

Role of Digital Natives in Promoting Better Extension Services

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Abstract

With the rapid explosion of social media content and availability of cheap devices, there is now no dearth of information available to more people from a greater number of sources than at any time in human history. As a result, basic human activities are constantly changing and new possibilities are rapidly emerging. Digital natives feel empowered with respect to learning opportunities because of their familiarity with and access to Information and Communication Technologies (ICTs). Some of the innovative tools will help digital natives to work for the larger community and provide extension services in a better way. Bihar Agricultural University, Sabour is using various tools of social media like YouTube and innovative platforms like videoconferencing for better dissemination of information among the farmers and other stakeholders.

Introduction

The term 'digital native' emerged from a series of articles written from 2001 onwards by the US technologist Marc Prensky. His writing received growing attention in education and technology circles through its compelling descriptions of the generation of young people born since 1980. Prensky labelled these children of the 1980s and 1990s as 'digital natives' due to what he reckoned to be an innate confidence in using new technologies such as the internet, video games, mobile telephony and 'all the other toys and tools of the digital age' (Selwyn, N., 2011). Over the past ten years, with increasingly easy and affordable access to ICTs and cheap devices, the extension scenario around the world started to incorporate technological elements in reaching the farmers and citizens. The advent of interactive communication and content-creation tools collectively referred to as "Web 3.0" have accelerated the meaningful uptake of ICTs for enhanced learning and extension services. Social media tools allow communities to become increasingly transparent by building relationships with and engaging

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their citizens (Parsons, M., 2015). Online visualisations, virtual interactive spaces, digital storage of information, collaborative research and writing, virtual worlds or simulations, video conferencing etc. are in the process of becoming integral to the development of the country. Digital natives in extension can lead to formation of emerging communities with the power to engage the citizens in constructive activities for the development of agriculture. The new generation students and professionals in agricultural extension have emerging opportunities to harness the potential of ICTs for the betterment of the extension scenario in the country.

New means of Extension by Digital Natives

Digital Natives can help in providing excellent extension services to the new group of people called as 'Digerati' (Keniston, K. and Kumar, D., 2004). Some of the popular means are described below:

Digital Storytelling

Storytelling is the oldest form of teaching and probably the best way to enable better learning. Digital storytelling is storytelling that contains some mixture of computer-based images, text, recorded audio narration, video clips, or music. Sadik (2008), researching the Egyptian Ministry of Education's initiative of integrating technology, found that teachers could use digital storytelling successfully to increase student engagement in learning. Extension professionals can use various video sharing platforms like YouTube, Vimeo etc. to provide expert information to the farming community. The same was applied by the scientists of the university to provide handy information on several agricultural avenues to the farmers over channels like YouTube. It is also updated regularly to meet the taste of the viewers from all over the world.

Table 1. Web analytics of Farmer Friendly Videos shared on YouTube (as on 30th October, 2015)

Topic	Watch time (minutes)	Views	Average view duration (min/sec)	Views (%)
Poultry farming	279229	45522	6.08	40
Goat farming	179553	37455	4.47	33
Honeybee rearing	34128	6477	5.16	5.7
Integrated Farming System	21807	4194	5.11	3.7
Azolla farming	15376	3210	4.47	2.8

Source: YouTube webanalytics (bausabour channel), 2015

The web analytics of YouTube channel reveal that Poultry Farming has the maximum viewership share (45,522 views) comprising 40 per cent of the total views of all the videos uploaded followed by Goat farming at the second place (37,455 views, 33 per cent) and Honeybee farming at third place (34,128 views, 5.7 per cent).

The 19th Livestock census 2012 also reveals the rise of poultry farming in the country with 12.13 per cent increase from the year 2007 to 2012. Though, the Goat population has declined by 3.82 per cent over the previous census and the total Goat population in the country is 135.17 million numbers in 2012 (Ministry of Agriculture, 2012), there is a rising interest among the farmers in the rural areas in India for poultry and goat farming which can be seen from the statistics in Table 1.

The table below shows the web-page visits from different countries together with the age group of the viewers. Maximum views are mostly from youth in the age group of 18-34 years and largely from India. It is followed by Saudi Arabia, United Arab Emirates, United States of America and Qatar.

Table 2. Web page visits from different countries (as on 30th October, 2015)

Top locations by views	Views	13-17 years (in %)	18-24 years (in %)	25-34 years (in %)	35-44 years (in %)	45-54 years (in %)	55-64 years (in %)	65 and above (in %)
India	76746	1.6	20	51	19	5.3	2.7	0.8
Saudi Arabia	9290	1.1	9.5	49	27	12	1.5	0.3
United Arab Emirates	5536	0.4	8.9	59	26	4.1	0.6	0.9
United States of America	2613	2.2	13	42	22	11	7.5	2.0
Qatar	2055	0	11	60	22	4.3	1.4	1.2

Source: YouTube webanalytics (bausabour channel), 2015

The above two tables indicate web analytics of farmer friendly videos produced by the university along with the visits from different countries which show the widening interest of the youth towards farming through social media.

Video Conferencing

Videoconference (also known as videoteleconference) is a set of interactive telecommunication technologies helping to interact via two-way video and audio transmission simultaneously at different locations. It has also been called visual

collaboration and is a type of groupware. It differs from videophone in that it is designed to serve a conference rather than individuals. Videoconferencing can act as a suitable delivery method for responding to the wants and needs of the remote farmers. It is an effective instrument to curtail costs and has already been experimented successfully on students. Educators are successfully facilitating connections between their clients and educational resources located anywhere in the world through videoconferencing (Nudell, D. *et. al.*, 2005). The benefits of videoconferencing for training farmers has been successfully experimented at Bihar Agricultural University, Sabour (BAU) and its affiliated Krishi Vigyan Kendras (KVKs).

Text and Voice Messaging Services

More than 1.3 billion mobile phone handsets are being sold annually (Ahonen 2010). “Smartphones” have emerged as powerful computing devices offering traditional wireless voice service along with Short Messaging Service (SMS), graphics, user-controlled operating systems, downloadable, browsers, camera functions (still and video), and ge positioning (Prensky, M., 2015). Mobile phones can be instrumental in providing need-based and location specific cropping practices to the farmers with the use of appropriate graphics and video support at frequent intervals suited to the cropping practice.

An analysis of mobile messages sent by different KVKs through Farmer’s portal shows that the advisories in relation to crop, livestock, weather, marketing, awareness and other topics show that a total of 6340 messages and 46923 calls were made during the financial year 2014-15 which benefited 6444686 farmers in the country. Table 3 shows the different types of advisories covered by different KVKs through Farmers portal.

Table 3. Analysis of Mobile Messages sent by different KVKs

Name of KVK	No. of messages	No. of calls	No. of farmers covered	Types of messages (No.)					
				Crop	Live-stock	Weath-er	Market-ing	Aware-ness	Other
Araria	365	-	485481	-	-	-	-	-	-
Arwal	334	-	400639	162	64	43	-	64	-
Aurangabad	212	-	3003	182	15	10	0	0	5
Banka	540	-	1262421	355	45	105	5	25	5
Bhagalpur	260	-	4800	85	45	24	-	78	28

Gaya	161	-	265118	116	15	2	0	13	15
Jehanabad	385	-	511703	214	81	6	2	35	47
Katihar	219	219	410872	84	5	19	0	46	65
Kishanganj	988	-	1715434	550	250	-	-	100	88
Lakhisarai	479	479	4,97,803	330	50	5	4	50	50
Madhepura	104	-	3500	21	23	-	-	-	60
Munger	480	803	40332	102	80	150	75	65	8
Nalanda	214	214	1800	160	46	4	-	4	-
Patna	245	-	348824	192	10	27		16	
Rohtas	804	-	517817	452	80	16	40	24	192
Saharsa	278	-	428903	195	12	17	11	29	14
Sheikhpura	72	45,000	786	46	26	0	0	0	0
Supaul	200	208	308371	85	35	8	-	37	35
Total	6340	46923	6444686	3331	882	436	137	586	612

Source: Statistics from <http://www.mkisan.gov.in>, 2015

Youth engagement through Social Media

It is important to understand the recent developments in social media for future youth engagement (Bennett, W. Lance, 2008). In the process of synthesizing what we know about youth engagement, the academicians, educators, educational policymakers, NGOs, journalists, foundations, public officials, and youth can make choices about what outcomes are desirable and how to nurture them effectively for greater success. A possibility for convergence of technologies and farming practices can bring vibrant experiences of farming into classrooms, youth programs, and showing young people how their concerns can help in entrepreneurial avenues.

Conclusion

The digital natives will be able to greatly expand their reach by using innovative social media tools as discussed, for increased interest and retention among the farming community. While the list above is not an exhaustive list of tools, it shows how digital natives can harness the potential of ICTs to further build and connect communities. To make the most of social media tools, new age Extension professionals should consider a variety of outreach methods and choose those that will provide the widest outreach for the time they have available to produce quality content.

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