

## **Virtual Library Services in Hyper- connected Knowledge Society**

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### **Abstract**

*In the digital age, new technologies both expand and limit access to information. The global information economy is transforming the way people connect with each other, learn new things and contribute to the knowledge society. This paper explores the different virtual services platforms currently adopted in 131 subject university libraries in Kazakhstan. Using case-analysis the researcher explored deeper on how virtual services contribute to the development of research and academic endeavors of Graduate School of Business students. Findings of the study revealed that less than half of the universities in Kazakhstan have VLS; however, the value of VLS is explicitly cited by respondents. Recommendations for further study on factors affecting the implementation of VLS in all libraries, stronger collaboration and increased awareness of VLS services hope to ensure the implementation of the government program called Information Kazakhstan – 2020.*

**Keywords:** *virtual library services, hyper connected society, Kazakhstan*

### **Introduction**

Internet penetration around the world has reached 51.7% or almost 4 billion population as of June 30, 2017 ([Internet World Stats, 2017](#)). With the growing web presence, online engagement becomes essential in the knowledge society. This creates a participatory culture (Jenkins, 2009) where netizens have the opportunity to become knowledge creators and libraries play a significant role not just as knowledge curator but also as co-creator or facilitator.

One of the services that libraries adopt in order to connect with users is through Virtual Library Services (VLS). This kind of service is important in enhancing communication with librarians and users. The advantage of VLS is its accessibility anytime, anywhere access. Reference materials that traditionally could not be brought out of the library can now be used outside of the physical library (Lankes, 2002). VLS also support the curriculum, provide alert systems to ensure users that they are aware of the latest information relating to their current research or project, unhindered access to information (Gunn, 2002), The ‘Library without Walls’, once a dream is now emerging as a reality. The role of the library as a place for people to gain ICT skills in a welcoming atmosphere is becoming a decisive element in capacity building (IFLA, 2003) which is best for quick instruction on finding necessary data or prompt briefing on how to use database. VLS is a way for libraries to connect with users in an online environment.

Virtual services also enable librarians to extend service beyond the four walls of the Library. As VLS are becoming a reality and an active part of libraries evolution in internet ([AlEnezi, 2012](#)), private institutions and governmental bodies are working towards the full implementation of this online platform.

As the information ecosystem becomes more pervasive, information and technology become the essential tools for national development. In Kazakhstan, a government program dubbed “Information Kazakhstan - 2020” was developed creating possibilities for users in educational sphere for the transition to a knowledge society. The governmental task was to expand citizens access to objects and materials of the cultural institutions which will require all the educational institutions to be accessible online. In the way of achieving the goals of this program, there were several suggestions from the government:

- development of proposals for the creation of national electronic libraries, as well as a free electronic catalog of libraries; and
- development of proposals for the creation of a single Internet portal, providing access to various information resources in the field of culture and art, the possibility of providing electronic services.

With the growing demand for reliable information and the value of delivering online services becomes indispensable in teaching and learning, this study analyzed the virtual services offered in academic libraries in Kazakhstan.

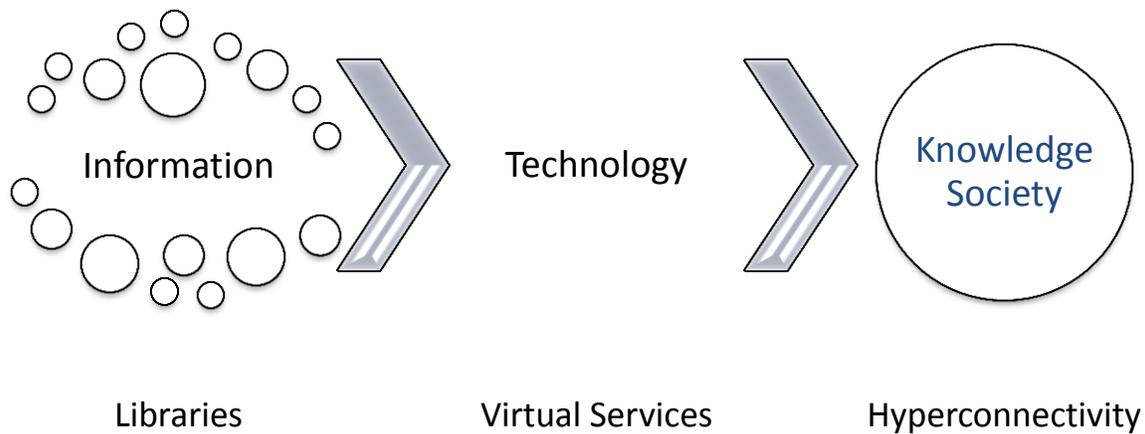
### **Statement of the Problem**

This survey of VLS in Kazakhstan aims to analyze the importance of online platform in a hyper connected society. Specifically, it aims to answer the following questions:

1. What virtual services are currently adopted by academic libraries in Kazakhstan?
2. What are the users’ perceptions on the effectiveness virtual services offered by libraries?
3. What are the areas that need to be improved in virtual libraries in Kazakhstan?
4. How can virtual services become an essential tool in promoting knowledge creation and exchange in a hyper connected society?

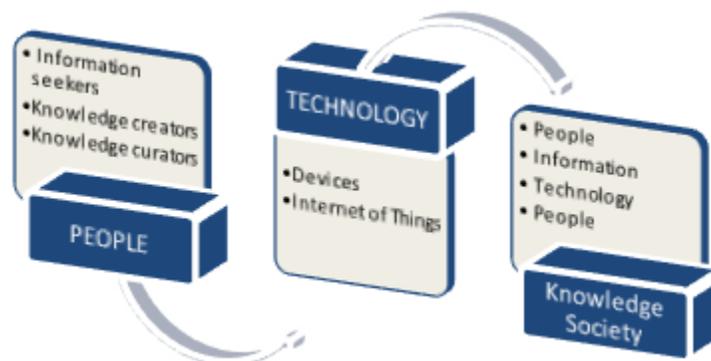
### **Conceptual Framework**

VLS is essential in developing a meaningfully engaged society. The online discussions facilitate knowledge exchange. Within this meaningful conversations are reliable information delivered by libraries that promotes scholarly output, facilitate learning and build credible voices.



**Figure 1. A Paradigm of Virtual Library Service and Knowledge Society**

In a hyper connected society, people are linked continuously through tech devices to other humans and to global intelligence ([Anderson and Rainie, 2012](#)). A hyper connected society enables more opportunities for collective action ([IFLA Trend Report, 2013 p.13](#)). As participation and engagement becomes more fluid and cohesive, the library plays a significant role as bearers of information and knowledge curators. The advent of virtual platforms in libraries maximizes the use of technology to connect people to the right information ultimately paving way to bring more people into the world of scholarly communication.



**Figure 2. The Interaction between People and Technology in a Hyper connected Society**

## Review of Related Literature

Various studies around the globe have been conducted about VLS. Several researchers analyzed different aspects of VLS such as user perception of Virtual Library Services ([Cummings, Cummings and Frederiksen, 2007](#)). [Duncan and Gerrard \(2011\)](#), studied about integrating

virtual reference service in the academic library; while Montalvo (2016) looked into the importance of self service of the users). Moreover, ways on improving VLS ([Shaw and Spink, 2009](#)), how digital library supports in research collaborations ([Aghakhani, Lagzian and Hazarika, 2013](#)) and changing in e-research environment ([Zhao, 2009](#)) and availability of library within virtual space ([Elliott and Probets, 2011](#)) were also some of the major aspects on VLS researches. The above studies are only a few of the literatures that show the value of integrating the virtual component for libraries. This has been realized to be useful in Kazakhstan as well. The pressing demand to have effective and fully functional VLS has been emphasized by the government within its thrust that by the end of 2020 almost all the educational organizations will have access to e-libraries (Kapezovich, K., and Toktarbekovna, D., 2014).

## **Methodology**

This study employed a mixed method of research. A desk research was done analyzing the website of 131 educational institutions in Kazakhstan. Researchers reviewed all the academic web-pages and checked the availability of Library services in remote access. While analyzing the efficiency and productivity of 131 University Library web pages presence/ availability of the following virtual services were identified:

- Library portal
- Library page on University web page
- Online catalog
- Ask a librarian service
- Interlibrary loan Service
- LibGuides
- Presence in social network

After the identification, a descriptive analysis was conducted by researchers, identifying the number of academic libraries having a particular service. Subsequently the proportion of availability was compared to the total number of particular service offered to see the extent of its usage. Lastly, ranking was also used to determine which of the services are highly used and least used.

The second phase was an empirical study in Nazarbayev University. Using Focus Group Discussion (FGD), the researcher probed on the utilization, effectiveness and impact of virtual services as perceived by students in Graduate School of Business. The selection of respondents of the study considered the manageability of the participants in terms of number. GSB post graduate students are also deemed appropriate to provide an objective assessment as they are considered active users of the library. The FGD utilized 10-item interview questions during the discussion. This exploratory assessment hopes to be expanded and adopted in the University and in Kazakhstan in the future as the demand for VLS grows.

### **A. Data Gathering and Content Validation**

As FGD is the selected method of gathering empirical data on the topic, a 10- item interview question was drafted by the researchers. To ensure that the content are comprehensible and fit for the group of respondents, it went through content validation process. Three content validators

were requested to review the items: 2 professors from the department and one librarian who developed the VLS in Nazarbayev University.

The first content validator is a professor in Public Policy from United Kingdom. His fields of research include: public sector reform in developed and developing countries; local government; and public policy evaluation. He has also written widely on researches in Public Policy. The second validator is a professor in Economics from Stanford University. His fields of research include monetary policy independence, international capital movement and financial stability and are handling courses in the University for less than 5 years. The third content validator is a Senior Expert Librarian from Reference Department of Nazarbayev University Library. She has a Master of Science in Information Studies degree and she handles projects of the Library related to VLS. The interview questions were evaluated based on the following criteria:

1. Relationship to the Problem
2. Clarity
3. Objectivity

According to the experts' assessment, the content of the questionnaire met their expectations.

## **Data Analysis**

### **A. Virtual Library Services in Kazakhstan**

The web analysis of 131 University library web pages showed that the main virtual services for remote access are: "Ask a Librarian", online catalog, interlibrary loan, libguides and social networks.

Out of 131 universities, less than half of the libraries in Kazakhstan provide VLS. The kind of interaction varies among academic libraries as well.

Service	Availability	(N=131) (%)	Rank
Library page on University web page	44	32.4	1
Library portal	23	16.9	3
Online Catalog	31	22.8	2
Ask a librarian	18	13.2	4
Interlibrary Loan	2	1.5	6
Libguides	1	.07	7
Social networks (Facebook, Instagram, VK...)	17	12.5	5

**Table 1. Presence of VLS in the University Libraries in the Republic of Kazakhstan**

The data in Table 1 shows the VLS platforms in academic libraries in Kazakhstan. Having a Library page that provides basic information about the Library is the most available virtual presence (32.4%). Having an online public access catalog was the 2<sup>nd</sup> widely used program with a quarter (22.8%) of libraries being able to implement. Through this service, users access to the e-resources and get informed on the book availability. On the other hand, the lowest VLS platform as shown are document delivery service (ILL) and use of Libguides. So far, the only library adopting the use of libguides in Kazakhstan is Nazarbayev University. While there is multifarious functions of this services, other libraries have not embarked into this ready-information.

Most common VLS available in University Library portals are observed to have the following characteristics: a) library catalogue which provides the whole library items list with availability status; b) most of the Library portals are similar with the structure and follow the same way of delivering information about working days/day off, working hours, upcoming events and scheduled meetings, etc.; c) the most user-friendly services, which provides librarian assistance remotely - ask a librarian service/chat. Can be reached immediately help and get answer quick and short. d) interlibrary loan service provided in most of the libraries, but nowadays it is more document delivery service rather than lending books from other university library. e) libGuide is a tool for all library users, which delivers instruction on how to find data, how to cite and brief introductions on how to use all library resources and services. f) presence in social network help users to get information at any time. Availability of library news and events in social networks give opportunity to be closer to users.

## **B. Nazarbayev University: A Case Study**

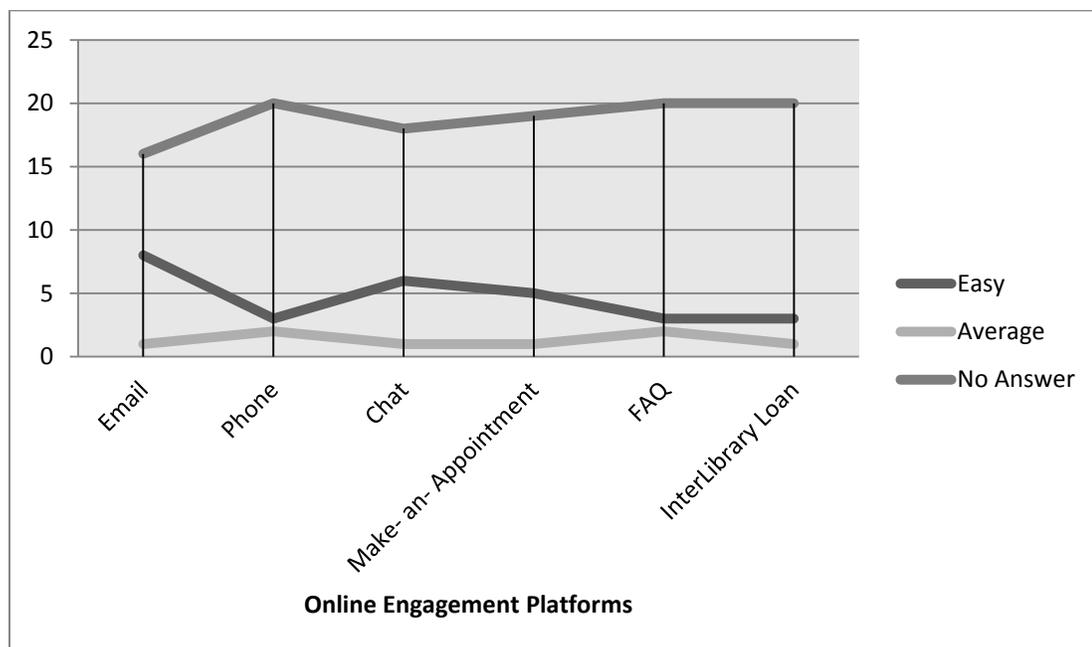
VLS has been recognized as an important component in a hyper connected society. The Nazarbayev University Library (NUL) is the only Library in Kazakhstan which makes available all the online platform studied. With this point in mind, the researchers probed further on how users perceive VLS as to its use and effectiveness and in ways it can be improved. Twenty five post graduate students from GSB were interviewed about their experience on using VLS.

### **i. Users perception on online platform**

Virtual communication has been widely used nowadays; hence, the researched attempted to find out how most commonly used virtual communications are adopted by users. In an interview made by researchers, the 25 respondents were asked about how they perceive the ease of use of various library services offered. While majority claims that they do not frequently use any of the online conversations to communicate with librarians or to be able to enhance their library services experience, almost 1/3 have started using email, chat, skype and other services both asynchronous and synchronous to interact or connect with the library.

Eight respondents find email an easy way to get connected with librarians. This use this platform to ask questions about availability of books or resources, ask help for problems related to research and access or to send request for materials. Although the document delivery system uses a form available on the webpage, some users prefer to ask first their Subject librarian about the availability of resources. Chat and Make-an- Appointment are other platforms frequently used. Chat is either embedded in libguides or at the main page of the library portal. This visibility of online platform that can address queries on real time is encouraged for all students. As to Make-an- Appointment, an online platform for real time via skype is provided in order to enable the students to avail of real time virtual discussion. This was developed to expand ways for real time Q&A for students and is often used for in- depth research assistance. Specifically, as to impression of participants, one reacted that “it was very easy.” Another GSB student who has not experienced using this service noted that, “Since I haven’t used these yet, according to the explanation which we had, it seems like the service is pretty much easy.” On being asked why they are not using the services, one respondent explained that “I believe that librarians might be busy with workshops and other events; so, it can be hard to make an appointment.”

Despite the unpopularity of online use, this is adopted by NUL to ensure that users are provided diverse ways for conversation. This confirms the study of Cummmings, Cummings and Frederieksen (2007) which noted that while many within the academic community are open to the idea of chat-based reference or using chat for some loosely defined “research purposes,” but this openness does not necessarily result in high levels of use.



### Figure 3. Perception of GSB students on Ease of Use of Online Platforms in NU Library

#### ii. Areas for improvement of VLS

When participants were asked about areas for improving VLS in the University, those who were able to use said that they are fully satisfied and the service is very good. One respondent who uses the online catalog noted that while he has no problem using the system, he thinks that there is a need to have more online books. For one respondent who has not experienced using any of the online platform he commented that “I think it is ok now” another said that, “- I think for [based on] orientation it is perfect” and another said “[I] Don’t know.” One respondent recommended to “make FAQ section simplified, divide into sections by subject” and another suggested “may be use Skype/Whatsapp if urgent questions arise.”

#### iii. VL: An essential tool in a hyper connected society

When respondents were asked to give an example where the Library had an impact on their work or research, one respondent mentioned specific instance: “when I had a problem with finding a book and access to various journals, the online platform is useful.” Another noted that VLS is very helpful when he/ she is studying for final exam and he needs to search for a book, asking a librarian for help saved time. For one respondent who has not used the service yet, he/ she noted. “for this moment, did not ask for help of library, but I will in writing paper.”

When they were asked with whom they get virtually connected to, majority (n=14) said that it made them connected to the Library while some said that the virtual service made them connected with other scholars/ researchers (n=7), Other libraries, research centers and other institutions (n=5), faculty (n=4) and administrators (n=2) . It can be gleaned that more than half of the respondents have most virtual interaction with the library. Respondents even connect with other libraries, researcher centers and other institutions in their research. A growing collaboration in the virtual environment can also be seen in the interaction of respondents with other scholars and researchers and faculty.

Groups	n
Faculty	4
Library	14
Other scholars/Researchers	7
Administrators	2
Other libraries, research centers and other institutions	5

**Table 2. Virtual connectivity of respondents**

The last question posed was how can virtual libraries help enhance connectivity in the knowledge society. One respondent broadly replied “very much.” It was further explained by another respondent that, “It’s good to have a virtual library, because it’s becoming more convenient” and another explained that this is “access mobility.” A more specific response on informational retrieval mentioned that “some search options are useful for those who have some difficulties in the progress evaluation” and another said “good to search book or article without

going to the library physically. Also can download materials directly.” It can be inferred that the value of VLS has been realized by the group.

## **Conclusion and Recommendations**

Overall, academic libraries in Kazakhstan have not fully embraced the virtual side of library service. Other factors might be attributed to unpopularity of this service but since the government is strongly advancing the use of online resources and delivery of information, VLS may soon become compulsory. Further study on the factors that prevents the full implementation in all academic libraries will be more meaningful to create an action framework for developing VLS in Kazakhstan. Moreover, collaboration with other countries who have fully implemented this service will also be useful.

While there is very little user experience, the ease of use or perceived ease of use from participants is very visible. Moreover, the respondents’ positive attitude towards exploring VLS is also a good indicator of their openness to virtual platform. The case study of a group of student may not represent the entire university but this group is a starting point to analyze the effectiveness of VLS. Ease of use is one area that is always looked into when adopting a technology driven service.

Promotion of VLS should be the priority of NUL to maximize the use of these services. Training on the use of VLS may also amplify the awareness level of academic community.

VLS is an essential tool in promoting knowledge creation and exchange in a hyper connected society. As mentioned by respondents, it provides remote access to users. Through technology, mediated communication is facilitated both on real time and on different time. However, this has not been realized but majority of the researchers and scholars. Success stories of VLS users can be a good marketing strategy to promote the service.

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