

**WEB 2.0 IN THE LIBRARY:  
ANALYSIS OF CHALLENGES AND OPPORTUNITIES**


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of the Requirement for the Degree  
Master in Library and Information Science**

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**APPROVAL SHEET-A**

This thesis titled “**WEB 2.0 IN THE LIBRARY: ANALYSIS OF CHALLENGES AND OPPORTUNITIES**” prepared and submitted by **CHRISTIAN GEORGE FRANCISCO ACEVEDO**, in partial fulfillment of the requirements for the degree **MASTER IN LIBRARY AND INFORMATION SCIENCE** has been examined and is recommended for the acceptance and approval for **ORAL EXAMINATION**.

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# **WEB 2.0 IN THE LIBRARY: ANALYSIS OF CHALLENGES AND OPPORTUNITIES**

**By**

**CHRISTIAN GEORGE FRANCISCO ACEVEDO**

The study was conducted to explore the possibilities of integrating Web 2.0 tools in academic libraries of the Province of Capiz. This mix-method research utilized questionnaire and focus group discussion (FGD) in gathering data from 17 licensed librarians working in the higher education institutions of Capiz. Librarians' level of awareness, competencies, and acceptance of Web 2.0 technologies were investigated. Existing Web 2.0 tools and availability of IT facilities in the libraries were also identified. Findings revealed that while there is a high level of awareness on common Web 2.0 tools, the librarians' personal use of Web 2.0 tools such as social networking sites, instant messaging, wikis and video sharing, did not translate to the adoption and utilization of Web 2.0 tools in the library. Strong acceptance in the use of Web 2.0 tools was also found among librarians but majority of the respondents were not confident in using Web 2.0 tools. Thus, there is a need to develop librarians' competencies in collaborative writing and in blogging. The libraries surveyed have the basic facilities and infrastructures to make Web 2.0 integration possible. The lack of maintenance for IT equipment, limited training, absence of plan for Web 2.0 integration and inadequate staff were identified as deterring factors. To address these challenges, the head librarians should include in its development plan strategies for improving IT maintenance, trainings, planning and staffing that will make Web 2.0 integration viable. The availability of

funding, adequate facilities and supportive administration were identified as opportunities that should be capitalized for successful Web 2.0 integration in libraries.

# CHAPTER I

## BACKGROUND OF THE STUDY

### Background of the Study

To address the demands of today's competitive information exchange and sharing activities brought about by the development in the World Wide Web, librarians are taking advantage of emerging technologies to change the platform of information sharing. Web 2.0 has been considered one of the crucial tools that enable libraries to adapt into the digital environment.

Web 2.0 refers to the tools that allow users to interact and collaborate with each other in a social media dialog as creators of user-generated content. It is the second stage of development of the World Wide Web, characterized especially by the change from static web pages to dynamic or user-generated content and the growth of social media (O'Reilly, 2005) with focus on empowering users to become active in collaborating and in sharing information online (Beale, 2014). This makes Web 2.0 a significant part of everyday life. A student shares his thoughts every now and then at his finger tips and the whole world would see it posted on Facebook, Twitter and other social media platforms. An administrator would spend much of his time reading and answering emails. A researcher visits different websites in search for reliable information. The use of social media has enabled quick user interaction and collaboration in a social media landscape, making users as content creators in a virtual environment.

Web 2.0 use is now widespread, mainstream, and more influential than ever. With social signals increasingly influencing search rankings, expanding and enhancing

the library's your social media presence can significantly amplify your reach and rate of lead generation (Romeri, 2014).

The Asia-Pacific is home to almost four billion people, accounting for just fewer than 55 percent of the total world population (World Internet Stats, 2014). The region hosts just under half the world's Internet users and active social media enthusiasts. Of all the Asian countries, the Philippines dominates the scene. The Philippines is number one in Asia Pacific in terms of spending the most time on the internet. In 2013, Filipinos spent an average of 6.2 hours a day using laptop or desktop, and 2.8 hours using a mobile device. The Filipinos also spent the most number of hours (average of four hours a day) on social media (Kemp, 2014).

Integrating Web 2.0 tools in the library aims to build meaningful interactions with stakeholders. Web 2.0 applications enable librarians to interact with learners, access, acquire, and share knowledge and experiences, thus, helping them to build minds, shape ideas, and keep libraries stay relevant to their communities (McManus, 2009).

The application of Web 2.0 in the libraries has resulted to the formulation of the Library 2.0, which has been considered as the new model of librarianship that empowers users and offers them services at their convenience (Khiwa, 2010). The need to integrate Web 2.0 services in the library has become vital. Accrediting agencies in the Philippines require libraries to acquire non-print, digital and electronic resources. Libraries also need functional Web page and interactive library system.

It is common among traditional librarians (those who barely used the Internet and do not have any Web 2.0 account) to complain about the delay of receiving

communications through snail mail. This could be minimized if the library has its own Web 2.0 tools that enable collaboration with other libraries. In the Philippines, the emergence of Web 2.0 as an integral component of the library has been the subject of studies and articles, citing the benefits, opportunities and challenges that Web 2.0 has to offer.

Lapuz (2009) emphasized the vital role played by librarians and information professionals in developing initiatives to introduce and spearhead the use of Web 2.0 tools in the development and enhancement of information literacy teaching aimed at educating users of information. In view of this, Ramos (2011) suggested the need to integrate Web 2.0 applications to enhance reference, as well as other library services.

The need to utilize emerging technologies, therefore, requires librarians to equip themselves with the necessary technical competencies. Yap (2012) discussed about these technical competencies for librarians to upgrade their basic skills to add-up new skills to the performance of their work.

Educating users of social media has become widespread. In Iloilo City alone the Google Educators' Group (GEG) was launched early in 2014 as a non-profit community of academic professionals to inspire, empower, and meet the needs of students through technology. Furthermore, the Google Educators' Group Capiz was launched in September 2014 to widen the social media training provided to educators in the Province of Capiz, where librarians are not aware of the need to integrate Web 2.0 platforms into their library. Some librarians find it necessary to learn how to use such tools. Others argued that using Web 2.0 was not yet introduced to them. Familiarity is where it all

begins to open possibilities of delivering information, engaging users to connect in meaningful ways and providing a wider venue for intellectual discussion to flourish.

There are two universities and four colleges in the province of Capiz, duly recognized by the Commission on Higher Education (CHED). The universities include Capiz State University and Filamer Christian University, while the colleges are: Colegio de la Purisima Concepcion; College of St. John; Hercor College; and St. Anthony College of Roxas City.

Each of these higher education libraries has internet stations to cater to the needs of the students for print and electronic references, with available Internet connection. Librarians in the province also participate in seminars, trainings and workshops conducted by various library organizations exposing them to various trends and latest technological innovations, including Web 2.0. Most of the academic librarians and their paraprofessional staff are also studying Master in Library and Information Science, wherein Web 2.0 is frequently discussed. However, it was found that no library has fully integrated Web 2.0.

The lack of utilization of Web 2.0 tools is therefore the problem. This could give libraries the opportunities for improving and developing their services that could establish or strengthen collaboration and resource sharing with other institutions, upgrade their skills and competencies, and integrate their libraries in the online environs. There is a need to analyze the potentials of integrating Web 2.0 in the libraries as well as the challenges that might deter in the implementation of this plan.



## **Objectives of the Study**

Web 2.0 is an essential aspect in information sharing. The academic libraries in Capiz have internet access, modern technology is available and librarians are exposed to different trainings on Web 2.0 and social media. Web 2.0 use, however, has not yet fully been fully integrated. This study was conducted to analyze the possibilities of integrating Web 2.0 technology by looking into different factors that are associated with their decisions. Specifically, this study was conducted to:

1. determine the level of awareness of librarians on the existence of Web 2.0 technologies;
2. identify existing Web 2.0 technologies that have been integrated in the academic libraries in the Province of Capiz;
3. determine Web 2.0 competencies among academic librarians in the province;
4. examine the availability of library facilities and infrastructure of the target institutions;
5. assess the acceptability of integrating Web 2.0 technologies in the academic libraries in terms of perceived usefulness and ease of use;
6. identify the challenges for integrating Web 2.0 technologies in the academic libraries;
7. determine the opportunities for integrating Web 2.0 technologies in the academic libraries;
8. determine the needed input for integrating Web 2.0 technologies; and
9. develop a program for integrating Web 2.0 technologies.

## **Theoretical and Conceptual Framework**

This study is anchored on the Library 2.0 principle posited by Casey (2006), Technology Acceptance Model (TAM) by Davis (1986) and Input-Process-Output (IPO) model based on the Systems Theory by Katz and Kahn (1966).

Casey (2006) posits that Library 2.0 is “a model for library service that encourages constant and purposeful change, inviting user participation in the creation of both the physical and the virtual services they want, supported by consistently evaluating services. It also attempts to reach new users and better serve current ones through improved customer-driven offerings.” In particular, he describes the need for libraries to adopt a strategy for constant change while promoting a participatory role for library users. Thus, Library 2.0 is the integration of Web 2.0 in the library.

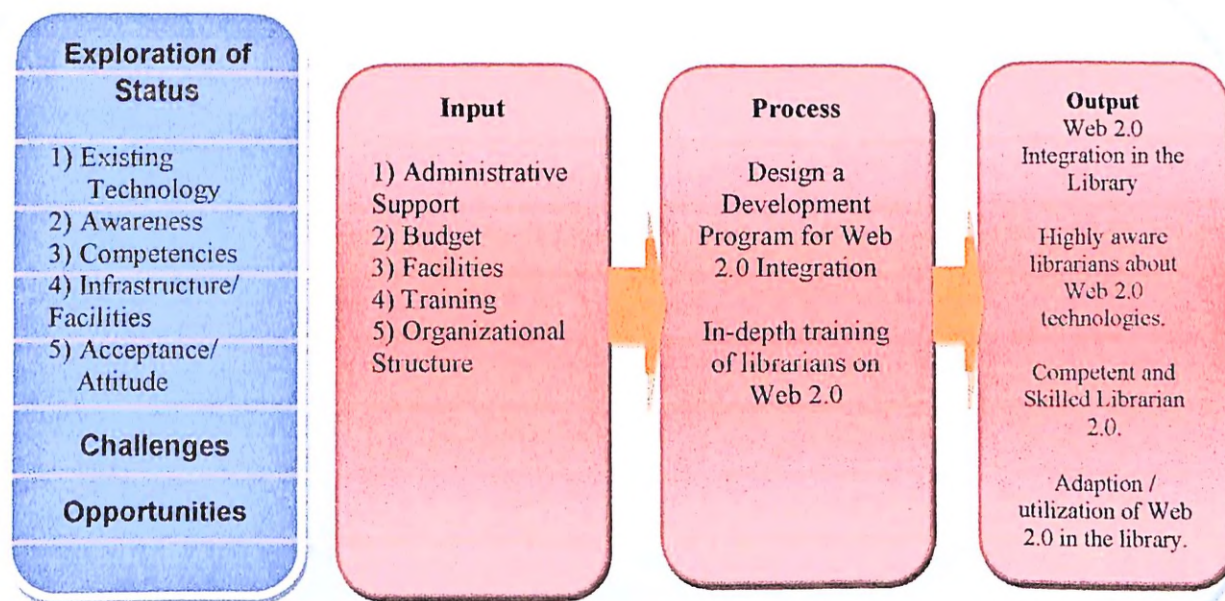
Davis (1986) developed TAM which deals with the acceptability of an information system. This is to predict the acceptability of a tool and to identify the modifications which must be brought to the system in order to make it acceptable to users. TAM suggests that the acceptability of an information system is determined by two main factors: perceived usefulness and perceived ease of use. Perceived usefulness is defined as the degree to which a person believes that the use of a system will improve his/her performance. The higher the perceived usefulness (or perceived advantage) the more likely it is for the individual to adopt the new technology (Rogers, 2003). Perceived ease of use refers to the degree to which an innovation is easy to understand and operate or the degree to which the particular technology is free of effort (Davis, 1989).

Based on TAM principle, the use of Web 2.0 is dependent on the librarians' behavioral intention or attitudes towards the use these tools, which is also elicited by the perceived impact on their performance. Therefore, the probability of using Web 2.0 may be high among librarians if they perceive that the system will improve their work. If the librarians consider Web 2.0 as useful and easy to use, it could be adopted as part of the library services.

The acceptance of Library 2.0, which is the basis for the integration of Web 2.0 in the library, is congruent to TAM wherein librarians' perception of usefulness and ease of use could be attributed to their awareness, the availability of technology and facilities in their library, and the skills and competencies. Transforming the library into Library 2.0 requires the exploration of Web 2.0 of inputs, process and outputs (IPO).

The basis of the input-process-output (IPO) model is the Systems Theory proposed by Katz and Kahn (1966), which identifies a program's inputs, its outputs, and the processing steps required to transform the inputs into outputs. The system receives input from the environment either as information or in the form of resources. Prior to the development of inputs, an exploration of the existing status, challenges and opportunities were described to determine the factors that are necessary in the inputs. To transform the inputs into outputs, the factors identified were processed to design a Web 2.0. The expected output is the full adoption and use of Web 2.0 tools, with librarians as highly competent social media practitioners and even influencers. Thus, the researcher further posits that the application of IPO framework in this study is useful in integrating the new platform (Web 2.0) with the old tools (the library).

The schematic diagram in Figure 1 illustrates the concept of the study. The researcher first conducted an exploration of status/factors among the academic libraries: existing technologies, awareness and competencies of librarians, infrastructure and acceptance and attitude towards Web 2.0 technologies. The researcher also determined the challenges that might serve as deterring factors in Web 2.0 integration and the opportunities that would make the integration possible, as well as the possible input to develop a program of integration. A program of integration has been designed to guide librarians in successfully integrating Web 2.0 in their respective libraries.



**Figure 1. Schematic Diagram Illustrating the Study**

## **Operational Definition**

**Challenge.** In this study, challenges refer to the factors that can deter, prevent, halt or delay the integration of Web 2.0 technologies in the academic libraries in the Province of Capiz.

**Integration.** This refers to the blending, incorporating, or the inclusion of Web 2.0 in the integral function or system of the academic libraries in the province of Capiz.

**Opportunity.** In this study, opportunity refers to the chance or probability of integrating Web 2.0 technologies as an interactive, highly scalable and interactive platform in order to communicate, collaborate, and share information in an online environment.

**Technology.** This refers to tools, techniques, platforms, strategies and innovations that are to be used and taken advantage of in the library for faster, more effective and efficient manner of creating, gathering and disseminating information.

**Web 2.0.** In this study, Web 2.0 refers to the interactive, highly scalable and interactive platform that should be integrated in the academic libraries in the province of Capiz to enable librarians and information specialists to communicate, collaborate, and share information in an online platform.

## **Significance and Importance of the Study**

This study provides a replicable model for academic libraries in adopting Web 2.0 technology. The action plan, which is the output of the study, can serve as basis for other libraries in the region that are planning to integrate Web 2.0 technologies.

***The Administration.*** The results of this study will help school heads and those in the administration realize that maintaining a strong social media presence is beneficial in fostering and strengthening linkages with other institutions.

***The Librarians.*** The output of this study, which is a training program, will equip librarians with the skills and competencies that will enable them to successfully integrate Web 2.0 in the library.

***The Library Users.*** Users will benefit from this study as a library's online presence will provide them with easy access to information and enable them to make virtual reference queries anytime, wherever they are, as long as they have internet connection.

***The Library.*** Adoption of Web 2.0 technologies by libraries means a total overhaul to its archaic image of a boring, dust-filled "stockroom" of books. Integrating Web 2.0 to the library operations will make the institution a multifaceted and interactive channel of information, not just a mere storage place for knowledge.

### **Scope and Limitation of the Study**

The study covered the academic libraries in the province of Capiz. Data were collected from February to September 2014. Two university libraries and five college libraries were the focus of the study. Only licensed librarians were invited to participate in the discussion of this study to integrate Web 2.0 in their respective libraries.

## **CHAPTER II**

### **REVIEW OF RELATED LITERATURE**

In this chapter, the researcher presents a collection of information literatures and research studies relevant to the study based on recent researches, surveys, books, and peer-reviewed journals.

#### **Web 2.0**

Stephens and Collins (2007) described Web 2.0 as “the next incarnation of the World Wide Web, where digital tools allow users to create, change, and publish dynamic content of all kinds.” Web 2.0 is a variety of websites and applications that enable an individual to create and share online information or materials. A unique feature of this technology is the ability of users to generate, share, collaborate and communicate in an online platform. The difference of Web 2.0 from other types of online platforms is that users do not need to have in depth web design or publishing skills to participate (University of Melbourne, 2008).

Web 2.0 applications are user-friendly, with features and applications that enable users to locate and assemble content that address their needs, rather than forcing individuals to conform to the paths laid by content owners or their intermediaries (Singh, Shukla and Hariom, 2012), making Web 2.0 an simple and practical tool to create and share information either to a specific set of professionals or to a general audience for quick and efficient communication and transfer of knowledge to students, staff and the wider academic community.

Among the basic qualities of Web 2.0 include the push for the freeing of data, the building of virtual applications, active user participation, end-user design, modularity, ease of sharing, communicating, remixing, and intelligence in design, long tail design, and trust (Miller, 2005). Among the challenges that library faced before include physical constraints, which limits the amount of information a library could hold, but with Web 2.0, libraries could streamline digital information systems, enabling the storage and access of virtually unlimited amount of information.

Discussions surrounding the concepts of Web 2.0 and Library 2.0 are increasing in the library community. Stephens and Collins (2007) outlined the key principles behind Web 2.0 and provide a brief explanation of social tools, such as blogs, RSS feeds, podcasting and wikis. In the Web 2.0 environs, communication involved user participation, discussion and feedback. Community, meanwhile, has to do with open conversations which can lead to a sense of community and belongingness to social sites.

Participation involves new information created via collaboration between users. Everyone can create content, ideas and knowledge flow freely and are remixed and reused. Experience has to do with engagement with other users and the community as a whole is rewarding and provides some type of fulfillment. Sharing involves enabling users to post about as much as or as little of their lives as possible.

Tiwari, Sharma and Tiwari (2012) discussed that if Web 1.0 (the predecessor of Web 2.0) is a read-only medium, Web 2.0 is a read-and-write medium. From a static, one-way platform to Web 2.0, the emphasis on user participation characterizes the definition of Web 2.0 offered by most commentators and advocates as well.



## **Web 2.0 Technologies**

As the new avenue of conversation and information evolves in the World Wide Web, new tools and new categories develop. For purposes of this study and in relation to Web 2.0 tools in the library, familiarity of the basic tools and types of Web 2.0 technology is important.

**Blogs.** The term blog is a contraction of the term weblog. It is a type of website, usually maintained by an individual who regularly enters commentary, descriptions of events, or other material such as graphics or video (Educause, 2011). It is updated frequently, dated, arranged in reversed chronological order. A blog is maintained with varied and unlimited information depending on the purpose and nature of the blog (Singh, Shukla and Hariom). Blogs are created to give a “what’s new” style site for users to market new materials and resources, events, and to share information. With open comments, the blogs create conversation within the community as a meeting place for discussion (Stephens and Collins, 2007).

**Microblogs.** Microblogging sites are communication platforms that enable the user to publish brief contents (140 characters or less) (Educause, 2011). An example of a microblogging site is Twitter. The posts are called microposts, while the act of using these services to update your blog is called microblogging.

**Really Simple Syndication or Rich Site Summary (RSS).** RSS is a technology which has brought about significant advances in the fundamental architecture of the web (Majhi and Maharana, 2012). RSS serves to feed new materials, blog posts, and event information to readers, providing library users with the ability to customize catalog

searches and subscribe to them to monitor new catalog additions and news from the library (Stephens and Collins, 2007).

**Podcasts.** Podcast is a digital recording that can be downloaded to a computer or some other device (Educause, 2011). Podcasts are used for promotional recordings about an organization's services and programs. For the library, podcasts can be used for book reviews of all ages, speeches by visiting authors, children's story, book club promotions, highlight new resources, and spread library information, such as the monthly podcast series of the organization (Stephens and Collins, 2007).

**Wikis.** Wikis are built to annotate online and print resources, allowing easy access to information, discussion and addition of information (Stephens and Collins, 2007). Wikis enable users to create and edit the content freely, although the information therein may have questionable reliability and authenticity. Wikis as library web platforms could facilitate in social interaction among librarians and the online user community, which could be archived for future reference (Singh, Shukla and Hariom, 2012).

**Instant Messaging (IM, or synchronous messaging).** Instant messaging is a form of real-time communication between two or more people based on typed text (Educause, 2011). Libraries have adopted IM as a means of offering affordable and quick virtual reference using systems that users may already have in their computer. Firke, Mukhyadal and Dakne (2012) explain that IM allows real time text communication between individuals, generally used in SMS.

**Social Networking Sites (SNS).** Social networking sites are so far the most popular medium for publishing, sharing, communicating and disseminating of

information enabling individuals to represent their social networks in a computer-mediated context, articulate their social networks or maintain connections with others (Kalbande and Golwal, 2012) These are the easiest media to reach out to people, interact with students, answer questions, and provide information about library and university services (Stephens and Collins, 2007).

Among the different social networking sites, Facebook was found to be very effective in communicating, engaging and collaborating with users by sharing photos, latest news and events, announcement, latest updates, latest collections and many more (Hazidah and Mohd Ismael, 2013).

**Streaming Media.** Streaming of video and audio media could be taken advantage of in library instruction and orientation programs to be ran online, incorporating more interactive media-rich facets (Firke, Mukhyadal and Dakne, 2012). Among the most popular sites include Youtube and Vimeo.

**Tagging.** A tag or metadata is a non-hierarchical keyword which is assigned to a particular piece of information (Singh, Shukla and Hariom, 2012). Web 2.0 allows users to establish subject create subject headings on hand. It is made more convenient with Web 2.0 since it enables users to add and change not only content but content description as well. The tagged catalog is an open catalog, a customized user-centered catalog making lateral searching a lot easier (Firke, Mukhyadal and Dakne, 2012).

**Mashups.** Mashups are considered as hybrid applications where two or more technologies or services are merged into a completely new service. Mashup is the mixture

of blogs, wikis, streaming media, content aggregation, IM and social networking (Firke, Mukhyadal and Dakne, 2012).

**Social Bookmarking Sites.** Bookmarking sites are sites which you use to save links to a public site and tagging them with visitors. Bookmarked sites could be searched for sites that others have linked to (Educause, 2011).

### **Awareness of Web 2.0**

Different studies have been conducted that explored awareness on Web 2.0 technologies. The study of Abidin, et al., (2013) revealed that almost one half of students who responded to their study in Malaysia were found to be aware of Web 2.0. Of these, more than a quarter learned about Web 2.0 through friends and less than a quarter from their respective library websites. A handful learned about Web 2.0 through teachers, library bulletins and library orientations.

Results of the study of Baro, et al., (2013) revealed that majority of the 321 surveyed librarians in Nigeria were highly familiar of social networking sites, followed by instant messaging (IM). More than half were familiar of media sharing sites, blogs and wikis.

The study of Harinarayana and Raju (2010) conformed with Baro, et al.'s study citing that Facebook is the most popular Web 2.0 tool used.

Furthermore, Luo's assessment (2009) on the adoption of the Web 2.0 technology in information literacy instruction among member-libraries of the Association of College and Research Libraries (ACRL) in USA revealed that surveyed librarians actively used

Web 2.0 technology in IL institution, as manifested in a three-level hierarchy; first, the personnel use of Web 2.0 tools; second, Web 2.0 use to facilitate of content delivery to students; for their own purposes without engaging students. At the second level, librarians used Web 2.0 tools to facilitate the delivery of content to students; third level, the use of certain Web 2.0 to illustrate IL concepts.

In Thanuskodi's assessment (2011), library and information science professionals of the engineering colleges in Chennai, India, displayed positive response on Web 2.0 awareness and utilization, given that more than half of them read blogs and wikis and are active in social media. More than half of the respondents also post on their own blogs and add/edit entries on certain wikis.

A similar study in Nigeria by Anunobi and Ogbunna (2013) gauged librarians' awareness on different Web 2.0 tools. Social networking ranked the highest, with over one-third of the respondents as aware of this tool. Furthermore, networking was utilized mainly for communication and specific publication. Less than a quarter of respondents were aware of voice over the internet protocol (VOIP), microblogging and wikis. However, the general respondents displayed low level of awareness and use of Web2.0 tools among the librarians.

A similar study by Anyaoku, et al. (2012), in Nigeria reported that while almost one-half of the 57 librarians who participated in the study were found to be aware of Web 2.0, however, only 57 percent of those who affirmed could actually describe what Web 2.0 and understand its unique features and functions.

Al-Daihani (2009), investigated the familiarity of library and information science (LIS) academics with Web 2.0 concepts, tools and services and applications as these relate to LIS education. Forty-four LIS academics in three LIS schools completed the survey. Results show that the respondents have low level of familiarity with the use of Web 2.0. Lack of training was the most inhibiting barrier to the use of Web 2.0 applications. Institutional affiliation and Internet experience were also significant factors in regard to a number of online activities and Web 2.0 barriers.

Meanwhile, a study by Garoufallou and Charitopoulou (2011) found out that while web games were highly popular among majority of library science students, followed by social media, which was preferred by almost half of the respondent. Also a majority of them were not familiar with social bookmarks. The lack of knowledge on the nature and uses of Web 2.0, more than one half of them (69.3 per cent) indicated no use of Web 2.0.

Aharony's study (2009) explored the familiarity of librarians on Web 2.0 tools and how they used them in the libraries. Personal factors such as resistance to change, cognitive appraisal, empowerment and capacity towards studying and integrating different applications of Web 2.0 in the future influenced librarians' use of Web 2.0. Library manager as compared to librarians were more inclined to incorporate Web 2.0 technologies to offer new services in the libraries. Librarians were quite exposed to these changes and understood that in order to survive, remain relevant, attract new patrons, and be professional, they should master the newest technological applications and apply them in their changing work environment.

It could be inferred that awareness on Web 2.0 varied depending on the location and availability of tools and IT equipment of the librarians. For example, studies conducted in the United States, India and Malaysia conclude that LIS professionals and students were, to a certain extent, aware of Web 2.0, while those in countries like Nigeria have little awareness on Web 2.0. Lack of training and technology were also cited as some of the reasons for lack of awareness. Not everyone who knows what Web 2.0 per se is introduced to its unique features and functionalities. Awareness of Web 2.0 is a significant factor that leads to its utilization, as those who were highly aware or familiar of the different Web 2.0 tools are more likely to utilize them frequently.

### **Web 2.0 Utilization**

Various studies were reviewed on the extent of utilization of Web 2.0. Majority of these studies revealed high utilization of Web 2.0.

Studies of Xu, et.al (2009), Tripathi and Kumar (2010), Linh (2008), Mahmood (2009), Thorman (2012), Han and Lin (2010), Si, et al. (2011), and, Mahmood and Richardson (2010) reported that more than one-half to majority of their respondents, who were librarians, information specialists, faculty, and students, utilized Web 2.0. However, results of the studies by Anyaoku, et al. (2012), Awang and Abidin (2006), Barnet, et al. (2010), Garoufallou and Charitopoulou (2011), Sarrafzadeh and Alavi (2013), and Nesta and Mi (2011), revealed low Web 2.0 utilization among various respondents. Anyaoku, et al. (2012), posited that low utilization may stem from the fact that users only utilize Web 2.0 tools that may only positively impact their professional development.

Interestingly, majority of the academic librarians have not utilized Web 2.0 tools (Awang and Abidin, 2006). The Philippines with the highest number of academic libraries offers library science programs only have 11 academic libraries that have adopted Web 2.0. Five of the 17 university websites in Thailand have not adopted Web 2.0, while none has adopted in Brunei. Indonesia fared better with seven of the 11 university websites with Web 2.0. Cambodia, Laos, East Timor and Myanmar, meanwhile, do not offer any LIS course.

While there were users who utilize a number of social networking sites (like Facebook and Youtube), they still fail to use a variety or create accounts with other Web 2.0 tools (Garroufallon and Charitopoulou, 2011; Nesta and Mi, 2011). This implies that user participation in these Web 2.0 tools were actually low.

Among the most popularly utilized Web 2.0 tools include social media (Facebook and Twitter) (Chu and Du, 2012; Awang and Abidin, 2006; Garroufallou and Charitopoulou, 2011; Barnet, et al., 2010; Chua and Go, 2010), Instant Messaging (Xu, et al., 2009; Tripathi and Kumar, 2010; Han and Si, 2010; Nesta and Mi, 2011), blog (Chew, 2009; Mahmood and Richardson, 2011), and wiki (Kim and Abbas, 2010).

Furthermore, various factors are involved that impact Web 2.0 is used in the library. These include enhanced library services (Tripathi and Kumar, 2010), social and academic purposes (Barnet, et al., 2010), such as online reference servicing, library news and events, and training services, among other. Web 2.0 also keeps patrons abreast of library collections, new books and other new resources (Wyatt and Hahn, 2011).



Many libraries have shown positive perceptions on the usefulness of social networking tools, but hesitancy among library staff and limited participation of users (i.e. students) were perceived to be hindrances (Chu and Du, 2012). Web 2.0 use stems from inclination for technology adoption. Thus, internet technologies should be provided to all libraries and that librarians should undergo extensive internet training at pre-and in service level to introduce and train them on the use of Web 2.0.

### **Web 2.0 Competencies of Librarians and Information Specialists**

Technological core competencies for library professionals are “a combination of skills, knowledge and behaviors related to library technology and are important for organizational success, personal performance and career building.” (Alberta Public Library Electronic Network (APLEN), 2008). Those with technological competencies “enjoy learning and applying new technologies, analytical, familiar with concepts of computer use, able to transfer knowledge, pursues and demonstrates expertise in technology and can apply it as required by internet and library applications, can resolve routine problems without assistance and learn new technology quickly.” (Chan, 2005).

Web 2.0 involves the “interaction between users and libraries in a new culture of participation catalyzed by social web technologies” (Holmberg, et al., 2009). This requires librarians to be better equipped and broadly educated to put these tools to the library’s advantage and for the users’ benefits.

Library staff should also be transformed to serve the present generation who needs information anytime, anywhere with librarians, skills linked to the technological infrastructure (Tyson, 2007).

Stephens (2006) emphasized that a librarian 2.0 must: plan for users, embrace Web 2.0 tools, control “technolust”, make good, yet fast decisions, is a trend spotter, and gets content. In support to Stephen’s proportion, librarians 2.0, Peltier-Davis (2009) should have the “capacity to learn constantly and quickly,” “the propensity to take risks and work under pressure,” being “skillful at enabling and fostering change,” having “a sense of humor,” and serving as “an advocate of the profession.” Librarians also need to: possess big picture skills; establish a closer connection to information and not the library per se; embracing the role of teacher; adopting a marketing approach to service design and delivery; and having the confidence to take up the challenge and embrace the future (Michael Saint-Onge, 2009).

Library staff should know the general trends and developments of appropriate technology in all library functions and services whether offered in the library or through remote access (Laroza, 2012). They should therefore, be competent in utilizing the basic applications of the computer, desktop applications, in navigating the library website and blog, and knowledge basic HTML.

Library staff also needs to acquire specific skills, in emailing, internet utilization and web tool utilization to contribute to the overall effectiveness of the organization, whether they are behind the scenes of interacting in public (Web Junction, 2009). These include competency on basic of email applications; perform basic calendar operations and task management; understand and use the internet and the World Wide Web; perform basic information searches; understand common security protocols related to internet use; and understand and use common social networking tools and online collaboration tools, particularly to locate and read blogs and listen to podcast, demonstrate familiarity with

micro-blogging (Twitter), demonstrate familiarity with RSS, instant messaging, social networking, social bookmarking, photo sharing, file sharing, use web conferencing and locate information sources to stay informed of new technologies and social tools.

Given the popularity and great use of social networking in the library, librarians should have a competency in utilizing this Web 2.0 tool. The following are the skills specific to utilizing and leveraging social networking sites to provide quality services: content creation, evaluating information, applying information ethically and legally, searching and navigating, interacting, teaching and providing services.

Library staff should also be transformed to serve the present generation who need information anytime, anywhere with librarians, skills linked to the technological infrastructure (Tyson, 2007).

The professional practice of a librarian should focus on a variety of competencies, including having specific IT skills as well as having the attitude or ethos (Cohen, 2006). Much weight has been given on acquiring technical competencies, including: writing and posting to a blog; creating, uploading, and editing photos, short videos, podcasts and screen casts; editing an avatar's appearance; and, knowing how to pick up a new device and figuring out how to use it (King, 2007). Likewise, "big picture" 2.0 skills should be acquired, which include understanding the basic IT competencies show they complement a physical, traditional library and to tell the library's story, through various media—writing, photography, audio, and video.

Having acquired the necessary skills and competencies, and given the availability of technology, implementing Web 2.0 in the library is possible through exploring its tools

and how to it works, taking advantage of professional learning opportunities, consider the implications and issues and collaborate on developing the solutions, and engaging the Web tools and fitting them the instructional program.

### **Acceptance of Using Web 2.0 in the Library**

Gauging the acceptability of Web 2.0 determines the probability of the success of its integration in the library.

A study by Popescu (2010) revealed a general consensus on Web 2.0 as a tool which facilitated communication and collaboration between team members, increase interest, motivation and involvement, help organize knowledge, support experience exchange and feedback from peers, thus, making it highly acceptable in the higher education community. Thus, “where electronic services are becoming more and more popular, increasing number of academic libraries are applying or planning to apply Web 2.0 technologies like wikis.” (Chu, 2009)

State regulations on internet access and use could also have an impact on Web 2.0 acceptance and utilization. In Iran, for example, Sarrafzadeh and Alavi (2013) discussed that Internet filtering was found as the major barrier on using social networking sites. With the state’s tough filtering of the internet, Iranians have negative perception towards SNS. Respondents also found social networking a waste of their time and are dubious of whatever very little information was released in SNS.

Web 2.0’s ability to fulfill professional and personal needs significantly contribute to its acceptance, as was the case of a group of librarians, who were “experts” in using the internet and perceived Web 2.0 technology as “easy to use,”(Mahmood,

2012). There is, however, a need for more training to use these tools in libraries, respondents also show their eagerness towards using these innovations in their professional work.

Gender difference may also determine the acceptance of Web 2.0. Huang, et al. (2013), found that females felt more anxious of using Web 2.0 applications than males, although females did not show such characteristics when using social networking tools and online video sharing tools. Features of social networking tools and online video sharing might promote female's use of Web 2.0 applications although further studies are needed to prove this.

Cultural differences may also be analyzed to determine Web 2.0 acceptance among various cultures. Yoo and Huang (2011) compared Web 2.0 technology acceptance level based on cultural differences between American and Korean respondents, revealing that all participants had a more positive attitude towards using instant messenger and online video sharing other than Web 2.0 tools. While American respondents found that instant messaging and online video sharing are the easiest to use, Korean participants had positive attitude towards using blogs for learning and information sharing and were found to be more anxious and apprehensive about using Web 2.0 applications than American participants.

A similar study conducted by Usoro, et al. (2013), among the respondents from Nigeria and Scotland showed that the correlation between behavioral intention and perceived usefulness is highly significant in both cultures. It could be inferred that using Web 2.0 technologies encourages active participation in teaching and learning.

In the study conducted by Onuoha (2013), which determined librarian's use of social media for professional development in Nigeria, the extent of satisfaction with the use of social media professional development was explored. Of the 297 respondents, more than half indicated satisfaction "to a large extent." Meanwhile, over one-third are satisfied to a "moderate extent" while only a handful was either satisfied to a little extent or not satisfied at all.

Based on the technology acceptance model by David, it could be inferred that the librarians' behavioral intention or attitudes to use Web 2.0 tools and Web 2.0's perceived impact on their performance can be considered as significant factors in determining the adoption of these tools in the libraries. There is a possibility of Web 2.0 use if librarians perceive that the system will improve their work. However, challenges come along with these opportunities.

### **Challenges in Integrating Web 2.0 in the Library**

The integration of Web 2.0 brings unique challenges to librarians, administrators, and patrons alike. Some of the challenges, considered in integrating Web 2.0 include technological constraints, accessibility, staffing, east IP and copyright concerns, privacy and data retention, and impact on the culture and nature of the library (Zimmer et al, 2010).

Casey and Savastinuk (2007) explained that Web 2.0 "about making change in your organization easy and routine." With the web as a platform for collaboration and dynamic idea building, academic libraries can more easily implement changes to patron (McManus, 2009). Thus, libraries need to evolve a Web 2.0 strategy to promote this

aspect of their services, but that they will need to devise solutions to specific problems as part of their strategy. These include the range of Web 2.0 platforms that are on offer and the authentications and workload issues associated with this diversity (Joint, 2009).

Maintenance issues, too many social media features and tools to leave, low user interest, information security (Harnesk, 2010), difficulty in learning new tools and improving staff expertise, competing priorities, privacy concerns, (Bejune and Ronan, 2008), lack of user awareness and staff (Cao, 2009), doubtful quality of information (Chawner, 2008), increasing rate of change, possibility of identity theft, lack of peer-reviewed content and possibility of posting and offensive materials (Morris and Allen, 2008), were also discussed as possible challenges to integrating Web 2.0 tools.

Fernandez (2009) also wrote about the weaknesses and threats of social media for libraries:

*"Social media have limitations on the amount of information you can input; Libraries may be exposing themselves to criticism. Some social media require downloading, which can be a problem in some organizations. Social media may be open to unsavory elements that can sabotage social media websites in many ways. These sites are usually beyond the control of the librarians who manage them; and social media users can easily unsubscribe at the click of a button."*

Libraries must continue to adapt or will become anachronistic institutions, relics from a bygone era which are overshadowed by the publicly preferred Web 2.0 technologies and standards. The services of the past, heavily reliant on the professional and top-down design, are being thrust into obscurity by the collaborative standards of this new paradigm.

Accordingly librarians must develop a sense of self through the flux, developing a clear identity and job role. That discussion is outside the domain of this paper, but it must

be reiterated that this process of reevaluation will be necessary given the new processes of information retrieval which now dominate the horizon. One solution is for the librarian to be the engineer and guide behind complex collaborative information retrieval systems, ensuring the healthy functioning of a more democratic and anarchic system. In the end the most successful will probably be those who can bridge the gap between Library 2.0 and classical librarianship, offering the best of innovative technology with the wisdom of our professionalism.

As a platform for collaboration and increased internet community and because of its decentralized structure, Web 2.0 emphasizes the librarian's role as guide to information rather than the traditional role of an information keeper. There a need for academic libraries to embrace change, which is quite difficult for large institutions to do. With the Web 2.0 technologies, academic libraries can make change a very easy and consistent activity. Thus, assessing the existing challenges and opportunities is a must before a library comes up with a viable plan for successful Web 2.0 integration.

### **Opportunities for Integrating Web 2.0 in the Library**

Web 2.0 has the power to bring people of the same interests together (Khandare, et al, 2012), which is already considered as an opportunity for integrating Web 2.0. Enabling of interaction with friends, colleagues, classmates and relatives; its affordability as a means to keep in touch with people with no geographical barriers; ease of access of information on any subjects from anywhere; and function as a tool in promoting business, products and services were also deemed the factor that contribute to the reasons why it should be adapted in the library.



Web 2.0 enables librarians and information specialists to market library services, provide links and information, enable sharing and discussion of topics, pictures, music and videos, and participation with other virtual users with the following benefits and opportunities, including literacy and communication skills; collaboration which encourages creation; and being where learners are (Verzosa, 2012) were also the reasons enumerated that make it an interesting tool in the library.

Web 2.0 influences the way people learn access information and communicate with one another (Virkus, 2009). Experiences with distance learning through Web 2.0 tools have transformed teaching and learning, provided new alternative delivery modes, and helped to deliver information beyond the physical space. Thus, educators and librarians should take advantage of new ICT and consider the learning preferences of digital natives, as well as digital immigrants. Web 2.0 supports constructivist approaches to learning and has great potential to socialize online learning to a greater extent than previously seen. Furthermore, Web 2.0 tools were perceived to improve students' overall learning, improve students' writing skills, also increase student faculty interaction (Ajjan and Hartshorne, 2008).

Another study conducted by Yuen, Yaoyuneyong and Yuen (2011) examined faculty use of Web 2.0 tools in education. The study assessed teachers' awareness and perceptions of the pedagogical benefits of Web 2.0 technologies, and investigated teachers' willingness to adopt Web 2.0 tools to support and supplement classroom instruction. Responses indicated that social networking sites and social video tools are currently the Web 2.0 tools most utilized by instructors. Positive experiences in using social video, social networking and podcasts have been reported as well. Respondents,

likewise, reported positive perceptions on the benefits and importance of Web 2.0 tools for teaching and learning, and expressed interest in gaining further skill and understanding in order to more effectively and seamlessly integrate Web 2.0 tools to support and supplement classroom instruction.

Other than creating teaching and learning opportunities, Web 2.0 has the potential to forever alter the way human knowledge is constructed and disseminated. Due of their ease and use, their open nature and their support for collaboration and communication, the applications associated with web 2.0 have profound potential to transform education (Yuen, Yaoyuneyong and Yuen, 2011). Furthermore, Web 2.0 could be used to captivate students, to hold their attention, and to enhance their learning experiences (Franklene and Harmelene, 2007).

It is also believed that Web 2.0 enable users to meet the requirements of the clients and allows them to stay updated on library news, although it may diminish it face-to-face socialization among individuals (Basak, 2013).

To bring Web 2.0 to the libraries to the fullest advantage, there is a need to reconsider the place of libraries and the librarian in this new age of information (Krause). While libraries have taken measures to digitize, many institutions have not yet done so and those who did have done an insufficient job of branding and redirecting users to their valuable and unique resources.

Rehman and Shafique (2011) determined that the opportunities of integrating Web 2.0 lie on the fact that the use is increasing among the information professionals, that the library professionals in their study in Pakistan were committed and well aware of

the usage of these applications to deliver better services to the library users and that library professionals perceived Web 2.0 applications can be used to provide online reference services in libraries and selective dissemination of information. Library professionals were found to be interested in learning the usage of Web 2.0 applications.

Popularity of Web 2.0 applications implemented in libraries such as: blogs, RSS, instant messaging, social networking services, wikis, and social tagging applications also serve as a great opportunity in integrating Web 2.0 tools (Chua and Go, 2010), libraries' ability to recognize how different Web 2.0 applications can be used is helpful in increasing the level of user engagement. Furthermore, the presence of Web 2.0 applications was found to be associated with the overall quality, and in particular, service quality of library websites.

Academic librarian's ability to use Web 2.0 tools at work and for personal purposes makes them realize that Web 2.0 is a good and useful for the library services, thus, making it easier to integrate the tools in the library (Khiwa, 2010).

Leveraging the power of Web 2.0 services provides better and more relevant services to their patrons (McManus, 2009) by integrating Web 2.0 services into their web presence, library instruction programs, and reference services to stay relevant to their communities and help them face the next generation of new information technology.

The presence of Web 2.0 in the library environs will serve to encourage more patrons to take part in what has been traditionally considered as a librarian's work, such as making recommendations for books and reviews of databases. Therefore, patrons have more say in contributing to the collections they use in a brand new way and on how

library services are implemented and managed. From the viewpoint of social software and Web 2.0 services emphasis, which is the social aspects of information such as reviews, recommendations and tagging, library patron research will be based more on the content of other patrons and the information usefulness (Coyle, 2007).

In line with user participation in the different facets of library management, libraries also move toward an experienced-based organization, a library that exists as a cultural center (Frey, 2007). With the constant evolution that exists on information creation and dissemination, there will also be a change in bringing individuals closer to seeking out information that is based partially on the success of past patrons. With the help of Web 2.0 and in leveraging these technologies, academic library will definitely evolve for the better.

### **Synthesis**

Web 2.0 as a multimedia platform for information creation and sharing involves the ever-changing trends in the use of World Wide Web technology and web design that aim to enhance creativity, communications, secure information sharing, collaboration and functionality.

Web 2.0 can lead to a significant shift for the library, from a storage place of books, to a space where information is created and exchanged, thus, becoming an active participant in the sharing of knowledge. With these, there is a need to reconsider the creation and development of information and knowledge based on the five Cs posited by Hicks and Graber (2010): community, collaboration, creativity, conversation and control.

Integration of Web 2.0 technology should come with thorough reexamination of the library's role in the academe, which continues to undergo dramatic shift in how they create and use knowledge. Web 2.0 tools, on the other hand, can provide the tools to establish stronger connections between the libraries and the learning that they serve. Web 2.0 as a tool for collaboration ensures that the libraries become a vital academic unit, rather than just a peripheral player in the academic community.

The use of Web 2.0 primarily involves communication, sharing of ideas, and support, presenting new opportunities for large scale professional collaboration and cooperation. Web 2.0 affects the creation distribution, distribution and repackaging of information and the sharing of knowledge. Thus, it is necessary that librarians take advantage of this new technology in order to make progress in this new context. Since the inception of Web 2.0, there were challenges that librarians have faced as the information science field requires these professionals to develop new skills and competencies. These require librarians the need for training and fresh orientation directed toward developing Web 2.0 competencies. They have to, particularly develop professional competencies to adapt to changing technologies to deliver timely, value added quality content and world-class services to the users to make it possible to succeed in Web 2.0 integration in the library.

## **CHAPTER III**

### **METHODOLOGY**

This chapter discusses the methodology used in the study including the research design, target population and sample procedure, instrumentation, data gathering, data processing, analysis and interpretation.

#### **Research Design**

This study utilized the mixed-method of research. Quantitative research was used to gather data (through the use of questionnaire) for the awareness and competencies of the librarians in using Web 2.0 tools. The qualitative phase involved the conduct of online survey to determine if the academic libraries in the Province of Capiz have already integrated the use of Web 2.0 tools in their operations and the conduct of focus group discussion (FGD) gathered in-depth information and discussed the challenges, opportunities and possible input in integrating Web 2.0.

#### **Target Population**

Table 1 presents the distribution of respondents by academic institution. The respondents of the study consisted of 17 licensed librarians working in the universities and colleges in the Province of Capiz. The universities included Capiz State University and Filamer Christian University, while the colleges were Colegio de la Purisima Concepcion, College of St. John, Hercor College and St. Anthony College of Roxas City.

**Table 1. Distribution of respondents by academic institutions.**

<b>Institution</b>	<b>Number of Respondents (Licensed Librarians)</b>
Capiz State University	9
Colegio de la Purisima Concepcion	2
College of St. John	1
Filamer Christian University	3
Hercor College	1
St. Anthony College	1
<b>TOTAL</b>	<b>17</b>

### **Instrumentation**

Questionnaires were disseminated to the participants to gather data on their awareness and competencies of Web 2.0 in the academic libraries of the Province of Capiz. The questionnaire was constructed based on different checklists, questionnaires, and concepts from literature. The questionnaire was composed of: (1) the level of awareness of the librarians on the existence of Web 2.0 technologies; (2) Web 2.0 technologies that are already being used by the academic libraries under study; (3) respondents' Web 2.0 competencies; (4) the IT facilities and infrastructure in the libraries; (5) the acceptance and attitude of respondents on Web 2.0 integration; (6) the challenges on integrating Web 2.0 tools; and (7) the opportunities on integrating Web 2.0.

Experts in Library and Information Science and Web 2.0/social media in the Philippines were requested to validate the questionnaire and determine the appropriateness, consistency, meaningfulness and usefulness of the questions, as well as the adequacy of the sampling of the content included in the instrument. The validators included a researcher and active social media practitioner in Western Visayas who works

with Southeast Asia Fishery Development Center (SEAFDEC); a librarian from Dela Salle University, who is also an author and researcher; and a librarian, lecturer, and researcher from the University of the Philippines (UP) Diliman.

The instrument was pilot tested using test and retest method to respondents which were not part of the study. Eleven librarians from West Visayas State University (WVSU) and Western Visayas College of Science and Technology (WVCST) were respondents of the pilot testing conducted on August 25 and September 5, 2014. This group was selected as respondents for the pilot test due homogeneity with the subject-respondents of the study in terms of the type of institution. Pilot testing was necessary to determine which items have been constantly skipped by respondents. Pearson  $r$  was used for reliability testing. The data were processed and analyzed using the Statistical Package for Social Sciences (SPSS), Version 17. The result showed a reliability coefficient of 0.906 indicating the reliability of the questionnaire.

### **Data Gathering**

Data collection involved the following: online observation, ocular inspection, written survey using the questionnaire, and focus group discussion (FGD).

### **Online Observation**

Online observation involved checking the internet, specifically Google, to see if there were any search results that revealed the existence of Web 2.0 accounts by academic libraries in Capiz. The researcher identified and determined the Web 2.0 tool either as exclusive for the library or just a subdomain or extension of the institutional



website. The findings were tallied to determine which of the subject higher education institution used Web 2.0 tools.

### **Written Survey**

The questionnaire was distributed among the 17 librarians to determine the level of awareness of the librarians on the existence of Web 2.0 technologies. The questionnaire gathered data on the following: Web 2.0 technologies used by the academic libraries; the librarians' level of awareness on Web 2.0 technologies; Web 2.0 competencies; available facilities and infrastructure in the libraries; acceptance and attitude of librarians toward Web 2.0 integration; and the challenges and opportunities on integrating Web 2.0 tools.

### **Ocular Inspection**

Ocular inspection investigated the infrastructures and facilities in the academic libraries in the Province of Capiz. The ocular inspection involved a careful observation of the location and size of the library, the availability of such facilities as computers/laptops, internet connection and space for online/internet stations. The researcher noted the availability or lack of said facilities, which could serve as basis in determining the challenges and opportunities in integrating Web 2.0 technologies.

### **Focus Group Discussion (FGD)**

Focus group discussion (FGD) was conducted to find out the librarian's understanding of Web 2.0 and let them clarify or explicate their responses on the survey. A focus group is a form of qualitative research in which a group of people are asked

about their perceptions, opinions, beliefs, and attitudes towards a product, service, concept, advertisement, idea, or packaging. Questions are asked in an interactive group setting where participants are free to talk with other group members (Kauffman, 2003). It enabled the researcher to gather detailed information to enrich, validate or clarify survey findings, particularly on the perceived challenges and opportunities of Web 2.0 technologies as further input to the uniform action guideline which will serve as the baseline of the academic libraries in Capiz in adopting the Web 2.0 technologies.

The researcher developed a topic guide, which was a list of topics or question areas to be covered and determined the allotted time for each question/topic. The FGD clarified the librarians' responses on the survey questionnaire. The participants, who included ten librarians, their staff, and information specialists were invited to join the FGD. The researcher served as the facilitator/moderator. The proceedings and interactions during the discussion were recorded, analyzed and used as bases for recommendations.

### **Data Processing, Analysis and Interpretation**

The data gathered from the online observation, survey, and FGD were compiled, examined, classified and analyzed based on the objectives of the study. Key ideas from the focus group discussions were noted and considered as an input to the action plan. The data gathered from the accomplished questionnaires were tabulated, tallied and interpreted using frequencies and mean.

## CHAPTER IV

### RESULTS AND DISCUSSION

#### **Level of Awareness on Web 2.0 Technologies**

The researcher categorized the respondents' level of awareness into five: highly aware, moderately aware, slightly aware, barely aware and not aware. Table 2 presents data on the respondents' level of awareness on different Web 2.0 tools.

**Wiki.** Wikis are websites which enable users to create and edit the content freely. The most popular wikis include Wikipedia, WikiPilipinas and Wikimapia. Wiki proved to be very popular among the librarians as 12 of the 17 respondents were highly aware of this tool, followed by 4 respondents who demonstrated moderate level of awareness. Only 1 respondent was slightly aware. It is perceived that majority of librarians have high level of awareness of wikis, particularly Wikipedia because each time that they do a research online, the first information that the search engine would yield is from Wikipedia, thus, establishing the respondents' familiarity with this site. The result of this study countered that of the study of Anunobi and Ogbunna (2013) and Barro, et al. (2013), where they found low level of awareness among their respondents.

**Instant Messaging.** IM is a form of real-time communication between two or more people based on typed text (Educause, 2011). The most popular IMs, such as Yahoo! Messenger, Skype and Google Chat, have successfully evolved from just merely text-based to a multimedia communication tool. Based on the survey, 14 of the 17 respondents were highly aware of IM, while 2 respondents were moderately aware. Only 1 respondent was slightly aware. Findings of the studies of Anunobi and Ogbunna (2013)

and Barro, et al. (2013), revealed IM is a common tool among librarians. It is inferred that awareness of this tool is derived from users' frequent use of IMs in communicating with friends and relatives and also because it affords users face-to-face interaction, making this tool a practical choice for virtual communication.

**Really Simple Syndication (RSS).** RSS is a Web 2.0 tool that feeds new materials, blog posts, and event information to readers, allowing them to customize catalog searches and subscribe to them to monitor new catalog additions and news from the library (Stephens and Collins, 2007). Results show that 8 of the 17 respondents were barely aware of RSS. Only 2 were highly aware, while the rest were moderately aware (3 respondents) and slightly aware (4 respondents). One factor that possibly explains the slight awareness of RSS is that this tool was not yet introduced to most of the librarians, thus, it is seldom used. The results of the study of Anunobi and Ogbunna (2013), Barro, et al. (2013), and Garroufallou and Charitopoulou (2013) all supported this inference since RSS is the least preferred tools among their respondents. Titangos (2013), however, posited that despite differences in cultures and languages, RSS has been extensively utilized to publish library programs and services, due to its unique power of delivering changing content to interested users.

**Social Networking Sites (SNS).** Social networking sites are the most popular media to use in reaching out to people, interact with students, answer questions, and provide information about library and university services (Stephens and Collins, 2007). Results show that 14 of the 17 respondents were highly aware of social networking sites, while 3 respondents were moderately aware. However, it was found that respondents' familiarity with Facebook did not translate to their familiarity with SNS or social media

as a whole, as all the 17 respondents were not even familiar of less popular SNS, like LinkedIn and Orkut. Previous studies, particularly by Anunobi and Ogbunna (2013), Barro, et al. (2013), Harinarayana and Raju (2010), and Garroufallou and Charitopoulou (2011), support the claim that social networking is highly popular among users, while Facebook is perceived as the most commonly used SNS (Sharma and Saini, 2012).

**Podcast.** Podcast is a digital recording that is downloadable to a computer or other devices (Educause, 2011). The data show that 6 of the 17 respondents were slightly aware of podcasts, followed by 4 respondents who revealed that they were moderately aware. The rest were highly aware (3 respondents), barely aware (3 respondent) and not aware (1 respondent). It could be surmised that the popularity of video streaming tools, particularly Youtube, is one of the reasons why podcasts are not very familiar among librarians. Barro, et al. (2013), and Kim and Abbas (2010) also found low-level of awareness on Podcast. Mahmood and Richardson (2011) cited, however, that podcast is one of the most widely adopted Web 2.0 tools among the ARL-member libraries in the United States.

**Video Streaming.** Eleven of the 17 respondents were highly aware of video streaming, while the rest were moderately aware (2 respondents) slightly aware (2 respondents) and barely aware (2 respondents). Familiarity on video streaming, particularly YouTube, could be attributed to its features which allow them to watch videos and clips that they find interesting. The rich multimedia experiences afforded by video streaming also make it a preferred online medium, compared to podcast. Barro, et al. (2013), and Barnet, et al.'s (2010) studies claimed that video streaming tools were

among the most popular media sharing platforms among their respondents in the United States.

**Social Bookmarking Sites.** Social bookmarking sites enable users to save links to a public site and tag them with other users. However, it was found that 6 of the 17 respondents were barely aware of social bookmarks. Another 6 respondents were slightly aware, followed by 1 respondent who was moderately aware and 1 respondent who was not aware at all. Only 1 respondent was highly aware. It is implied that majority of the respondents have poor awareness of social bookmarking sites, although most of them were familiar of tags, indexing terms or bibliographies/webliographies. Social bookmarking was also among the least preferred tools in the study of Barro, et al. (2013), while Garroufallou and Charitopoulou (2011) noted that majority of Greek LIS students were not familiar of this tool.

**Mashups.** Mashups are considered as hybrid applications where two or more technologies or services merged into a completely new service. The figure shows that 6 of the 17 respondents were slightly aware of this tool, followed by 4 respondents who were barely aware. Four respondents were moderately aware but only 3 respondents were highly aware. It was found that the librarians were not introduced to its concepts, functionalities, features and the benefits that they could get in using this tool and they were not also exposed to using this tool.

**Blog.** Blog is a website usually maintained by an individual who regularly posts commentary, descriptions of events, or other materials such as graphics or video (Educause, 2011), which is updated frequently, dated, arranged in reversed chronological

order and maintained with varied and unlimited information depending on the purpose and nature of the blog. Six of the 17 respondents were highly aware of this tool, while another 6 respondents were slightly aware. Five respondents were moderately aware. Respondent always get confused between blogsites and static websites or social networking sites, like Facebook. Results of this study is similar with the studies of Barro and Idiodi (2013) and Anunobi and Ogbunna, which revealed low familiarity of blog among their respondents, although Garroufallou and Charitopoulou (2011) found that over half of their Greek LIS respondents were highly aware of blogs.

**Photo Sharing.** Photo sharing sites are Web 2.0 tools where users can download and upload images. Of the 17 respondents, only 6 were moderately aware of photo sharing tools followed by the 5 respondents who were highly aware. The rest were slightly aware (4 respondents) and barely aware (2 respondents). Photo sharing sites such as Picasa, Pinterest and Flickr were less familiar among the respondents because most of them frequently utilize Facebook or Instagram, which also have photo-sharing features. Furthermore, sharing images on social networking sites is easy, while majority of the respondents have not been introduced to the features of photosharing tools.

**Presentation Sharing.** Presentation sharing tools, like Slideshare, Slidesnack and Slideboom are Web 2.0 tools where users can upload and download PowerPoint presentations. Nine of the 17 respondents were highly aware of this tool, while 4 respondents were moderately aware. Another 4 respondents were only slightly aware about presentation sharing. The ease and convenience in downloading and uploading presentations makes presentation sharing sites popular among users looking for ready-to-use and easy-to-edit slide shares.

**Table 2. Respondents' Level of Awareness on Web 2.0.**

Web 2.0 Tools	LEVELS OF AWARENESS (n=17)				
	Highly Aware	Moderately Aware	Slightly Aware	Barely Aware	Not Aware
Wiki	12	4	1	0	0
RSS	2	3	4	8	0
Social Network	14	3	0	0	0
IM	14	2	1	0	0
Podcast	3	4	6	3	1
Video Stream	11	2	2	2	0
Social Bookmarking	1	3	6	6	1
Mashup	3	4	6	4	0
Blog/Microblog	6	5	6	0	0
Photo Sharing	5	6	4	2	0
Slide Sharing	9	4	4	0	0

Table 3 shows the data on how the respondents learned about Web 2.0. Twelve of the 17 respondents learned about Web 2.0 through seminar and training and from fellow librarians, while 11 learned Web 2.0 from friends. Nine acquired their awareness from instructors, while the rest learned about Web 2.0 from family members (8 respondents), through online search (7 respondents), and from reading newspapers or magazines (5 respondents). Findings suggest that awareness on Web 2.0 is acquired through word-of-mouth interaction, while only a few of them learned about Web 2.0 through the use of the Internet.

Barro, et al. (2013) and Abidin, et al. (2013) supported the notion that word-of-mouth interaction is effective in spreading information about Web 2.0, explaining that friends and colleagues were the leading means of gaining awareness on Web 2.0, while only a few learned about this tool from attending workshops and from the schools.



Visiting libraries, online portals, teachers and library bulletins were also effective in boosting information awareness on Web 2.0 tools (Abidin, et al., 2013).

**Table 3. Respondents' Means of Learning About Web 2.0 Technologies**

<b>Means of Learning About Web 2.0</b>	<b>f (n=17)</b>
Online Search	7
From friends	11
Seminars and Trainings	12
Newspapers and Magazines	5
Family members	8
Fellow librarians	12
Instructor	9

### **Use of Existing Web 2.0 Technologies**

Table 4 shows the results of the respondents' use of Web 2.0. All 17 respondents utilized SNS and IM on a personal basis, while 13 used wikis. The following tools were, however, least utilized by majority of the respondents: RSS (16 respondents), podcast (15 respondents), mashup (13 respondents) and photo sharing (13 respondents). The use of Web 2.0 tools has been probed first on the idea that familiarity leads to adoption of technology. SNS and IM were frequently used by librarians because they are the popular tools utilized in communicating with friends. The low level of familiarity of RSS, podcast, mashup and photo sharing tools explains respondents' low utilization, given that they are not familiar of the features of said tools. Also, advanced skills are also required in using these tools.

**Table 4. Respondents' Use of Web 2.0.**

<b>Web 2.0 Tools</b>	<b>Personal Use of Web 2.0 Tools f (n=17)</b>
Wiki	13
RSS	1
SNS	17
IM	17
Podcast	2
Video Streaming	9
Social Bookmarking	3
Mashup	4
Blog/Microblog	6
Photo Sharing	4
Slide Sharing	6

Table 5 shows the result for the survey on the use of existing Web 2.0 technologies among the academic libraries in Capiz.

All 17 respondents revealed that their respective libraries do not have accounts on RSS, podcast and presentation sharing tools. The librarians' lack of skills in using the features and functionalities of the said tools are the reasons of non-utilization of these tools in the library. Only 6 respondents set up SNS and IM for their libraries. These Web 2.0 tools are also utilized by the respondents on a personal basis.

Two respondents revealed that they set up wiki, video sharing sites (particularly YouTube), mashup, and photo sharing tools for their libraries. These accounts, however, were not updated frequently. Only 1 respondent set up an account in social bookmarking and blog for her library.

It could be implied that the personal use of Web 2.0 tools by the librarians did not translate to their use of it in the library. Respondents were found to prefer using certain Web 2.0 tools on a personal basis, rather than using these tools for library or work purposes. Those few librarians created Web 2.0 accounts for their libraries knew that Web 2.0 is a big help in reaching out to their clientele and in taking advantage of online resources. However, they failed to market these tools to students, who also knew little about Web 2.0.

Utilization of Web 2.0 tools may vary from one place to another. The result of the study of Barnett's group in 2012 found that the use of Web 2.0 inside the library, as almost all respondents used Facebook, while a majority utilized Youtube and Wikipedia. In Pakistan, IM was most utilized (Arif and Mahmood, 2010), while blogs were the most important Web 2.0 tool in India (Harinarayana and Raju, 2010). Social bookmarking, photo sharing and RSS were also least utilized in India (Baro, et al., 2013). Findings of Nguyen, et al. (2008), contended that RSS was the most widely applied in Australasian universities. In Malaysia, Facebook was widely utilized, while RSS, podcast, vodcast and video streaming were least utilized (Abidin, et al, 2013). Social networking and IM are widely utilized, while RSS, podcast, mashup, and social book marking were least utilized based on the results of the various studies. No definitive conclusion, however, could posit the utilization of a specific set of Web 2.0 tools.

**Table 5. Respondents' Use of Existing Web 2.0 Technologies in the Library**

<b>Web 2.0 Tools</b>	<b>Use of Existing Web 2.0 Tools in the Library f (n=17)</b>
Wiki	2
RSS	0
SNS	6
IM	6
Podcast	0
Video Streaming	2
Social Bookmarking	1
Mashup	2
Blog/Microblog	1
Photo Sharing	2
Slide Sharing	0

Table 6 shows the data obtained during the online observation on the availability of Web 2.0 in the academic libraries in the Province of Capiz. An online observation was conducted to check the online search engine Google for Web 2.0 tools used by academic libraries of Capiz. There are institutional web/blogsites and social network pages although only a few libraries actually have their own online portals. Among the 10 campuses of Capiz State University, only 2 academic libraries have respective blogsites and Facebook pages. Two academic libraries have their Facebook pages while only 1 has its own blogsite. Likewise, 2 academic libraries have their own page on their respective institutional websites. These Web 2.0 tools were, however, not updated. Library blogsites are available in free hosting platforms and do not have their own domain names. Only the library's rules and regulations, schedules and available materials are provided on their blogsites. With this, it is implied that Web 2.0 use in the academic libraries of Capiz is



## **Librarians' Web 2.0 Competencies**

Competency is the combination of skills, knowledge and behavior related to library technology and are important for organizational success, personal performance and career building. Table 7 shows the data on the level of respondents' Web 2.0 competencies. As most of the respondents were digital migrants, they need to develop the basic skills necessary for Web 2.0 use. This would make it easier for them to later on hone their skills to advanced level.

**Creating a Web 2.0 Account.** Based on the survey, 10 of the 17 respondents were highly competent in creating an account on one of more social media or Web 2.0 platform. Six respondents were competent, while 1 respondent was moderately competent. Creating a Web 2.0 account is the first skill that should be acquired to use Web 2.0 tool. The State Library of North Carolina (2003), which created the first technology competencies in the USA, mentioned that the ability to create an account with an online tool is one of the basic internet skills which librarians should have.

**Participating in Collaborative Writing Sites.** Ten respondents were only somewhat competent in joining collaborating writing sites, like Wikipedia, WikiSpaces and PAARLWiki, while 2 were not competent at all. Four respondents were moderately competent, while only 1 respondent was competent in sharing articles and contents on collaborative writing sites. Respondents' poor writing skills and their unfamiliarity to the various features of different wikis were identified as reasons of their limited competency. Scripps-Hoekstra, et al. (2013), concludes that respondents from ALA-accredited library science programs have low level of competency in web content creation, particularly in



collaborative writing. Anyauko, et al.'s study (2012) noted that majority of librarians have never contributed to wikis because of the poor writing and technical skills. The use of blog and collaborative writing sites will help polish the writing skills of Southeast Asian students and they had also portrayed positive attitude in using collaborative writing to improve their writing skills (Said, et al., 2010). It could be inferred that joining collaborative writing sites require librarians to have editing skills to support individualized learning and promote even better collaboration.

**Updating Social Media Accounts.** Eight of the 17 respondents reported that they were highly competent in updating their social media account. Another 6 were competent, while only 3 were moderately competent. The respondents' use of social media accounts, particularly Facebook, as a means of communication explains why majority was competent on this. However, the researcher could surmise that the respondents were not yet sophisticated social media practitioners. They know the basic features but they have limited skills in more advanced features, such as privacy setting. The study of Scripps-Hoekstra (2014), which found that students of ALA-accredited library science programs do not show mastery in using social media, corroborate the results of this study.

**Sharing Relevant Information Posted By Another Individual Or Organization.** Seven of the 17 respondents were highly competent in sharing relevant information posted by another individual or organization. The rest were competent (5 respondents) and moderately competent (5 respondents). The ease of sharing posts allows the respondents to easily have a grasp on this task. Sharma and Sain (2012) posited that

information dissemination, sharing of opinion and experiences were among the factors considered why users share relevant information online.

**Commenting on Another User's Post/Photo.** Eleven of the 17 respondents were highly competent in commenting on another user's post or photo. Five were competent, while only 1 was moderately competent. Abidin and his group[ (2013), found that Malaysian students were highly competent in commenting on photos since this was the most frequent activity that they do with social media sites.

**Liking Another User's Post or Update.** Eleven of the 17 respondents have high level of competency in liking another user's post or update. Five respondents were competent, while 1 one respondent was moderately competent. Just like sharing other users' posts, one thing that triggers users to like posts is because they agree to what has been posted.

**Liking Another User's Photo or Video.** Twelve of the respondents reported that they were highly competent in liking another user's photo or video, while only 2 was competent. Three respondents, however, were moderately competent. The respondents' competency in is attributed to the fact that liking a post or video is one of the most basic and easiest features to learn in social media, as supported by the results of Zarrafzadeh's study (2013), where more than half of his respondents revealed competency in this task.

**Creating, Moderating or Joining Pages, Groups and Forums.** Five of the 17 respondents were found to be highly competent in creating, moderating and joining pages, groups and forums. Another 5 were also competent. The rest were moderately competent (4 respondents), somewhat competent (2 respondents) and not competent (1



respondent ). Majority of the librarians are members of professional Facebook pages or online communities for librarians, although they are not competent in creating or moderating any online community/group, which requires effective communication skill and the ability to filter or edit other users' post. Respondents, therefore, do not have the required skills. The lack of expertise in this task also prevented majority of Anyaoku's respondents (2013) from joining online discussion groups. This may have repercussions in the librarians' career as they are deprived from professional development and updates from peers.

**Sending Private Message to a Friend.** Respondents' competency in sending private message among the three most popular private messaging tools (Facebook, Twitter, and Skype) revealed that 9 respondents were highly competent while 5 were competent. Two respondents were moderately competent and 1 respondent was somewhat competent. A respondent mentioned that it is important to learn how to use this tool because of its big help in information exchange with colleagues. Another respondent said that she find it faster to send and receive messages using IMs, instead of sending text message. Abidin, et al. (2013), however, noted that while majority of their respondents were aware of IM, they still have difficulty using it because of the features and tools that they do not know.

**Using Hashtag On Every Post.** Eight of the 17 respondents were moderately competent in using hashtag because they find it confusing to use and they were also not aware of what is its purpose. Only 4 were highly competent; 3 respondents were competent and 1 respondent was somewhat competent. Hashtag is a word or phrase preceded by a hash or pound sign (#) and used to identify messages on a specific topic.

Social networking sites, like Facebook or Twitter encourage users to use hashtags to make one topic or word go trending online.

**Uploading and Downloading Video, Clip or Slide Presentation.** Eight of the respondents were highly competent in uploading and downloading video, clip or slide. Two were competent, while 3 were only moderately competent. One respondent was somewhat competent. Uploading and downloading has become a common activity while utilizing the internet. Also the availability of uploading and downloading tools, such as Torrent, made it easier for the respondents to become familiar of this activity.

**Video Streaming.** Twelve respondents were highly competent in streaming online videos, while 4 of them were competent. Only 1 respondent was moderately competent. Video streaming is a popular activity among web users. Its ease and convenience of use enable majority of the respondents to find it easy to learn the skill in utilizing streaming sites.

**Posting Comments on Videos and Reporting Any Inappropriate Content.** Eight of the 17 respondents were highly competent in posting comments on videos and in reporting any video that they found to have inappropriate contents, while 5 were competent. Only 1 respondent was moderately competent. Commenting and reporting inappropriate content was found by the respondents to be fairly easy to do. Depending on the reaction elicited by the video, respondents were more likely to comment if they find the video emotionally stirring. They also tend to flag or report a material if they found it inappropriate.

**Setting up Blogs or Websites.** Eight respondents were not competent in setting up blog or website. Only 1 respondent was highly competent and two were competent. The rest were moderately competent (3 respondents) and somewhat competent (3). The results of the study implied that respondents have limited competency in setting up blog or websites because of the lack of technical skills. Setting up a blog also requires writing competencies, as content creation is necessary in updating and keeping the blog relevant.

**Writing and Posting Contents on Blogs and Websites.** The librarians' competencies in writing and posting contents on blogs and website were almost the same as their response on creating blogs and websites. Seven of the 17 respondents reported that they were not competent in doing this task. Another 4 respondents were somewhat competent. Only 1 was highly competent in writing blog contents. Nevertheless, there were 5 who were competent in web content writing. Poor writing skills and lack of time were cited as the reasons for the lack of competency of most of the respondents.

Alexander (2006) notes that a librarian 2.0 should possess blogging competencies, which include researching, tracking, interpreting, and evaluating resources. Yap (2012) opines that a librarian 2.0 should be capable of creating, contributing and revising content within and beyond the presence of their library. This makes content creation vital for any librarian to succeed in the Web 2.0 environment.

**Adding Sites to Social Bookmarks.** Adding sites to social bookmarks is where most librarians either lack skills or are not skilled at all, as 5 respondents were only moderately competent, 4 respondents who were somewhat competent, and the 3 respondents who were not competent. Three respondents were, nevertheless, found to be highly competent and there were also 2 respondents who were competent. The fact that

Delicious or Reddit are not familiar among librarians or are frequently utilized could be the reason why the respondents' competencies in this field have not been developed. As posited by Rethlefsen (2007), competencies in tagging have to be developed by librarians because it will allow them to bookmark web pages for themselves and others, check out what other users have bookmarked, and organize bookmarks in one place for portability.

**Announcing Events and Activities on Facebook, Twitter and Other Social Networking Sites.** Web 2.0 tools help spread news about events and activities. Users turn to them if they want to advertise certain events or activities. Announcing events on various social media channels is one competency that 7 respondents were highly competent and the 6 respondents who were competent. The rest of the respondents, though, were only moderately competent (3 respondents) and not competent (1 respondent). It is assumed that the majority of the respondents have basic competency on this task because they found it very easy to learn and that it is one of the most frequent activities done in social networking sites, such as Facebook. Rogers (2009) supported the findings of this study as a growing number of American libraries are employing communications resources, such as online videos and social networking sites, to promote and document library services and events. The use of Web 2.0 is vital in marketing and delivering the services of the library. Witek and Guffano (2012) explain that Facebook offers many opportunities to teach and practice information literacy. It is necessary for librarians to acquire the skills that would enable them to market and promote library resources and services, as well as connect with the academic community (Siddike, et al., 2013).

**Subscribing on RSS.** Data revealed that 6 of the 17 respondents were only somewhat competent in subscribing to RSS; 4 respondents were somewhat competent and 1 respondent was not competent at all. Only 2 respondents were highly competent, followed by the four respondents who were competent. The low utilization of RSS translates both to the lack of awareness and competency of the respondents as supported by Batool and Ameen (2010) who concluded that Pakistani librarians hardly have proficiency in RSS, as much as they lack familiarity and proficiency with specialized services offered online.

**Table 7. Respondents' Level of Web 2.0 Competency**

Task	Level of Competency (n=17)				
	Highly Competent	Competent	Moderately Competent	Somewhat Competent	Not Competent
Creates an account on one or more social media site/ Web 2.0 platform	10	6	1	0	0
Participate in a collaborative writing site, like Wikipedia.	0	1	4	10	2
Updates own social media status.	8	6	3	0	0
Shares relevant information posted by another individual/organization.	7	5	5	0	0
Comments on friend's or another user's post or photo.	11	5	1	0	0
Likes another user's post or update.	11	5	1	0	0
Likes another user's photo or video.	12	2	3	0	0
Creates, moderates, or/and joins pages, groups, forums.	5	5	4	2	1
Sends private message to a friend using Facebook, Twitter, or Skype.	9	5	2	1	0
Uses #hashtag on every post.	4	3	8	2	0
Uploads/downloads video, clip, image or slide.	8	2	3	1	1
Streams and watches videos on video-sharing sites, like Youtube, Vimeo, etc.	12	4	1	0	0
Comments on videos and reports any video with inappropriate content to the administrator.	8	5	4	0	0
Sets up blog(s) and/or website(s).	1	2	3	3	8
Writes and posts contents on blogs and websites.	1	5	0	4	7
Adds on social bookmarking sites favorites or worthwhile information found on the internet.	3	2	5	4	3
Announces events and activities on Facebook, Twitter, and other social networking sites.	7	6	3	0	1
Subscribes/Embeds posts on RSS.	2	4	4	6	1

### Library Facilities and Infrastructure

Table 8 shows the data about available IT facilities among the academic libraries in the Province of Capiz. It was found that all the 17 respondents revealed that their respective libraries have available internet stations, personal computers, and internet

connections. Only 4 respondents reported that their respective libraries have laptops. Facility-wise, this makes Web 2.0 integration highly possible among the academic libraries. Aside from skills and knowledgeable personnel, having IT facilities is crucial to ensure the success of Web 2.0 integration.

**Table 8. IT Facilities in the Library**

<b>IT Facilities</b>	<b>No. of Responses (n=17)</b>
Internet station	17
Tablets	0
PC	17
Internet connection	17
Laptops	4

### **Acceptance Towards Web 2.0 Integration**

Table 9 shows the data on the acceptance of Web 2.0 among the respondents.

**Perceived Usefulness.** Sixteen of the 17 respondents strongly agreed on the statement that using Web 2.0 would improve their performance in their job. Another 16 respondents also believed that Web 2.0 would improve their productivity and enhance their effectiveness at work. The same respondents reported that using Web 2.0 is useful in their job. Thus, eagerness to use Web 2.0 is driven by its usefulness and the help it could give in making librarians more productive and efficient at work.

Results of the student of Ajjan and Harshorne (2008) conformed with the results of this study as it is indicated that while respondents from southern United States feel that some Web 2.0 technologies could improve student learning, their interactions with faculty and peers, their writing ability and their satisfaction with their course; few chose to use them, however. Yuen, et al. (2013), also claims that most Web 2.0 tools were

useful and applicable in the academe. Singh and Gill (2012) believes that Web 2.0 increases work efficiency, is an effective tool for communicating with others, and helps users learn new things and idea.

Respondents also feel that the use of Web 2.0, therefore, would be free from effort, which could impact their intention to use (Davis, 1989). Integrating Web 2.0 into the library can effectively increase their job satisfaction, enhance their learning and skills, thus, changing their roles from passive individuals to interactive information professionals. Perceived behavioral control could also serve as strong indicators of Web 2.0.

**Perceived Ease of Use.** Ten respondents strongly agreed that learning Web 2.0 is easy, while 6 respondents agreed on the statement. One respondent was undecided. The same respondents found it easy to get Web 2.0 to do what they want to do and that it would be easy to become skillful in using Web 2.0. When asked if they would find Web 2.0 easy to use, 10 respondents strongly agreed, followed by 6 respondents who agreed. Still 1 respondent was undecided. The eagerness among respondents to learn Web 2.0, therefore, is correlated to their perceived ease of use of this tool because of the convenience and ease that they offer to users. Arif and Mahmood's study (2012) revealed that majority of Pakistani information professionals believed that Web 2.0 tools were easy to use and that it fulfilled their professional and personal needs.

**Behavioral Intention to Use Web 2.0.** Eleven respondents said that they intend to use Web 2.0 regularly at work; 5, meanwhile, agreed, while only 1 respondent was undecided. The eagerness to learn the different features and functionalities of Web 2.0



and knowing its benefits, therefore, makes it more interesting to make Web 2.0 a part of the respondents' work and day to day life

**Table 9. Acceptance of Web 2.0.**

Statement	f (n=17)				
	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
<i>Perceived usefulness statements</i>					
Using Web 2.0 would improve my performance in doing my job.	16	1	0	0	0
Using Web 2.0 at work would improve my productivity.	16	1	0	0	0
Using Web 2.0 would enhance my effectiveness in my job.	16	1	0	0	0
I would find Web 2.0 useful in my job.	16	1	0	0	0
<i>Perceived ease of use</i>					
Learning to operate Web 2.0 would be easy for me.	10	6	1	0	0
I would find it easy to get Web 2.0 to do what I want it to do.	10	6	1	0	0
It would be easy for me to become skillful in the use of Web 2.0.	10	6	1	0	0
I would find Web 2.0 easy to use.	10	6	1	0	0
<i>Behavioral intention to use</i>					
I intend to use Web 2.0 regularly at work	11	5	1	0	0

### **Challenges in Web 2.0 Integration**

Challenges exist in Web 2.0 integration. Respondents were asked to check the challenges or deterring factors that prevent them from integrating Web 2.0 in the library. Results from the survey revealed that majority of the respondents perceived lack of maintenance (16 respondents), limited training (15 respondents), lack of knowledgeable and skilled staff (12 respondents) and lack proper planning (12 respondents) as the deterring factors that served as challenges to integrating Web 2.0. Lack of maintenance was the biggest challenge that faces Web 2.0 integration given the lack of staff who were

skilled to handle IT problems. Lack of management support, however, ranked the lowest among the challenges, as respondents revealed that their respective administrations are supportive of library programs and activities. Data derived from the focus group discussions qualified the data obtained from the survey

**Table 10. Challenges in Integrating Web 2.0 in the Library.**

<b>Factors</b>	<b>f (n=17)</b>
Lack of budget	8
Lack of knowledgeable and skilled staff	12
Lack of maintenance	16
Limited time availability	8
Limited training	15
No proper planning	12
Lack of willingness to change/improve	4
Poor internet access	3
Inadequate/outdate equipment/infrastructure	7
Lack of management support	2

**Lack of Maintenance.** Respondents agreed that the lack of maintenance, particularly of skilled IT personnel, to check, repair and upgrade libraries' computers, internet connections and other IT facilities is the main challenge found to deter Web 2.0 integration. The head librarian from a private university mentioned that there is a part-time IT specialist who works for two hours in her library for five days a week. The problem of having a part-time staff is their unavailability to immediately address the need. Delay affects the efficiency of operation and the success of integration IT in the library system.

The chief librarian from a private college also shared that they have an IT office that takes charge of all the IT facilities in their institution. However, because of the bulk

of task of having to maintain all IT facilities and with limited personnel, the problems in the library's computers and electronic materials are not immediately resolved.

Lack of IT personnel is also the dilemma of librarians from a state university, who said that they have to rely on IT instructors to check their computers. One librarian shared that the administration should at least designate a team of teaching personnel for the maintenance and upgrade of the IT facilities. Likewise, no library staff in this state university had finished a computer-related course or has been trained to answer the inadequacy.

Another respondent shared the complicated process applied in her university whenever IT repairs and maintenance is concerned. The library has to coordinate with the school's property custodian who would send an inspection officer to check on the facilities and decide if repair is necessary. Once the need for a technician is determined, documents are prepared, which would take 1-2 weeks before the problems are resolved.

It could be inferred, that the inadequacy of personnel for IT maintenance in the library will have to be addressed first to ensure the possibility of successfully integrating Web 2.0. The availability of hands-on IT personnel ensures timely maintenance and regular update on the library's facilities and equipment. This saves time and gives students maximum access to available online resources.

**Limited Training.** Majority of the respondents were digital migrants. Web 2.0 and IT were not yet introduced or fully implemented at the start of their career. Some of them either have very limited skills in using the computer or none at all. If Web 2.0 is to be successfully implemented, they have to be thoroughly trained and completely

immersed in using these technologies. The lack of intensive training and hands-on experience, necessitated for a short-term course. It was also discussed that there were library staff who were not interested to practice the skills and trainings acquired after attending seminars.

On the limited time and lack of training, three participants agreed that two to three days of training is not enough to acquire the skills needed to become a librarian 2.0. One respondent said: “The seminars and workshops that I have attended only last for up to 3-4 days, which is not enough to provide all the training a librarian needs to fully take Web 2.0.”

An intensive training as mentioned by another participant as necessary for Web 2.0 integration:

*“A short term course would be great. For example, there could be a training on how to set up and use a blog for one day, then, set another schedule for another training on how to use RSS, etc. and during the training itself, we, the participants should be able to create our own Web 2.0 account so that there's an output that we could use right there and then.”*

Another issue arises from those who attended seminars and trainings but do not actually apply what they have learned. One librarian said:

*“There are library staff who are sent to trainings and seminar but they don't practice what they have learned. They do not want to learn by heart. So, no matter how many times I endorse them for a training, if they don't want to, then, there's no use. After all, some of them would claim that they're already old or that they're too busy to learn these new things.”*

Librarians' frequent attendance to seminars and workshop are not enough to hone their IT or social media skills. Comprehensive and intensive training is needed to give them ample time for hands-on experience.

**Lack of Skilled and Knowledgeable Staff.** The academic libraries in the Province of Capiz are understaffed. Libraries cannot comply with the minimum standards set by CHED of one fulltime librarian for every 500 students and an additional one librarian for succeeding 1,000 students with two library assistants/staff for every licensed librarian. Respondents discussed that they have difficulty in convincing their respective human resource office to hire additional staff with IT expertise or background. There was also this lengthy and complicated, process involved in hiring new personnel, which also dissuades head librarians from hiring new staff.

*“The HR will not hire anyone unless a vacancy is posted which should first be approved by the board. Requests to hire for an additional personnel is often met with rejection as the HR would often respond that it's not included in the budget.”*

A respondent from a state university said:

*“It is quite difficult to persuade the administration to hire additional library staff because it involves money. The library fees paid for by the students are not touched should not be spent for employees' salary, so the administration points out that it's going to be another expense if an employee is hired solely for the purpose of having an IT personnel in the library.”*

**Absence or Lack of Proper Planning.** Most of participants reported they failed to include Web 2.0 integration on their five-year development plans. They, however, mentioned that they would try to propose with their respective school heads on the possibilities of integrating Web 2.0 technologies in the library. It was also mentioned that acquisitions and updates of facilities are always included in their annual procurement plan and budget allocation.

While challenges pose a threat to Web 2.0, it can be an opportunity if the library and the administration work together to turn these challenges into opportunities.

Librarians should involve the administration, faculty, students, and other stakeholders, in

discussing what the library's needs are to decide what are the adequate solutions to these challenges. Zimmer, et al. (2010) posits, Web 2.0 integration brings unique challenges to librarians, administrators, and patrons, alike, but these challenges are "about making change in the organization." While Web 2.0 integration exposes libraries to "criticism" and "unsavory elements" (Fernandez, 2009), librarians, could develop a sense of professional development. As Lapuz wrote (2009): "Librarians should have a firm grasp of understanding what the technology allows, learning new skills and embracing new ways of working." Thorough evaluation is needed within the library to bridge the gap between traditional librarianship and Library 2.0, offering the best of innovation technology with the wisdom of professionalism.

### **Opportunities for Integrating Web 2.0 Technologies**

The opportunities were considered as possible inputs in integrating Web 2.0 in the library. Result of the survey revealed that all the respondents 17 respondents were willing to collaborate with each other. The librarians were interested in utilizing Web 2.0 as they find it a helpful tool in connecting with each other, particularly in link building and online resource sharing. Furthermore, 15 respondents expressed strong interest to learn Web 2.0, had supportive administration, and were familiar with using the computer and Internet. Strong internet access was also considered as an opportunity, as revealed by 12 of the respondents. Free access to Web 2.0 tools was also mentioned as another opportunity. It is believed that the ease and convenience of Web 2.0 explains their strong willingness to collaborate with each other to work together in the online platform. However, maintenance was ruled out among the opportunities, given the lack of IT experts to maintain and troubleshoot the library's facilities and equipment.

The experience and observations shared by the FGD participants validated and expounded their responses on the written survey.

**Table 11. Opportunities in Integrating Web 2.0 in the Library**

<b>Factors</b>	<b>f (n=17)</b>
Existing Web 2.0 technologies	8
Adequate funding	9
Well-trained staff	3
Availability of maintenance	1
Strong internet access	12
Adequate IT infrastructure	9
Strong interest from staff to learn Web 2.0	15
Supportive administration	15
Familiarity of staff in using the computer and Internet	15
Willingness to collaborate with librarians from other institutions through Web 2.0 platform.	17

**Willingness to Collaborate With Other Librarians Using Web 2.0.** Results from the FGD revealed that the discussants have already established connections with other librarians through Facebook on a personal basis. The perceived benefits of using Web 2.0 influence librarians to use these tools. Furthermore, the ease of use of Web 2.0 was also found to be one of the of the reasons why they were interested to use this tool in their libraries.

It was mentioned that ease of communication was considered the most important factor for Web 2.0 use, as mentioned by one librarian: "I have added to my Facebook friends some librarians I already knew. Some of them were accreditors, others I met during seminars. It just feels good to make friends with these people because when I go other places, it is nice to know that there is someone in that place who I could contact."

The head librarian of one SUC library said that internet is her primary means of sending and receiving information from other libraries: “I no longer expect communications sent through snail mail to make their way to my library on time. I just keep myself updated with what’s going on at PLAI and PAARL Facebook page or through my email. So, when invitations to seminars and trainings are available, together with their accompanying CHED memo, all I have to do is download it and present it to my administrator for approval.”

It was also found that most of the respondents already follow the Facebook pages of library organizations, like the Philippine Librarians’ Association (PLAI) and Philippine Association for Academic and Research Libraries (PAARL). They also frequently receive notifications, updates and communications through Web 2.0 tools.

Some older librarians were quite surprised to find out that it is possible to collaborate with other librarians through Web 2.0. A 60-year-old librarian from a private college was quite surprised to find out that she could actually access information, particularly seminar invitations and communications, through Facebook and email.

One librarian from an SUC mentioned about the various opportunities for working together with each other with the help of Web 2.0: “There are so many opportunities in stored for us librarians and for our libraries in integrating Web 2.0 technologies, particularly in exploring and in sharing resources with each other.”

The FGD enlightened the participants on the benefits of Web 2.0, especially in collaborating and building linkage, making them even more interested to use it to connect, share their resources and establish linkages with one another.



**Strong Support from Administration.** The librarians agreed that support from the administration is vital to successfully implement Web 2.0. A librarian from a private college mentioned that her administration knows that the library is a vital part of the academe, so support is always necessary. She said: “Given that the library is the heart of any academic institution, our administrations always gives priority to our library, whether it comes to the purchase of books, getting our staff trained, or acquiring new computers.” Most of the respondents believed that their administration will also support whatever innovation is introduced, such as Web 2.0 integration, especially if it serves the academic community well. However, a librarian from another private college commented that the administration’s support should come with adequate funds. She explained that “it is important to have the administration’s support and at the same time the money to back that support and turn it into tangible facilities, books, and other stuffs that would serve beneficial for the library.”

Another librarian noted: “The administration’s support should come with funding to successfully implement Web 2.0. We need funds to purchase computers and other facilities, which, first and foremost, what we need to connect with the Internet.”

One librarian mentioned the need to coordinate with the administrations on Web 2.0 integration: “It has to be decided how Web 2.0 should be used, especially in serving students’ needs. Also, a well-designed plan should be created to guide librarians on how to effectively utilize Web 2.0.”

Involvement of the administration in planning for Web 2.0 integration is a necessity. Administrators must be aware on Web 2.0’s role in the library and what

benefits will the library before the administration gives full support to this integration program.

**Strong Interest to Learn Web 2.0.** The participants were found to be interested in learning Web 2.0, especially if given the opportunity, the right training, and the support from the administration. A librarian from a private Catholic affirmed that: “Learning should be constant among us librarians because this is needed in order for our libraries to pass accreditation, to deliver quality service to our users and to ensure our relevance despite the emergence of internet.”

Participants expressed strong interest to join on intensive training given their availability. However, one librarian pointed out that they could actually start on their own, if they are interested. There are free, self-paced online trainings and tutorials that they could check out.

**Familiarity in Using the Computer and Internet.** Almost all of the FGD participants admitted that they have at least the basic knowledge and skills in using the computer and the internet. Among the common tasks they do include encoding documents, replying to emails and surfing online. The respondents believed that learning how to use the computer and the internet is necessary at work, as mentioned by a 60-year-old head librarian:

*“I had to learn how to use the computer because I don't want to be laughed at [sic] by my staff and colleagues. It also gives me the ability to work without depending on my staff, who also have their own work to do.”*

Likewise, one librarian mentioned that it is necessary to learn how to use the computer transactions in the library are already done online. Tasks such as cataloging,

copylogging, entering data on the MARC record, using the OPAC, encoding book pockets, preparing inventories, and many more require at basic computer skills.

Another librarian, who is studying MLIS said that using the computer is also essential for her studies. She is already in her 40s while her classmates are in their 20s and 30s. She pointed out that the use of laptops is common in graduate school. Reports presented in slide and are encoded and distributed in class.

*“If I don’t know how to use the computer, what would become of me in class? I can’t definitely write my visual aids in manila paper or prepare my report using typewriter! Indeed, having the basic skills in computer and in researching online is a big help.”*

Familiarity in using the computer and internet is a good start and this could be developed further to enhance the librarians’ mastery in using Web 2.0 tools.

**Adequate IT Facilities/Infrastructure.** The FGD participants shared that their respective libraries have adequate computers and internet connections to cater to their students’ needs. The FGD results also echoed the survey findings that the library facilities in the participants’ schools are ready for Web 2.0 integration.

The participants also acknowledged that Web 2.0 tools are readily available online, which are free and could be accessed anytime. They recognized that intermittent internet connection is a problem among the academic libraries throughout the province, and that this is brought about by poor signal and broken lines and site centers, still left unfixed since Typhoon Yolanda.

Space constraint should also be addressed according the FGD participants. They admitted that an Internet space exists, but there is no more room for future expansion. To

address this issue, some librarians shared that their schools have plans for library expansion already exist. One private school librarian spoke about their school's newly inaugurated and described it as a three-story building where 50 computers have been installed. She added that plans for the expansion of the state university library have already been made and funding is already being negotiated with an international organization and local leaders.

**Funding.** The group emphasized that using Web 2.0 sites may be free, but funding is needed for the purchase of facilities needed in accessing these tools. Money is also needed for other expenses, including electricity, the internet, periodic maintenance, and compensation of library staff.

The participants also noted that there is a library budget prepared annually for IT procurement but the use of the budget for IT development is hampered by institutional policy. A memorandum from the Commission on Audit stipulates that library fees should be used solely for books and journals. The libraries get fund for IT purchase from their e-lib fee of P100 per semester, on top of their library fee, which is used for the procurement of computers and in the subscription of online databases, journals, etc. This makes procurement of IT facilities complicated and, sometimes, even impossible.

Donors or benefactors who either donate IT facilities or finance possible library expansion are also being sought. An SUC library benefited from the IT project of the university's student government that donated 15 units of computers to the library which are being used by students for free. Similarly, a private university library was a recipient of 50 units of computers from a benefactor.

**Trainings.** The FGD participants discussed the availability of trainings that they could take part in to hone their skills in Web 2.0. It was mentioned that learning Web 2.0 is possible even without attending the traditional and costly seminar-workshops.

One participant shared said that she was able to learn how to use basic Web 2.0 tools, such as blogs and social networking first, by hands-on experience, and then by checking out free online tutorials. According to her, “there are actually a lot of good sites online that offer self-paced trainings to those interested to learn Web 2.0. You can watch them on Youtube or find out about them by surfing Google.” Sites, such as Educause and ALA.org, offer easy-to-understand Web 2.0 tutorials.

The participants also reported that seminars are being conducted by library associations, such as the Philippine Librarian’s Association (PLAI) and other institutions to raise awareness on Web 2.0 and the social media in the library. Free trainings from Google Business Group and Google Educators’ Group with the aim of equipping those in the academe on how to use and maximize online resources in information sharing and dissemination are also available. However, the participants opined that these trainings only run for like two to three days, but what is needed is a more intensive training that provides hands on experience to hone their skills.

### **Input for Integrating Web 2.0 in the Library**

Results from the survey and FGD on the status of Web 2.0 integration revealed that training, library facilities, administrative support, adequate funding and the library’s well-defined position in the institution’s organizational structure and available Web 2.0

tools, have been identified as necessary inputs in order to successfully integrate Web 2.0 in the library.

The FGD participants expressed that training provides them with the chance to learn Web 2.0. They mentioned that there are organizations that sponsor seminars, trainings, and workshops on social media use, and there are also online trainings and courses available, which librarians could take advantage of at their own pace.

Provisions from the Accrediting Agency for Chartered Colleges and Universities (AACUP) require libraries to use online tools and electronic resources, particularly Web 2.0. One SUC librarian commented: “The never ending availability of modern technology and online resources compels us to upgrade ourselves and learn new skills.”

All the FGD participants expressed willingness to be trained on how to use Web 2.0 tools. A librarian from a private Christian university shared the following views:

*“I admit that my skills are very basic. I only know how to use [sic] Facebook and Youtube, but I have no idea on how to download pictures, create a video or slide, or create an account in a blogsite. Thus, we need an intensive training to acquire the skills which will be useful for our job.”*

The participants also believe that getting trained and becoming competent in Web 2.0 enable them to become flexible. As what Murphy and Moulaison(2009) posited: “Librarians need a new branch of skill sets specific to utilizing and leveraging social networking sites to provide quality services and maintain their role as information experts in a Web2.0 field.”

One librarian acknowledged that being skilled in the use of Web 2,0 will be of great help to librarians who perform several tasks. She quipped, “Because of the lack of personnel, I have to be an “all-around-woman” in my library. I help students look for the right book. I also catalog books. I believe it would be a big help to further hone my skills

in using the computer and the internet, so that I could impart what I know to students. That adds value to my profession.” Therefore, honing Web 2.0 skills helps transform librarians as interactive information specialists who cater to students’ needs for reliable information at the right place, at the right time.

It is important that librarians should be open and receptive to innovation and development. In relation to this, a 60-year-old head librarian explained:

*“I am very open to learning new things because that is how I can improve myself as a professional. Our VP for Finance told us not to open Facebook during office hours but I defended myself why I do it. I told him that Facebook is crucial to my work. I do transactions with my book dealers online. I do get information about seminars and new trends in the field because of social media, so I cannot totally say ‘no’ to Facebook during office hours. That’s how useful it is for my work.”*

Another librarian, from an SUC, said:

*“Openness allows us to learn. I have a library staff who were mostly in the late 40s who refuse to learn new things because they said that they are already in their 40’s and do not need to learn new technology anymore. But I urged them to keep on learning because even if they do not need to learn how to use computers or the internet on a personal basis, their work demands them to do so.”*

The adequacy of library facilities among the academic libraries in Capiz is also a major issue to consider, since all the libraries have computers, internet access, and ample space for an internet station inside the library. The FGD participants agreed that strong administrative support is crucial in the realization of a successful integration and utilization of Web 2.0 in the library. One librarian commented that: “When it comes to the library, our administration is all-out on its support. So, definitely, I guess, if I bring up this topic with our VPAA, she will definitely say yes to this because she believes that whatever is good for the library will also benefit the school in general.”

Nevertheless, the interest and desire of librarians and their staff to learn Web 2.0 should be supported by the school administration. The FGD participants believed that no library program can succeed if the school administration does not support it.

One librarian explained:

*“Administrative support is much needed for budget, procurement of facilities, personnel acquisition and development and training. No matter how interested the librarian is in implementing Web 2.0 and other technologies, if the administration does not show interest, plans would be useless.”*

The issue of budget was another consideration discussed during the FGD. The participants agreed that without adequate funding, the library cannot put plans into action. Interestingly, the librarians shared that the funds collected from their students are spent solely for the library, particularly on the purchase of books, computers and IT equipment. They mentioned the possibility of tapping the student council, alumni, and external benefactors for funds to support the needs of the library for more facilities. The librarians admitted that although they already have internet station and personal computers to address the need of their students and facilitate in the successful integration of Web 2.0 in their library, they still need additional computers, better internet access, and more space for future expansion in order to enable them to accommodate more users and researchers and to serve them better.

One participant explained that users open their Facebook account using computer or laptop and they conduct online conversations, download documents and images, watch videos through their own computers. He shared further that these activities are made possible because of a strong internet access and added that Web 2.0 has been introduced because there are computers used as medium and the internet as the channel.



She further explained that “without the computers and internet, there can be s no Web 2.0. She said that believes that even if the library has only one computer unit provided there is an internet access, it is still possible to create Web 2.0 accounts for the library.

Having adequate personnel is key to successfully integrate Web 2.0 technologies. Librarians from private schools said that their respective institutions have IT personnel in charge of the upkeep of the IT facilities, but there is still a need for the library to have its own IT staff for the upkeep of the equipment. State university libraries, meanwhile, lack competent staff to manage their Web 2.0 platforms in the future.

The inputs identified make it possible for the academic libraries in the province of Capiz to successfully integrate Web 2.0. The plan therefore of integrating Web 2.0 should be designed considering these inputs to come up with a comprehensive and detailed guide that academic libraries could use to develop their competencies and fully utilize Web 2.0 in their respective libraries. The expected outputs once inputs have been processed are librarians who are highly competent social media practitioners.

## CHAPTER V

### SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This study was conducted to determine the possibility of integrating Web 2.0 technology in libraries in terms of challenges and opportunities. Specifically, this study was conducted to: (1) determine the level of awareness of librarians on the existence of Web 2.0 technologies; (2) identify existing Web 2.0 technologies that have been integrated in the academic libraries in the Province of Capiz; (3) determine Web 2.0 competencies among academic librarians in the province; (4) examine the availability of library facilities and infrastructure of the target institutions; (5) assess the acceptability of integrating Web 2.0 technologies in the academic libraries in terms of perceived usefulness and ease of use; (6) identify the challenges for integrating Web 2.0 technologies in the academic libraries; (7) determine the opportunities for integrating Web 2.0 technologies in the academic libraries; (8) determine the needed input for integrating Web 2.0 technologies; and (9) develop a program for integrating Web 2.0 technologies.

The researcher utilized the mixed-method research to gather the data for this study, which include the survey method through questionnaire administration and focus group discussion (FGD). The questionnaire was validated by a jury and tested for reliability.

Seventeen licensed librarians working in the universities and colleges in the Province of Capiz served as respondents for the survey as well as FGD participants. The

HEIs included: Capiz State University and Filamer Christian University. The colleges are: Colegio de la Purisima Concepcion, College of St. John, Hercor College and St. Anthony College of Roxas City.

### **Summary of Findings**

Majority of the respondents were highly aware of wikis, social networking sites, instant messaging, video streaming, and slide sharing, however, majority was also slightly to least aware on RSS, podcast, social bookmarking, mashup and photo sharing tools.

All the respondents used social networking sites (SNS) and instant messaging (IM). More than half of them were using wikis and video sharing tools. Majority of them, however, have not used RSS, podcast, social bookmarking, mashup, blog, photo sharing and presentation sharing tools. Furthermore, all the respondents revealed that their libraries neither have an account on RSS tools and podcasting sites nor have subscribed to RSS.

Majority revealed that their libraries do not have accounts on wiki sites, SNS, IM, video streaming, social bookmarking, mashup, blog, photo sharing, and presentation sharing sites. Majority were also highly competent in performing basic tasks, such as creating an account, commenting, liking another user's photo or video, sending private message, or online streaming, however, majority have limited competency in performing complex or difficult tasks, such as collaborative writing, blogging, and using RSS.

All academic libraries have personal computers, internet stations and internet connections that enable them to access the Web.

Majority of the respondents perceived that using Web 2.0 is very useful in their job. They also believed that it is easy to learn and become skillful in Web 2.0. Majority also strongly agreed on using Web 2.0 regularly at work.

Majority of the respondents believed that lack of maintenance, limited training, lack of knowledgeable and skilled staff, and the absence of proper planning are the major challenges against Web 2.0 integration in their respective libraries. Lack of library personnel, lack of IT experts were identified as challenges faced by libraries in their implementation of innovations in their libraries. Despite the librarians' frequent attendance in seminars and workshops, they are still not confident to adopt Web 2.0 technologies. The lack of skilled or knowledgeable staff, primarily licensed librarians, or at least a library science graduate, has also been considered as a deterring factor. Majority of the respondents also admitted that they failed to include Web 2.0 integration on their five-year development, although they would propose this to their respective administrators.

Survey results identified the following opportunities that would make Web 2.0 integration possible: willingness of the librarians to collaborate and share information with other librarians and other institutions through the Web 2.0 platform, strong interest to learn Web 2.0, strong support from the administration, familiarity of staff in using the computer and Internet, strong internet access, adequate IT infrastructure and available funds. Furthermore, Web 2.0 as a free tool was recognized as another opportunity for librarians.

Training, adequate library facilities, supportive administration, adequate funding and available Web 2.0 tools were the inputs identified. These are the resources that should be utilized to produce the desired output which is the integration of Web 2.0 in the academic libraries of Capiz and librarians that are competent in utilizing Web 2.0.

### **Conclusions**

1. The respondents were highly aware of popular Web 2.0 tools, which is a good indicator for ease of integration of Web 2.0 in the libraries of the Province of Capiz.
2. The librarian's personal use of social networking sites, instant, wikis and video sharing tools did not translate to library's adoption and utilization of Web 2.0 tools; thus, the use of Web 2.0 technology in academic libraries in Capiz must start from the basic and requires thorough attention in order to cope with other provinces and regions, where Web 2.0 have already been integrated and regularly used.
3. The respondents were competent on the basic tasks involved in using Web 2.0, but they still need to develop their skills on other tasks, particularly in collaborative writing and in blogging. Likewise, some are not confident in using Web 2.0 tools.
4. Facilities and infrastructures exist and are functional in all academic libraries in the province of Capiz. Thus, integration is possible if the academic libraries decide to use and adopt Web 2.0 technologies.
5. Strong acceptance in the use of Web 2.0 among libraries is a positive implication in enabling the use of Web 2.0 for library services.

6. The absence or lack of personnel who can regularly maintain IT equipment, inadequate staff to take charge of the library's Web 2.0 tools, and the absence of proper planning for Web 2.0 integration pose a great challenge in Web 2.0 integration in the library.

7. A strong network among librarians in the province is identified as an opportunity that will make Web 2.0 integration possible among the academic libraries in Capiz. As Web 2.0 tools are free of cost, it can be considered as another opportunity.

8. Inputs identified include the availability of funding, adequate library facilities, supportive administration, and the availability and easy access of Web 2.0.

### **Recommendations**

1. Librarians should undergo training, such as a short-term program, on Web 2.0 to enhance their knowledge, skills and awareness on the different online technologies, particularly those that they are not familiar with or but are identified to be useful in libraries. It is a well-entrenched concept in Web 2.0 that "one size does not fit all," thus, diverse tools must be explored by users.

2. Librarians should be trained on how to use not only tools that they already know about, but also those that are beyond what is popularly utilized. Librarians should also exert effort to explore these technologies. Those with basic skills in using Web 2.0 should get further training to master the complex Web 2.0 features, such as privacy settings, modification of pages, and familiarity on technical tasks.

3. Capacity building on the use of Web 2.0 tools and emerging technologies should be integrated in the BLIS and MLIS program. Teaching and hands-on exercises on using Web 2.0 should be included in the learning activities.
4. Librarians need to include the development and strategic plans the need to regularly update the library's IT facilities, purchase new equipment and expand library space. This should be done in consultation with the administration and finance department to successfully implement these plans.
5. Library managers should explore the benefits that each Web 2.0 tools offer. They should also frequently explore and experiment on different Web 2.0 tools so they could appreciate and understand how and why Web 2.0 is beneficial in their work. They should also join online platform/page or forum where they could share their knowledge and experiences with other librarians.
6. Maintenance of the library's equipment and facilities should be a part of the tasks of the IT office. Library managers should explain this need to the administration to give IT facilities immediate attention, particularly the maintenance and upgrade that they should have.
7. Part of the enhancement plan is a training in basic trouble shooting so that they could address at least the minor problems in the library's IT equipment.
8. In this age of emerging technology, collaboration plays an important role. Librarians in the province of Capiz must find ways to establish and strengthen library consortia and create librarian's online discussion forum where librarians could connect, interact,

collaborate with each other. Furthermore, librarians should be encouraged to regularly use these online platforms to develop and enhance their communication skills.

9. Library managers must involve stakeholders, particularly the administration, faculty, IT and students in designing the plan to adopt Web 2.0 tools and discuss with them the benefits that the entire academe would get from integrating these online tools in the library services.

10. The head librarian should include in its development plan strategies for improving IT maintenance, trainings, planning and staffing that will make Web 2.0 integration viable.



## CHAPTER VI

# **PROGRAM FOR WEB 2.0 INTEGRATION IN THE LIBRARY**

This program for integration is a replicable model that academic libraries can be used as a guide on how to develop, adopt and utilize Web 2.0 technologies. This program for integration could be applied either in a self-paced, self-exploratory manner, or could be used in a group setting, where librarians and information specialists could meet together and learn how to use this program in a collaborative manner.

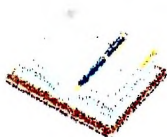
Objectives:

This program for Web 2.0 integration was designed to:

1. Introduce Web 2.0 to librarians
2. Develop librarians' skills and competencies in the use of Web 2.0 technologies
3. Provide a step-by-step guide that would make it easy for librarians to acquire Web 2.0 competencies and integrate these technologies to their respective libraries.

## Day #1: Web 2.0 in a Nutshell

### Learning Outcomes



The activity in Day 1 aims to introduce Web 2.0 to the librarians to enhance their awareness of the available online tools that they could use in their respective libraries.

### Objectives



At the end of Day 1, participants should be able to:

1. Discuss salient features of Web 2.0.
2. Enumerate how Web 2.0 can be used in the library.
3. Identify the unique features and functionalities of each Web 2.0.
4. Differentiate the function of one Web 2.0 tool with another.

### Overview



Web 2.0 is a set of online technologies that enable users to create and disseminate information in various online platforms. Most Popular Web 2.0 Tools

- Wikis
- Really Simple Syndication (RSS)
- Social Networking Sites (SNS)
- Instant Messaging (IM)
- Podcast
- Video Streaming
- Social Bookmarking
- Mashups
- Blogs/Microblogs
- Photo Sharing
- Presentation/Slide Sharing

The activities in Day 1 orient and acquaint librarians with Web 2.0 tool, its features, qualities and most popular platforms.



## List of Activities

### Activity No. 1

To understand what Web 2.0 is, visit the following sites:

- [oreilly.com/web2/archive/what-is-web-2.0.html?page=3](http://oreilly.com/web2/archive/what-is-web-2.0.html?page=3)
- [web2014.discoverveducation.com/](http://web2014.discoverveducation.com/)
- [www.paulgraham.com/web2.0.html](http://www.paulgraham.com/web2.0.html)

### Activity No. 2

Recognize features and qualities of Web 2.0 in the following sites.

- [webapprater.com/general/7-key-features-of-web-2-0.html](http://webapprater.com/general/7-key-features-of-web-2-0.html)
- [www.bluestonethompson.com/node/7](http://www.bluestonethompson.com/node/7)
- [www.computerweekly.com/feature/Web-2.0-What-does-it-constitute](http://www.computerweekly.com/feature/Web-2.0-What-does-it-constitute)
- [www.webpages.uidaho.edu/~mbolin/rehman-shafique.htm](http://www.webpages.uidaho.edu/~mbolin/rehman-shafique.htm)
- [www.wlac.edu/online/documents/Web\\_2.0%20v.02.pdf](http://www.wlac.edu/online/documents/Web_2.0%20v.02.pdf)

### Activity No. 3

To identify the most popular Web 2.0 tools/platforms, visit these sites:

- [thehyperlinkedlibrary.org/libtechreport1/introduction-creating-conversations-connections-and-community](http://thehyperlinkedlibrary.org/libtechreport1/introduction-creating-conversations-connections-and-community)
- [www.slideshare.net/nathan07/exploring-web-2.0-blogs-wikis-social-networking-and-social-sharing](http://www.slideshare.net/nathan07/exploring-web-2.0-blogs-wikis-social-networking-and-social-sharing)
- [www.unimelb.edu.au/copyright/information/guides/wikisblogsweb2blue.pdf](http://www.unimelb.edu.au/copyright/information/guides/wikisblogsweb2blue.pdf)



## Expected Outcomes

Librarians can discuss what Web 2.0 is, identify the unique features of Web 2.0 and enumerate at least the most popular Web 2.0 tools.

## Day 2: Wiki



### Learning Outcomes

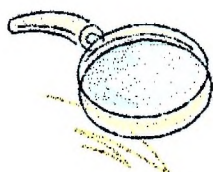
At the end of Day 2, participants should be able to use wiki in the library.



### Objectives

Participants should be able to:

1. Explain what is a wiki and what are its unique features.
2. Create a wiki account.
3. Enumerate the benefits of a wiki.



### Overview

Wikis are built to annotate online and print resources, allowing easy access to information, discussion, and addition of information (Stephens and Collins, 2007). Wikis enables users to create and edit the content freely, although the information therein may have questionable reliability and authenticity. This however does not undermine the importance of the wiki. Wikis as library web platforms could facilitate in social interaction among librarians and the online user community, which could be archived for future reference (Singh, Shukla and Hariom, 2012).



### List of Activities

#### Activity No. 1

To find out more about wikis, visit the following sites:

- [computer.howstuffworks.com/internet/basics/wiki.htm](http://computer.howstuffworks.com/internet/basics/wiki.htm)
- [net.educause.edu/ir/library/pdf/eli7004.pdf](http://net.educause.edu/ir/library/pdf/eli7004.pdf)
- [www.wiki.com/whatiswiki.htm](http://www.wiki.com/whatiswiki.htm)

Activity No. 2

Visit some of the most popular wiki sites and observe their salient features and content:

- [naarl.wikispaces.com](http://naarl.wikispaces.com)
- [www.wikipedia.org](http://www.wikipedia.org)
- [www.wikipilipinas.org](http://www.wikipilipinas.org)
- [www.wiktionary.org](http://www.wiktionary.org)

Activity No. 3

Visit and explore the three most popular free wiki hosting sites that you can use when creating wiki pages for your library.

- [www.wikia.com/Wikia](http://www.wikia.com/Wikia)
- [www.wikidot.com](http://www.wikidot.com)
- [www.wikispaces.com](http://www.wikispaces.com)

Activity No. 4

Set up an account with one or all of the three most popular wiki pages. Here are the following resources that you might want to check out:

- The following resources are useful in setting an account with Wikispaces  
[rachelboyd.wikispaces.com/file/view/Setting+up+your+Wikispaces+Wiki+-+Rachel+Boyd.pdf](http://rachelboyd.wikispaces.com/file/view/Setting+up+your+Wikispaces+Wiki+-+Rachel+Boyd.pdf)  
[www.duluth.umn.edu/~hrallis/guides/wiki/wikispacesguide.html](http://www.duluth.umn.edu/~hrallis/guides/wiki/wikispacesguide.html)  
[www.slideshare.net/sharpiacqui/how-to-set-up-a-wiki-site](http://www.slideshare.net/sharpiacqui/how-to-set-up-a-wiki-site)
- Check out the following sites when setting up a wiki page at Wikia  
[community.wikia.com/wiki/Create\\_an\\_account](http://community.wikia.com/wiki/Create_an_account)  
[www.wikia.com/Special:CreateNewWiki](http://www.wikia.com/Special:CreateNewWiki)  
[www.wikihow.com/Create-a-Free-Wiki-with-Wikia](http://www.wikihow.com/Create-a-Free-Wiki-with-Wikia)
- The following websites provide specific steps when creating an account with Wikidot.  
[handbook.wikidot.com/en:start-a-wiki](http://handbook.wikidot.com/en:start-a-wiki)  
[www.wikihow.com/Make-a-Page-on-Wikidot](http://www.wikihow.com/Make-a-Page-on-Wikidot)



### Expected Outcomes

- Create a Wiki page for the library using one of the three most popular free Wiki platforms.
- Update wikis with articles, images, infographics and videos.

## Day 3: Really Simple Syndication (RSS)



### Learning Outcomes

At the end of Day 3, participants are expected to define what really simple syndication (RSS) is and subscribe to relevant RSS feeds for library use.

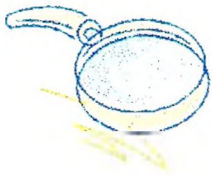
### Objectives



Participants should be able to:

1. Enumerate and discuss the most popular RSS aggregators/readers.
2. Set up an aggregator to collect RSS feeds.
3. Compare and contrast the features of two or three different RSS feeders.

### Overview



RSS is an online tool which allows users to know about the content of websites, blogs, or podcasts without necessarily visiting its actual site. RSS serves to feed new materials, blog posts, and event information to readers, providing library users with the ability to customize catalog searches and subscribe to them to monitor new catalog additions and news from the library (Stephens and Collins, 2007).

### List of Activities



#### Activity No. 1

Visit the following sites to get more idea about RSS:

- [probblogger.net/what-is-rss/](http://probblogger.net/what-is-rss/)
- [rss.softwaregarden.com/aboutrss.html](http://rss.softwaregarden.com/aboutrss.html)
- [usa.gov/Topics/Reference-Shelf/Libraries/RSS-Library/What-Is-RSS.shtml](http://usa.gov/Topics/Reference-Shelf/Libraries/RSS-Library/What-Is-RSS.shtml)

#### Activity No. 2

Check out some of the most popular RSS aggregators:

- [feedly.com](http://feedly.com)
- [www.bloglines.com](http://www.bloglines.com)
- [www.netvibes.com](http://www.netvibes.com)
- [www.newsblur.com](http://www.newsblur.com)

Activity No. 3

Check out the following tutorials on how to set up an account with the five most popular RSS aggregators.

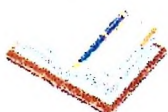
- [blog.feedly.com/getting-started](http://blog.feedly.com/getting-started)
- [blog.netvibes.com/how-to-your-very-first-dashboard](http://blog.netvibes.com/how-to-your-very-first-dashboard)
- [web.summons.edu/~gshslab/website/workshops/wkshp\\_rss\\_bloglines\\_20100917.pdf](http://web.summons.edu/~gshslab/website/workshops/wkshp_rss_bloglines_20100917.pdf)
- [www.linux-magazine.com/Online/Blogs/Productivity-Sauce/Read-and-Manage-RSS-Feeds-with-NewsBlur](http://www.linux-magazine.com/Online/Blogs/Productivity-Sauce/Read-and-Manage-RSS-Feeds-with-NewsBlur)



### Expected Outcomes

- Create RSS aggregators for library use.
- Feed articles and websites on the library's RSS feeders.
- Explain the process or steps to create and use an RSS aggregator.
- Share the experience of setting up an RSS aggregator.

## Day 4: Social Networking Sites (SNS)



### Learning Outcomes

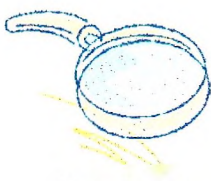
At the end of Day 4, participants should be able to master not just the basic but also the advanced features of social networking sites, particularly Facebook and Twitter.



### Objectives

Participants should be able to:

1. Discuss the different features of popular social networking sites.
2. Enumerate and explicate benefits of social networking sites.
3. Compare and contrast the features of popular networking sites.
4. Set up an account with one or more social networking sites.



### Overview

Social networking sites are so far the most popular medium for publishing, sharing, communicating and disseminating of information enabling individuals to represent their social networks in a computer-mediated context, articulate their social networks or maintain connections with others (Kalbande and Golwal, 2012) These are the easiest media to reach out to people, interact with students, answer questions, and provide information about library and university services (Stephens and Collins, 2007). Social networking is considered the “most promoting technology and networking.” Social networking sites, such as Facebook, Twitter, MySpace, Pinterest and Instagram serve the following purpose: interact, share and change resources dynamically in an electronic medium, allowing users to create accounts with the library network; see what other users have in common to their informational needs, recommended resources to one another and the network recommended resources to users, based on similar profile; allow users to choose what is public and private to help circumvent privacy issues; enable users to catalog books and view what other users share those books; and enable users to recommend books to one another simply by viewing other online curating sites (Firke, Mukhyadal and Dakne, 2012).





## List of Activities

### Activity No. 1

To find out more about social networking, visit the following sites:

- [mashable.com/category/social-networking](http://mashable.com/category/social-networking)
- [www.ala.org/news/mediapresscenter/americaslibraries/soal2012/social-networking](http://www.ala.org/news/mediapresscenter/americaslibraries/soal2012/social-networking)
- [www.pcmag.com/encyclopedia/term/55316/social-networking-site](http://www.pcmag.com/encyclopedia/term/55316/social-networking-site)
- [www.webopedia.com/TERM/S/social\\_networking\\_site.html](http://www.webopedia.com/TERM/S/social_networking_site.html)
- [www.whatissocialnetworking.com](http://www.whatissocialnetworking.com)

### Activity No. 2

Check out some of the most popular social networking sites that you can use in your library:

- [plus.google.com](http://plus.google.com)
- [twitter.com](http://twitter.com)
- [www.facebook.com](http://www.facebook.com)
- [www.librarything.com](http://www.librarything.com)

### Activity No. 3

The following tutorials are helpful in setting up an account in different social networking sites.

- [mashable.com/2013/10/27/google-plus-beginners-guide](http://mashable.com/2013/10/27/google-plus-beginners-guide)
- [www.gctlearnfree.org/twitter101](http://www.gctlearnfree.org/twitter101)
- [www.queenslibrary.org/sites/default/files/Social\\_Media/Facebook%20Tutorial.pdf](http://www.queenslibrary.org/sites/default/files/Social_Media/Facebook%20Tutorial.pdf)
- [www.scls.info/program/software/LibraryThing-MID.pdf](http://www.scls.info/program/software/LibraryThing-MID.pdf)



## Expected Outcomes

- Create social networking accounts for library, particularly on Facebook, Twitter, and Google Plus.
- Post pictures and updates about their respective libraries, collections, and library activities.
- Teach users the process or steps to create and use social media and.
- Modify the privacy settings of library's SNS account.
- Promote library's collections, activities, and program through popular social networking sites.
- Discuss the benefits of using social networking sites for your library.

## Day 5: Instant Messaging (IM)



### Learning Outcomes

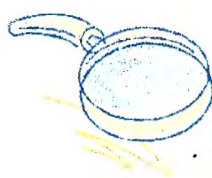
At the end of Day 5, participants should be able to acquire more advanced skills and use Instant Messaging (IM) on a more regularly basis.



### Objectives

Participants should be able to:

1. Discuss what are the other uses of an IM aside from sending and receiving messages.
2. Compare and contrast the features of Skype and Yahoo! Messenger.
3. Make a video call to someone or set up a group call.
4. Send and download documents via IM.



### Overview

Instant messaging is a form of real-time communication between two or more people based on typed text (Educause, 2011). Libraries have adopted IM as a means of offering affordable and quick virtual reference using systems that users may already have in their computer.

IM allows real time text communication between individuals, generally used in SMS. Libraries have begun employing this platform to offer “chat reference servicing” where used can synchronously communicate with the information specialist, as much as they would with face-to-face reference context (Firke, Mukhyadal and Dakne, 2012). In the library, an IM messaging service could be staffed or manned by the reference librarian.



### List of Activities

#### Activity No. 1

To find out more about instant messaging, visit the following

sites:

- [computer.howstuffworks.com/e-mail-messaging/instant-messaging.htm](http://computer.howstuffworks.com/e-mail-messaging/instant-messaging.htm)
- [www.archives.gov/records-mgmt/initiatives/im-faq.html](http://www.archives.gov/records-mgmt/initiatives/im-faq.html)
- [www.webopedia.com/TERM/I/instant\\_messaging.html](http://www.webopedia.com/TERM/I/instant_messaging.html)
- [www.wisegeek.org/what-is-instant-messaging.htm#didyouknowout](http://www.wisegeek.org/what-is-instant-messaging.htm#didyouknowout)

### Activity No. 2

Visit and explore the features of the most popular social networking sites that you can use in your library:

- [messenger.yahoo.com](http://messenger.yahoo.com)
- [www.skype.com](http://www.skype.com)

### Activity No. 3

Check out the following tutorials on how to download and set up an account with Skype and Yahoo Messenger.

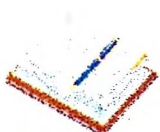
- [help.yahoo.com/!us/yahoo\\_videotuts/ms11/tut\\_intro.html](http://help.yahoo.com/!us/yahoo_videotuts/ms11/tut_intro.html)
- [help.yahoo.com/sbc/tutorials/ms8/im\\_setup1.html](http://help.yahoo.com/sbc/tutorials/ms8/im_setup1.html)
- [support.skype.com/en/faq/FA11098/getting-started-with-skype-windows-desktop](http://support.skype.com/en/faq/FA11098/getting-started-with-skype-windows-desktop)
- [www.lynda.com/Skype-training-tutorials/1523-0.html](http://www.lynda.com/Skype-training-tutorials/1523-0.html)



### **Expected Outcomes**

- Use the different features and functionalities of the popular IMs, especially Yahoo Mail and Skype with ease.
- Use IMs in delivering remote services to students and library patrons.
- Successfully perform a video call or conference call with a group.
- Send, upload and download documents and images.
- Teach users how to use IMs.

## Day 6: Podcast



### Learning Outcomes

At the end of day six, participants should be able to acquire at least the basic skills and competencies in using podcast in their respective libraries.



### Objectives

Participants should be able to:

1. Discuss the benefits of a podcast.
2. Explicate the uses of a podcast.
3. Enumerate the tools needed in creating a podcast.
4. Create and share a podcast.



### Overview

Podcast is a digital recording that can be downloaded to a computer or some other device (Educause, 2011). Podcasts are used for promotional recordings about an organization's services and programs. For the library, podcasts can be used for book reviews of all ages, speeches by visiting authors, children's story, book club promotions, etc. Academic libraries podcast highlight new resources, library information, such as the monthly podcast series of the organization (Stephens and Collins, 2007).



### List of Activities

#### Activity No. 1

Find out more about podcast by checking the following sites:

- [etc.usf.edu/techease/mac/internet/what-is-a-podcast-and-how-do-i-create-one/](http://etc.usf.edu/techease/mac/internet/what-is-a-podcast-and-how-do-i-create-one/)
- [open.nesu.edu/prof\\_podcast.pdf](http://open.nesu.edu/prof_podcast.pdf)
- [www.howtopodcasttutorial.com/what-is-a-podcast.htm](http://www.howtopodcasttutorial.com/what-is-a-podcast.htm)

#### Activity No. 2

Check podcasts made by other libraries:

- [loc.gov/podcasts/](http://loc.gov/podcasts/)
- [www.bl.uk/whatson/podcasts/](http://www.bl.uk/whatson/podcasts/)
- [www.davidleeking.com/2011/11/10/library-podcasts-you-might-find-useful](http://www.davidleeking.com/2011/11/10/library-podcasts-you-might-find-useful)
- [www.spl.org/library-collection/podcasts](http://www.spl.org/library-collection/podcasts)

### Activity No. 3

Find out the tools that you'll need to create a podcast for your library:

- [howtopodcasttutorial.com](http://howtopodcasttutorial.com)
- [podcastanswerman.com/learn-how-to-podcast](http://podcastanswerman.com/learn-how-to-podcast)
- [teacherlink.ed.usu.edu/t/resources/training2/PodcastTutorial.pdf](http://teacherlink.ed.usu.edu/t/resources/training2/PodcastTutorial.pdf)



### **Expected Outcomes**

- Create a podcast for your library where it will be shared either on the library's Facebook page, blog or website.
- Use podcast to announce library and share relevant information to users.

## Day 7: Video Streaming



### Learning Outcomes

At the end of Day 7, participants should use video streaming in their respective libraries with ease.



### Objectives

Participants should be able to:

1. Enumerate the benefits of video streaming for the library.
2. Compare video streaming with a podcast.
3. Create a promotional video about the library and post them on Youtube, Facebook or library blog.
4. Subscribe to Youtube accounts of other libraries. .
5. Add to library's Youtube account videos that are worth sharing.



### Overview

Streaming of video and audio media could be taken advantage of in library instruction and orientation programs to be ran online, incorporating more interactive media-rich facets (Firke, Mukhyadal and Dakne, 2012).



### List of Activities

#### *Activity No. 1*

Find out more about video streaming by checking the following sites:

- [computer.howstuffworks.com/internet/basics/streaming-video-and-audio.htm](http://computer.howstuffworks.com/internet/basics/streaming-video-and-audio.htm)
- [kb.wisc.edu/streaming/page.php?id=5325](http://kb.wisc.edu/streaming/page.php?id=5325)
- [streaming.wisconsin.edu/](http://streaming.wisconsin.edu/)

- [whatis.techtarget.com/definition/streaming-media](http://whatis.techtarget.com/definition/streaming-media)

### Activity No. 2

Check Youtube pages by other libraries:

- [www.youtube.com/user/britishlibrary](http://www.youtube.com/user/britishlibrary)
- [www.youtube.com/user/LibraryOfCongress](http://www.youtube.com/user/LibraryOfCongress)
- [www.youtube.com/user/NewYorkPublicLibrary](http://www.youtube.com/user/NewYorkPublicLibrary)
- [www.youtube.com/watch?v=0v60pJXl6Do&snfreload=10](http://www.youtube.com/watch?v=0v60pJXl6Do&snfreload=10)

### Activity No. 3

Learn how to set up an account with Youtube with the help of the following guides:

- [support.google.com/youtube/answer/161805?hl=en](http://support.google.com/youtube/answer/161805?hl=en)
- [www.dummies.com/how-to/content/how-to-create-a-youtube-account.html](http://www.dummies.com/how-to/content/how-to-create-a-youtube-account.html)
- [www.hongkiat.com/blog/youtube-tutorial-for-beginners/](http://www.hongkiat.com/blog/youtube-tutorial-for-beginners/)

### Activity No. 4

Check the following sites and learn how to upload a video, slide or audio on Youtube:

- [lifehacker.com/5804501/how-to-upload-videos-to-youtube-for-beginners](http://lifehacker.com/5804501/how-to-upload-videos-to-youtube-for-beginners)
- [support.google.com/youtube/answer/57407?hl=en](http://support.google.com/youtube/answer/57407?hl=en)
- [thinktutorial.com/social-media/youtube/upload-a-video-2/](http://thinktutorial.com/social-media/youtube/upload-a-video-2/)
- [www.hongkiat.com/blog/youtube-tutorial-for-beginners/](http://www.hongkiat.com/blog/youtube-tutorial-for-beginners/)



## **Expected Outcomes**

- Market and promote the library through Youtube and other video streaming sites.
- Share relevant and informative videos.
- Create a video that provides a quick background about the library.

## Day 8: Social Bookmarking



### Learning Outcomes

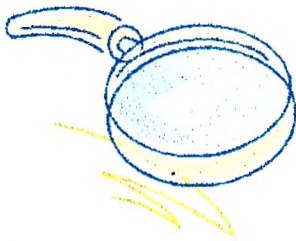
At the end of Day 8, participants should be able to bookmark relevant sites and use this tool with ease.



### Objectives

Participants should be able to:

1. Discuss the benefits of using social bookmarking sites.
2. Enumerate and discuss the most popular social bookmarking sites.
3. Set up an account with one or more social bookmarking sites.
4. Use social bookmarking sites in looking for, gathering and organizing relevant online information.
5. Enumerate the different uses of social book marking sites.



### Overview

Social bookmarking sites are online tools which you use to save links to a public site and tagging them with visitors. Bookmarked sites could be searched for sites that others have linked to (Educause, 2011). The most popular social bookmarking sites include Delicious, Digg, Reddit and

StumbleUpon.



### List of Activities

#### Activity No. 1

Find out more about social bookmarking by checking the following sites:

- [mashable.com/category/social-bookmarking](http://mashable.com/category/social-bookmarking)

online information.

5. Enumerate the different uses of social book marking sites.



- [net.educause.edu/ir/library/pdf/ELI7001.pdf](http://net.educause.edu/ir/library/pdf/ELI7001.pdf)
- [www.networksolutions.com/support/social-bookmarking-what-is-it-and-how-can-it-help-promote-my-site](http://www.networksolutions.com/support/social-bookmarking-what-is-it-and-how-can-it-help-promote-my-site)
- [www.searchenginejournal.com/50-social-bookmarking-sites-importance-of-user-generated-tags-votes-and-links](http://www.searchenginejournal.com/50-social-bookmarking-sites-importance-of-user-generated-tags-votes-and-links)

### Activity No. 2

Visit the most popular social bookmarking sites:

- [del.icio.us](http://del.icio.us)
- [digg.com](http://digg.com)
- [www.reddit.com](http://www.reddit.com)
- [www.stumbleupon.com](http://www.stumbleupon.com)

### Activity No. 3

Learn how to set up an account with different social bookmarking tools with the help of the following websites:

- <http://home2.fvcc.edu/~drausche/tutorials/delicious.pdf>
- <http://www.searchenginejournal.com/beginners-guide-to-digg/54817/>
- <http://mashable.com/2012/06/06/reddit-for-beginners/>
- <http://www.tots100.co.uk/2014/07/08/the-beginners-guide-to-using-stumbleupon/>



### **Expected Outcomes**

- Set up an account with one or more social bookmarking sites.
- Bookmark relevant and informative online materials.
- Teach students and users how to use social bookmarking sites when doing research.

## Day 9: Blog



### Learning Outcomes

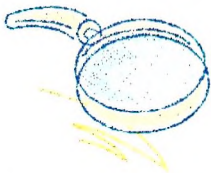
At the end of Day 9, participants should be able to set up, update and use a blog in promoting, marketing and sharing information about the library.



### Objectives

Participants should be able to:

1. Discuss what a blog is.
2. Enumerate the most popular free blogging platforms.
3. Set up an account with one or more blogsites for the library.
4. Regularly update blogs by posting articles, pictures, videos and infographic materials.
5. Enumerate the benefits of a blog.



### Overview

The term blog is a contraction of the term weblog. It is a type of website, usually maintained by an individual who regularly enters commentary, descriptions of events, or other material such as graphics or video (Educause, 2011). It is updated frequently, dated, arranged in reversed chronological order and maintained with varied and unlimited information depending on the purpose and nature of the blog where everybody can read and write their views and ideas without changing the original content. Blogs are created to create a “what’s new” style site for users to market new materials and resources, events, and to share information. With open comments, the blogs create conversation within the community as a meeting place for discussion (Stephens and Collins, 2007).

### List of Activities



#### Activity No. 1

Find out more about social bookmarking by checking the following sites:

- [blogbasics.com/what-is-a-blog](http://blogbasics.com/what-is-a-blog)
- [net.educause.edu/ir/library/pdf/ELI7006.pdf](http://net.educause.edu/ir/library/pdf/ELI7006.pdf)
- [weblogs.about.com/od/startingablog/p/WhatIsABlog.htm](http://weblogs.about.com/od/startingablog/p/WhatIsABlog.htm)

### Activity No. 2

Visit the most popular library/librarians' blogsites. Observe their content and find out what they have in common:

- [cansunainlibrary.blogspot.com](http://cansunainlibrary.blogspot.com)
- [curtiselementarylibrary.blogspot.com](http://curtiselementarylibrary.blogspot.com)
- [mediaspecialistsguide.blogspot.com](http://mediaspecialistsguide.blogspot.com)
- [yanmeterlibraryvoice.blogspot.com](http://yanmeterlibraryvoice.blogspot.com)
- [www.thedaringlibrarian.com](http://www.thedaringlibrarian.com)

### Activity No. 3

Check out free blog hosting sites where you can open an account for your library without spending a cent.

- [wordpress.com](http://wordpress.com)
- [www.blogger.com](http://www.blogger.com)
- [www.tyepad.com](http://www.tyepad.com)

### Activity No. 3

Set up a blog for your library on one or more free blog hosts. The following tutorials and how-to's will help you.

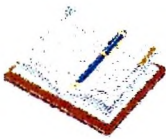
- [danieleraig.wikispaces.com/file/view/Blogger+Tutorial.pdf](http://danieleraig.wikispaces.com/file/view/Blogger+Tutorial.pdf)
- [www.dummies.com/how-to/content/tyepad-for-dummies-cheat-sheet.html](http://www.dummies.com/how-to/content/tyepad-for-dummies-cheat-sheet.html)
- [businessjournalism.org/wp-content/uploads/2011/05/WordPressinOneDayTutorial.pdf](http://businessjournalism.org/wp-content/uploads/2011/05/WordPressinOneDayTutorial.pdf)



## Expected Outcomes

- Create a blogsite for the library.
- Update the blog with the latest contents, images, videos, and infographic materials.
- Promote library activities and programs through the blog.
- Teach users how to set up and update a blog.

## Day 10: Photo Sharing



### Learning Outcomes

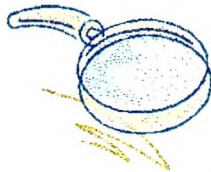
At the end of Day 10, participants should be able to set up and update photo sharing sites for the library.



### Objectives

Participants should be able to:

1. Discuss what a photo sharing tool is.
2. Enumerate the most popular free photo sharing sites.
3. Explain the benefits of using photo sharing sites.



### Overview

Photo sharing tools allow users to share images online. However, the social software side of photo sharing sites is what makes them really powerful, including the ability to share images publicly online or with selected users, commenting tools, tagging and geolocation systems and collection management tools.

### List of Activities



#### Activity No. 1

Find out more about photo sharing tools by checking the following sites:

- [computer.howstuffworks.com/internet/basics/photo-sharing.htm](http://computer.howstuffworks.com/internet/basics/photo-sharing.htm)
- [net.educause.edu/ir/library/pdf/ELI7034.pdf](http://net.educause.edu/ir/library/pdf/ELI7034.pdf)
- [socialnetworking.swsi.wikispaces.net/Photosharing](http://socialnetworking.swsi.wikispaces.net/Photosharing)
- [www.jiscdigitalmedia.ac.uk/guide/photo-sharing-sites/](http://www.jiscdigitalmedia.ac.uk/guide/photo-sharing-sites/)

### Activity No. 2

Check out the most popular photo sharing sites where you can open an account for your library:

- [flickr.com](http://flickr.com)
- [picasa.google.com](http://picasa.google.com)
- [shutterfly.com](http://shutterfly.com)

### Activity No. 3

Set up an account for your library on one or more free photo sharing tools. The following tutorials and how-to's will help you.

- [fcit.usf.edu/laptop/pdf/flickr.pdf](http://fcit.usf.edu/laptop/pdf/flickr.pdf)
- [www.lmsenior.net.com/workshop/picasa/pws2.pdf](http://www.lmsenior.net.com/workshop/picasa/pws2.pdf)
- [www.shutterfly.com/howto/photobook/how\\_to\\_create\\_photobook.pdf](http://www.shutterfly.com/howto/photobook/how_to_create_photobook.pdf)



### **Expected Outcomes**

- Create a photo sharing account that the library and library users could utilize.
- Upload, download and share images using photo sharing tools.

## Day 11: Slide Sharing



### Learning Outcomes

At the end of Day 11, participants should be able to use slide sharing tools in information sharing in the library.

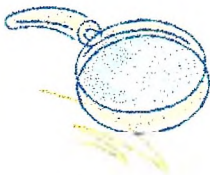


tools.

### Objectives

Participants should be able to:

1. Discuss what a slide sharing tool is.
2. Enumerate the benefits of using slide sharing tools.
3. Set up an account with Slide Share and other slide sharing



### Overview

Slide sharing tools are online platforms where users can upload files privately or publicly in the following file formats: PowerPoint, PDF, Keynote or OpenDocument presentations. Slide decks can then be viewed on the site itself, on hand held devices or embedded on other sites. Likewise, those with accounts in these tools could download certain slides for free.



### List of Activities

#### Activity No. 1

Find out more about photo sharing tools by checking the following sites:

- [mashable.com/category/slideshare](http://mashable.com/category/slideshare)
- [www.edudemic.com/powerpoint-presentations-online](http://www.edudemic.com/powerpoint-presentations-online)
- [www.edudemic.com/powerpoint-presentations-online](http://www.edudemic.com/powerpoint-presentations-online)

#### Activity No. 2

Check out the most online slide sharing tools where you can set up an account for your library and where you can share your library's slides and PowerPoint presentations:

- [www.slideboom.com](http://www.slideboom.com)
- [www.slideserve.com](http://www.slideserve.com)
- [www.slideshare.net](http://www.slideshare.net)

### Activity No. 3

Set up an account for your library on one or more slide sharing tools. The following tutorials and how-to's will help you.

- [www.marketo.com/assets/uploads/marketo-cheatsheet-slideshare.pdf?20130109174122](http://www.marketo.com/assets/uploads/marketo-cheatsheet-slideshare.pdf?20130109174122)
- [www.slideboom.com/presentations/415404/SLIDEBOOM-TUTORIAL](http://www.slideboom.com/presentations/415404/SLIDEBOOM-TUTORIAL)
- [www.slideshare.net/MixyG/how-to-use-slide-serve](http://www.slideshare.net/MixyG/how-to-use-slide-serve)



### **Expected Outcomes**

- Create an account with slide sharing sites for the library, particularly in Slideshare, Slideboom and Slideserve.
- Download and upload slides and presentations in different slide sharing tools.

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funding, adequate facilities and supportive administration were identified as opportunities that should be capitalized for successful Web 2.0 integration in libraries.

# **APPENDICES**

**QUESTIONNAIRE IN ANALYZING THE CHALLENGES AND OPPORTUNITIES OF WEB 2.0  
INTEGRATION IN THE ACADEMIC LIBRARIES IN THE PROVINCE OF CAPIZ**

By Christian George F. Acevedo  
Central Philippine University

Kindly fill the information needed in form below. Your response shall be treated confidential.

Name of respondent (Optional): \_\_\_\_\_ Age: \_\_\_\_\_ Sex: \_\_\_\_\_

Name of institution: \_\_\_\_\_

Position:  Library head  Library staff Year(s) of experience: \_\_\_\_\_

Employment status:  Regular/Permanent  Contractual/Non-permanent

**I. LEVEL OF AWARENESS ON WEB 2.0 TECHNOLOGIES.** *Definition of the levels of awareness on Web 2.0 technologies.*

Level of Awareness	Numerical Equivalent	Description
Highly aware	5	Owens account on multiple Web 2.0 platforms, has excellent familiarity, identifies different Web 2.0 tools, distinguishes the functions of each tool.
Moderately aware	4	Shows average awareness on utilizing Web 2.0 tools, has more than two accounts and utilization is frequent.
Slightly aware	3	Shows modest appreciation of the Web 2.0 tools, has one or two accounts but unfamiliar with its features.
Barely aware	2	Demonstrates low level of familiarity, has heard about Web 2.0 tools but does not own any account.
Not aware	1	Does not have any Web 2.0 account and has never been introduced to any of this.

To what extent are you aware of the existence of Web 2.0 technology? Please check the appropriate column.

Web 2.0 Tools	Level of Awareness				
	Highly Aware (5)	Moderately Aware (4)	Slightly Aware (3)	Barely Aware (2)	Not aware (1)
1. Wikis (e.g. Wikipedia, WikiPilipinas, Wikimapia)					
2. Really Simple Syndication (RSS)					
3. Social Networking Sites (SNS) (e.g. Facebook, Twitter, Instagram)					
4. Instant Messaging (IM) / Chat (e.g. Skype, Yahoo Messenger, Google Chat/Hangouts)					
5. Podcast/Audio Sharing (e.g. Library of Congress Podcast, Harvard Library Innovation Laboratory Podcast, Library Spot)					
6. Video Streaming/Vodcast (e.g. Youtube, Vimeo)					
7. Social Bookmarking/Tagging (e.g. Digg, Delicious [formerly del.icious], Reddit)					
8. Mashups (e.g. Trendmaps, Yelp, Google Maps, ThisWeKnow)					
9. Blogs/Microblogs (e.g. Media Specialist Guide to the Internet, Daring Librarian, The True Adventures of a High School Librarian)					
10. Photo Sharing (e.g. Flickr, Picasa, Shutterfly)					
11. Presentation/Slide sharing (e.g. Slideshare, Slidesnack, Slideboom)					

How did you learn about the availability of these Web 2.0 tools? Check your responses.

- Online search                       Newspaper/magazine                       Fellow librarian  
 From a friend                       From family members                       From instructor  
 Seminar/training                       Other(s), please specify: \_\_\_\_\_

**II. EXISTING WEB 2.0 TECHNOLOGIES.** *Personal Use of Web 2.0 Tools. Kindly check the response that best corresponds to your personal use of Web 2.0.*

Web 2.0 Tools	Responses	
	Yes	No
1. Wikis(e.g. Wikipedia, WikiPilipinas, Wikimapia)		
2. Really Simple Syndication (RSS)		
3. Social Networking Sites (SNS) (e.g. Facebook, Twitter, Instagram)		
4. Instant Messaging (IM)/Chat(e.g. Skype, Yahoo Messenger, Google Chat/Hangouts)		
5. Podcast/Audio Sharing (e.g. Library of Congress Podcast, Harvard Library Innovation Laboratory Podcast, Library Spot)		
6. Video Streaming/Vodcast(e.g. Youtube, Vimeo)		
7. Social Bookmarking/Tagging(e.g. Diggs, Delicious [formerly del.icious], Reddit)		
8. Mashups(e.g. Trendmaps, Yelp, Google Maps, ThisWeKnow)		
9. Blogs/Microblogs(e.g. Media Specialist Guide to the Internet, Daring Librarian, The True Adventures of a High School Librarian)		
10. Photo Sharing (e.g. Flickr, Picasa, Shutterfly)		
11. Presentation/Slide Sharing (e.g. Slideshare, Slidesnack, Slideboom)		

If you are using other Web 2.0 tools, please specify: \_\_\_\_\_.

*Existing Web 2.0 Tools in the Library. Kindly check the response that best corresponds to the availability of Web 2.0 technologies in your library.*

Web 2.0 Tools	Responses	
	Yes	No
1. Wikis(e.g. Wikipedia, WikiPilipinas, Wikimapia)		
2. Really Simple Syndication (RSS)		
3. Social Networking Sites (SNS) (e.g. Facebook, Twitter, Instagram)		
4. Instant Messaging (IM)/Chat(e.g. Skype, Yahoo Messenger, Google Chat/Hangouts)		
5. Podcast/Audio Sharing (e.g. Library of Congress Podcast, Harvard Library Innovation Laboratory Podcast, Library Spot)		
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10. Photo Sharing (e.g. Flickr, Picasa, Shutterfly)		
11. Presentation/Slide Sharing (e.g. Slideshare, Slidesnack, Slideboom)		

If you are using other Web 2.0 tools, please specify: \_\_\_\_\_.



**III. WEB 2.0 COMPETENCIES OF LIBRARIANS.** *Definition of the levels of Web 2.0 competencies of librarians and their staff.*

Level of Competency	Numerical Equivalent	Description
Highly Competent	5	Demonstrates expertise in using Web 2.0 tools, can teach/explain how the function works and is quick to learn new applications.
Competent	4	Shows familiarity but has average competency in utilizing the tool and is not prepared to teach these tools.
Moderately Competent	3	Performs only the most basic function and needs further/advanced training to enhance his skill to use the tools with ease.
Somewhat Competent	2	Displays limited competency and needs training to further familiarize the use of tool.
Least Competent	1	Shows very low-level of competency and requires assistance to perform a task.

*Kindly check the box that best corresponds to your level of competency in using web 2.0 tools.*

Competencies	Level of Competencies				
	Highly Competent (5)	Competent (4)	Moderately Competent (3)	Somewhat Competent (2)	Not Competent (1)
1. Creates an account on one or more social media site/ Web 2.0 platform (e.g. Facebook, Twitter, Youtube, Tumblr, etc.)					
2. Participate in a collaborative writing site, like Wikipedia.					
3. Updates own social media status.					
4. Shares relevant information posted by another individual/organization.					
5. Comments on friend's or another user's post or photo.					
6. Likes another user's post or update.					
7. Likes another user's photo or video.					
8. Creates, moderates, or/and joins pages, groups, forums.					
9. Sends private message to a friend using Facebook, Twitter, or Skype.					
10. Uses #hashtag on every post.					
11. Uploads/downloads video, clip, image or slide.					
12. Streams and watches videos on video-sharing sites, like Youtube, Vimeo, etc.					
13. Comments on videos and reports any video with inappropriate content to the administrator.					
14. Sets up blog(s) and/or website(s).					
15. Writes and posts contents on blogs and websites.					
16. Adds on social bookmarking sites favorites or worthwhile information found on the internet.					
17. Announces events and activities on Facebook, Twitter, and other social networking sites.					
18. Subscribes/Embeds posts on RSS.					

#### IV. CHECKLIST OF LIBRARY FACILITIES AND INFRASTRUCTURE

A. Please check the box that corresponds to the library facility/infrastructure that you have.

Internet station     Personal computers (PC)     Laptops  
 Tablets     Internet connection

B. Follow up questions:

1. How many personal computers does the library have?
2. How fast is your internet speed?
3. How many IT personnel do you have?
4. Are laptops provided for library clientele usage?  Yes     No
5. Are tablets available for library clientele usage?  Yes     No

V. **ACCEPTANCE TOWARDS WEB 2.0 INTEGRATION.** *Definition of the levels of acceptance/attitude towards Web 2.0 integration in the academic libraries in the Province of Capiz.*

Level of Acceptance	Equivalent	Description
Strongly agree	5	Response is fixed and respondent's mind is least likely to change.
Agree	4	Respondent agrees to the statement but could reconsider if further information is provided.
Undecided	3	Respondent neither agrees or disagrees with the statement and requires more information to make a decision.
Disagree	2	Respondent differs with the statement but could change his/her mind later when provided with more information.
Strongly disagree	1	Respondent is firm on his response and has profound reasons why he/she does not concur with the statement.

Please check the box that corresponds to your response to the statements below.

Statements	Level of Acceptance				
	Strongly Agree (5)	Agree (4)	Undecided (3)	Disagree (2)	Strongly Disagree (1)
<b>Perceived Usefulness Statements</b>					
1. Using <i>Web 2.0</i> would improve my performance in doing my job.					
2. Using <i>Web 2.0</i> at work would improve my productivity.					
3. Using <i>Web 2.0</i> would enhance my effectiveness in my job.					
4. I would find <i>Web 2.0</i> useful in my job.					
<b>Perceived Ease of Use Statements</b>					
1. Learning to operate <i>Web 2.0</i> would be easy for me.					
2. I would find it easy to get <i>Web 2.0</i> to do what I want it to do.					
3. It would be easy for me to become skillful in the use of <i>Web 2.0</i> .					
4. I would find <i>Web 2.0</i> easy to use.					
<b>Behavioral Intention to Use</b>					
I intend to use <i>Web 2.0</i> regularly at work					

**VI. CHALLENGES.** What do you think are the factors that prevent the library from incorporating Web 2.0 technologies in the library? Kindly check the boxes that you think corresponds to the deterring factors involved.

- Lack of budget
- Lack of knowledgeable and skilled staff
- Lack of maintenance
- Limited time availability
- Limited training
- No proper planning
- Lack of willingness to change/improve
- Poor internet access
- Inadequate/outdate equipment/infrastructure
- Lack of management support
- Other(s), please specify: \_\_\_\_\_.

**VII. OPPORTUNITIES.** What do you think are the opportunities for integrating web 2.0 technologies in the library? Please check the box that you think best corresponds to the opportunities that the library may benefit.

- Existing Web 2.0 technologies
- Adequate funding
- Well-trained staff
- Availability of maintenance
- Strong internet access
- Adequate IT infrastructure
- Strong interest from staff to learn Web 2.0
- Supportive administration
- Familiarity of staff in using the computer and Internet
- Willingness of staff to work/connect/collaborate with librarians from other institutions through Web 2.0 platform.
- Other(s), please specify: \_\_\_\_\_.

THANK YOU FOR TAKING TIME IN ANSWERING.



**CENTRAL PHILIPPINE UNIVERSITY**

Lopez Jaena Street  
Jaro, Iloilo City

August 19, 2014

**REV. DR. DOMINGO DIEL**

President

Filamer Christian University

Roxas Avenue

Roxas City

Reverend:

Greetings!

I am a graduate student at Central Philippine University taking up Master in Library and Information Science (MLIS). I am already on my thesis writing this semester and I am currently gathering data about my study titled "Web 2.0 in the Library: Analysis of Opportunities and Challenges."

My study aims to determine the opportunities and challenges IN integrating Web 2.0 technologies in the Province of Capiz. The output of this study is a training program that would integrate the use of Web 2.0 technologies in the library, which, I hope would be of great help in improving library services. With this, I would like to request your permission to allow me to gather relevant information from your librarians. I have attached the questionnaire for your perusal. I also would like to request for your approval to conduct an ocular survey on your library, particularly on its infrastructure and internet facilities.

I do look forward to your favorable approval on this request.

Thank you very much.

Respectfully yours,

  
**CHRISTIAN GEORGE F. ACEVEDO**  
MLIS Student

Noted:

  
**REYSA C. ALENZUELA, Ph. D.**  
Adviser



**CENTRAL PHILIPPINE UNIVERSITY**  
Lopez Jaena Street  
Jaro, Iloilo City

August 19, 2014

**DR. EDITHA L. MAGALLANES**  
President  
Capiz State University  
Fuentes Drive  
Roxas City

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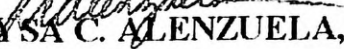
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**CENTRAL PHILIPPINE UNIVERSITY**  
Lopez Jaena Street  
Jaro, Iloilo City

August 19, 2014

**MS. CHRISTY HERNANDEZ-SYNCHING**

President  
Hercor College  
Km. 1, Lawaan  
Roxas City

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**CENTRAL PHILIPPINE UNIVERSITY**

Lopez Jaena Street  
Jaro, Iloilo City

August 19, 2014

**MS. EVITA REGINA DABAO**

Chancellor  
College of St. John  
Teodorica Avenue  
Roxas City

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Adviser



**CENTRAL PHILIPPINE UNIVERSITY**

Lopez Jaena Street  
Jaro, Iloilo City

August 19, 2014

**MSGR. RUFINO REGIE A. PAMPOSA**

Rector  
Arzobispo Street  
Colegio de la Purisima Concepcion  
Roxas City

Monsignor:

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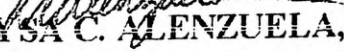
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