

E-Coverage of Fisheries Ecosystem and Usage Pattern of Social Media

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Abstract

The penetration of internet and subsequent usage of social media, especially among the youth is increasing day by day. In this context, a study was conducted to identify the internet and social media usage by students as well as their mode of accessing professional (fisheries) information through social media. For this study, social media has been classified into two broad categories namely Social networking sites and Instant messaging applications. A pre-tested questionnaire was used to collect data, through online and offline modes, from 223 respondents consisting of undergraduate, Masters and Ph.D. students. The data obtained by the survey was analysed using MS-Excel and SPSS software. Results showed that fisheries professionals spent a significant amount of their time using social media especially Facebook and YouTube with nearly half of them spending >4 hrs / day. ResearchGate (68.5%), Google Scholar (67.5%), YouTube (65.3%), and Facebook (55.2%) were the most preferred / used applications for accessing fisheries related information while WhatsApp (82.1%) and FB Messenger (53%) were the top choices among instant messaging Apps. Though entertainment was prime reason for majority (58.3%) for accessing Facebook, News (49.5%) and professional information (46.6%) are also considered important by almost half the students. In the case of YouTube, it was entertainment (81%), professional information (60%) and news (50.6%), the same reasons but slightly varying degrees. Analysis of tests of significance showed that usage pattern was similar across both male and female students except for FB usage, which females accessed less frequently. The study also documents the list of Facebook pages maintained by various fisheries professional groups.



Article History

Received: 10 July 2019
Accepted: 26 August 2019

Keywords

Instant Messaging Application;
Social Media;
Social Networking Sites.

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Doi: <http://dx.doi.org/10.12944/CWE.14.2.10>

Introduction

The usage of web 2.0 technologies (Facebook, Twitter, WhatsApp, Instagram, YouTube) has been increasing day by day, with 800 million people possessing smartphones with 400 million active internet users.¹ Facebook is perceived as the dominant (59%) social media platform by American fisheries society² and students spend a significant amount of their times using Facebook. Facebook has become a popular and dominant digital platform for maintaining and strengthening the social relationship, which can be beneficial for both social and academic purposes.³ Facebook has been found to be beneficial for the medical students in terms of providing a new way of learning; fostering greater interaction amongst co-students and staff; and effectively engaging them with the content of courses.⁴ If properly applied, twitter can be an excellent tool for public education and outreach from scientific conferences. A single influential twitter user who live tweets a conference presentation can spread the word to thousands of interested citizens around the world, and greatly impact the conversation about a conference.⁵ Social media use in agriculture is not restricted to any specific age group but users belong invariably to all age groups.⁶ Private high school students are found to be more addicted to use social media compare to Government high school students.⁷ Social media like Facebook and Twitter are more used for political advertisement and it has helped to increase people participation in the politicalparty based activities and related celebrities.⁸ This study was carried out to understand the extent and pattern of social media usage by fisheries professionals (students),and to explore the nature of fisheries groups in Facebook. The study attempted to find answers to the following questions:

- i). What are the social media used by fisheries professionals?
- ii). How much time does fisheries professionals spend on social media?
- iii). Which social media are popular for accessing the profession (fisheries) related information? and
- iv). What are the prominent fisheries groups in Facebook?

Materials and Methods

Social Media Classification

For this study, social media has been classified

into two types, namely social networking sites, and Instant messaging applications based on both form and content of the media. The social media considered for the study are given in the table 1 below.

Table 1: Social Media Classification

Social Networking Sites	Instant Messaging Applications
Instagram	WhatsApp
Twitter	FB Messenger
Pinterest	Yahoo Messenger
Google plus	Skype
Google groups	Google Hangouts
ResearchGate	IMO
Google Scholar	Snap Chat
Wikipedia	Viber
Facebook	Hike
YouTube	Telegram
LinkedIn	We Chat
Bharat Student	

Sample

The survey was conducted primarily among the students and staff from ICAR-Central Institute of Fisheries Education (CIFE), Mumbai. Though there are about 264 students and 76 faculty at CIFE during the survey (January-February 2017), only 182 students and staff - Masters (118), Ph.D. (65) students and staff (9) - volunteered and took part in the survey. In addition, 41 undergraduate students from Fisheries College and Research Institute, Thoothukudi, Tamil Nadu also were part of the survey. The sample comprised of 60% males and 40% of females. It must be noted that CIFE students and faculty hail from all over India and are broadly representative of all the major states.

Data Collection

A structured questionnaire was prepared and pre-tested among students of social sciences at CIFE, Mumbai to enhance its validity and reliability. The data was collected from the respondents through online mode using Survey Monkey application, and offline mode by distributing the questionnaire. The researcher collected 48 responses online and 185 responses in person.

Data Analysis

The data obtained from the survey was subjected to descriptive statistics, especially frequency and percentage analysis, a test of significance, and Rank Based Quotient (RBQ) method using MS-Excel and IBM-SPSS software.

$$RBQ = \frac{\sum fi (n+1-i)}{N \times n} \times 100$$

Where, *fi* = Number of professionals reporting a particular social media/purpose of visit (Facebook & YouTube) under *Ith* rank, *N* = Number of respondents/sample size, *n* = Number of Social Media/ purpose of visit (Facebook & YouTube) identified.

Results

Time Spent on Social Media

Fig. 1 shows that half the students used social media for 2 to 4 hours daily, whereas one-third of students spent less than 2 hours. Interestingly, 15% of students accessed social media for more than 4 hours a day on an average, which is a significant proportion of productive time in a student's life. On an average, a fisheries professional student spends 2.8 hours daily on social media. Test of significance showed no significant differences (*p*=0.725) between male and female students in terms of time spent on social media, indicating both boys and girls spend almost similar amount of time on social media.

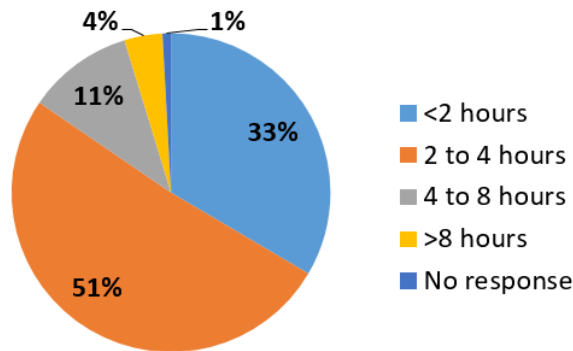


Fig. 1: Time spent daily on social media per day

Usage Frequency of Social Media

Fig. 2 illustrates the usage frequency of social media by students. Instant messaging application, WhatsApp ranked on top with 89% of the students using them daily while 74% and 69% students respectively accessed the social networking sites - Facebook and YouTube - daily. Another study has found that half (48%) the students use WhatsApp for more than 8 hours per day, and about 72% of students claimed to use mainly to chat with friends.⁹ A higher percentage of girl students reported that they log into Facebook more than once per day, and revealed that they spent significantly more time on Facebook than boy students.¹⁰ It is also reported that WhatsApp is being used to unlock new opportunities for quick and private information, to enable the creation of micro-communities, and to support social practices such as strengthening collective life.¹¹

Among academic-related social networking sites, Google Scholar and ResearchGate and were

popular which was accessed daily by about one third of students.

When it comes to time spent on social media, WhatsApp, YouTube and Facebook top the chart. All the students ranked WhatsApp as the social media on which most time was spent, about 60% of them ranked YouTube and Facebook to be next most important media in terms of time spent.

Preferred Social Media for Professional Info

Students were asked to rank how they accessed professional (fisheries related) information online. Table 2 below presents the major online sources frequently used by students. ResearchGate was the most preferred source though Google Scholar and YouTube closely followed it. As the sample consisted mostly of the Masters and PhD students, who tended to access research articles, it was obvious ResearchGate and Google Scholar ranked high on the preferred choices. Another study has

found that ResearchGate as the most popular choice for scholars/academic purposes (40.7%) i.e. to share their work and expertise, increase the citations, increasing job market success and facilitating the research collaboration.¹² However,

sites such as Academia, Mendeley, Orchid which also host research articles and are popular among researchers in western countries have few followers in India, at least among the fisheries professionals at the time of study.

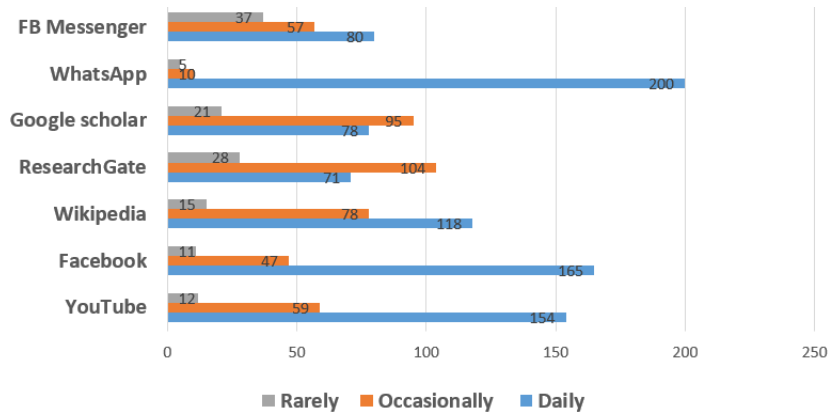


Fig. 2: Usage frequency of Social Media

Table 2: Preferred social media for professional info

Social Media	RBQ	Rank
Research Gate	68.5	1
Google Scholar	67.6	2
YouTube	65.3	3
Facebook	55.2	4
LinkedIn	21	5

Reasons for Visiting Social Media

In order to understand why students, access social media, they were queried specifically with respect to Facebook and YouTube which were the most preferred and on which most time was spent. Fig. 4 shows that students access Facebook for multiple reasons. While 58% of them claimed to access Facebook for entertainment, about half of them said to access it for trending topics/news and professional (fisheries) information which was a revelation. Surprisingly, only 42% of students claimed that they use Facebook for networking with friends/family. Test of significance revealed that male and female students differed significantly ($p < 0.01$) in Facebook usage wherein relatively fewer girl students access Facebook on a daily / regular basis. It was reported that 58% of school students visit Facebook to self-express, to create a better impression and to

present their characteristics and hobbies to the friends.¹³ One third of (32%) undergraduate students used Facebook for more than four hours in a day and claimed to access Facebook to connect with friends and to see trending topics (news)³ Women are more likely to go to Facebook to maintain existing relationships, pass the time and be entertained. On the other hand, men are more likely to go to Facebook to develop new relationships or meet new people.¹⁴

The usage pattern and reasons become more obvious when it comes to YouTube usage (Fig. 5). Eight out of 10 students access YouTube for entertainment while half of them claim to use it for news / trending topics. The educational / professional value of YouTube gains significance as nearly 60% of students claimed to access it to gain professional

(fisheries) information. A study reported that the purpose of visiting YouTube is to gain knowledge,

provide information, self-status seeking, social interaction, and entertainment.¹⁵

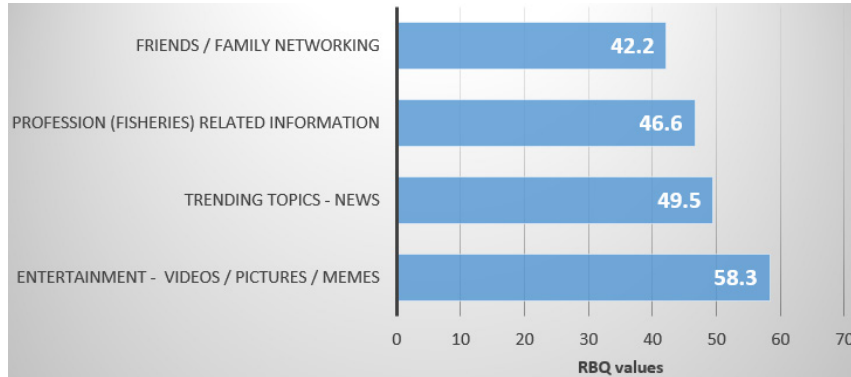


Fig. 4: Reasons for visiting Facebook

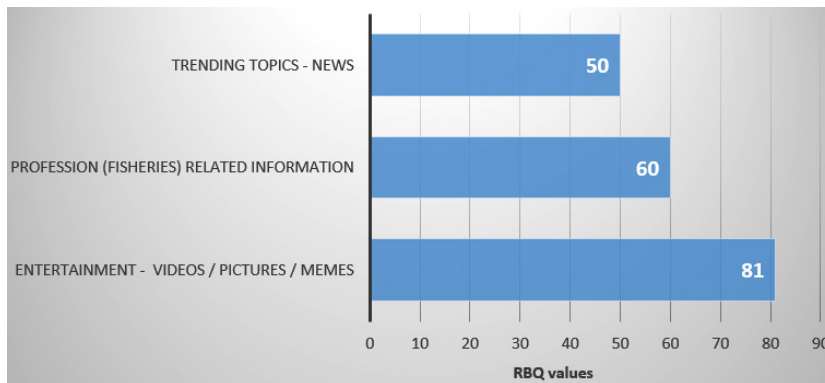


Fig. 5: Reasons for visiting YouTube

Effect of Social Media Usage

The opinion was divided along the middle when it comes to the impact of social media. While one half of the students community claimed that the use of social media often reduces stress and thereby increases work productivity, another half held a contrarian view. A higher number of undergraduate students reported that having a large number of Facebook friends provide them social support, which helps them to reduce stress, minimise physical illness, and boost life satisfaction.¹⁶ However, the majority of students (63%) opined that the use of social media leads to addictive behavior, which may or may not be healthy.

Facebook Groups on Fisheries

As could only be expected, there are numerous Facebook pages related to fisheries profession. Only a representative and selective list of 11 such

FB pages along with their number of members as on May 2019 are given here that are relevant to India, and are accessed by students either as members or followers. Students from the 30 fisheries colleges from across the country, scientists, entrepreneurs, teachers, DoF staff, fish farmers, hobbyist and even the general public are members in one or the other group.

- Fish Farming and Aquaculture – 28,905 members
- Aqua Brahma – 11,748 members
- Kerala Fish Hobbyist and Breeding group – 11,581 members
- The Fisheries Social Scientists – 5,439 members
- Fisheries Professionals – 3,346 members
- Fisheries Graduates Forum – 2,712 members
- Aquapedia- 1,892 members
- CIFE – 866 members

- ICAR –Aspirants – 600 members
- FC & RI, Ponneri – 420 members

Content on Fisheries FB Pages

The listed FB pages covers a range of fisheries related content. For instance, it has posts on various aspects of Fish farming, Ornamental fish breeding and culture, Seafood export and import, Scientific research reports on fisheries, Job vacancy, Higher studies abroad and fellowship opportunities, Fishing practices, Seafood health benefits, etc. The undergraduate students perceived that Facebook pages had less information on the subject domain and more information on job-related information.¹⁷

Discussion

Study showed that fisheries professionals spend a significant amount of their time (nearly half of them spending >4 hrs / day) using social media especially Facebook and YouTube. Research gate (68.5%), Google Scholar (67.5%), YouTube (65.3%), and Facebook (55.2%) are the most preferred / used applications for accessing fisheries related information while WhatsApp (82.1%) and FB Messenger (53%) are the top choices among instant messaging Apps for the

same. Though entertainment was prime reason for majority for accessing Facebook and YouTube, access of professional info was also cited as one of the significant reasons. The diversity of content and membership in fisheries FB pages only underscore the important role the social media has begun to play in the professional lives of students as well as other stakeholders like farmers, entrepreneurs and researchers. Considering the significant time spent by students on social media, Universities and R&D organisations shall harness their potential.

Acknowledgements

The study was conducted as a part of the Post Graduate research in ICAR-Central Institute of Fisheries Education, Mumbai, India. The Authors duly acknowledge the support provided by the Institute in all forms for the conduct of the study.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Conflict of Interest

The authors do not have any conflict of interest.

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