21	3	2	66	1.00	9
Digg	13	22	24	4	3	66	0.94	13
Viber	22	14	21	3	6	66	0.96	12
Q Zone	47	12	4	5	2	66	1.15	6

5.2 Impact of Social Media on Construction Project

The outcome of the survey revealed that social media helps in exchange information and develop professionals ranked 1st, by posting construction processes and new construction methods on their social media platform, other professionals can learn. Ranked 2nd social helps to gain inspiration from feedback from people who visited your post on your profile, their comments could help in improving construction project delivery. Feedback can also be gotten time to time and instantly with the use of social media, immediate approval for project to progress can be gotten without the physical presence of the project managers. Social media can also impact construction project by making Construction Company easily accessible through their social profile which links them to their company’s website. Relationship between companies will also be built and it will promote partnership in project execution. Other ways social media has impacted construction project delivery are shown in the table below.

Table 2: Impact of social media in construction project delivery

Impact Of Social Media In Construction Project Delivery	Sa	A	Ns	D	SD	Total	Mean	Rank
It helps to exchange information and develop professional	60	6	0	0	0	66	1.50	1
Building relationships within the company	41	22	3	0	0	66	1.21	5
It helps to get more clients	24	17	21	3	1	66	1.03	8
It aids time to time feedback	52	6	7	1	0	66	1.23	3
It gives the company self-boost	13	41	8	3	1	66	1.04	9
Increases company awareness and loyalty	18	34	9	5	0	66	1.05	8
Getting clients insights work progress	14	32	12	4	4	66	0.98	9
Directing online traffic to your website	5	17	14	3	1	66	0.88	10
Gaining inspirations from feedbacks	61	3	2	0	0	66	1.29	2
It helps in keeping document of progress of work	43	15	6	2	0	66	1.19	6
Upgrading company standard	18	19	22	5	2	66	0.98	9
It makes your company to be easily accessed	53	7	3	2	1	66	1.22	4
It makes coordination to be easier	44	13	7	0	2	66	1.18	7
It helps to share information faster and easier	62	3	1	0	0	66	1.30	1
It makes you to find out what your competitors are doing	13	15	17	20	1	66	0.74	11

5.3 Ways Social Media has enhanced Contemporary Construction Project Delivery

Social media has enhanced construction delivery in various ways as indicated by the respondent in the research survey. The results of survey revealed that social media has enhanced construction delivery in a way that progress of work on site are easily uploaded on group chat in the social media plat for the group members to comment, make useful contribute the project.

It can also enhance project delivery by fostering better communication with clients by sending every information about the project to client’s mail and the client can be keep abreast on the happenings on site. Approvals can also be gotten instantly through WhatsApp message to the consultants when they are away from the site rather than waiting to get the paper work approval when the consultant is around. The approval can be given through instant messaging and then he formality of paper work approval will be done when the consultants is on site.

Project delivery can also be enhanced when there are group chats with the social media platform between the construction team, where issues relating to be project can be discussed, resolved and technical information can be exchanged, and the project expectation can be communicated.

Table 3: Ways social media has enhanced construction.

Ways Social Media Has Enhance Construction	Sa	A	NS	D	SD	Total	Mean	Rank
Sending every information about the project to client’s mail	58	5	2	1	0	66	1.27	2
Copy the head office with every mail sent out	49	11	4	1	1	66	1.22	6
Creating group chat for the construction team on WhatsApp	51	13	0	2	0	66	1.24	4
Upload progress of work on group chat	61	3	2	0		66	1.29	1
Uploading the progress of work on YouTube	15	7	31	7		66	0.86	10
Posting the project images or photographs on Instagram	18	13	25	6	4	66	0.39	8
Making the clients’ group admin to add more of his friends to the group	31	15	7	7	6	66	1.02	7
Taking approval of work from the consultant on WhatsApp	51	13	2	0	0	66	1.25	3
Regular uploading progress of work on Facebook	49	4	11	1	1	66	1.23	5
Using the project picture as workers’ display picture on WhatsApp	18	13	6	25	4	66	1.36	10
Using the project picture as workers’ Facebook profile picture.	19	17	6	20	4	66	0.90	9

Based on analysis carried out below using Analysis of Variance (ANOVA) as the statistical tools for comparisons to determine the Significant Level (S.L).

The table below shows the factors that have significant difference from each other in the ways Social media has enhance construction they are regular uploading progress of work on Facebook, creating group chat for the construction team on WhatsApp, upload progress of work on group chat, making the clients group admin to add more of his friends to the group, taking approval of work from the consultant on WhatsApp which implies they have p-value α-value

While the one that are Not-Significant are copy the head office with every mail sent out, uploading the progress of work on YouTube, posting the project images or photographs on Instagram, sending every information about the project to client’s mail, using the project picture as workers` display picture on WhatsApp, using the project picture as workers` Facebook profile picture which implies they have p-value >math>\alpha</math>-value.

Table 4: Level of Agreement on the Level of Social Media Enhancement of contemporary construction project delivery.

Social media adherence to construction		Sum of Squares	Df	Mean Square	F	Sig.	Sig. level
Regular uploading progress of work on Facebook	Between Groups	247322.300	3	82440.767	164881.533	.002	S
	Within Groups	.500	1	.500			
	Total	247322.800	4				
copy the head office with every mail sent out	Between Groups	1664.300	3	554.767	123.281	.066	NS
	Within Groups	4.500	1	4.500			
	Total	1668.800	4				
creating group chat for the construction team on WhatsApp	Between Groups	1900.800	3	633.600	316.800	.041	S
	Within Groups	2.000	1	2.000			
	Total	1902.800	4				
upload progress of work on group chat	Between Groups	2860.800	3	953.600	476.800	.034	S
	Within Groups	2.000	1	2.000			
	Total	2862.800	4				
uploading the progress of work on YouTube	Between Groups	160.800	3	53.600	.186	.897	NS
	Within Groups	288.000	1	288.000			
	Total	448.800	4				
posting the project images or photographs on Instagram	Between Groups	118.300	3	39.433	.218	.878	NS
	Within Groups	180.500	1	180.500			
	Total	298.800	4				
making the clients group admin to add more of his friends to the group	Between Groups	448.800	3	149.600	.050	.000	S
	Within Groups	.000	1	.000			
	Total	448.800	4				
taking approval of work from the consultant on WhatsApp	Between Groups	1900.800	3	633.600	316.800	.041	S
	Within Groups	2.000	1	2.000			
	Total	1902.800	4				
sending every information about the project to client`s mail	Between Groups	1618.800	3	539.600	10.792	.219	NS
	Within Groups	50.000	1	50.000			
	Total	1668.800	4				
using the project picture as workers` display picture on WhatsApp	Between Groups	118.300	3	39.433	.218	.878	NS
	Within Groups	180.500	1	180.500			
	Total	298.800	4				
using the project picture as workers` Facebook profile picture	Between Groups	132.800	3	44.267	.452	.766	NS
	Within Groups	98.000	1	98.000			
	Total	230.800	4				

6. Conclusion

From the findings of this study, it can be safely concluded as follows:

That social media has helped in expanding and facilitating the construction project delivery in Nigeria. social media has significantly changed the way construction professionals adopt in effective delivery of construction project and the extent to which construction professionals can get directly involved in the heterogeneous construction project. Business survival is becoming more closely tied to construction industry's abilities to adapt to technological changes and to use technology to attract customers. Through much debate and careful consideration, along with variety of successes and mistakes, the construction industry has been adapting itself to take advantage of the internet over the past years. With such explosive growth in electronic commerce, a number of industries, including construction industry, are leveraging themselves to benefit from this new technology.

That the trends in social media has enhanced the growth and development of construction industry in Nigeria as it is now possible for more practitioners than ever to collaborate and transact business in real time with other practitioners on a more different kinds of work from different corners of the planets and on a more equal footing than at any previous time in the history of construction industry using E-mail, WhatsApp, LinkedIn, YouTube, Instagram, Twitter, Google+ ,Pinterest, Tumblr, Flickr, Facebook, Snapchat, Quora Vine, Periscope, BizSugar, Stumbleupon, Delicious, Digg Viber,Q Zone.

Social media resources can be effectively harnessed to improve construction industry by allowing communication, feedback, meetings and approval of construction project on social media.

Social media has completely enhanced construction industries, but in Nigeria; there is room for improvement. A simple example is the use of mobile phone for communication via text messages, which has helped improve communication in the course of everyday. Field staff can make immediate contact with the home office of the principal partner when issues arise while out in the field. In the past, such staff would have had to return to base to deal with such issues. The use of computers and internet has also made it possible for firms to operate several branches apart from their head offices with more ease than previously was the case.

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