Development of Learner Centred Supplementary Curriculum for Library and Information Science Fraternity by Analysing Social Networks: A Concept

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Abstract:

Curriculum based knowledge is limited to a particular country's education system and industry, which limits the potential opportunities for an individual to grow globally. In regular education system, individual gets a chance to learn a limited amount of knowledge / skills and that too in a restricted time period but the social networks which have plethora of think-tanks, helps individual to develop themselves in a particular domain without having a time restriction. Educators who are active on such networks also get an input to enhance curriculum according to the current and futuristic needs. Also, the queries and discussions on the social media platforms helps to create the digital curriculum which is not supposed to be the core syllabus but can be used as reference study material which can be accessible throughout the country. The aim of this study is to give a conceptual model of a digital inventory for learner centred supplementary curriculum, to give the concept of how the queries and discussions posted by professionals / educators on the social networks give inputs to enhance the learner centred view of curricula for both the categories of students as well as professionals. The novelty of this study is that this research aims to use the form of information from social networks and convert it into a readable and available resource for both the entrants as well as the eminent professionals in the Library and Information Science domain.

Keywords: Social Media, Curriculum, Supplementary curriculum, Library and Information Science, Conceptual Model, Learner Centred Curriculum.

Introduction

Recently, Global Digital Report (2018) gave the startling results of the digital world we live in now. It stated the statistics of internet users increase 7 per cent per year, which includes

4.021 billion in 2018, out of which 3.196 billion are social media users rising 13 percent every year, and 5.135 billion mobile users increasing 4 per cent per year. Whereas, since 2017 worldwide usage of social media has increased by 13 percent. With the improving technology and ease of accessibility, India, Indonesia and Ghana have become the largest social media using countries. Though social media is not a new trend but in the present scenario, it has influenced almost every aspect of daily life, with near majority of the population having at least one user account over at-least more than one social media.

Initially, during its infancy period, people used the Social Media only for social non-learning interactions. With the majority of global population joining the Social media or Social Networking Sites (SNS), profit-making organisations started exploiting /penetrated these sites for marketing, recruitment and ideas or knowledge generation and information sharing. Hence, subsequently, social media has expanded/masked into knowledge sharing and educating at both personal and corporation mediums (Eid and Al-Jabri, 2016). Thus, the learner of the 21st century is progressively aligned towards technology and its use as a tool in learning. The learner today goes beyond the traditional way of learning and as mention by Bahner et al. (2014) - lectures are now podcasts and textbooks are now e-books.

Library and Information Science (LIS) education in the 21st century has geared up to the next level of development and stationed to provide the learners appropriate contents for developing and maintaining excellent professional expertise. With the world slowly becoming a global village, LIS students need to be ready to understand and showcase the comprehensive services to the global population of the digital information era (Tumuhairwe, 2013).

The aim of this study is to give the conceptual model on how the queries and discussions posted by professionals/educators on social media give inputs to enhance the learner-centred view of curricula for both the students/learners as well as professionals. This purpose of this study is to provide a concept for creating a digital inventory of Learner-Centred Curriculum for Library and Information Science fraternity.

Social Media and LIS Education

The ways we identify and access information, interact with each other have been precisely changing with the evolution of World Wide Web from Web 1.0 to Web 2.0. Technology advancements have led to the creation of the different form of communications and knowledge acquiring. The learning standards have developed beyond the traditional classroom teaching method to contemporary and asynchronous, bilateral and cooperative learning, further advanced by Web 2.0 tools as well as social networking methods. Continuous development of Web 2.0 technologies has surpassed the development of theoretical approaches and their use in the education and profession (Gunawardena et al., 2009).

Transformatory changes include the creation of new methods being created from the larger, demand-driven information society, broader interdisciplinary boundary/reach and closer focus on user needs (Sutton, 2001). By becoming open and receptive towards the new modes of gathering, disseminating and generation of information, both educators, as well as learners/students, will be able to grow themselves towards the transformed education for the present information age. To create a workforce of library professionals which can be

leveraged into the global economy, the education imparted needs to be supplemented with additional courses keeping in mind the global presence of the community.

The traditional education pattern was created in the age where information was scarce, and modes of communication were limited (Cantwell, 2011), which led to institutions offering fixed components in the curriculum whose measure of the efficiency was by exams of content knowledge specifically. In contrast, focusing at the present scenario, information is growing exponentially every year, and every individual has access to various communication modes especially over social media, which means that role of educators/teachers needs to be rejuvenated. Educators should transform themselves into facilitators by orienting themselves towards the world which has moved beyond the classroom teaching and learning. And social media is the best option to make this communication happen.

The majority of students/learners today opt for the online media as their primary source of information (Giordano and Giordano, 2011). Patel et al. (2013) analysed in their study that 163 out of 226 participants used social media for learning purposes. Social media not only benefits the learners but professionals also. A survey by Stokic, Correia, and Reimer (2013) has confirmed the relationships between social media collaboration and learning motivation, and the willfulness to share knowledge and the self-motivation for learning and knowledge building.

Technology has made libraries and information centres struggling and adjusting their focus from print era to the digital era. Many innovations such as e-publishing, Web 2.0, Library 2.0, digitization process, Blogs, Wikis, Tagging, Open source software (OSS), Open Access Initiatives (OAI), etc. are emerging and putting a challenge in front of the library professionals to meet the demands of this information society. These emerging new trends and technologies put forth the need for new roles and skill-set of LIS professionals (Nonthacumjane, 2011). These evolving trends also emphasize the curriculum being taught in the LIS institutions/schools, to fulfil the current demand of the profession.

Learner Centred Supplementary Curriculum

The existing learning theories are being challenged by the advancing Web 2.0 technologies, and a vast range of online communication is now possible between people of different races, from different locations (Gunawardena, 2009). The world now is more connected than ever through the use of advanced technology and social media. Developed as well as developing countries are connected and sharing the information and knowledge with the help of social media. The LIS educator / professional / learner in a developing country can connect with another LIS educator / professional / learner from any another developing or developed nation and share their professional knowledge over social media over different modes within a fraction of time. Hence, the best platform to search for the recent trends and innovations in the LIS profession (or for that matter in any profession) are the social media groups, blogs, communities, social networking sites, etc.

Gunawardena (2009) gives the "Evolution of learning from Web 1.0 to 2.0", adapted from Lambert (2008) as given in Table 1 below, which explains how traditional learning environment has evolved and developed into a community-based learning environment, where 'structured learning' has become 'collaborative learning', experts are not only identified by the company but also by community.

The need for a supplement to the LIS curriculum is essential, as mentioned in the previous section, not everything can be included in the curriculum for a particular level of a course.

Table 1: **Evolution of learning from Web 1.0 to Web 2.0**

Learning 1.0	Learning 2.0
Formal and structured learning	Informal and collaborative learning
Instructor led, Web-based, virtual and blended	Blended, blogs, wikis, Q&A, search
Management hierarchy	Mentoring, knowledge and networks
Taxonomies	Tags
Scheduled, planned	Real time, just in time
Company – identified experts	Community identified experts
Managed formal events	Enabled knowledge exchange

Apart from core and electives being included in the curriculum, a supplementary curriculum is needed to equip the learner as well as the educator to meet the current skill demand of the profession. The challenge lies in motivating the educators/teachers to open their perspective creatively about the pedagogy, content delivery and assessment where the responsibility of the educator, student and technology are reframed (Chi and Hausmann, 2003).

A traditional curriculum consists of two parts –

   a) Core / Compulsory (static / basic) components and
   b) Elective (dynamic) components.

Since it is difficult to validate and update the curriculum on a regular basis, in core subjects the educators find out the flexibility of introducing new trends and concepts via electives. Though many new components of technology or recent trends in LIS profession are being included in the curriculum, especially in developed countries, developing countries are still trying to cope up with the rapidly changing patterns of the Information Science profession and their inclusion in the LIS curriculum.

What is Social Media?

Social media deploys mobile as well as web-based technology (eg., Web 2.0) for creating collaborative platforms using which individuals and community share, create, discuss and update users' generated content to network communities (Gross, 2011; Kaplan and Haelien, 2010).

Gunawardena et al. (2009) give classification of Social Media citing Erlandson (2008) as follows:

   a) Social Networks – Facebook, MySpace, Linkedin, etc.
   b) Social Publishing – Youtube, Blogs.
   c) Social Bookmarking - Del.icio.us, Bibsonomy, etc.
   d) Social Cataloguing – Folksonomy, Tag Clouds, etc.
   e) Wiki – Wiki can be integrated with other social networks for creating an efficient platform for communication and learning

Each social media provides a different way of connecting and communicating with others through status updates, comments, photo sharing, web links or more extensive articles (Cantwell, 2011).

Conceptual Framework

Curriculum-based knowledge is limited to a particular country's education system and industry, which limits the potential opportunities for an individual to grow globally. In the regular education system, individual gets a chance to learn a limited amount of knowledge/skills and that too in a restricted period but the social media or professional networks which have a plethora of think-tanks, help the individual to develop themselves in a particular domain without having a time restriction. Educators who are active on these networks also get input to enhance curriculum according to the current and futuristic needs. Also, the queries and discussions on the social networking platforms help them to create the digital curriculum which is not supposed to be the core syllabus but can be used as reference study material which can be accessed worldwide.

The problem lies in finding a right digital platform where people from LIS domain can get the self-learning content which is dynamic and updated on a regular basis. The rationale for creating this conceptual framework for the digital inventory was that there is no self-learning organised / consolidated platform (structure) for such reference components with both ways vertical communication.

Wenger et al. (2002, p. 4) have defined the concept of Community of Practice (CoP) as, "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis."

The CoP has been classified into three structures – 1) Domain, 2) Community, and 3) Practice. When relating the CoP with the conceptual model of this research, Domain indicates 'Library and Information Science', Community are different types of Social Media Networks, and Practice is applying the knowledge insights gained through community interaction into one's professional experience.

In proposing the concept for the development of learner-centred supplementary curriculum for Library and Information Science family by analysing social networks, this paper first identifies the various types of social media networks (as described in the previous section) used for context analysis.

LIS professionals/students/educators, etc. input their content into various networks, and our model extracts the useful information from the content and exports it to a single framework. This can be shown in reference with the Figure 1.

Figure 1: Concept Overview
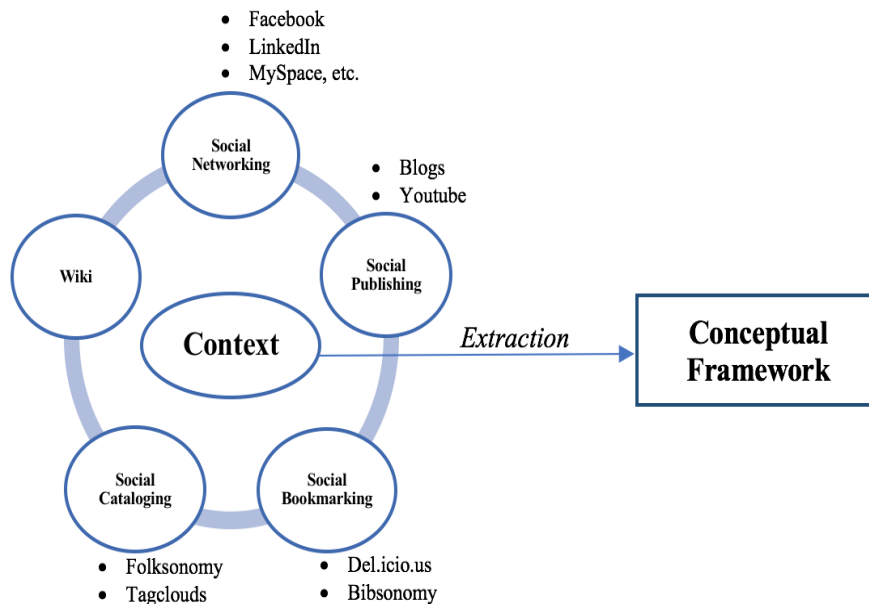
The flow of the conceptual framework can therefore be identified as follows:

Figure 2: Conceptual Model for the Digital Inventory
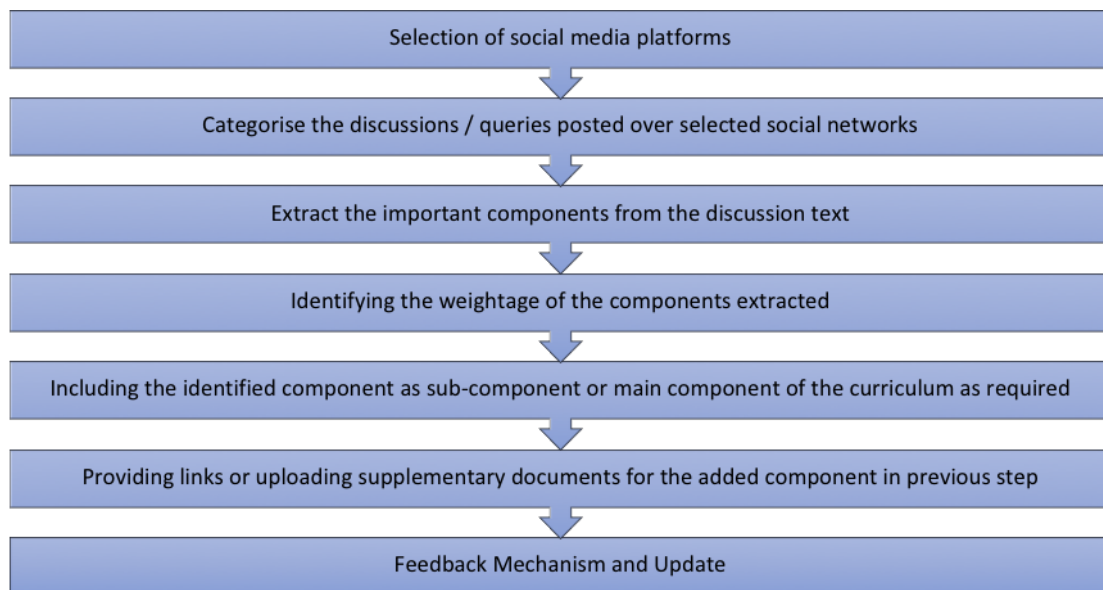
Step 1. Selection of social media platforms

The first step towards creating a supplementary knowledge framework is to find out the platforms, in context of this study – social networking platforms, as categorised in Fig. 1, suitable for the specific domain related knowledge. The criticality lies because some of the networks are niched or targeted for a particular population or geographical region which influences the flow of content and the quality of content.

For example, *Lislinks.com* is the social networking site aimed specifically for the Indian LIS Professionals. Shared content over seminal social networks offer insights and regular updates in Indian (developing Asian countries) context. The information and the discussions being shared over such networks are mostly limited to the Indian Curriculum context (boundaries), and hence it is primarily different from the discussions or queries posted over the social networks with members from developed countries.

Thus, choosing relevant social media is the critical and foremost step for this theoretical model.

Step 2. Categorise the discussions / queries posted over selected social networks

Social networks are flooded with knowledge in the context of their respective topics. A smart netizen strategically follows the domain which contains the relevant topics in the field of their affiliations. Often, misleading or repetitive data create traffic congestion which leads to increase in response time in the extraction of pertinent content as well as establishes a slack of non-relevant content.

To simplify and save time on search optimisation one has to classify the content according to need and then search for dedicated classified topics. Sometimes error comes due to the wrong classification of sub-topics leading to delivery of non-relevant information to the netizens. For example, many discussions over different media may sometimes contain the different title, but the similar concept or occasionally same query can be posted by the same or different users over various social media.

To avoid the consequences, people often interact in common interest classified social network platforms which act as a source of valid information.

Step 3. Extract the important components from the discussion text.

Step 4. Identifying the weightage of the components extracted

After step 2, the next step is to find the components (keywords) relevant to the current trends and terms in the context of Library and Information Science from the discussion text. In a simple case, one will remove the noise-words (stop words), eg., 'the', 'is', 'from','far', 'where', 'following', etc. from the text and extract the remaining terms from which the required components are finalised. Since social media is flooded with such context and even classification of the discussions would also give a significantly large amount of data. Hence, to confront the scenarios, one has to deploy the (semi-) automated tools and techniques like data mining/text mining for strategic text extraction. For example, a thread over LinkedIn is shared, shown in Fig. 3, and it can be seen that it shares some information about Big Data and Privacy and shares some link for it. Thus, the components from the complete thread would be – 'Big Data', 'Privacy', 'Analytics', etc. and the final decision of choosing the main component for the next step (Step 4) is important one, i.e., which one of the components does completely convey the meaning of the post, and that can be defined for supplemented material. In this example, it is 'Big Data and Privacy'.

Figure 3. A group post about 'Big Data' shared on LinkedIn
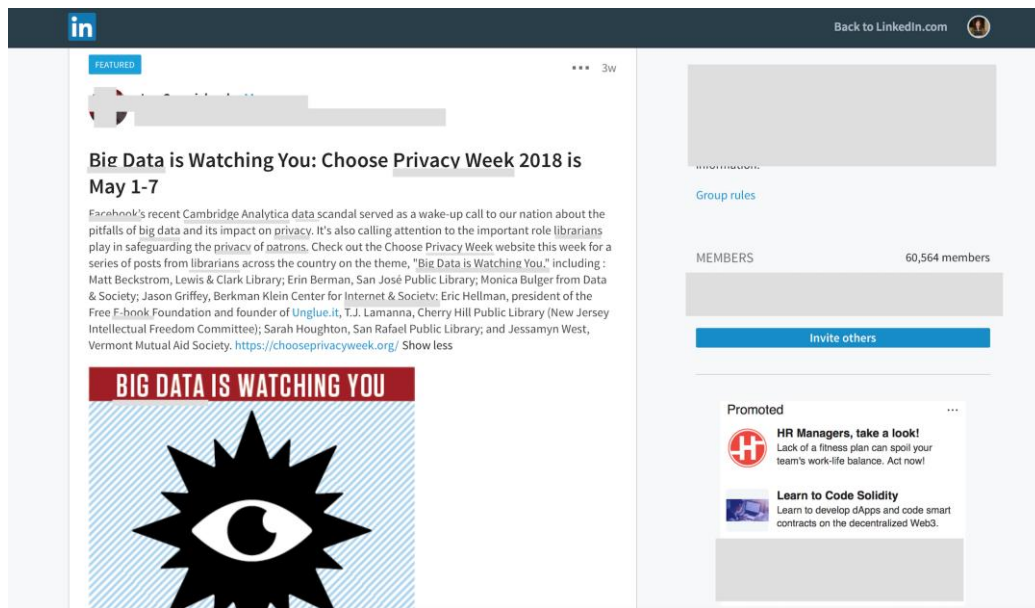
Step 5. Including the identified component as sub-component or main component of the curriculum as required

Once the terms relevant to the context of Library and Information Science are identified, next step is to organise them into the main or subcomponent hierarchy. For instance, in the above example, our component is 'Big Data and Privacy', now the first step is to identify if any level for 'Big Data' is created already. Then, this component keyword can be categorised under that level or if the main level hierarchy needs to be created for 'Big Data' also, for example, 'Data Sets', and so on and so forth.

Step 6. Providing links or uploading supplementary documents for the added component in previous step

Once the context term is placed at its appropriate location, it is important to provide the relevant links and documents for the same, to complete the task of creating supplementary documentation for the LIS curriculum or learning.

This will be an ongoing process, i.e., for instance, in case of 'Big Data', one link is added from the above example and suppose another discussion or thread of relevant information about Big Data is posted on some other platform, then in such a case, the information material related to the corresponding thread will be updated under the level 'Big Data' already created at Step 5.

Step 7. Feedback and Update

Without feedback, no framework is complete. A system can be updated when critical input from the user is received. The digital inventory for the learner-centred curriculum can be updated from time to time on a regular basis with the help of proper feedback and help to convert the collected, filtered information in the digital form.

Discussion

Social networks are mainly used for communication and information transfer, but the filtered information proposed in the concept given in this study is not used for the design of curricula in education system especially in developing countries. So, the novelty of the idea framed in this study is that this it proposes to use the form of information from social networks and convert it into a readable and available resource for both the entrants as well as the eminent professionals in the Library and Information Science domain.

This study has proposed a theoretical framework to explain the creation of a learner-centred supplementary curriculum over a digital platform. This study has unveiled the learning opportunities social media has to offer to the LIS professionals. Since this model leverages the Internet, it is also available to the educators at anytime from anywhere according to their individual needs and available time.

As this concept develops into practice, so will the research of this study. The concept presented in this paper will help educators and professionals to gain insights of the new and latest trends and innovations being carried in Library and Information Science field. With the help of this digital inventory, educators especially will be able to reflect the new ideas/materials in practice and share with their students/colleagues in more meaningful ways, which can prove to produce real potential changes in classroom practice.

The future scope of this study is to create the full-fledged digital inventory of the supplementary curriculum, based on the concept produced in this study to enhance the learning outcomes of the Library and Information Science community.

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