

The Effect of Facebook Adoption in an Academic Library

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Abstract

The postings in library's Facebook page were gleaned and analysed. Data of important metrics of Facebook post usage was taken from 'Facebook Insight' metrics of Indira Gandhi Delhi Technical University for Women Library's Facebook page. Alongside, library usage data was used to understand the change in behaviour of library usage. The findings provide further support to the view that social network sites (i.e., Facebook) have the potential to be a cost-effective means of engaging users effectively irrespective of the size of the academic library. It is also found that collaboration and communication through Facebook were far more effective than traditional approaches. Since only the experience of a single institution is considered, it cannot be generalized that Facebook will be effective in every institutional context. However, the result provides a basis for academic libraries to consider experimenting with Facebook and its page to understand its effectiveness. This paper provides evidence that such initiatives can provide a measurable impact of Facebook as an outreach tool with minimal efforts.

Keywords: Social networks, Facebook, Education, Library marketing, Academic libraries, India

1. Introduction

Invention of social media and its fascinating appeal among youth have changed the online world dramatically over the last decades. The unique nature of social media that enabled its users to form, maintain, and rediscover a relationship in a completely different way, irrespective of time and space, has made it unbelievably popular among the youth. This meteoric rise of social media phenomenon across the globe has inspired many researchers to investigate its effects on different aspects of human development. Studies have shown that social networking tools can make educational activities more lively by making interaction, collaboration, active participation, information plus resource sharing, and critical thinking possible (Mason 2006; Ajjan & Hartshorne 2008). Hence, using social networks in educational and instructional contexts can be considered as a potentially powerful means simply because students spend a lot of time on these online networking activities (Mazer, Murphy, & Simonds 2007; Mazman & Usluel 2010). Libraries that play a pivotal role in both formal and informal education viewed social media as a powerful information dissemination tool that offered an easy and cost-effective way to promote their activities, resources, and services while allowing a two-way dialogue with stakeholders (Canty 2012). Thus, many librarians have considered social media as a low-cost minimal effort resort for current and potential users of library (Farkas 2007; Miller & Jensen 2007). Web2.0 tools, especially social media, are usually associated with younger generation and their implementation in library is often justified by the argument that there is a need to adapt to the new expectations and demands of the web savvy and digital-oriented generation (Mercun and Zumer 2011). Thus, many libraries across the globe, hooked to social media, seem to be pervasive in its use throughout society in order to remain relevant with contemporary users.

Among the social networks, Facebook has become the most visited social networking site in the world, with over 600 million active users by December 2010 (<https://newsroom.fb.com/Timeline>). According to Socialbaker.com, India has the third largest number of Facebook users in the world and among the metro cities in India, Delhi ranked second in terms of population of Facebook users. Statistics by Socialbaker.com also shows that among all users of Facebook in India, 49 per cent users' aged between 18–24 years followed by 27 per cent users aged between 25–34 years. As a result of its strong user base among youth, Facebook appears to be the most logical social networking website to be used by an academic library whenever it considers reaching its prospective users through Social Networking Sites (SNS). Thus, the library of Indira Gandhi Delhi Technical University for Women (IGDTUW) has adopted Facebook since December 2011.

2. Background

Previously, the Indira Gandhi Institute of Technology (IGIT) was the government engineering college for women under the GGS Indraprastha University, Delhi. This college has recently been upgraded to become a university and thus has been renamed as Indira Gandhi Delhi Technical University for Women. This institute predominantly caters to the needs of undergraduate students with four BTech courses. Recently, four new MTech courses have been introduced after its upgradation to a university. There are around 1,400 students including the postgraduate students.

The library of this institute is always open to experimentation whenever it comes to adoption of new technology. In order to facilitate services to its users, it has adopted NewGenLib, an open source integrated library management system, since 2008, without any vendor support (Giri and Sengar 2011; Giri 2012). In mid-2011, the library staff decided to have library's presence in the much used social media, preferably Facebook

and Twitter. But some of the advisory members of the library believed that the usage of social media would be better for the big libraries that host a lot of events, exhibitions, workshops, and other activities. But the staff preferred the ‘active librarian’ role by coordinating with students preferably class leaders, board members of different society of this institute like the Institute of Electrical and Electronics Engineers (IEEE) society, and Head of Departments (HOD) for first-hand information on different events, workshops, etc. After a few brainstorming discussions, in mid-December 2011, the Library opened its account in Facebook and created the library page as www.Facebook.com/IGDTUWLibrary.

3. Literature Survey

Given the widespread diffusion of Facebook among students, a significant number of investigations have been carried out to understand and evaluate the value of Facebook as an educational tool and as a learning environment (Selwyn 2009; Roblyer *et al.* 2010; Wodzicki *et al.* 2012). It has been argued that SNSs blur the distinction among learning spaces, social spaces, and leisure spaces and thus mix all sorts of activities together (Manca and Ranieri 2013). In a networked world, the connectivist approach of learning states that the locus of learning relies on a concept of learning based on exploration, connection, creation, and evaluation within networks that connect people, digital artifacts, and content (Siemens 2005). Thus, the use of SNSs for learning relies on the fact that they would support “the process of building networks of information, contacts, and resources that are applied to real problems” (Anderson and Dron 2011).

Libraries being an important part of academic sphere have also explored the opportunity and drawbacks of using Facebook to reach and interact with its users since its inception. Since then, a good amount of literature has flourished. The early literature has been very vocal on using

Facebook as a venue for the library’s outreach (Matthews 2006; Farkas 2007; Breeding 2007). A few of them presented library-centric case studies to support this view. Of them, Mack *et al.*’s (2007) investigation in which a librarian at Pennsylvania State University marketed his own page to undergraduate students and documented the number of references and research questions he had received, found that almost 29 per cent questions were received through Facebook, and all of them came from undergraduate students. Therefore, the author recommended that library professionals whose positions required them to interact with undergraduates seriously might consider making use of Facebook.

Thereafter, literature based on “how to” started to appear (Kroski 2007; Greenwell and Kraemer 2006). As librarians were still hesitant to use Facebook in libraries, the survey-based literature started to appear in order to understand users’ perception as well as Library and Information Science (LIS) community perception. Connell (2009) presented a study, where she surveyed 366 newcomers at Valparaiso University to elicit their opinion on libraries’ presence in social networking sites. It was found that most of the students used Facebook and majority of them preferred library’s presence in Facebook. In contrast, Burhana *et al.* (2009) reported that most of the participants preferred a clear delineation between educational and social communication. The same has also been supported by Ismail (2010) as well as Epperson and Leffler (2009). Hendrix *et al.* (2009) surveyed opinions and perceptions of librarians of academic health science institutes and found that majority of the librarians who participated in the survey believed that Facebook had hardly any place in academic settings, and librarians hardly had any time to set up a library page on Facebook.

Despite the contradictory nature of the findings regarding application of Facebook in library like those mentioned, many librarians became ambitious and more open to experimentation and library-centric case

studies started to appear. Librarians at Rutgers University undertook their Facebook initiative in 2006, and they soon found that an academic library's presence on Facebook can produce worthwhile results (Glazer 2009). Graham, Faix, and Hartman (2009) presented a case study of their Facebook adoption at Kimbel Library of Coastal Carolina University in which they observed that library's visibility has increased substantially after Facebook adoption.

As time passed, more and more libraries started tapping Facebook. Several studies started to explore the content, likes, and comments posted on the walls of library Facebook page. Jacobson (2011) tried to find out reported versus actual use of Facebook in libraries. He found that marketing/announcements along with Online Public Access Catalog (OPAC) search and Répondez, S'il Vous Plaît (RSVP) of the events are more popular than reference service and discussion forum. While Gerolimos's (2011) attempt to understand the level of engagement of library with students by analyzing user-posted comments on different library Facebook walls showed that students prefer to press the 'Like' button rather than challenging the library and its personnel, either by giving a suggestion, making a complaint, or even asking a simple question. Phillips's (2011) analysis of contents posted in Consortium of Academic and Research Libraries in Illinois (CARLI) members' Facebook walls revealed that Facebook offers a dynamic environment for academic libraries to cultivate fruitful relationships with students. He concluded that if librarians using Facebook present themselves as approachable in order to develop a rapport with students, it would ultimately facilitate the delivery of service.

The studies cited above were mostly carried out by the libraries/librarians of developed countries. Only a few studies have been conducted for libraries of developing countries. For instance, Riza Ayu and Abrizah's (2011) study on usage and applications of Facebook pages among academic libraries in Malaysia gives

some insight of level of usage by the libraries of the country. Moreover, minimal research has been done to provide empirical evidence of the effectiveness of Facebook adoption in library except the study of Mack *et al.* (2007). Thus, unlike most research of today, the present study attempts to investigate the following:

- a) Response behaviour towards library postings
- b) Impact on activities and services of the library after the Facebook adoption

4. Methodology

4.1 Data Collection

Collection of data on the following steps:

- (i) Students' social media usage and their perception
The Library of the Institute is responsible for preparing bar-coded student Identity (ID) cards for freshers. It is mandatory for students to submit their admission details along with contact information during the preparation of ID card. At that time, additional information such as preference for SNS, presence in SNS, and their views on joining to library's SNS networks is collected. The data is upgraded regularly by the circulation staff of the library.
- (ii) Facebook insight data
Facebook provides a unique opportunity to the page administrator to view and export page level and post level data through 'Facebook Insights', the metrics about how people are using the Page (Facebook 2012), which is not visible to students or others. Their insight data is exported in an excel sheet for analysis.
- (iii) Data on usage of learning materials by users
The library has been using the NewGenLib, an open source software for integrated library management system since August 2008. All the activities and services of library are automated. Data regarding circulation statistics, OPAC statistics, etc., are culled out from the database.

4.2 Data Analysis

In this phase, collected data was tabulated in an excel sheet and analysis was carried out. Facebook insights data provides more than 60 usage parameters. Among them, only three parameters, viz. ‘total reach’, ‘like’, and ‘comments’ were considered of our interest for this study. Glazer (2012) recommended that impression could be used as ranking popularity of the post. We emphasize on total reach rather than impression because ‘impression’ measures the number of times a post from a ‘page’ is displayed, whether or not the post is clicked. One may see multiple impressions of the same post whereas ‘reach’ measures the number of unique people who received impressions of a Page post (Facebook.com). Thus, it is thought that the reach may be the important parameter rather than impression when we consider ‘reach’ to unique people.

‘Likes’ are allowed as it is believed that this could be a more active way of engaging with users than the ‘reach’. Total page ‘likes’ is good but post-level ‘likes’ have more importance on measuring the effectiveness of the post as a user may like the library’s presence in Facebook for several reasons but liking a particular post indicates its

suitability. ‘Comments’ are considered the most active way of engaging the users.

All the posts in Facebook are divided into several categories according to their content and then analysed.

The usage data of library has been divided into two periods, i.e., the usage data of pre- and post-adoption of Facebook by the library. The data has been tabulated and analysed.

5. Results and Discussion

The initial data collection of student’s preference for SNS has revealed that 89 per cent of the students use Facebook and about 9 per cent use Twitter. The uses of other SNS by the students are negligible. The details are summarized in Table 1.

This has prompted the library to use Facebook, though library has its presence on Twitter but it is integrated with Facebook, i.e., whenever we post a message on Facebook wall it gets automatically posted on Twitter.

When, the first year students joined this institute in June 2012, they were required to know about the library’s Facebook adoption. It was found that undergraduate students are less concerned about their privacy and security rather than their postgraduate counterparts. Table 2 depicts the scenario.

Table 1: Students’ SNS accounts and their willingness to join Library’s SNS account*

Students enrolled with library	Name of SNS	Students reported having an account	Students joined in library’s network	Students having account (%)	Students willing to join library’s network having account (%)
1406	Facebook	1,253	1,054	~ 89	~ 84
	Twitter	127	72	~ 9	~ 57

* (Data as on January 31, 2013)

Table 2: Freshers’ SNS accounts and their willingness to join with Library’s SNS account*

Students	Number of first year students	Students reported having facebook account	Student joined in library’s facebook network	% of total students having account	% of students willing to join library’s network having account
Total Admitted	395	341	239	86.33	70.09
Undergraduate	302	251	185	83.11	73.71
Postgraduate	93	90	54	96.77	60

Most of the unwilling students perceive Facebook as a private and personal space and thus do not want to share it with library staff. Some were apprehensive that the library staff may be peeping into their personal life and that may have the potential to jeopardize their college/university life. The above results are in line with Sachs *et al.*'s (2011) findings. Thus, unwilling students prefer to click 'like' button on the library's Facebook page rather than joining library's Facebook network.

5.1 Insights from Facebook

The library has posted 117 items on its Facebook wall from its inception till February 2014. It has got 608 likes so far. The total likes may not be the most important element of assessing the popularity of the page, but it provides a measure of the level of interest that a library attracts on Facebook (Gerolimos 2012).

When we see the 'reach' towards each post, it reveals the pattern given in Figure 1.

Though 'reach' depends on several factors including time of posting, interest on a particular post, etc., it may be safely inferred that library postings are gradually becoming popular among

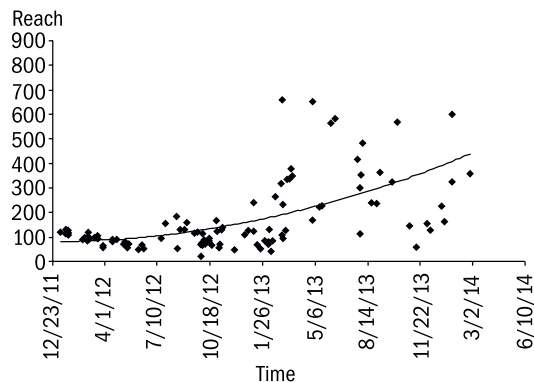


Figure 1: Reach pattern towards Facebook postings

the users. The lifetime reach data also greatly helps to understand the time of posting. It has been observed that during long holidays (e.g., summer/winter) or during examination time, hardly any users access the library Facebook page and as a result, some postings get less than 100 total reach.

Posts are broadly categorized according to their content and average *reach*, *like*, and *comments* towards each category (Table 3).

From the above data, it may be inferred that on average, non-library related postings are

Table 3: Categorization of postings of average *reach*, *likes*, and *comments*

Content type of posts	Number of postings	% of total items posted	Avg. no. of reaches (approx.)	Total likes	Total no. of comments
Institutional events	9	7.69	258	107	3
Institute information	3	2.56	133	5	1
Greetings	6	5.13	183	40	
Cultural and social activity	8	6.84	266	40	2
Institute workshop	22	18.8	115	8	
General	7	5.98	186	31	1
Tech festival	5	4.27	135	2	
Collection and facility	5	4.27	387	79	12
Web resources literacy	28	23.93	131	35	5
Library operation	19	16.24	170	26	8
Suggestion on library resources and services	5	4.27	102	3	2
Total	117			376	34

relatively more popular among users. But, adding those varieties of information (around 50% of total postings) increases engagement with users. This ultimately helps library's new collection and facility related information to reach the highest number of unique users. This data emphatically supports the view that in order to make journey in the social media landscape, libraries should talk about things that seem to be the interest of the users other than just the library (Glazer, 2012).

As seen from Figure 2, among the library related posts, it was found that users are more interested in collection and facility related information followed by library operation related message. This may be justified by the fact that the library is a growing entity and there is a gap between the demand and supply of learning resources and required infrastructures in the library. Thus, when a library posts the information on its Facebook wall that library has enabled Wi-Fi facility, the message gets the highest number of *reaches*, *likes* as well as *comments*. Initially, web resources literacy could not garner much support from users possibly because this could be related to their nature of needs and expectations. As most of

the users were undergraduate students, they basically needed textbooks rather than research articles. Thus, they were more interested in new textbooks that were coming to the library rather than availability of e-resources in web. But in recent times, this category of postings (i.e., web resource literacy) has caught up with other category of items posted. This is because after upgradation of the Institute to university, the University has started new post-graduation courses. It is found that postgraduate students frequently need scholarly articles and reference services for their project works and research.

In the above background, investigation was carried out to access the actual impact by collecting measurable information in some service area of the library.

5.2 Book Bank Issue Behaviour

Book Bank (BB) is a part of the library where most used books, generally the essential textbooks prescribed by the class teachers, are kept. Students most often look for the BB books as these are much needed and are used for whole semester. BB books are issued at the beginning of each semester on scheduled dates. The book issue nature of six specific instances is presented in Table 4. Of them, three instances (i.e., from August 2010 to August 2011) predate the social media adoption and the remaining three instances (from January 2012 to January 2013) postdate the social media adoption.

The above data shows that after the adoption of Facebook, there is a relative increase in the number of students getting BB books issued and considerable decrease in number of defaulting students. Before the Facebook adoption, generally BB notices were placed in the departmental and library notice boards. Students hardly used to see the notice boards regularly. Generally, the information is diffused through conversation among students. Thus, many students came at a later date and informed the library staff that they did not know the issue date due to various reasons. But Facebook helps to

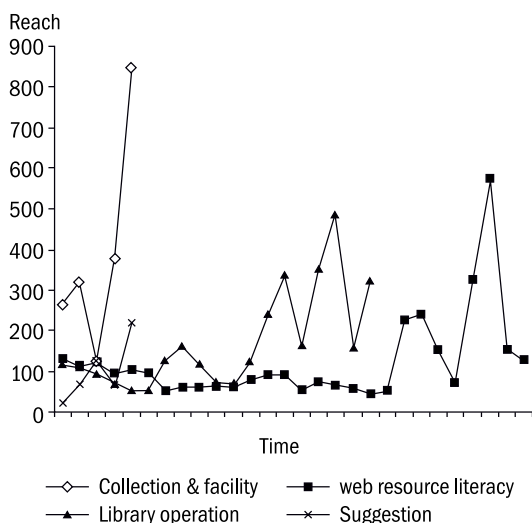


Figure 2: Reach pattern towards postings related to library activities and services

Table 4: Issue of books pertaining to the Book Bank

Date of issue	No. of students enrolled by the date	No. of students to whom books issued	No. of defaulting students*	% of students to whom books issued	% of defaulting students
Jan. 2013	1,287	754	34	≈58.59	≈2.64
Aug. 2012	1,279	696	42	≈54.42	≈3.28
Jan. 2012	1,004	586	51	≈ 58.37	≈5.08
Aug. 2011	999	501	109	≈50.15	≈ 10.91
Jan. 2011	901	426	125	≈ 47.3	≈13.87
Aug. 2010	890	401	101	≈45	≈11.35

* Defaulting students are those who did not come to get books issued on their schedule date but came at a later date and reported that they did not see the BB notice

remove this time and space barrier to a great extent.

5.3 Nature of Issue of Current Arrivals (CA)

The demand for newly arrived books depends on several factors. The most important is the relevancy of the procured books for the ongoing semester. Between August 2011–December 2011 and February 2013–March 2013, a considerable number of books were procured that were believed to be the titles in demand for that ongoing semester. Newly arrived books were kept in the display section after their processing.

Before adopting Facebook, notice regarding the current arrivals was placed in different notice boards of the Institute. In 2013, the library announced the current arrivals through Facebook and notice boards of the Institute. The dates of announcements and the issue nature of the books arrived by the date are given in Figure 3 (before adoption of Facebook) and Figure 4 (after adoption of Facebook).

From the above graphs, it is clear that peak demand period for the newly arrived titles before adoption of Facebook goes beyond 20th day after its announcement whereas adoption of Facebook helps to reduce the

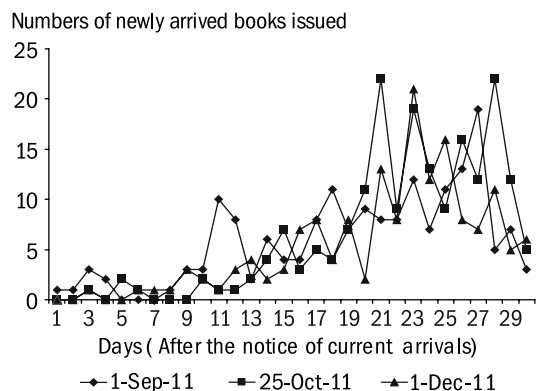


Figure 3: Issue nature of current arrivals before Facebook adoption

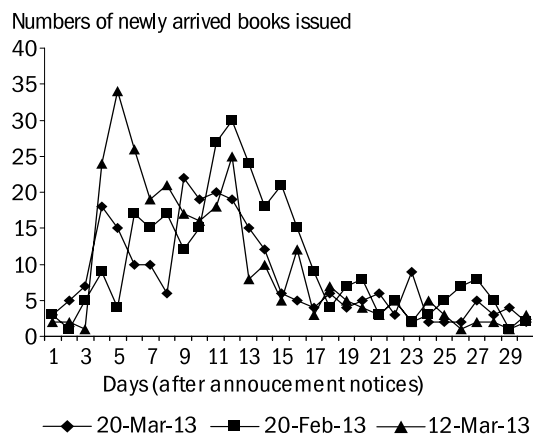


Figure 4: Issue nature of current arrivals after Facebook adoption

gap between the announcement and peak demand considerably.

The other important observation by the library staff beyond this numerical statistics is that Facebook helps more democratic uses of current arrival resources. In the absence of wider dissemination of Current Arrival (CA) information, generally it happens that whenever a student notices relevant titles in multiple copies, he/she only informs his/her close friends and they get their desired copy issued whereas others, who notice these titles late, do not get the desired copy. But, Facebook being an effective announcement tool removes this shortcoming to a great extent and attracts more number of students to visit the library.

5.4 OPAC Hits Behaviour

All modules of NewGenlib, Open Source Software (OSS) for library management, were implemented in the Library in January 2009 (Giri and Sengar 2011). Since then the, OPAC was in the institute’s LAN and that was announced through several library orientation programmes as well as notice boards. The Library first posted message about OPAC on December 11, 2011. The OPAC was then in LAN only. From June 15, 2012, the OPAC went online. The NewGenLib provides OPAC hit statistics, i.e, how many times search was carried out through OPAC. The result is given in Table 5.

From the above data, it is very much transparent that Facebook message plays a substantial role in attracting students towards OPAC search. It can even be argued that it is far more effective than library orientation

Table 5: OPAC usage

Hits before adopting Facebook and OPAC available in LAN only (≈ 35 months)	Hits after adopting Facebook and OPAC available in LAN only (≈ 6 months)	Hits after adopting Facebook and OPAC available in Internet (≈ 20 months)
978	1,102	10,245

programme while OPAC search is concerned. It is to be noted that library OPAC of the institute is available online only in library timings. It has also been observed that there is a positive correlation between the *reach* towards the post-related OPAC search message or message about library collection and OPAC hits.

5.5 Engaging Users in Collection Development

Since the library is a growing entity, it welcomes suggestions from students about the prospective learning resources in order to make library’s collection development more exhaustive. Till 2011, the library received suggestions of about 25–30 new book titles on average annually. After the adoption of Facebook, when suggestions were asked through Facebook postings with a link to the online form created in Google docs, it was found that submission of suggestions by students had increased more than three folds (Table 6).

Given the convenience of suggesting online, most of the student netizens prefer this mode as reflected through the huge hike in their recommendation. Thus, it can be safely argued that if a library can harness the potential of web

Table 6: Suggestion behaviour of students after Facebook adoption

No. of titles suggested	No. of users suggested the titles	Medium of request submission
63	21	Google online form
32	20 (15 of them suggested after seeing the Facebook message)	Reference desk
12	6	Library OPAC
9	5	Facebook message/ comments
Total = 116	Total = 52	

2.0 carefully, it can engage students proactively and effectively in collection development and better utilization of library resources.

6. Conclusion

Considering the dynamics and increasing importance of online communication among the student netizens in everyday life, academic libraries must seek new avenues such as social media to reach them timely and effectively. Application of social media in library needs a well-thought-out strategy to make it an effective vehicle in the present information super highway. As this study shows, pervasiveness of the particular social media in the targeted populace should be the initial criterion for selection of the SNS. Though frequent postings are golden

rule for its success, timings of postings may also be another criterion to optimize the effect on users. The recent study by Houk and Thornhill (2013) has also supported the same. It is not at all necessary that all the postings should be related to the library; in contrast, it is found that non-library-related postings attain higher *reach*. The findings of this study shed light as to how a small library has been benefited, by adopting Facebook, the most pervasive social media among its users. Thus, a library may not host a lot of events, but if librarians are resourceful, and a bit intuitive to assess the inclination of its prospective users, they can attract more users who can help develop the better library collection that can deliver effective and timely library services.

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