

Social Networks Impact on Information Consumption and Usage: e-Marefa Case

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Abstract This chapter presents social networks impact on information usage. Typically, information is being published via different channels that push information to readers. The main vehicle of information publishing is cataloging, indexing, searching, and marketing techniques. However, information that is being published via social networks is pulled and consumed by a participant (more than a reader). Information in social networks is virally published and consumed. This chapter discusses five pillars of social publishing to best utilize its features: (1) determine the nature and the structure of social networks; (2) viralize (viral-ready) the information; (3) evaluate the social information; (4) profile-oriented publishing; and (5) understand social capital as an economic value of social networks. At the end, this chapter presents a case study that embeds the concept of social networks information literacy within the e-Marefa database, which has been chosen as it includes over 252 000 records that could be viralized in social networks. The case study shows how an article could be viralized for self-publishing in an effective and efficient way. The case study found that there is a chance for an article to have one hit in 25 days (\sim one month period of time) on the native platform while the same article has a chance to have 25 hits in one day via social networks.

Keywords Social publishing · Viral ready · Viralizing the content · Social capital

1 Introduction

Social networks changed the way of information production and consumption. Consequently, the role of the library is being changed to offer new features and services under an emerged term which is called Library 2.0 [1]. The concept of

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Library 2.0 borrows features from Web 2.0 to increase interactivity and get information from the user back to the library [2]. Consumer-generated content is the major advancement of this concept.

According to studies, more than 74% of online users were moving to social networks sites in 2014 [3]. They used them as lively tools to socialize and interact in synchronous (same time) and asynchronous (different time) ways. Social networks could be defined as “an online means of communication, conveyance, collaboration and cultivation among interconnected people, communities and organizations” [4].

There are four zones of social networks: communities, publishing, entertainment, and commerce. In social communities’ sites, social networks are a subject of relationships of people who share the same interest. In social publishing, sites help in publishing the content to audiences (the scope of this chapter). People can define their own content (consumer-generated content) and participate in reviewing and rating it. A good example of consumer-generated content is wikis, which are based on crowd wisdom; i.e., multiple heads better than one. In social entertainment, sites offer opportunities to share and play games. Social commerce offers new opportunities in new forms of business value such as social capital.

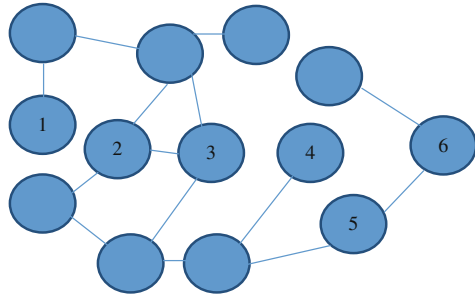
It is now the right time to include social networks topics within information literacy sessions. Moreover, some researchers insisted that librarians should embrace and exploit the potential of social technologies to guarantee the future of their profession [5].

This chapter recommends the basic competencies related to social networks that should be added as a subset of information literacy. Section 2 describes the nature and the structure of social networks. Section 3 handles the content itself and how to viralize it (i.e., make it viral-ready) to be socialized in an interactive way. Section 4 shows that the concept of information quality and evaluation is changed from refereed journals and citation into users’ rating and ranking. Section 5 utilizes the profile features of the social networks to target the right audience and readers. Section 6 sheds light on the concept of social capital as a new value for publishers. Section 7 introduces research methods and discusses research results using the e-Marefa database. Finally, Sect. 8 concludes the work.

2 The Structure of Social Networks

The key concept of social networks is based on the small-world phenomenon with six degrees of separation that was originally set out by [6]. Every connected node (agent) is only six or fewer steps away from any other connected node in the social network as illustrated in Fig. 1.

Another interesting concept is based on the game theory that assumes an agent is a decision-making unit. This could be used to show how a social network can influence the enforcement of certain behaviors within a given structure [7].

Fig. 1 Six-degree world

The underlying social structure has the following components and concepts [2].

- A *social network* is a set of socially relevant agents connected by one or more relations;
- *Agents* are members of the network;
- *Members* are connected via a relationship with each other;
- *Interactions* are behavior-based ties such as talking with each other or attending an event together;
- *Flows* are exchanges of resources, information, or influence among members of the network;
- *Content virality* is the extent to which content can be shared in social networks.

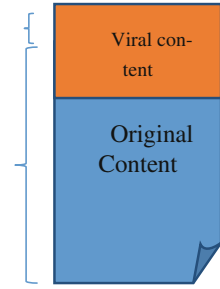
3 Content Viralization

In social networks, content is generated by consumers who are classified as follows [2]:

- **Creators**—create content to be shared with users;
- **Conversationalists**—those users who talk through social networks frequently;
- **Critics**—those who react to the content created by others;
- **Collectors**—efficient and organized users of social content;
- **Joiners**—people who maintain a profile on one or more social networking sites and visit the sites regularly;
- **Inactives**—online, but do not participate in a meaningful manner.

Using the six-degree world structure, it is easy to publish any content to any connected node (agent) in the world. To expedite the publishing process, the content should be viralized (viral-ready). Therefore, for publishers who would like to speed up the process of social publishing, it is suggested for them to adopt a psychological approach to viralize the content. Researchers found that content that includes extreme emotions (positive or negative) is more viral than other types of content [8].

Fig. 2 Embedding viral content with the original content (viral-ready)



Thus, authors should review their content and add a metatag to viralize and make it ‘viral-ready’ in order to motivate people to share the content.

The following are techniques that can help to viralize the content:

Technique #1: Embed the viral content with the original content in a natural and efficient way as illustrated in Fig. 2. While there are many authors (Elites) who create exciting content that travels around the world, there are few that can successfully and consistently insert the viral message into the content.

Technique #2: To create interactive content, e.g., rating and feedback. Allow users to contribute by rating and entering their feedback and impression.

Technique #3: There are 4.5 billion ‘likes’ generated daily as of May 2013 which is a 67% increase from August 2012 (Source: Facebook); therefore, the competition among viral content is extremely high. To compete, viral content should make sure that keywords are embedded in the original content. Social Networks Optimization (SMO) employs tactics to increase the likelihood that others will share and promote content. SMO seeks to leverage the network effect to spread endorsements of the published content.

Technique #4: Besides the platform that publishes the content, publishers should create viral content in the most generic social networks; i.e., creating a fan page for the viral content in Facebook (Fig. 3), MySpace, Twitter, LinkedIn, and Google+.

4 Social Content Evaluation

Readers trust the top ten results that appear in generic search engines or those articles that have been rated by readers regardless of the quality of this information. Moreover, in social networks there are only few influencers who maintain a huge network of people in their ‘fan’ pages. They are socially active and highly interconnected. Figure 4 shows the basic impact of the influencers on others; e.g., “Perez Hilton averages 220 Million Impressions and 12 Million unique readers per month” [9].



Fig. 3 e-Marefa in Facebook

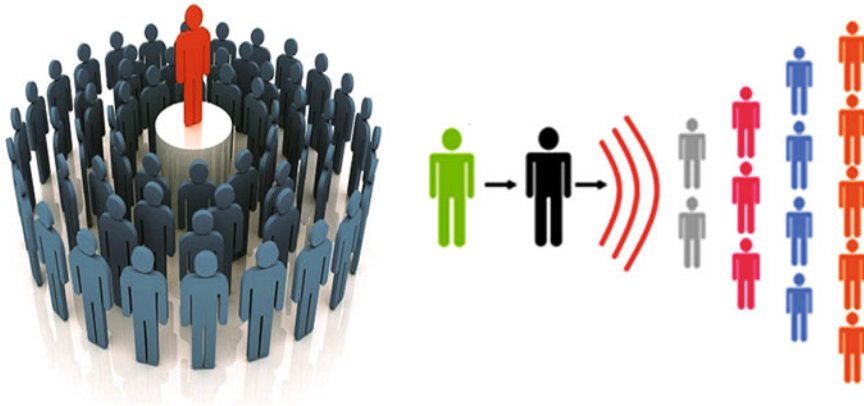


Fig. 4 The impact of the influencer

Influencers are able to change others' attitudes and behaviors. Therefore, their opinions are extremely valuable because they are competent to share information in an unbiased way.

Accordingly, it is a good strategy for publishers to recognize those influencers and share the published information with them.

5 Profile-Oriented Publishing

In social networks, all transactions are recorded as footprints or so-called ‘participant prints.’ This will help in understanding the behaviors of the participants who are actively engaged in content sharing. A participant print could include different profiles such as general profile, digital profile, digital usage habits, content consumption preferences, consumer content creation profile, and individual profiles.

A general profile should include basic information about the participants, demographic factors, reading patterns, the response rate to previous publishing, lifestyle data, and how readers talk about previous publishing. Publishers can collect data from prospective readers or competitors’ readers as well as from current readers.

The analysis of digital usage habits will help in understanding what channels participants currently use and in what proportion. The analysis can also help answer questions such as: What sites do they surf? What kind of digital devices do they own? What are their content consumption preferences? What are participants’ favored sources of information? What influences them? and What do they consider the best single source of information they can tap?

Consumer content creation profiles will answer the questions: What is created by the participants at the moment? What type of contents do they participate in? Tracking should be a standard operating procedure that gives information on what people are saying about publishing.

After analyzing the participant prints, publishers can choose the best publishing strategies, the type of the viral content that should be created, choose the keywords to publish content, and prepare the influence plan.

6 Social Capital

Social capital is defined as “the accumulated resources whose value flows to people as a result of their access to others”; (e.g., in YouTube, a view can generate \$0.07). This creates new business models and motivates open data. Thus, besides subscriptions, publishers will use the social capital of their platform saying on average a published article has a certain number of views. Social capital is a formula of shared beliefs, relationships, and actions of participants’ ‘like’ norms, behaviors, and values [2].

7 Research Method and Results

The research hypothesis is that viralized articles via social networks bring more hits and views than those articles that are being published on a platform. Consequently, the articles will contribute to increasing the overall social capital of a platform. Therefore, the chapter examined how viralized content drives social transmission

and thus enhances usage and views. It studied publishing in two ways: (1) publishing via the native platform and investigating the usage report; and (2) publishing after viralizing that content on social networks and investigating the usage reports of those social networks.

In the first method, about 1500 articles have been selected from the e-Marefa database to monitor their usage and views since publishing on its native platform (i.e., e-Marefa). As an example, Fig. 6 shows the history of an article (ISN 9690) on the native platform. It has 48 hits from 16/01/2012 till 30/04/2015 (3 years and 3 months). The same article (ISN 9690) has been viralized and published on social networks. In social networks, it has 240 hits from May 2, 2015 till May 12, 2015 (10 days). Table 1 shows more examples.

This is a very interesting observation that has been generalized into 1500 articles. The ratio between the native platform and social networks was 0.03–20.5 (~ 1:625). The acceleration factor is 625, which means an article will have 625 times the number of hits on social networks compared to the native platform. In other words, it is found that there is the chance for an article to have one hit in

Table 1 More examples

Article ISN	Native platform		Social networks		Ratio
	Days	Hits	Days	Hits	
9690	1185	48	10	240	0.04:24
329463	1130	25	10	190	0.02: 19
379141	950	33	10	205	0.03:20.5
355523	1300	54	10	175	0.04:17.5
373638	1150	44	10	185	0.04:18.5
...					...
Average					0.03:18.5 (~ 1:625)

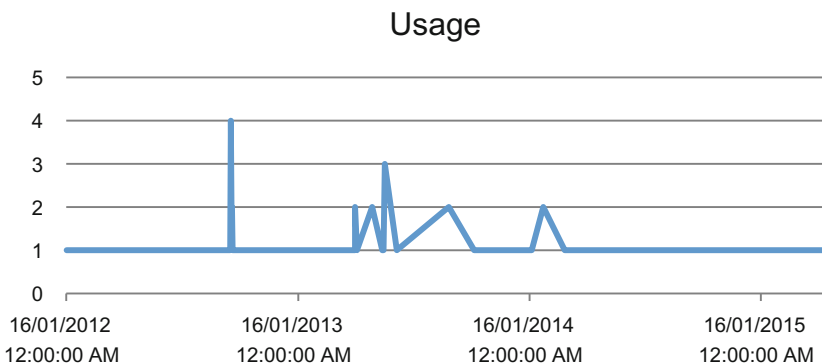


Fig. 5 A history of an article on the native platform

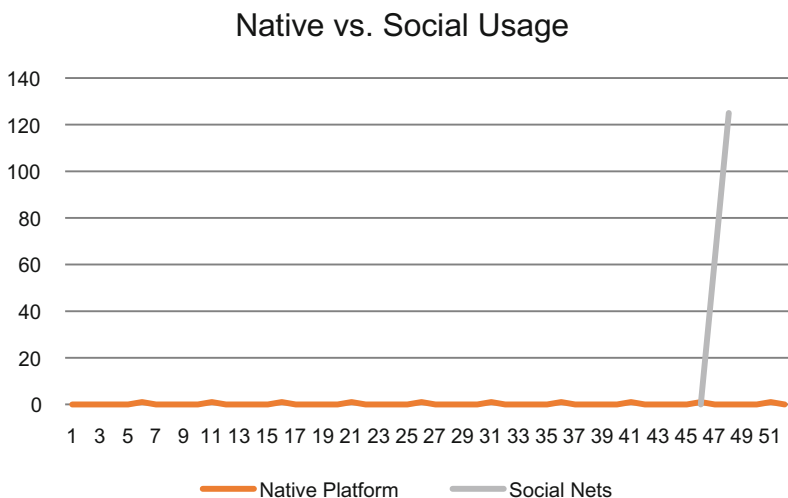


Fig. 6 Native vs. social publishing

25 days (\sim one month period of time) on a native platform while the same article has a chance to have 25 hits in 1 day on social networks as depicted in Figs. 5 and 6 respectively.

8 Conclusion

Analysis of the number of hits on the native platform over 3.4 years and social networks over 10 days sheds light on the impact of social publishing using social networks over the native platform. This contributes to the hypothesis on whether viralized articles are more likely to be viewed and downloaded. The results demonstrated that viralized articles have more usage activities in social networks compared to those which are published on the native platform. These findings are consistent with the hypothesis that viralized articles bring more hits and views than those articles that are being published on the native platform. It is found that there is a possibility for an article to have one hit in 25 days (\sim one month period of time) on native platforms while the same article has a possibility to have 25 hits in 1 day on social networks. For example, the usage activates are increased exponentially in a growth curve. This increase is equivalent to spending an additional 25 days for an article to have a chance of a hit on the native platform. These field results are consistent with the notion that social networks drive more usage.

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