

**USERS' PERCEPTION ON THE CURRICULUM DEVELOPMENT  
CENTRE (CDC) DIGITAL LIBRARY**

A Thesis Submitted to the  
Central Department of Library and Information Science  
Tribhuvan University, in Partial fulfillment of the requirements for the  
Master's Degree in Library and Information Science

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### **SELF -DECLARATION**

I declare that this thesis entitled “**Users’ Perceptions on the Curriculum Development Centre (CDC) Digital Library**” has been prepared entirely by me. It has not been submitted for any other degree or professional qualification. The data, analysis, and descriptive work are my own work. Due reference has been provided on all supporting literature and resources wherever required. I am aware of and understand the university’s policy on plagiarism.

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## LETTER OF RECOMMENDATION

This is to certify that **Mr. Arun Kumar Rai** has prepared this thesis entitled “**Users’ Perceptions on the Curriculum Development Centre (CDC) Digital Library**” under my supervision and guidance. I recommend this thesis for final approval and acceptance.

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Lila Nyaichyai, Ph.D.

(Thesis Supervisor)



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## LETTER OF ACCEPTANCE

The thesis entitled “**Users’ Perceptions on the Curriculum Development Centre (CDC) Digital Library**” prepared and submitted by **Mr. Arun Kumar Rai** in partial fulfillment of the requirements for the Master’s Degree in Library and Information Science is hereby accepted and approved.

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Thank you;

Mr. Arun Kumar Rai

MLISc. Student

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## ABSTRACT

This study entitled “**Users’ Perceptions on the Curriculum Development Centre (CDC) Digital Library**” investigates how users perceive the CDC digital library system. This study investigates the user perception and accessibility of the CDC digital library, focusing on high school teachers in the Kathmandu Valley, Nepal.

The objective of the study is to understand how users perceive the CDC digital library system, assess its level of accessibility and user-friendliness. The research also identifies barriers and obstacles encountered while using the library system. The Technology Acceptance Model (TAM) was used in the study to examine user acceptance of the digital library.

A questionnaire comprising 20 questions were distributed to 86 high school teachers and head teachers, with a response rate of 95.35%. Descriptive and analytical methods were used to analyze the collected data, including a detailed analytical report on the CDC digital library system from 2015 AD to 2022 AD.

The findings indicate a strongly negative perception of perceived ease of use (PEU) and attitude (AT) among digital library users. There is a negative correlation between PEU and AT, suggesting that an increase in ease of use leads to a decrease in negative attitudes toward the digital library. As with the perceived usefulness (PU) and Attitude (AT) relationship, it is moderately negative. A medium negative relationship means that a rise in one variable generates a moderate reduction in the other, and vice versa. However, no significant relationship was found between ease of use and perceived usefulness (PU). The study also highlights the increased usage of the CDC digital library during the COVID-19 lockdown, indicating its usefulness during online classes.

The thesis concluded that 91.5% of respondents have a positive perception of the CDC digital library system in terms of usefulness and ease of use. However, a large percentage of respondents (90.2) identified concerns about mobile device accessibility, navigation, and system configuration. The study recommends addressing some relevant issues by upgrading mobile device compatibility, providing notification services, incorporating online user manuals, redesigning the system interface, and ensuring compatibility with current ICT devices.

**Keywords:** digital libraries, users’ acceptance, users’ perception, teachers’ attitude.

**DEDICATION**

**TO**

**MY PARENTS, FAMILY, FRIENDS, RELATIVES, RESPECTED  
FACULTY MEMBERS**

**AND**

**ALL THE LIBRARY PROFESSIONALS**

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## **ABBREVIATIONS**

AT	Attitude
CDC	Curriculum Development Centre
CNRI	Corporation for National Research Initiatives
CUSAT	Cohcin University of Science and Technology
DAPRA	Defense Advanced Research Projects Agency
DL	Digital Library
ICT	Information and Communication Technology
MTN Digital Library	Mobile Telecommunication Network Digital Library
NASA	National Aeronautics and Space Administration
NeLIC	Nepal Library and Information Consortium
NSF	National Science Foundation
OLE Nepal	Open Learning Education Nepal
OPAC	Online Public Access Catalogue
PEU	Perceived Ease of Use
PMB	PhpMyBibli
PU	Perceived Usefulness
TAM	Technology Acceptance Model
TUCL	Tribhuvan University Centre Library

# CHAPTER 1

## INTRODUCTION

### 1. 1 Background of the Study

Humans are constantly looking for ways to access and retrieve all of the records of human thought that have ever appeared everywhere. Always a social institution, libraries. On the other hand, traditional libraries restricted access to public knowledge and information to those who could travel to the library's physical location or obtain the resources through interlibrary loan.

It has always been difficult for library professionals to retrieve and provide remote users with access to library collections. Libraries have served as document repositories for a long time, collecting, classifying, cataloguing, and distributing books, journals, and other resources for its users.

Because of the use of information and communication technologies (ICTs) in managing library activities, people have created a new innovation that enables information and library professionals to select, acquire, organize, and distribute digital resources to remote users quickly, easily, and effectively. ICT development has changed the concept of a library from being a physical warehouse or a collection of artefacts to a digital library that is a library without walls.

The ability to save resources in digital format, which allows users to access them from anywhere in the world at any time, is one of the most significant advantages of digital libraries. Moreover, digital libraries offer a variety of search options for locating digitized resources (Wiederhold, 1994). According to Paul (1997), a digital library is an environment that combines digital collection as well as knowledge management instruments with resources to support the life cycle of information. Cleveland (1998) has defined the term "digital library" as the "World Wide Web." It maintained his statement with the huge number of documents gathered in the Web and accessible. These varieties of definition of digital library had indicated toward the remotely accessibility over digital collections.

While going through the genesis of digital library, the phrase "electronic libraries" came as the initial terminology that was used in 1992 to create the first research-oriented definition of digital



libraries. The term 'electronic libraries' has been replaced by the term 'digital libraries' (Borgman, 1999). As information technology has changed, so have the terminologies. It's possible that a report submitted to the Corporation for National Research Initiatives (CNRI) in 1988 is where the term "digital library" first developed. The phrase developed popular in 1994 due to the NSF/DARPA/NASA Digital Library Initiatives (Mayank, 2010). Rather than terminology, the functions are more important to be established for digital library. How are digital library being distinguished from manual library? It is more important to know. In several definitions of a digital library, the Association of Research Libraries (ARL) has identified the following typical characteristics or qualities:

The goal of the digital library is to provide universal access to digital resources and information services; the digital library is not one entity; it requires networking technology to connect many entities; the links between the various digital libraries and information services are open to end users; and the digital library collections include digital artefacts that cannot be represented or distributed in printed formats (Nazim, 2013).

These functions of digital library have opened extended information services. After harvesting the fruits of digital library, it became significant for scholars and entire academia because it allows users to access digital information resources from. In addition to information access facilities information storage, and retrieval methods have also changed dramatically, hence it was called the digital revolution. Such revolution has impacted teaching and learning methods. (Beagle, 2000; Roes, 2001).

According to the Digital Library Reference Model (DELOS), a digital library is an organisation, which may be virtual, that carefully gathers, manages, and preserves rich digital content for a long time while providing its user communities with specialised functionality on that content, with measurable quality and defined policies. (Candela et al., 2007).

In several definitions of a digital library, the Association of Research Libraries (ARL) has identified the following common traits or features (Nazim, 2013):

- the goal of the digital library is to provide universal access to digital resources and information services;

- the digital library is not a single entity; it requires networking technology to connect many entities;
- the linkages between the various digital libraries and information services are forthcoming to end users;
- and the digital library collections include digital artefacts that are unable to be displayed or distributed in printed formats.

The digital library, according to Fox (2018), is a "new way of carrying out the functions of libraries, encompassing new types of information resources, new approaches to classification and cataloguing, intensive use of electronic systems and networks, and dramatic shifts in intellectual, organizational, and electronic practices."

A current sort of information retrieval system is the digital library. Due the collections are stored in digital formats and are available from any computer or mobile device, it is termed virtual. 'Virtual library,' 'electronic library,' 'institutional repository,' 'library without walls,' and 'digital library' are examples of library features that have been defined and interchangeably used (Sharma, & Chauhan, 2019). 'Digital Libraries' is the most appropriate and often used term for such resources.

Digital libraries allow users to access desired information by concentrating on electronic items or digital form rather than conventional printed book form, and providing global access to material disseminated on networks, accessible at the click of a mouse on a personal computer linked to the networks.

### **1.1.1 Initiation of Digital Library in Nepal**

In industrialized countries, digital libraries were first introduced in the 1970s. It has been started in Nepal in 1994 AD. Health Net Nepal is Nepal's leading digital library program, collecting and disseminating a wide range of locally generated health science information resources such as thesis, reports, statistical data, and databases. Although digital libraries are becoming more popular in Nepal, traditional libraries continue to operate alongside them. As a result, a policy must be implemented to better integrate traditional and online resources in order to meet users' information needs (Pradhan, 2005).

Nepal Library and Information Consortium (NeLIC) is another digital library movement in Nepal. It was founded in 2009 with the goal for educational information services in Nepal, providing access to journal databases and other electronic resources. E-Pustakalay-OLE Nepal, UN Digital Library, British Council's Digital Nepal, NHRC Digital Library, TUCL Digital Library, and Asia Foundation Asia's Digital Library for Children, digital library Department of Library and Library Science (TU) WECS digital library, and CHERD digital library are among the other digital library initiatives in Nepal.

There are a lot examples of organizations have taken the initiative to create digital libraries in Nepal as institutional repositories. Curriculum Development Centre (CDC) is one of them. It has provided open access to a variety of documents including School textbooks, school level curricula, teachers' learning materials, children reference materials, reports, audio-visual learning resources, journal articles, news items related to CDC, illustrations(images)developed by CDC, policies and directories, etc. One of the significant initiatives of the CDC digital library is to develop a digital repository for illustrations or photos.

### **1.1.1 Curriculum Development Centre (CDC)**

Curriculum Development Centre (CDC), an academic center within the Ministry of Education, Science and Technology, was established to design curricula, textbooks, and other instructional materials for school education in order to meet the country's educational goals. This center holds annual and recurrent discussions, interactions, and dissemination initiatives about the value of instructional materials. It also runs research-based programs to ensure that school curriculum is relevant, practical, and competitive. The foundation stone for the formation of responsive and capable citizens is school education. As a result, this center, which was first established.

The Director General is a Gazetted I class officer, and the center has a staff of 60 people that work in both technical and administrative sectors. This center's headquarters are in Sanothimi, Bhaktapur, Nepal (CDC, 2021).

### **1.1.2 CDC Digital Library**

The Curriculum Development Centre is developing a variety of documents, including school textbooks, school level curricula, teachers' learning materials, children reference materials,

reports, audio-visual learning resources, as well as research reports, journals articles etc. This knowledge should be located, picked, arranged, kept online, and preserved via the digital library system. The completion of the CDC digital library is a significant accomplishment. After then the CDC decided to develop a digital library as the institutional repository with accumulating its publications which are the born-digital resources in 2012 A.D. It is developed using ResourceSpace, Open-Source Digital Asset Management Software. Its structure is planned on the ResourceSpace principles of communities, sub-communities, collections and items and digital resources are integrated with the bibliographic database created using PMB (PhpMyBibli). It has been starting to convert some selective and rare materials (textbooks, curricula, children literature etc.) from print to electronic form by scanning to its collections (Rai, 2074).

Currently, the CDC digital library system contains over 10000 different types of digital resources including such text, audio, video, photos, and so on. After developing the digital repository as the digital library, CDC has stopped disseminating its publications in printed formats except for textbooks. The CDC digital library offers open access to all available resources. The library can be accessed through the library web-link [http://nepaknol.org.np/cdc/catalog/opac\\_css/](http://nepaknol.org.np/cdc/catalog/opac_css/) within 24 (twenty-four) hours from anywhere.

This study analyzed the users' perception on use, viewing behavior, the importance of use, level of users' satisfaction, accessibility and usability, barrier and difficulties faced by users and comprehensiveness of collection on the digital library of Curriculum Development Centre (CDC), Nepal. After the analysis and interpretation, it has suggested and recommended some improvement to be implied.

## **1.2 Statement of Problem**

In the context of Nepal, digital libraries are still relatively young. The role and importance of digital libraries in bridging the gap between information creators and end consumers are still unclear.

The CDC has stopped disseminating all publications in printed formats other than textbooks after developing the digital library system as the institutional repository, and there are now more than

10000 various types of digital resources (text, audio, videos, and images) available in the CDC digital library.

Service providers have no idea how users have perceived it and how they utilize them in their professional careers because digital libraries are a radical concept to teachers. The objectives of the digital library are not achieved if service providers don't record users' perceptions of the system's usability and acceptability. Modifications must be made to the digital library system based on such evaluation. The establishment of a digital library is irrelevant if it is unable to satisfy the expectations of the library's users. A digital library's user group is typically a huge community of users with a diverse range of educational and socioeconomic backgrounds. As a result, the purpose of this study is to find out how users perceived about the digital library and its collection, services in the context of CDC digital library. One of the problems faced by CDC library authorities is that they merely predicted users' acceptance of the CDC digital library system. Therefore, this study on users' perceptions of the CDC digital library is required to show the usefulness and accessibility of the system.

### **1.3 Objectives of Study**

The main objective of this study is to investigate how users perceive the CDC digital library system. The study also focused on the following objectives, which include

- 1) To examine the level of the accessibility and user-friendly of users with the digital collections and services of the CDC digital library,
- 2) To explore the level of users' satisfaction with the CDC digital library,
- 3) To identify the barriers and obstacles encountered while using the CDC digital library system and,
- 4) To explore the innovative system and service for CDC library system.

### **1.4 Research Questions**

This study has answered the following research questions in order to achieve the objectives stated above.

1. What are users' perceptions toward the use of the CDC digital library?

2. How is the CDC's digital library system accepted through perceived ease of use, perceived usefulness, attitude and satisfaction of users?
3. What are the difficulties and obstacles being faced by users on the digital library of the CDC?
4. What are the changes necessary for the improvement of the system and services of a digital library?

### **1.5 Significance of the Study**

The study's main goal is to identify how users have perceived about the CDC's digital library system. It has also investigated the CDC's digital library's accessibility, usefulness, user satisfaction, and difficulties. This study was carried out not only to fulfill a master's degree requirement in Library and Information Science, but also to study how users perceive the CDC digital library system, its condition at the time, and the issues they face. Its significance can be summarized in the following points:

- This study can help with the identifying the needs and demands of users within the context of the CDC digital library system.
- This study can contribute for keeping of the CDC's digital library system, resources, and services up-to-date.
- The results can assist to strengthen the current condition of the CDC digital library system.
- It is useful for future researchers to conduct research in the context of digital library systems, specifically the acceptability of the digital library system.

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

Due to limited resources and time, this study only has evaluated users' perceptions of the utility and ease of use of the digital resources and services of the CDC digital library digital. This study has utilized the Technology Acceptance Model (TAM) developed by Fred Davis (Davis, 1989). As a result, it is not a comprehensive and multidimensional investigation of each and every aspect of the digital library system.

It is just the descriptive survey study based on the questionnaires and observation analytical report of the CDC library system. Due to a lack of time and resources, the study's sample is made

up of only 82 high school teachers (Science, English, Mathematics, Nepali, Social Studies, and Computer Science) from Kathmandu Valley's municipal areas. Hence this did not reflect the reality of the high school teachers' perception from other part of Nepal towards the CDC digital library.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Literature Review**

Because the effective research is based on previous information, this process helps to prevent duplication of effort and generates useful hypotheses and ideas for further exploration. Past literature serves as a mirror to the present and future, allowing the researcher to gain a better understanding and insight into earlier research studies that are relevant to the current subject.

A literature review helps a researcher in identifying new areas of study, avoiding useless approaches, gaining methodological insights, suggesting recommendations for additional research, and obtaining support for grounded theory. It also serves as a basis for relating new findings to past findings (Manandhar, 2015).

#### **2.2 Definition of Digital Library**

Retrieve and access to information resources are available in the digital library are for all in the time and anywhere. As a result, users may now retrieve and access library materials and services through digital libraries, which has a big impact on how individuals look for and acquire the information they need (Liu & Lou, 2011).

The ultimate goal of digital libraries is to enable people to completely access and utilise human knowledge without any restrictions (Heradio et al., 2012). However, with the massive production and accumulation of diverse information sources beyond the library in the modern information society, it appears that more and more individuals are ignoring the crucial status of digital libraries as conventional knowledge sources (Ross & Sennyey, 2008).

Digital library can have two types of information sources viz primary and secondary sources. The primary sources include internal publications of an organization and the secondary sources include bibliographic information of library holdings in the form of online public access catalogue (OPAC) and heterogeneous online databases. These collections must be well-organized and seamlessly combined in order to make information access more effective and efficient ways (Sankaranpillai & Ganesan, 2010).



An online database of texts, still photos, audio, video, and other documents in electronic media types is known as a "digital library." In addition to storing information, digital libraries enable network and computer-based organization, searching, and content retrieval. The current situation calls for institutional repositories (IR), archives, and digital libraries (Sharma& Chauhan, 2019).

### **2.3 Research Studies on Users' Perception on Digital Library**

To provide a set of adaptable and flexible standards for digital library evaluation, Fox et al. (1993) carried out the research study on "Evaluation of digital libraries". The relationships between the DL components—users' content, contents' system, and users' system—should serve as the basis for the review process. These relationships are based on a system's performance, utility, and usability. Users are the first part of every interaction process, and they have complicated characteristics that are always changing. The quantity and characteristics of users are numerous and intricate, even in specific evaluation studies with restricted study constraints. The goals of a user-oriented assessment, regardless of the specific technique used, are to gain a thorough grasp of the user requirements for technology design and planning as well as to systematically gather user feedback throughout the design process (Fox et al., 1993).

Keng et al. (1999) discussed about how digital libraries' characteristics affected the subjects' capabilities to carry out search and retrieval tasks. They came to the conclusion that if digital libraries were to be utilized effectively, study must be conducted to evaluate and improve their usefulness over time. They also concluded that more research is needed to evaluate user needs and expectations if digital libraries are to be used more often in the future.

Jen (2005) investigated focused on users' usability evaluation in academic digital libraries. He used efficiency, effectiveness, satisfaction, and learn ability as variables. It has been discovered that there is a connection among effectiveness, efficiency, and satisfaction. It also studies how learn ability interacts with these three factors. It is useful to review in the context of the CDC digital library.

Tamaro (2008) has tried to get feedback from users on how they feel about the services offered by digital libraries and to give them a chance to offer suggestions The survey was conducted at three humanistic cultural organizations that the study group has chosen, and the results have been compared to those from the National Central Library of Florence. Data collection methods included interviews and questionnaires, which were also given to the management of the relevant cultural

institutions. Although the survey also highlights that the users frequently lack knowledge of how to utilise the libraries and are ignorant of all the facilities provided, the research found that there is an overall good attitude towards digital libraries. Although it becomes more advanced and offers more features, the interface's usability was seen to be crucial.

Data were analyzed using both quantitative and qualitative methods by Xie (2008) using a diary, a questionnaire, and a survey. For the purpose of evaluation, two digital libraries representing various contents and design aesthetics were chosen. This study aims to look into how users utilize, choose, and evaluate the two chosen digital libraries. To take part in the study, 19 participants were chosen. They were told to keep a journal of their usage of the two digital libraries, score the significance of the evaluation criteria for those libraries, and then compare the two libraries using the most significant criteria. The study found that consumers' interactions with digital libraries are influenced by the way they are designed. Particularly, the presence or absence of features or their actual design might direct or suggest to users how to use a digital library. The identification of correlations between the usage of digital libraries and their evaluation, as well as relationships between their use and perceived importance of DL evaluation criteria, is one of the study's primary achievements. This study discovered that among all the criteria for users' evaluation of the digital library for its sustainability, usability, system performance, resource quality, and authentication were considered as the highest.

Sheeja (2010) has studied procedure to collect and interpret those required data are from Cochin University of Science and Technology (CUSAT) digital library users (undergraduate program of the engineering faculty) systematically. Out of 225 students who were used as the sample population, 204 (89%) were engaged in responding to the material, while 21 weren't. And this study's findings indicate that practically all students use digital libraries to further their education. Students prefer digital information formats as well as they are satisfied with the current library features and functionality.

In order to look into how digital library resources were used in two undergraduate classrooms and how professors and students felt about educational digital libraries, Matusiak (2012) performed a case study. According to the study's findings, academic digital libraries are the primary source for textual resources used by students and teachers, while open-source websites are used for visual and

multimedia resources. Participants in the study preferred using search engines to locate visual materials and did not view academic libraries as a useful source of digital images. By utilising empirical data from actual practice, the study helps to improve understanding of perceptions that influence how users accept and use educational digital libraries. Since there is still much to learn about the usage of educational digital libraries, further research is absolutely required.

Ekere et al.( 2016) carried out survey research on Users' perception of the facilities, resources and services of MTN digital library the University of Nigeria, Nsukka. The descriptive survey research design was adopted for this study. It was appropriate for this study as a useful method for assessing attitudes or opinions towards programs, individuals, organizations and events. Four objectives and four research questions were formulated to guide this study. A convenience sampling technique was used and a sample size of 196 registered users of the MTN Digital Library was evaluated for this study. A well-structured questionnaire created to elicit information from library patrons and an observation checklist created to corroborate the questionnaire's findings are among the tools used to collect data. A total of 213 questionnaires were sent out to library patrons, and 92% of them were returned. As statistical tools for data analysis, the study included frequency tables, percentages, mean scores, and ranking. According to the study's findings, users generally have a positive opinion of the MTN digital library's resources, services, and facilities. A well-structured questionnaire created to elicit information from users of libraries and an observation checklist created to corroborate the questionnaire's findings are among the tools used to collect data. A total of 213 questionnaires were sent out to library patrons, and 92% of them were returned. As statistical tools for data analysis, the study included frequency tables, percentages, mean scores, and ranking. According to the study's findings, users generally have a positive opinion of the MTN digital library's resources, services, and facilities.

Jabeen et al. (2017) carried out a survey to evaluate the significance of digital library resources to students and the usability of trans-disciplinary databases. The study investigated how individuals perceive and use digital databases, as well as their level of satisfaction and impact on users, factors influencing how people access digital databases, and concerns with digital database usage.

Dang and Felix (2019) conducted a quantitative survey to evaluate user satisfaction with the Federal University Dutsinma Library in Katsina's Digital Library. To effectively direct the study, three

goals and three areas of inquiry were created. Participants were chosen using a convenient sampling technique with representation from every faculty at the university. According to the study, user happiness may be increased and successful usage of the system can be ensured by regularly teaching users on how to use the system and explore between collections. Despite the fact that this study only focuses on university digital libraries in Nigeria, it is very beneficial for investigating users' perceptions of the CDC digital library system in Nepal.

## **2.4 Research Studies on Users' Perception and TAM**

Hong et al. (2001) have investigated the effect of a set of personal variations (computer self-efficacy and knowledge of search domain) and system characteristics (relevance, terminology, and screen design) on intent to utilise digital libraries. The findings, which are based on a sample of 585 users of an award-winning university's digital library, strongly support the use of the Technology Acceptance Model (TAM) in predicting users' intention to adopt digital libraries and show the influence of important external factors on behaviour intention through perceived usefulness and ease of use. This study has also highlighted the importance of creating user-friendly interfaces for digital libraries, including employing vocabulary that is known to users, clearly represented buttons and icons, a unified interface design, and simple navigation. Thus, there is less focus on how users perceive digital libraries. Thus, there is less focus on how users perceive digital libraries. It is necessary to look at the elements that affect consumers' adoption of digital libraries in order to help redesign the system in accordance with user requirements.

According to Hong (2002), The technology acceptance model (TAM) is a recognised theory that helps to understand how information systems are adopted. TAM defines adoption behaviour as the intent to use a certain system, which is influenced by the system's perceived usefulness and usability. The Theory of Reasoned Action and the Theory of Planned Behaviour, two social psychology theories, form the basis of the TAM, which has been proven to be a potent and understandable paradigm for analysing user adoption of IT. Usage of an information system is defined by TAM as users' intent to use the system. Users' perceptions of the system influence it. Perceived system usefulness and perceived system usability are the two important beliefs at play in this situation. As a result, the technology acceptance model (TAM) is used as the theoretical

framework for this study to evaluate users' perceptions of the CDC digital library system in terms of user acceptability.

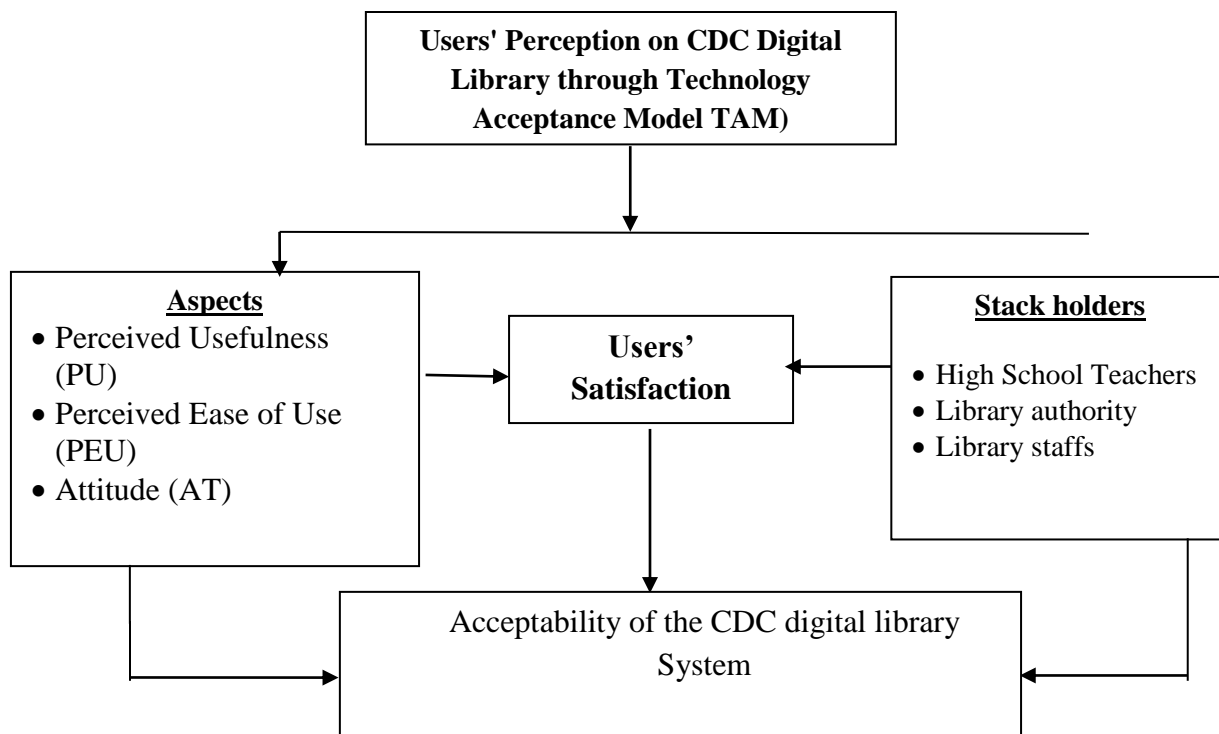
Thong (2002) used the Technology Acceptance Model (TAM) to evaluate user acceptance of digital libraries. In this study, external factors such as organizational environment, individual differences, and interface characteristics were discovered to be significant predictors of perceived usefulness and perceived ease of use. The results show that user acceptability of digital libraries is influenced by both perceived usefulness and perceived ease of use. The study also showed that although the interface and individual differences affect perceived usability, perceived usability and perceived utility of digital libraries are both influenced by organizational environments.

The factors that affect people's adoption and use of a digital library system were examined by Park et al. (2009), as well as the applicability of the Technology Acceptance Model (TAM) in the setting of developing nations. Path analysis was used to demonstrate that perceived ease of use of the library system had a major impact on perceived usefulness, which eventually led to behavioural intents to use, using data from a survey of 16 institutes in Africa, Asia, and Central/Latin America (N=1082). This study suggested that external variables determining perceived ease of use and usefulness should be considered to be essential elements in the process of designing, implementing, and operating a digital library system. It is beneficial to apply TAM as one of the most often used approaches for measuring users' perceptions of digital libraries.

Rahmiati et al. (2018) studied the influence of perceived usefulness, perceived ease of use, and attitude toward accessing digital libraries. Based on a sample of 400 university library users, the study's findings show that perceived ease of use has a significant and favorable effect on the perceived utility of digital libraries. It shows that people will find digital libraries helpful as they become easier to use. Similarly, perceived ease of use has a big and favorable effect on attitudes toward digital libraries. This study reveals that the acceptance of digital libraries largely depends on the system's friendliness. The results further indicate that perceived usefulness has a major influence on people's attitudes toward using digital libraries. The conclusions drawn from the study, people may ready to accept digital libraries and continue to use them in the future if they perceive the system useful.

## 2.5 Conceptual Framework

A conceptual framework is the comprehensive, logical orientation and associations of everything that underpins the assumptions, frameworks, plans, strategies, and methods that guide the implementation of our complete research project (Ravitch & Riggan, 2017). This study conceptual framework is as follows:



To investigate on users' perceptions of the CDC digital library, relevant factors such as usefulness, accessibility, user satisfaction, and barriers to using the CDC digital library were included. These aspects or variables were studied on the basis of Technology Acceptance Model. Using the TAM model (TAM) as the theoretical framework. The researchers used two main determinant factors to predict the accessibility of the CDC digital library system: perceived usefulness and perceived ease of use. Among the survey participants are high school teachers who primarily teach the subjects of Science, English, and Nepali, Mathematics, Social Science, and Computer Science, as well as library authorities. As carefully as possible, the researcher in this study followed to the theoretical concepts of the Technology Acceptance Model (TAM). The stack holders' perceptions of the usefulness, accessibility, satisfaction, and barriers to the CDC digital library system were investigated.

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter deals with research approaches and methods adopted in this study. The primary goal of this study is to investigate how users perceive the CDC digital library system. Data for this study were gathered from primary sources. Primary data can be collected using a variety of methods. In this study, data was collected using a questionnaire and observation of the analytical report of the CDC digital library system.

Research methodology refers to the methods and procedures used throughout the study, including the data collection instrument and procedure, data tabulation, processing, and analysis methods. This chapter covered the research design, study location, data sources, population, sampling procedure, data collection procedure, and data analysis procedure.

#### **3.2 Research Design**

This study used a descriptive research design. The researcher collected data using a quantitative research approach. There are numerous instruments for collecting data, but in this case, the researcher used a questionnaire tool to collect the relevant facts, figures, and data. In addition, the researcher used a survey to learn more about the CDC digital library system. The survey instrument, which is a quantitative method of data collection via questionnaire, was used to collect data. To collect data, a questionnaire is broken up into different sections. Single measures, which are likert-style (rating scale) questionnaires, were applied to collect the data.

#### **3.3 Place of Study**

The municipal areas of Kathmandu Valley (Bhaktapur, Chagunarayan, Chandragiri, Godavari, Kathmandu, Kirtipur, Lalitpur, Mahalaxmi, Suryabianayak, and Thimi) were accounted for the purpose of the study. This study included only Science, English, Mathematics, Nepali, Social Studies, and Computer Science teachers from high schools in Kathmandu Valley municipal areas as respondents.

### **3.4 Source of Data**

In this study the most of the data were primary sources. These data were collected through using questionnaire and observation. Likert scale questionnaire were distributed to high school teachers in Kathmandu Valley, Nepal. Data were also accumulated from the observation of the CDC digital library system's analytical report.

### **3.5 Population**

A research population is a large number of individuals or objects that are the focus of a scientific investigation. Research is carried out for the benefit of the general population. However, due to the large size of populations, researchers are frequently unable to test every individual in the population because it is too expensive and time-consuming. The population of this study is only high school teachers who generally utilized the CDC digital library system. This study's total population is 384 high school teachers who focus in Science, English, Mathematics, Nepali, Social Studies, and Computer Science.

### **3.6 Sampling Procedure**

Sampling is the statistical process of selecting a subset of a population of interest (known to as a "sample") for the purpose of making observations and statistical draw conclusions about that population. The purposive sampling was adopted to fulfill the objectives of this research study. The sample for the study will be the CDC digital library users, library authority and library staff, which has been chosen randomly so the sampling procedure is random one. The closed ended questionnaires were designed and distributed to the users in study period. The sample size for this study includes 82 (21.354%) CDC digital library users, primarily high school teachers. A sample was chosen from Kathmandu valley high school teachers of Science, English, Mathematics, Nepali, Social Studies, and Computer Science.

### **3.7 Period of Data Collection**

The data was collected from June 5 to September 5, 2022. Data was collected using the quantitative method. Likert scale questionnaires were used. Questionnaires were distributed to CDC Digital library users, specifically high school teachers teaching Science, English, Mathematics, Nepali, Social Studies, and Computer science in Kathmandu valley municipalities.



### **3.8 Data Collection Procedure**

Collecting data is the systematic process of acquiring and evaluating information on particular variables so that pertinent issues may be addressed and outcomes can be evaluated. All fields of study, including the physical and social sciences, humanities, and business, share the need to gather data as a component of research.

The Likert types of questionnaires and analytical reports (Automated Generated on CDC digital library system) of the CDC digital library have been adopted for collection of data for this study. The key data for this study has been collected through observation, and questionnaire (data has been collected through single measures, which are Likert type of questionnaire).

The questionnaires were distributed to 86 high school teachers and head teachers from various disciplines in Kathmandu valley municipal areas. Only 82 (95.35%) high school teachers and head teachers responded completely, but 4 (4.88%) teachers did not complete the response.

To obtain the objectives of this research study, detailed analytical reports of the CDC digital library system from 2015 AD to 2022 AD were also studied. The following instruments were primarily used to collect the necessary data for this study.

- a. Observation (online analytical report of CDC digital library system),
- b. Questionnaires (Likert type)

Note: detail of analytical reports and questionnaires have been presented in page 53-64 pages in annex part

### **3.9 Data Analysis Procedure**

In this regard, all raw data collected were tabulated, classified, and analyzed. Then they were categorized in various forms based on their need and nature, which were expressed numerically and a percentage was calculated. For the presentation of collected data and information, both descriptive and analytical methods were used in this study. In this study, data was analyzed using IBM SPSS version 20 and Microsoft office excel for statistics representation, and Microsoft office word for wording. The collected data have been presented by frequency distribution, tables, bar diagrams and pie charts.

### **3.9.1 Correlation Analysis**

The TAM theoretical framework served as a guide for the researcher. In order to analyze the coefficient of correlation, the three key variables of perceived ease of use (PEU), perceived usefulness (PU), and attitude (AT) have been defined. Karl Pearson correlations were applied to calculate the relationships between the three variables: perceived ease of use (PEU), perceived usefulness (PU), and perceived attitude (AT) using MS Excel.

## CHAPTER 4

### DATA ANALYSIS AND PRESENTATION

The basic goal of data analysis is to convert the raw information into an aggregate form that can be presented in an appropriate manner. This chapter is about analyzing and interpreting the collected data. The prime objective of analyzing and presenting data is to reshape it from an unprocessed form to a processed form in an understandable presentation using various presentation tools such as tables, charts, and diagrams, among others. In this research study for data analysis and interpretation, IBM SPSS version 20 was used and correlation has been calculated using correlation formula of MS Excel. The results of the analysis are presented in the following sections using various statistical tools based on questionnaire, and observation.

#### 4 Analysis within TAM Framework

##### 4.1 Perceived Ease of Use (PEU) on CDC Digital Library

Except the view on ‘users’ friendliness’, all other factors of PEU gained the result ‘strongly agree’, however users marked it only as ‘agree’ for quality of being user friendly for CDC. The study showed that the quality of being user friendly is quite tough; however, it is worth to give proper concern for it. According to the first objective of exploring of CDC digital library, the research proved fully accessible to user.

**Table 1: Result of Perceived Ease of Use on CDC Digital Library**

PEU	Factors of PEU	Value	Result
PEU1	User friendly	0.95	Agree
PEU2	Usefulness Teaching materials	1.04	Strongly Agree
PEU3	Easy to use	1.06	Strongly Agree
PEU4	Comfortable for advanced Search	1.15	Strongly Agree
PEU5	Retrieval and accessible	1.2	Strongly Agree
PEU6	Easy View	1.2	Strongly Agree
PEU7	Finding documents	1.3	Strongly Agree
PEU8	Easy to download	1.3	Strongly Agree

In the matter of accessibility, the respondent has perceived with the easiest way. In all four processes of accessibility, finding, viewing and downloading, they found CDC digital library easiest. Here all four processes obtained above score, that fall under the result of strongly agree. In the TAM framework, it was identified as perceived ease of use (PEU).

#### 4.2. Perceived Usefulness on CDC Digital Library

**Table 2: Result of Perceived Usefulness on CDC Digital Library**

<b>PU</b>	<b>Factors of PU</b>	<b>Value</b>	<b>Result</b>
<b>PU 1</b>	Usefulness for getting teaching learning resources	1.8	Strongly agree
<b>PU 2</b>	Satisfied with Browsing Headings	0.96	Agree
<b>PU 3</b>	Satisfied with digital resource	1.04	Strongly agree
<b>PU 4</b>	Improving quality teaching learning activities	1.17	Strongly agree

With regard to of the CDC digital library's usefulness, the data presented above indicates that users feel it easier to browse headings and are satisfied with the browsing facilities. Whereas the CDC's digital library is highly beneficial for teaching learning materials, with a value of perceived usefulness of 1.8 viz strongly agree. Similarly, a greater proportion of CDC digital library users felt that the CDC digital library enhanced the quality of teaching and learning activities. Along with the browsing heading, the satisfaction of CDC digital library users with regard for resources must be improved and updated.

### 4.3 Attitude (AT) on CDC Digital Library

**Table 3: Result of Users' Attitude on CDC Digital Library**

<b>AT</b>	<b>Factor of AT</b>	<b>Value</b>	<b>Result</b>
<b>AT 1</b>	Digital library Interface not attractive	0.46	Agree
<b>AT 2</b>	Easily Learn to Use	0.65	Agree
<b>AT 3</b>	Tutorial and Guidance	0.86	Agree
<b>AT 4</b>	Difficult to navigate	0.61	Agree
<b>AT 5</b>	Using Complication through Mobile device	1.58	Strongly agree
<b>AT 6</b>	Support for Access and Use	1.3	Strongly agree
<b>AT 7</b>	Organization of the information	1.32	Strongly agree
<b>AT 8</b>	Unclear online help and Notification service	1.09	Strongly agree

There appears to be a conflicting view of the CDC digital library among users. In terms of digital library interface, ease of learning, tutorial, guidance, and issues in navigating users' attitudes are on the agreeable side.

Similarly, users' attitudes toward using complication via mobile device support for access and use, information organization, and unclear online help and notification service are strongly agreeable. This indicates some respondents answered queries regarding their viewpoints without using their conscience. Using complication via mobile device shows that CDC authority needs to update the CDC digital library system to make it mobile device compatible. Furthermore, the CDC library authority should oversee online assistance and notification services. However, users' attitudes toward the CDC digital library are generally favorable.

#### 4.4 Accessibility Statement

##### 4.4.1 Distribution of Respondents by Gender

The first thing that needs to be focused on in an introductory section of respondents is their participation in this study based on their gender role. In fact, the respondents were asked to mention their gender in the questionnaire. The here is the gender distribution of respondents.

**Table 4: Distribution of Respondents by Gender (n=82)**

<b>Gender</b>	<b>Frequency</b>	<b>Percent</b>
<b>Male</b>	61	74.4
<b>Female</b>	21	25.6
<b>Total</b>	82	100

**Source: Field Survey, 2022**

The above table shows that three-quarters (74.4%) of respondents are male, while one-quarter (25.6%) are female. The data shows that more male users are using CDC digital library in compare to female. It can be concluded that additional research is required to assess the obstacles to female users' access to the CDC's digital library.

##### 4.4.2 Retrieval and Accessible of Digital Resources

This question was designed to obtain respondents' perceptions on the overall condition of retrieval and accessibility to digital resources from the CDC digital library system. The perceptions of respondents are presented in the table below:

**Table 5: Retrieval and Accessible the Digital Resources (n=82)**

	<b>Frequency</b>	<b>Percent</b>
<b>Strongly Agree</b>	20	24.4
<b>Agree</b>	60	73.2
<b>Neutral</b>	1	1.2
<b>Disagree</b>	1	1.2
<b>Total</b>	<b>82</b>	<b>100.0</b>

**Source: Field Survey, 2022**

Based on the table 73.2% of respondents agree, and 24.4% strongly agree, with the easiness of viewing digital resources from the CDC digital library system. However, 1.2% of respondents disagree with the easiness of viewing digital resources from the CDC digital library system. The majorities of respondents (97.8%) believed that it was easy and convenient to access and utilize the digital resources of the CDC digital library.

#### 4.4.3 Finding Documents Faster from CDC Digital Library System

This question was related with finding the documents faster from the CDC digital library system. Respondents have responded differently. Does the CDC digital library help in finding documents faster? It was the question to find the perception of users on the ease accessibility of the digital resources from the CDC digital library. The respondent’s responses have been presented in the following table.

**Table 6: Distribution of Rrespondents based on Finding Documents (n=82)**

	<b>Frequency</b>	<b>Percent</b>
<b>Strongly Agree</b>	25	30.5
<b>Agree</b>	54	65.9
<b>Neutral</b>	3	3.7
<b>Total</b>	<b>82</b>	<b>100.0</b>

**Source: Field Survey, 2022**

The above table shows that 65.9% of respondents agreed that the CDC digital library helps in finding documents faster. A total of 30.5% of respondents strongly agreed that finding the documents is faster. The remaining 3.7% of respondents are neutral; however, no respondents disagreed with this question. Overall, the CDC digital library greatly assisted in the faster in finding the documents faster.

#### 4.4.4 Easy View of CDC Digital Library Remotely

This question was designed to obtain user perceptions of the CDC digital library system's easy visibility. The responses of the respondents are as follows:

**Table 7: Distribution of Respondents by Easy View of Digital Documents Remotely (n=82)**

	<b>Frequency</b>	<b>Percent</b>
<b>Strongly Agree</b>	25	30.5
<b>Agree</b>	47	57.3
<b>Neutral</b>	10	12.2
<b>Total</b>	82	100.0

**Source: Field Survey, 2022**

According to the above table, 57.3% of respondents agreed that it would be easy to view digital documents from the CDC digital library, 30.5% strongly agreed, and 12.2% were neutral. However, no respondents disagreed that it was easy to view digital documents. The majority of respondents (87.8%) said that the system visibility of digital documents from the CDC digital library was simple and convenient. It can be concluded that system visibility has a beneficial effect on the perceived usefulness of the CDC digital library.

#### **4.4.5 Easy to Download and Print**

One of the main aims of this study is to find out how users perceive the digital library's collections and services with regards to accessibility. The question was asked to determine the accessibility of digital resources for download and printing from the CDC digital library system. The responses of the respondents are shown in the following table.

**Table 8: Easy to Download and Print (n=82)**

	<b>Frequency</b>	<b>Percent</b>
<b>Strongly Agree</b>	35	42.7
<b>Agree</b>	40	48.8
<b>Neutral</b>	5	6.1
<b>Disagree</b>	2	2.4
<b>Total</b>	82	100.0

**Source: Field Survey, 2022**



Based on the above table, 48.8 percent of respondents have agreed that it is easy to download and print digital resources from the CDC digital library, 42.7 percent have strongly agreed. Respondents' neutrality is at 6.1%, while disagreement is at 2.4%. The data shows that the majority of respondents have agreed that the digital resources of the CDC digital library system are easy to download and print. It can be concluded that system accessibility is a positive effect on perceived usefulness of the CDC digital library system.

#### **4.5 User-Friendly Statement/Perceived Ease of Use**

##### **4.5.1 User Friendly and Appealing Interface**

The interface design determines how things really look on the screen, along with the choice of frames, icons, colors, and user-assistance visual elements. Any digital library is practically worthless if it is difficult to use effectively and efficiently. This question was prepared to explore users' opinion on the user-friendly and appealing interface of the CDC digital library. The respondents have following views:

**Table 9: User Friendly and Appealing Interface (n=82)**

	<b>Frequency</b>	<b>Percent</b>
<b>Strongly Agree</b>	9	11.0
<b>Agree</b>	60	73.2
<b>Neutral</b>	13	15.9
<b>Total</b>	82	100.0

---

**Source: Field Survey, 2022**

The above table indicates that 73.3% of respondents agreed that the CDC digital library system has user-friendly and appealing user interface. Likewise, 11% of respondents stated that they strongly agreed, and the remaining 15.9% respondents declared themselves to be neutral. It indicates that most of the users are satisfied with user-friendly system design, clear navigation or interface in the CDC digital library. It can be concluded the CDC digital library system has user-friendly and appealing interface.

#### 4.5.2 Usefulness Teaching Materials

The relevance of a digital library to the information needs of its users can enhance their perception of its usefulness. The usefulness of the CDC digital library for acquiring relevant digital resources was another question put to the respondents. Respondents have expressed their opinions in the following ways:

**Table 10: Usefulness Teaching Materials (n=82)**

	Frequency	Percent
<b>Strongly Agree</b>	19	23.2
<b>Agree</b>	49	59.8
<b>Neutral</b>	13	15.9
<b>Disagree</b>	1	1.2
<b>Total</b>	82	100.0

**Source: Field Survey, 2022**

The above data shows that 59.8% respondents agreed that using the CDC digital library is useful to find relevant teaching materials, while 23.2% strongly agreed and 15.9% had a neutral opinion. However, only 1.2% of the total respondents reported that they disagreed with that statement. It shows that the majority of respondents are satisfied with the CDC digital library system's ability to find and access relevant teaching materials. It can be concluded that relevance of the system to users' information needs does have a positive effect on perceived usefulness of the CDC digital library.

#### 4.5.3 Easy to Use the CDC Digital library

The perceived ease of use determines behavior intention to utilize the digital library. This question was asked to respondents in order to obtain their opinions on the ease of use of the CDC digital library system. The responses of the respondents are as follows:

**Table 11: Easy to Use the CDC Digital Library (n=82)**

	<b>Frequency</b>	<b>Percent</b>
<b>Strongly Agree</b>	20	24.4
<b>Agree</b>	49	59.8
<b>Neutral</b>	11	13.4
<b>Disagree</b>	2	2.4
<b>Total</b>	<b>82</b>	<b>100.0</b>

**Source: Field Survey, 2022**

The above table shows that 59.8% respondents agreed that the CDC digital library system is easy to use, and 24.4% respondents strongly agreed. However, 13.4% respondents remained undecided. Only 2.4% of respondents disagreed with the ease of use of the CDC digital library system. It shows that the great majority of respondents believed that utilizing the CDC digital library system was simple and easy. It can be concluded that the perceived ease of use of the CDC digital library influenced a large number of respondents favorably.

#### **4.5.4 Comfortable for Advanced Search**

The question was developed to find out the respondents' perception on the easiness of the screen design and navigation of the advanced search on the CDC digital library system. The collected data has been presented and analyzed in the following table and figure with illustration:

**Table 12: Comfortable for Advanced Search (n=82)**

	<b>Frequency</b>	<b>Percent</b>
<b>Strongly Agree</b>	25	30.5
<b>Agree</b>	46	56.1
<b>Neutral</b>	10	12.2
<b>Disagree</b>	1	1.2
<b>Total</b>	<b>82</b>	<b>100.0</b>

**Source: Field survey, 2022**

As the above table shows, 56.1% of respondents agreed that the CDC digital library system's advanced search options are simple and easy while using. Similarly, 30.5% respondents strongly agreed and 12.2% respondents have been undecided. Only 1.2% respondents disagreed. It shows that the majority of respondents are satisfied with the design and connectivity of the CDC digital library's advanced searching subsystem. However, the remaining respondents require guidance in searching strategies and techniques on the digital library system. The majority of respondents (86.6%) reported that it was simple and easy to use the advanced search feature of the CDC digital library system. It is reasonable to come to the conclusion that the CDC digital library's advanced search feature is simple to use and accessible.

#### **4.6 Users Satisfaction/ Usability Statement**

##### **4.6.1 Usefulness of CDC Digital Library**

The purpose of this question was to identify the usefulness and usability of the teaching learning resources available in the CDC's digital library. The following table shows the data that were collected:

**Table 13: Usefulness of CDC Digital Library (n=82)**

	<b>Frequency</b>	<b>Percent</b>
<b>Strongly Agree</b>	9	11.0
<b>Agree</b>	55	67.0
<b>Neutral</b>	18	22.0
<b>Total</b>	<b>82</b>	<b>100.0</b>

**Source: Field survey, 2022**

According to the above table, 67.1% respondents agreed that the CDC digital library is useful for accessing teaching and learning resources. Similarly, 11% respondents strongly agreed that teaching and learning resources are extremely beneficial. Only 22% respondents did not respond to this question. It shows that the majority of respondents (78.1%) are satisfied with relevant and useful teaching and learning resources available in the CDC digital library. It can be concluded that more research is required to address the respondents who haven't revealed their opinion about the usefulness and applicability of the teaching resources available in the CDC digital library.

#### 4.6.2 Satisfied with Browsing Headings

A clear, understandable terminology as well as the user-friendly system design can reduce the users' search effort and support efficient information search and retrieval. The question was developed to find out the condition of the search terminologies/ headings and system design or structures on the CDC digital library system. The responses of the respondents are as follows:

**Table 14: Satisfied with Browsing Headings (n=82)**

	<b>Frequency</b>	<b>Percent</b>
<b>Strongly Agree</b>	13	15.9
<b>Agree</b>	55	67.1
<b>Neutral</b>	12	14.6
<b>Disagree</b>	2	2.4
<b>Total</b>	<b>82</b>	<b>100.0</b>

**Source: Field Survey, 2022**

As shown in the above table, 67.2% of respondents agree and 15.9% strongly agree that searching digital resources in the CDC digital library system by headings or terminologies is useful. However, only 2.4% of respondents disagreed, while 14.6% of respondents did not respond. The majority of the respondents (78.1%) provided their opinion that the CDC digital library system has a clear, understandable and the user friendly system design. It can be concluded that the search headings and system design on the CDC digital library system are in good functioning order.

#### 4.6.3 Satisfied with Digital Library Resources

The question was aimed at obtaining respondents' opinions about the arrangement and organization of the digital resources on the CDC digital library system. The collected data has been presented and analyzed in the following table with illustration.

**Table 15: Satisfaction with Digital Library Resources (n=82)**

	<b>Frequency</b>	<b>Percent</b>
<b>Strongly Agree</b>	18	22.0
<b>Agree</b>	49	59.7
<b>Neutral</b>	15	18.3
<b>Total</b>	<b>82</b>	<b>100.0</b>

**Source: Field Survey, 2022**

In accordance with the data presented above, 59.7% of respondents are satisfied with the organization and arrangement of the digital resources in the CDC digital library. Similarly, 22% respondents strongly agreed. However, only 18.3% respondents are neutral. Respondents are satisfied with digital resources available in a digital library; if they can easily and efficiently obtain relevant and useful information. Positive impact on the usefulness of the digital library can be created by the system's sensitivity to users' information needs. It can be concluded that the CDC digital library's resources are well-arranged and organized in accordance with digital library requirements.

#### **4.6.4 Improving the Quality Teaching and Learning Activities.**

The research question was created to find out whether the CDC digital library system assists in improving the quality of teaching and learning activities. The following table indicates respondents' opinion in number and percentage.

**Table 16: Improving Quality Teaching and Learning Activities (n=82)**

	<b>Frequency</b>	<b>Percent</b>
<b>Strongly Agree</b>	20	24.4
<b>Agree</b>	56	68.3
<b>Neutral</b>	6	7.3
<b>Total</b>	<b>82</b>	<b>100.0</b>

**Source: Field Survey, 2022**

Above table and chart indicates that 68.3 % of respondents have given that using the CDC digital library system helps to improve the quality of teaching and learning activities. Similarly, 24.4% of respondents stated that they strongly agree with the statement. Only 7.3% of respondents are neutral. It means that most of them, i.e. more than 92.7% respondents are really satisfied with CDC digital library system for improving the quality of teaching and learning activities. It indicates that the positive effect on perceived usefulness and usability of the digital library depends on the relevance of the system.

#### **4.7 Difficulties and Obstacle of CDC Digital Library**

##### **4.7.1. Digital Library System's Interface**

The system design creates the positive effect on perceived ease of use of the digital library. This question was asked to collect opinion on the CDC digital library's system design or system interface in the context of difficulties and barriers. The collected data is presented in the following table:

**Table 17: Digital Library System's Interface (n=82)**

	<b>Frequency</b>	<b>Percent</b>
<b>Strongly Agree</b>	3	3.7
<b>Agree</b>	35	42.7
<b>Neutral</b>	33	40.2
<b>Disagree</b>	10	12.2
<b>Strongly Disagree</b>	1	1.2
<b>Total</b>	<b>82</b>	<b>100.0</b>

**Source: Field Survey, 2022**

Above data show that 42.7 % of respondents said that the CDC digital library system interface is not attractive and only 3.7% respondents are highly unsatisfied with the system interface and system design. Similarly, 40.2% respondents have not given their perception. However, 12.2% of respondents disagreed with the statement. The remaining 1.2% strongly disagreed. In the context of digital libraries, it not only matters what we put on the screen, but also how. It can be concluded that the CDC digital library system or system design is not attractive. To make the CDC digital library be user-friendly and usable, the digital library system should be redesigned attractively to address all type of users.

#### 4.7.2 CDC Digital Library System Ease of Use

The system's usability in connection to system characteristics, particularly interface design. This question was intended to collect users' views on the CDC digital library system in terms of problems and obstacles. The collected data is presented in the following table with illustration:

**Table 18: CDC Digital Library Ease of Use (n=82)**

	<b>Frequency</b>	<b>Percent</b>
<b>Strongly Agree</b>	8	9.8
<b>Agree</b>	41	50.0
<b>Neutral</b>	30	36.6
<b>Disagree</b>	3	3.7
<b>Total</b>	<b>82</b>	<b>100.0</b>

**Source: Field Survey, 2022**

Based on the data presented above, 50% of respondents agreed that individuals could easily learn to utilize the CDC digital library system. 9.8% of respondents expressed strong agreement. However, 36.6% respondents remained neutral. Only 3.7% respondents disagreed. The statistics show that 36.6% of respondents did not express their opinion on the CDC digital library system in terms of ease of use. It might be concluded that more research is needed to handle those kinds of responses.



### 4.7.3 Tutorial and Guidance on CDC Digital Library

Tutorials and guidelines are significant tools for ensuring the functionality and usability of a system. This question was designed to obtain opinions on the availability of tutorials and guidance for using the CDC digital library system. The collected data is presented in the following table and figure with illustration.

**Table 19: Tutorial and Guidance on CDC Digital Library (n=82)**

	<b>Frequency</b>	<b>Percent</b>
<b>Strongly Agree</b>	20	24.4
<b>Agree</b>	35	42.7
<b>Neutral</b>	23	28.0
<b>Disagree</b>	4	4.9
<b>Total</b>	<b>82</b>	<b>100.0</b>

**Source: Field Survey, 2022**

The data presented above show the 42.7% of respondents agreed that the CDC digital library system lacks the tutorial and guidance feature. Similarly, 24.4% respondents strongly agreed. Additionally, 28% of respondents did express their opinion. However, only 4.9% of respondents stated that the tutorial and guidance are provided in the CDC digital library system. The majority of respondents (67.1%) responded that the CDC digital library system does not provide tutorials and instructions for using the system. The statistics also show that 28% of respondents did not express their opinion on the statement. It can be concluded that the tutorials and instructions should be provided easily accessible.

### 4.7.4 Difficult to Navigate

Navigating means a method has been provided in the system for us to jump from one system to another to retrieve and access the needed information. This question was designed to find the condition of the navigating features of the CDC digital library. Respondents have given their opinions as shown in the following table.

**Table 20: Difficult to Navigate (n=82)**

	<b>Frequency</b>	<b>Percent</b>
<b>Strongly Agree</b>	8	9.8
<b>Agree</b>	48	58.5
<b>Neutral</b>	14	17.1
<b>Disagree</b>	8	9.8
<b>Strongly Disagree</b>	4	4.9
<b>Total</b>	<b>82</b>	<b>100.0</b>

**Source: Field Survey, 2022**

As shown in the table above, 58.5% of respondents agreed that the CDC digital library system makes it difficult to navigate digital materials. Similarly, 9.8% respondents strongly agreed with the CDC digital library system's navigation difficulty. Only 17.1% respondents are neutral; however, 9.8% respondents indicated the CDC digital library system is simple and easy to use and 4.9% respondents claimed it is extremely simple and easy to use. The majority of respondents believed that navigating features of the CDC digital library system has been difficult. It is reasonable to conclude that the simple and user friendly navigating features should be included in the CDC digital library system to enhance the perceived ease of use and usefulness of the digital library.

#### **4.8 Innovation Statement**

##### **4.8.1 Using Complication through Mobile Device**

The availability of information is now regarded as being more significant than a collection of buildings. The respondents were asked about their opinions on how difficult it is to operate the CDC digital library system on a mobile device. The opinions given by respondents are shown in the following table.

**Table 21: Using Complication through Mobile Device (n=82)**

	<b>Frequency</b>	<b>Percent</b>
<b>Strongly Agree</b>	62	75.6
<b>Agree</b>	12	14.6
<b>Neutral</b>	4	4.9
<b>Disagree</b>	2	2.4
<b>Strongly Disagree</b>	2	2.4
<b>Total</b>	<b>82</b>	<b>100.0</b>

**Source: Field Survey, 2022**

According to the table above, 75.6% of respondents strongly agreed that using the CDC digital library system on a mobile device is extremely difficult. Likewise, 14.6% of respondents agreed on that issue. The 4.9% respondents are undecided. However, just 4.8% respondents stated that using the CDC digital library system on a mobile device is not difficult. It shows that a large percentage of respondents claimed that is extremely difficult to use the CDC digital library system on a mobile device. It can be concluded that the CDC digital library system should be designed to be accessible via mobile device as well.

#### **4.8.2 Supports for Access and Use Digital Resources**

It is expected that computer self-efficacy and digital literacy have a positive effect on perceived ease of use of the digital library. This question was designed to obtain the users perception on the need of the technical support for access and use of the resources on the CDC digital library system. The opinions given by respondents are shown in the following table.

**Table 22: Supports for Access and Use Digital Resources (n=82)**

	<b>Frequency</b>	<b>Percent</b>
<b>Strongly Agree</b>	53	64.6
<b>Agree</b>	14	17.1
<b>Neutral</b>	2	2.4
<b>Disagree</b>	6	7.3
<b>Strongly Disagree</b>	7	8.5
<b>Total</b>	<b>82</b>	<b>100.0</b>

**Source: Field Survey, 2022**

According to the above table, 64.6% of respondents strongly agree that technical support is required to access and use the digital resources upon that CDC digital library system. Similarly, 17.1% of respondents agreed with this statement. Only 2.4% of respondents did not answer at all.

The majority of respondents depend on technical help to retrieve and access digital resources from the CDC digital library system. It can be concluded that the library authority should incorporate the digital users' manual or supporting document within the CDC digital library system to enhance the perceived ease of use of the digital library.

#### **4.8. 3 Organization of the Information**

Systems for organizing knowledge act as a link between a user's information needs and the collection's resources. This question was posed to respondents in order to obtain information about their perspective on the organizational structure of information in the CDC digital library system. The opinions given by respondents are given in the following table:

**Table 23: Organization of the Information (n=82)**

	<b>Frequency</b>	<b>Percent</b>
<b>Strongly Agree</b>	35	42.7
<b>Agree</b>	41	50.0
<b>Neutral</b>	5	6.1
<b>Strongly Disagree</b>	1	1.2
<b>Total</b>	<b>82</b>	<b>100.0</b>

**Source: Field Survey, 2022**

In the table mentioned above, 50% respondents agreed that the organization of the information on the CDC digital library is easy to access, and 42.7 % respondents strongly agreed. Similarly, 6.1% respondents are undecided. However, only 1.2% respondents strongly disagreed with this statement. Majority of the respondents have perceived that the organizational structure of information in the CDC digital library system is clear to access.

#### **4.8.4 Unclear Online Help and Notification Service**

Users of modern digital libraries (DLs) can keep up to date by searching and exploring their chosen collections, or by utilizing a notification service and online help. This question was intended to generate feedback regarding the inconsistency of the online help, notification service, and documentation available on the CDC digital library system. The opinions given by respondents are given in the following table:

**Table 22: Unclear Online Help and Notification Service (n=82)**

	<b>Frequency</b>	<b>Percent</b>
<b>Strongly Agree</b>	32	39.0
<b>Agree</b>	34	41.5
<b>Neutral</b>	9	11.0
<b>Disagree</b>	6	7.3
<b>Strongly Disagree</b>	1	1.2
<b>Total</b>	<b>82</b>	<b>100.0</b>

**Source: Field Survey, 2022**

As shown in the table above, 39% of respondents highly agreed on the ambiguity of the CDC digital library's online help and notification services. Similarly, 41.5% of those answered agreed. 11% of respondents did not respond at all. However, 7.3% respondents disagreed, and only 1.2% strongly disagreed. The majority of respondents believed that the CDC digital library's online and notification services seemed unclear. It can be concluded that the CDC digital library system's online help, on-screen notifications, and other documentation services should be redesigned to make it be accessible, clear, and easy to use.

#### **4.9 Relationship between Variables**

This study used two core variables of TAM: PU and PEU to test their effect on teachers' attitudes toward CDC digital library system. Karl Pearson correlation was used to determine the relationship between respondents' perceived ease of use (PEU), perceived usefulness (PU), and attitude (AT).

The relationships between variables are given below:

##### **4.9.1 Relationship between Perceived Ease of Use (PEU) and Attitude (AT)**

The PU and AT scores are shown in the table below. The following are the data score based on the questionnaires:

**Table 25: PEU and AT Relation**

<b>Perceived Ease of Use (PEU)</b>	<b>Score</b>	<b>Attitude (AT)</b>	<b>Score</b>
<b>PEU1</b>	1.2	AT1	0.46
<b>PEU2</b>	1.3	AT2	0.65
<b>PEU3</b>	1.2	AT3	0.86
<b>PEU4</b>	1.3	AT4	0.61
<b>PEU5</b>	0.95	AT5	1.58
<b>PEU6</b>	1.04	AT6	1.30
<b>PEU7</b>	1.06	AT7	1.32
<b>PEU8</b>	1.15	AT8	1.09

**Source: Field Survey, 2022**

Above table shows that the relationship between Perceived Ease of Use (PEU) and Attitude (AT). The statistical process shows the  $r$  is -0.91977. So we can say that PEU and AT relationship is strongly negative. A rise in one variable causes a drop in the other when the correlational coefficient is less than 0, but more than -1 (Dziak, 2016). When two variables have a negative correlation, it means that they are moving in the opposite directions. When one variable rises, the other reduces, and vice versa. It can be concluded that the relationship between two variables were strongly negative. The  $r$  value indicated that the increase of PEU will decrease the negative attitude (difficulties) toward CDC digital library. It can be concluded that Perceived Ease of Use (PEU) strongly opposite influence the trend of negative attitude (AT) of the users towards the CDC digital library system. The data reveals that the acceptance of digital libraries largely depends on the system's friendliness. It can be recommended that the CDC digital library authority should address the negative attitude of users toward the digital library by upgrading digital library compatible mobile device and notification service.

#### **4.9.2 Relationship between Perceived Ease of Use (PEU) and Perceived Usefulness (PU)**

The PEU and PU scores are shown in the table below. The following is the data score based on the questionnaires:

**Table 26: PEU and PU Relation**

Perceived Ease of Use(PEU)	Score	Perceived Usefulness (PU)	Score
PEU1	1.2	PU1	1.08
PEU2	1.3	PU2	0.96
PEU3	1.04	PU3	1.04
PEU7	1.06	PU4	1.17

**Source: Field Survey, 2022**

The relationship between PEU and PU is shown in the table above. The statistical process reveals that the correlation (r) between the two variables perceived ease of use (PEU) and perceived usefulness (PU) is -0.674854216. So we can say that PEU and PU relationship is strongly negative. The r value is less than 0. As a result, there is a very weak relationship between PEU and PU. A strongly negative correlation indicates that there is negative relationship between the variables. The r value indicated that there is no relation between perceived ease of use and perceived usefulness among users of the CDC digital library. It can be concluded that the CDC digital library is useful and easier to use are not connected questions regarding perceived ease of use and perceived usefulness of digital library users.

#### **4.9.3. Relationship between Perceived Usefulness (PU) and Attitude (AT)**

The PU (Perceived Usefulness) and AT (Attitude) scores are shown in the table below. The following is the data score based on the questionnaires:

**Table 27: PU and AT Relation**

Perceived Usefulness (PU)	Score	Attitude (AT)	Score
PU1	1.08	AT1	1.32
PU2	0.96	AT2	0.65
PU3	1.04	AT3	1.58
PU4	1.17	AT4	0.61

**Source: Field Survey, 2022**



The relationship between PU and AT is shown in the above table. The statistical operation reveals that the co-efficient correlation (r) between the two variables perceived usefulness (PU) and Attitude (AT) is -0.300443. So we can say that PU and AT relationship is in medium negative. A medium negative relationship indicates that an increase in one variable causes a moderate decrease in the other, and vice versa. The r value indicated that increasing PU will moderately reduce negative attitudes (difficulties) toward the CDC digital library system. Thus, we can draw the conclusion that PU has a minimal reverse influence on the attitude of library users.

In conclusion, correlation analysis reveals that PEU, PU, and AT were study variables that were negatively correlated, but that there was no correlation between PEU and PU. The correlation analysis demonstrated that the negative AT of users naturally decreased as PEU of the CDC digital library system increased. The negative AT of users gradually decreased as PU on the CDC digital library system increased. The results further indicate that perceived usefulness and perceived ease of use have a significant impact on people's attitudes toward using digital libraries. It can be concluded that people may be ready to accept digital libraries and continue to use them in the future if they perceive the system useful and ease of use. The researcher would like to recommend that the CDC library authority take into account the relationship between these variables during the planning process. As a result, the CDC library authority and library professionals should target these variables in order to significantly increase the acceptance and satisfaction of the CDC digital library system.

#### **4.10 Observation of the Analytical Report of CDC Digital Library System**

One of the primary objectives was to evaluate users' perceptions of the usefulness and accessibility of the CDC digital library system. Furthermore, the key focus is on the users' attitudes toward the digital library system's usage and usefulness. The researcher observed and analyzed the entire CDC digital library system for this purpose, and produced analytical reports based on the time period (January 2015 to January-September 2022) generated by the system's automatic process. The analytic reports from the CDC digital library system are presented in the following table:

**Table 28: Observation of the Analytical Report of CDC Digital Library System**

Date	Resources Downloaded	Daily Downloaded	Resources Viewed	Daily Viewed
2015 (January-December)	1,10,690	303.3	2,72,649	747.0
2016 (January-December)	67,849	192.8	3,11,683	878.0
2017 (January-December)	1,77,661	486.7	3,46,623	949.7
2018 (January-December)	5,22,275	1,446.7	7,48,691	2149.8
2019 (January-December)	4,53,530	1,242.5	19,36,971	5,306.8
2020 (January-December)	36,94,236	10,205.1	23,08,987	6,360.8
2021 (January-December)	11,08,040	3,035.7	1732936	4,747.8
2022 (January-September )	6,68,374	2,652.3	15,13,522	5,958.7

Source: Analytical Report of CDC digital library system

The above analytical reports were collected using the CDC digital library systems which were maintained on the Digital Assets Management Software (DAMS) of ResourceSpace. These CDC digital library system analytical reports are presented on a year-by-year basis.

According to the analytical download report of 2015, the digital resources of the CDC digital library were downloaded 110690 times, with an average of 303.3 times per day. In accordance with the 2015 analytical report on viewed resources, digital resources from the CDC digital library were viewed 272649 times in 2015, with an average of 747.0 views per day.

Digital materials of the CDC digital library were viewed 272649 times in 2016, with an average of 192.8 visits per day, as reported in the 2016 analytical download report. According to the 2016 analytical report on viewed resources, digital resources of the CDC digital library were viewed 311683 times in 2016, with an average of 878.0 daily views.

According to the analytical download report of 2017, the digital resources of the CDC digital library were downloaded 177661 times in 2017, for a daily average of 486.7 times. According to the 2017 analytical report on viewed resources, digital resources of the CDC digital library were viewed 346623 times in 2017, with an average of 949.7 times views per day.

Based on the 2018 analytical download report, the CDC digital library's digital resources were downloaded 522275 times, with an average of 1446.7 times each day. In accordance with the 2018

resources analytical report on viewed resources, the CDC digital library's digital resources were viewed 784691 times in 2018, with an average of 2149.8 times views per day.

According to the analytical download report of 2019, the CDC digital library's digital resources were downloaded 453530 times in 2019, with a daily average of 1242.5 times. Based on the 2019 analytical report on viewed resources, the CDC digital library's digital resources were viewed 1936971 times in 2019, with an average of 5306.8 views per day.

According to the analytical download report of 2020, the digital resources of the CDC digital library were downloaded 3694236 times in 2019, with a daily average of 10205.1 times. In accordance with the 2020 analytical report on viewed resources, digital resources from the CDC digital library were viewed 2308987 times in 2020, with an average of 6360.8 views per day.

According to the analytical download report of 2021, the digital resources of the CDC digital library were downloaded 1108040 times in 2021, with a daily average of 3035.7 times. In accordance with the 2021 analytical report on viewed resources, digital resources from the CDC digital library were viewed 1732936 times in 2021, with an average of 4747.8 views per day.

Based on the abovementioned analytical download report of 2022 January-September 2022, the digital resources of the CDC digital library were downloaded 668374 times in 2022, for a daily average of 2652.3 times. According to the 2022 January-September analytical report on viewed resources, digital resources from the CDC digital library were viewed 1513522 times during the period January-September 2022, with an average of 5958.7 views per day.

The above CDC digital library analytical study revealed that the number of downloads and views of resources has gone up and down over the last eight years. The numbers of knowledge materials download and views from the CDC digital library was limited in 2016, but the number of information materials was steadily increased in subsequent years.

The number of downloads and views of resources from the CDC digital library system increased dramatically during COVID19. It can be concluded that during the Lockdown, when there were no physical classes, the CDC digital library was efficiently and successfully used by teachers and students. As a result, the CDC digital library was in high demand during the Lockdown period, when no physical classes were held.

## CHAPTER 5

### SUMMARY, FINDINGS, CONCLUSIONS & RECOMMENDATIONS

This chapter is primarily based on the outcomes of the analysis and data presentation in chapter four. It covers the summary, findings, conclusions, and recommendations.

#### 5.1 Summary

This main goal of the study is to investigate how users perceive the resources and services provided by the CDC digital library. The perceptions of users were collected from high school teachers and head teachers in Kathmandu (Kathmandu Metropolitan City, Kiritpur Municipality, Chagunarayan Municipality), Lalitapur (Lalitapur Metropolitan City, Mahalaxmi Municipality, and Godavari Municipality), and Bhaktapur (Bhaktapur Metropolitan City, Thimi Municipality, Chagunarayan Municipality, and Suryabinayak Municipality). Information was collected through user questionnaires and direct observation of analytical reports in the CDC digital library system.

Only 82 respondents had responded to the 86 set questions that were distributed. Due to the purposive sampling approach used to obtain the data. Males made up a larger proportion of the survey population 61(74.4%) as opposed to 24(25.6%) female counterparts.

#### 5.2 Findings

Based on the analysis of data collected from CDC digital library users, the findings of this research can be summarized as follows:

- This study revealed a significant negative correlation between perceived ease of use (PEU) and attitude (AT) among CDC digital library users. An increase in Ease of Use of the CDC digital library causes a decrease in the negative Attitude (AT) toward library, and vice versa. The relationships between above mentioned two variables were strongly negative.
- The statistical process reveals that the correlation between the two variables perceived ease of use (PEU) and perceived usefulness (PU) is negative. It means that PEU and PU relationship is strongly negative. There is no relation between and ease of use among users of the CDC digital library and usefulness of the CDC digital library to them.

- The statistical analysis indicates that there is an adverse relationship between the two variables Perceived Usefulness (PU) and Attitude (AT). PU moderately reduces negative attitudes (difficulties) toward the CDC digital library system. Thus, It can draw the conclusion that PU has a minimal reverse influence on the attitude of library users.
- The results further indicate that perceived usefulness and perceived ease of use have a significant impact on people's attitudes toward using digital libraries. It can be concluded that people may ready to accept digital libraries and continue to use them in the future if they perceive the system useful and ease of use.
- The researcher observed and analyzed the entire CDC digital library system for this purpose, and produced analytical reports based on the time period (January 2015 to January-September 2022) generated by the system's automatic process. This study revealed that the number of downloads and views of resources has gone up and down over the last eight years. The number of knowledge materials in the CDC digital library was limited in 2016, but the number of information materials was steadily increased in subsequent years. The number of downloads and views of resources from the CDC digital library system increased dramatically during COVID19. It can be showed that during the Lockdown, when there were no physical classes, the CDC digital library was efficiently and successfully used by teachers and students. Thus, it can be concluded that the CDC digital library is extremely useful and noteworthy for the users.

### **5.3 Conclusions**

More 91.5% respondents have given the positive perception on the CDC digital library system. The first is that the CDC digital library is extremely useful and easy to use. The survey results showed that users had a positive perception on the CDC digital library in terms of usefulness and easiness. However, this survey data only includes high school teachers from schools in the Kathmandu valley, primarily within the municipal area.

This research revealed that usage of the CDC digital library dramatically increased during the COVID -19 periods when there were no physical classes. As a result, the CDC digital library is in more demand during online classes to manage health challenges. It can be concluded that the CDC digital library is extremely useful and noteworthy for the users.

Despite its usefulness and ease of use, the CDC digital library has been questioned by some users for its mobile device accessibility, navigation, system design, and additional tutorials. It could be concluded that users encountered numerous difficulties with the CDC digital library system's mobile device accessibility, navigation, system design, and additional tutorials that must be addressed in order to further enhance usability and ease of retrieval.

#### **5.4 Recommendations**

The findings and conclusion, following recommendations have been proposed for enhancing users' favorable perceptions of the accessibility and effectiveness of the CDC digital library:

- The CDC digital library authority should address the negative attitude of users toward the digital library by upgrading digital library compatible mobile device and notification service.
- The CDC library authorities consider the relationship between PU, PUE and AT elements during the planning phase. The CDC library authority and library professionals should address these variables in order to significantly increase the acceptance and satisfaction of the CDC digital library system.
- To improve the usability of the available materials and services, it should be a top priority to inform consumers about the presence of digital library systems. To improve the use of the many resources and services offered on the CDC digital library, user education should be conducted.
- The library authority should incorporate the online digital users' manual and supporting documents within the CDC digital library system to enhance the perceived ease of use and perceived usefulness of the digital library.
- To make the CDC digital library be user-friendly and usable, the digital library system should be redesigned attractively to address all type of users.
- It is essential to make the CDC digital library system compatible with the current ICT devices, such mobile devices.

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## APPENDIX A

### Questionnaire

Dear Respondents

I am a student of Masters in Library and Information Science (MLISc) of Tribhuwan University, Kirtipur. This questionnaire is a part of my research study for preparing a thesis for the partial fulfillment of my master's degree in Library and Information Science (MLISc). The "**A Study of Users' Perceptions towards the Curriculum Development Centre's (CDC) Digital Library**" is the issue of my research study. The primary objective of this study is to examine how users perceive the CDC digital library's collections and services. The information given by you will be kept confidential and used only for the purpose of this study.

Name:-.....

Age:..... Gender:-.....

Name of School:-.....

Address-.....

Users Group:-

- a) Teacher
- c) Head Teacher:

Subject Teaching: -----

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### Questionnaire

The TAM model will be used in this research. You are asked to share your thoughts on the CDC Digital Library system's ease of use and use. You are requested to put the tick mark (√) in the most appropriate number of each statement which corresponds most closely to your desired response. (Please use Rating Scale: 1- Strongly Agree, 2- Agree, 3-Neutral, 4 – Disagree, 5- Strongly Disagree)

### 1. Accessibility Statement

S/No	Statements	1	2	3	4	5
01	I can retrieve and access the digital resources from the CDC Digital library.					
02	The CDC digital library helps to in finding documents faster.					
03	The digital documents of the CDC digital library are easy to view remotely.					
04	The digital resources of the CDC digital library are easy to download and print.					

### 2. User-Friendly Statement/ Perceived Ease of Use

S/No	Statements	1	2	3	4	5
01	The CDC digital library system has user-friendly and appealing interface.					
02	CDC digital library system is useful for finding teaching material on my subject					
03	The CDC digital library system is easy to use.					
04	I am comfortable with advance search of the CDC digital library system.					

### 3. Users Satisfaction and Usability Statement/ Perceived Usefulness

S/No	Statements	1	2	3	4	5
01	For me, the CDC's digital library is really useful for getting teaching learning resources.					
02	I am satisfied with browsing headings the resources in the CDC digital library system.					
03	I am satisfied with browsing headings of CDC digital library's resources.					
04	Using the CDC digital library system improved the quality of my teaching and learning activities.					

### 4. Difficulties and obstacle of CDC digital library

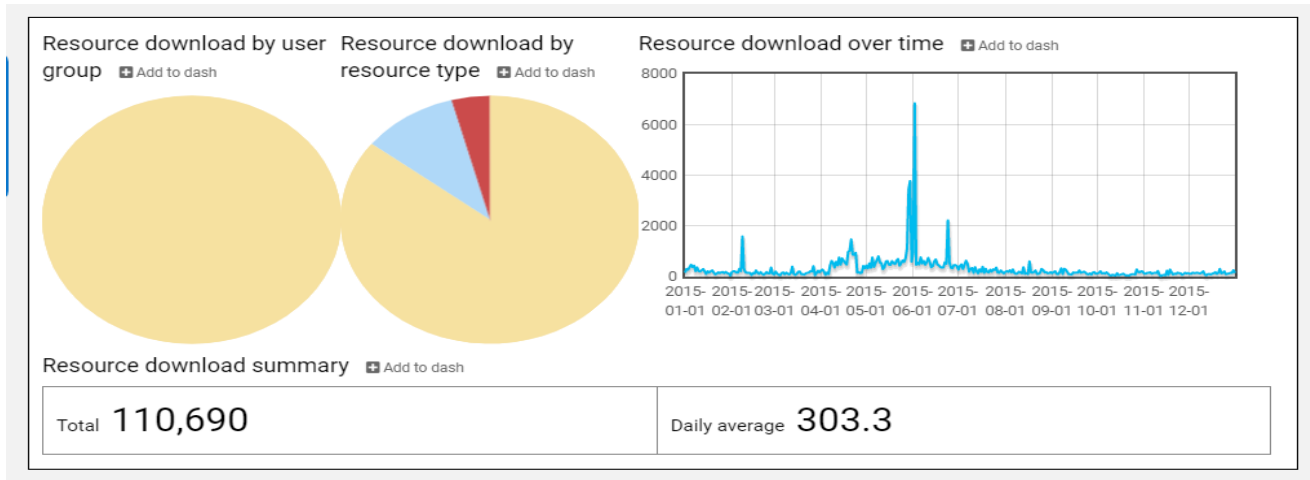
S/No	Statements	1	2	3	4	5
01	The CDC digital library system's interface is not attractive					
02	I think that most people can learn to use the CDC digital library system easily.					
03	The tutorial and guidance for using the CDC digital library are not provided.					
04	The CDC digital library system is difficult for me to navigate.					

**5. Innovative Statement**

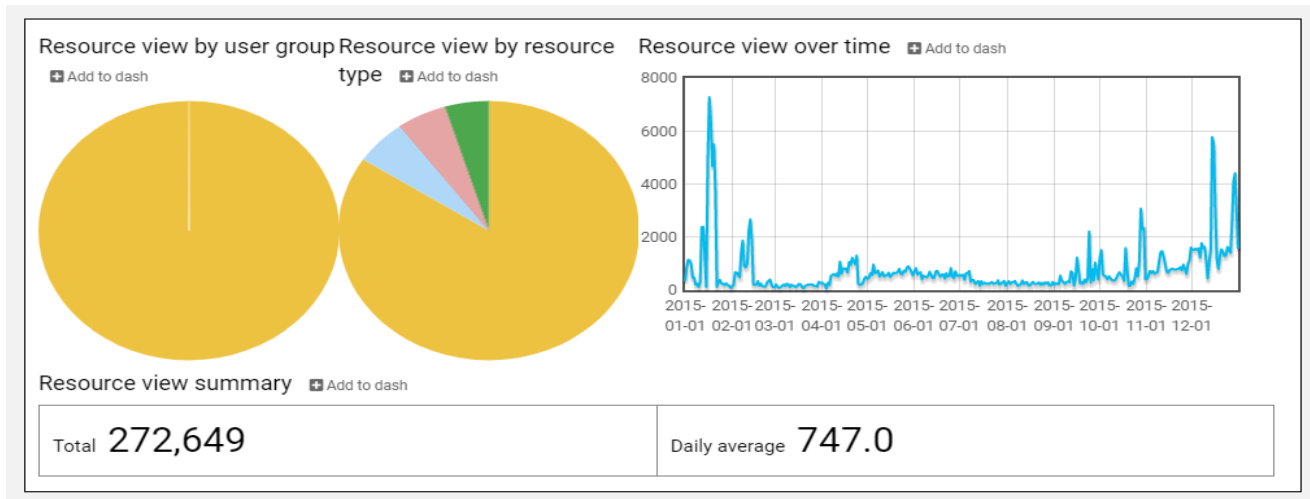
S/No	Statements	1	2	3	4	5
01	Using the CDC digital library system on a mobile device is extremely complicated.					
02	I need the support of a technical person to be able to access and use the digital resources on the CDC digital library system.					
03	The organization of the information on the CDC digital library is clear to access.					
04	The information (such as online help, on-screen notifications, and other documentation) provided with the CDC digital library is not clear.					

## APPENDIX B

**Figure 1: Resources Downloaded Report of 2015(January – December)**

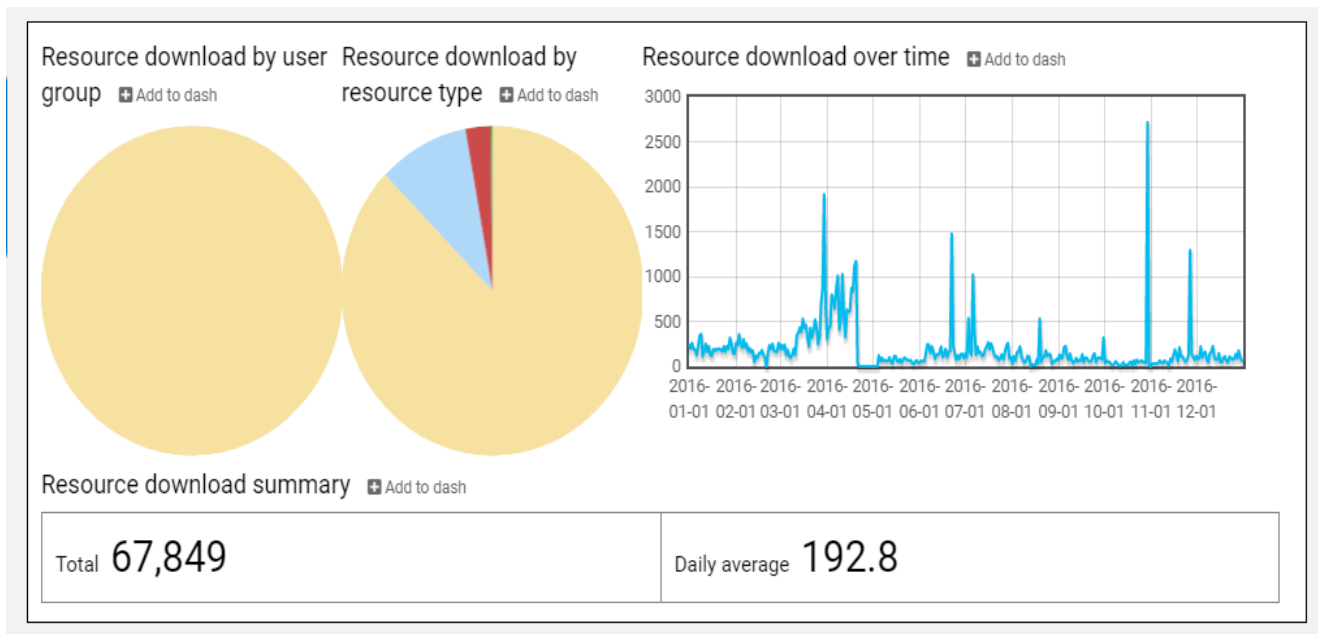


**Figure 2: Resources Viewed Report of 2015(January – December)**

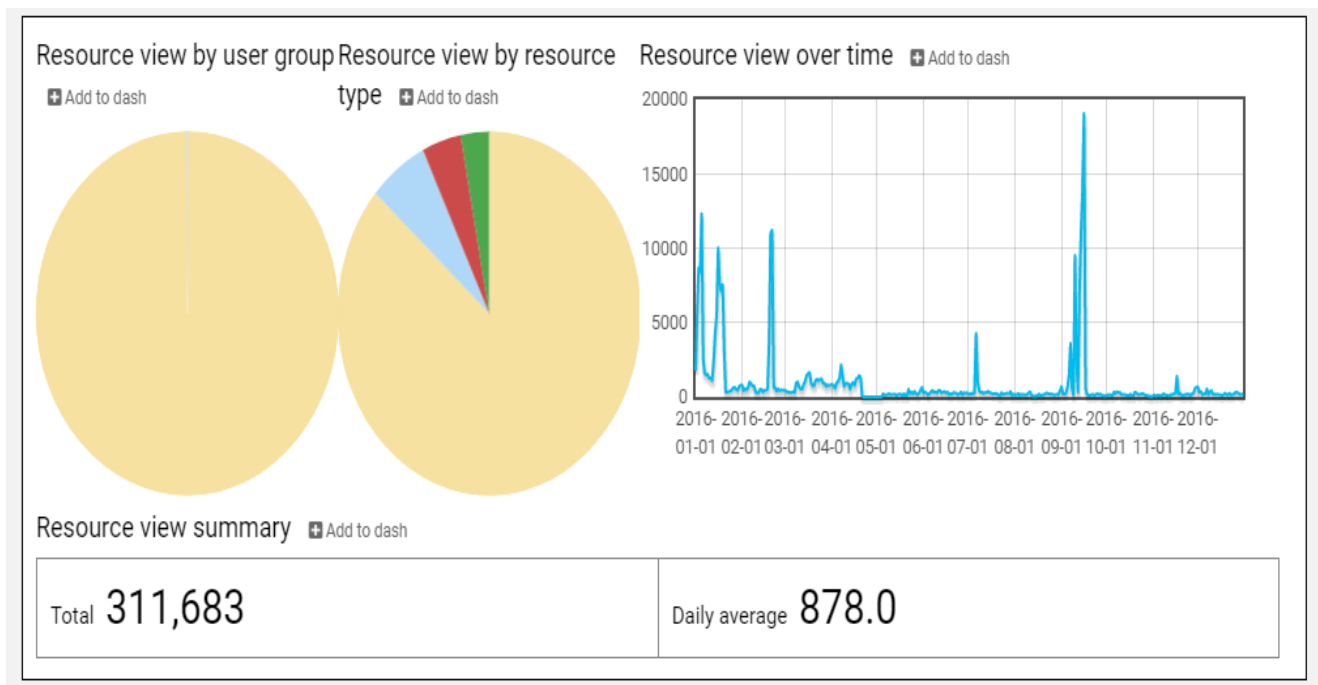




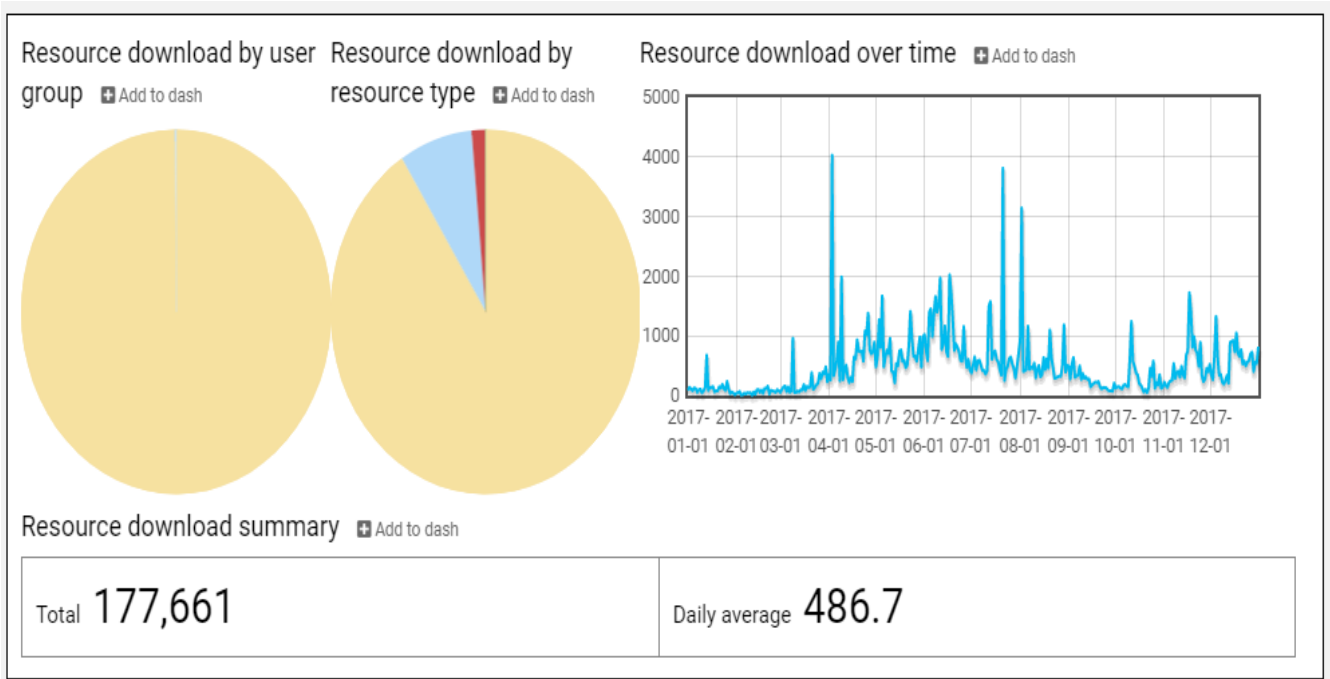
**Figure 3: Resources Download Report of 2016 (January – December)**



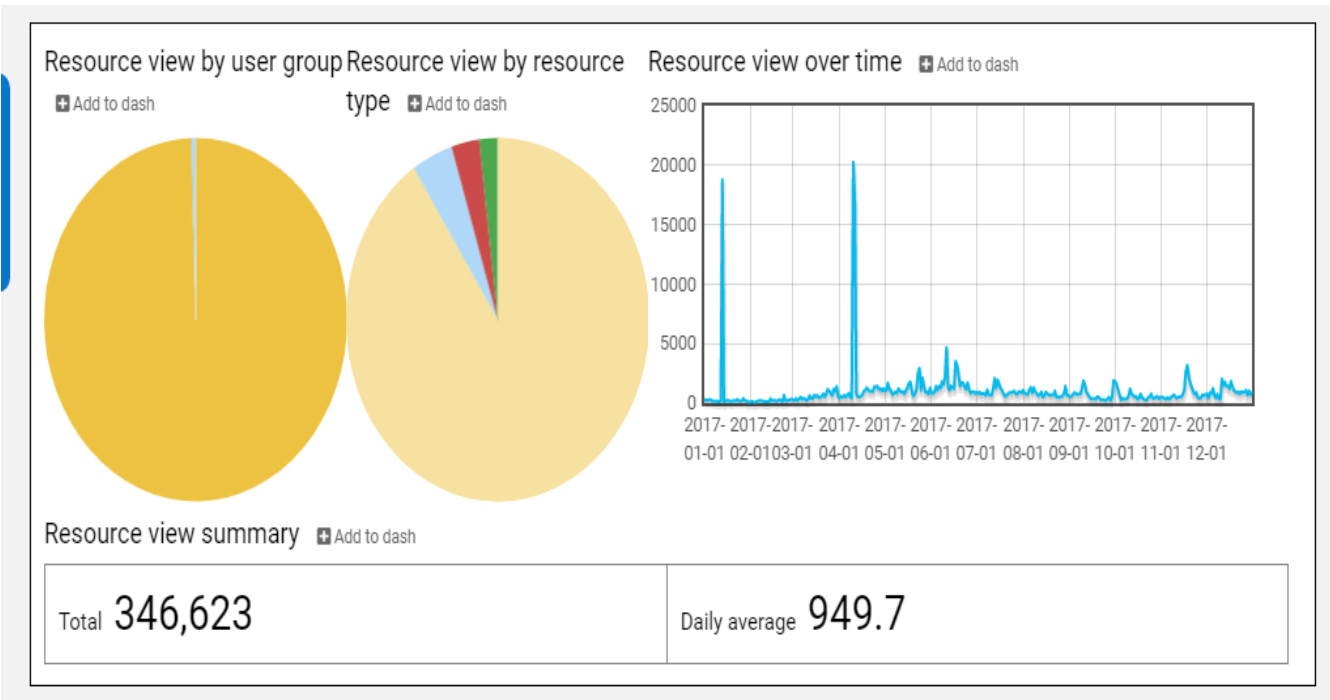
**Figure 4: Resources Viewed Report of 2016(January – December)**



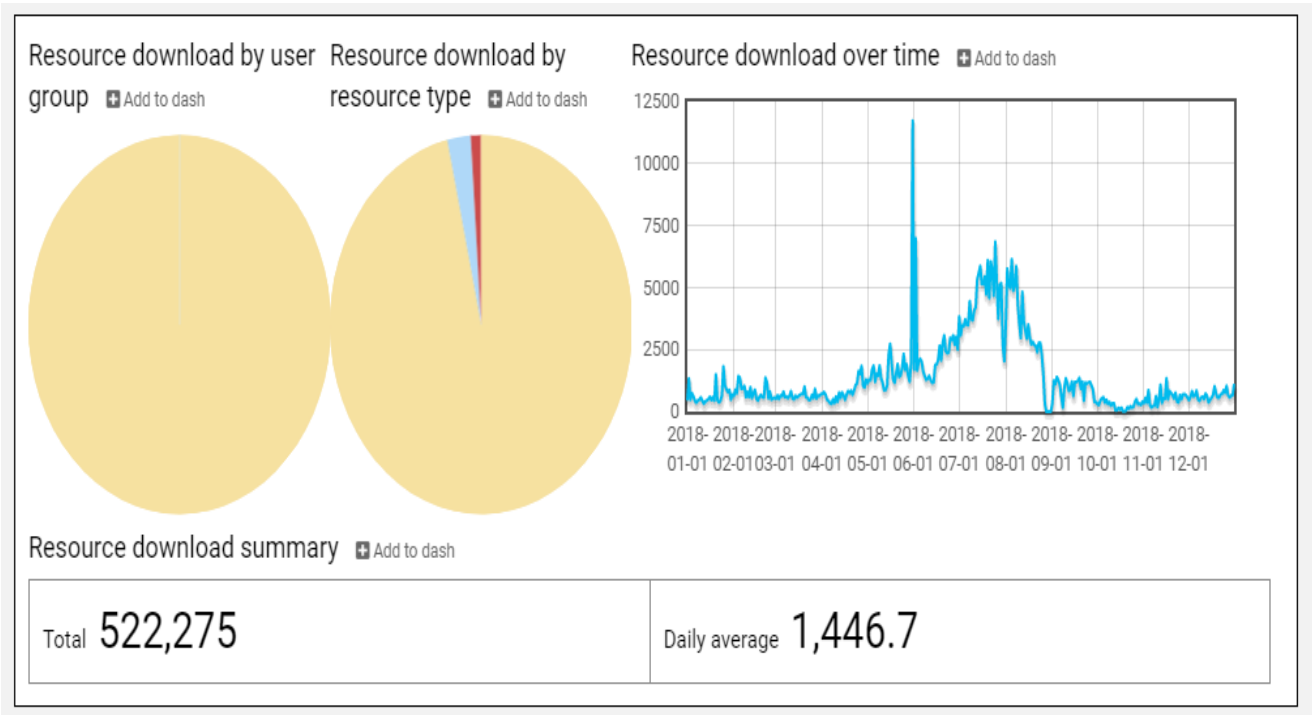
**Figure 5: Resources Download Report of 2017 (January - December)**



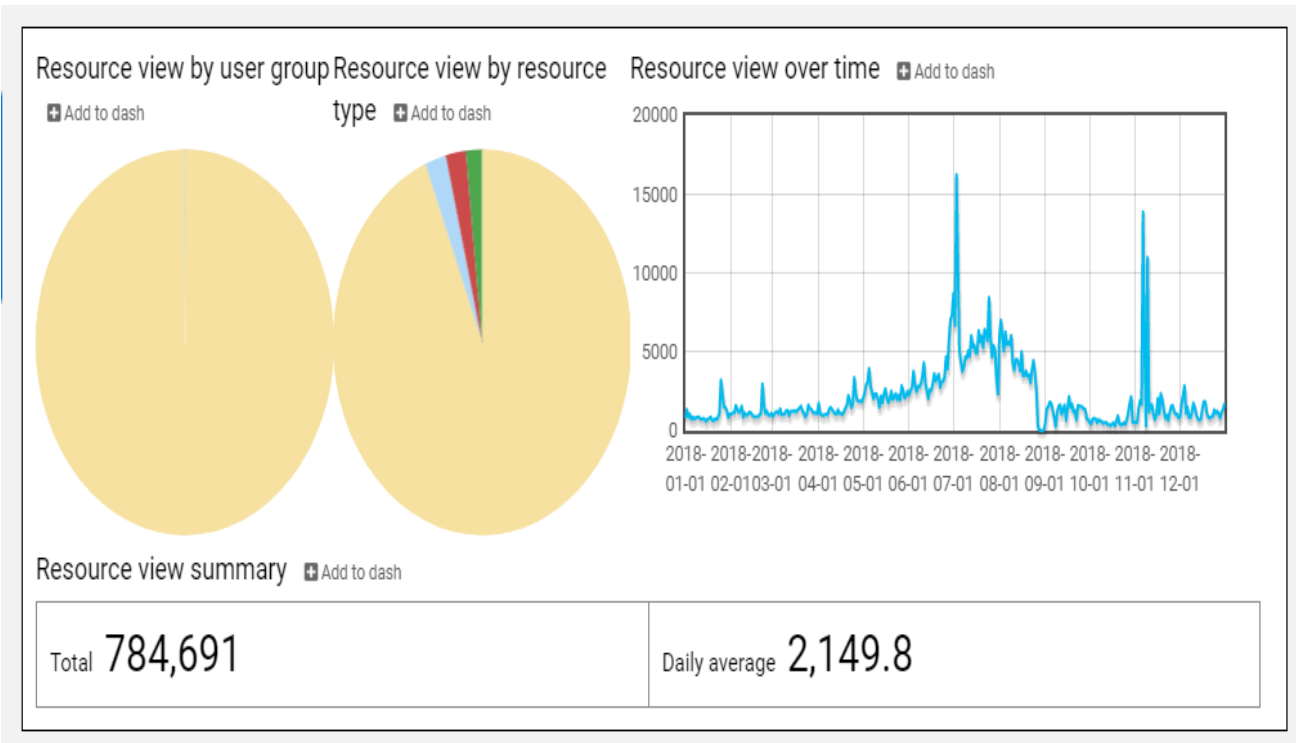
**Figure 6: Resources viewed Report of 2017 (January - December)**



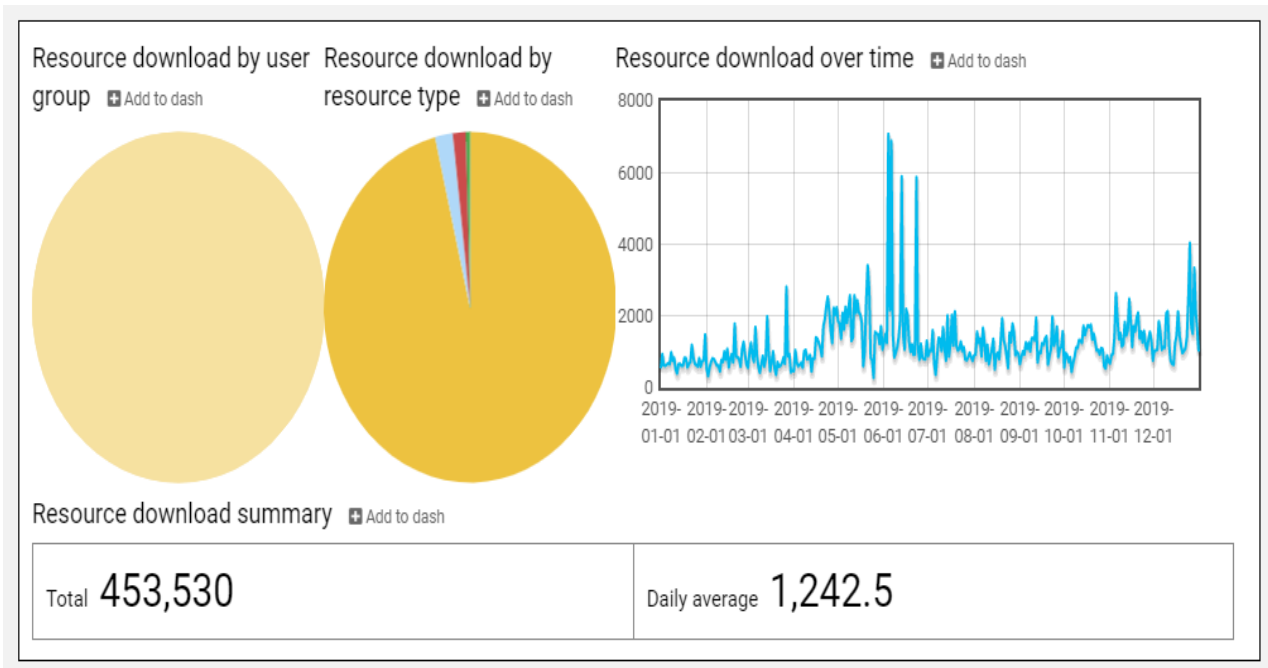
**Figure 7: Resources Download Report of 2018 (January - December)**



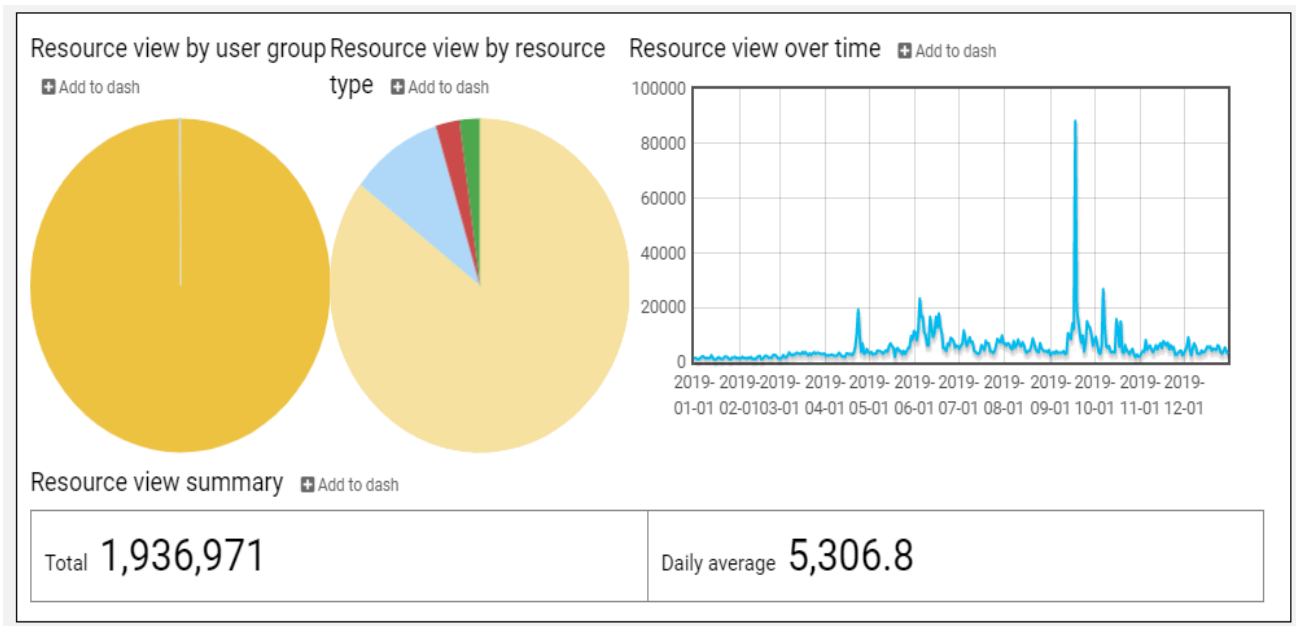
**Figure 8: Resources Viewed Report of 2018 (January - December)**



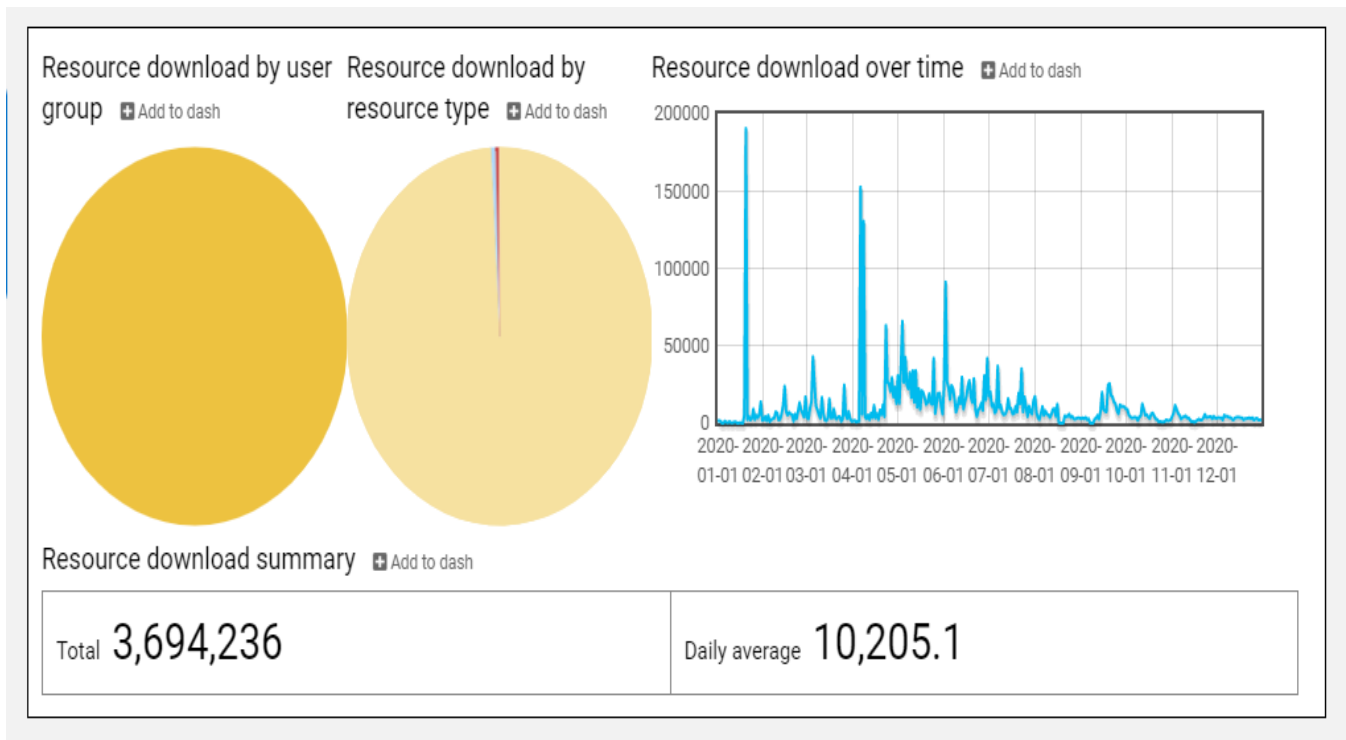
**Figure 9: Resources Download Report of 2019 (January – December)**



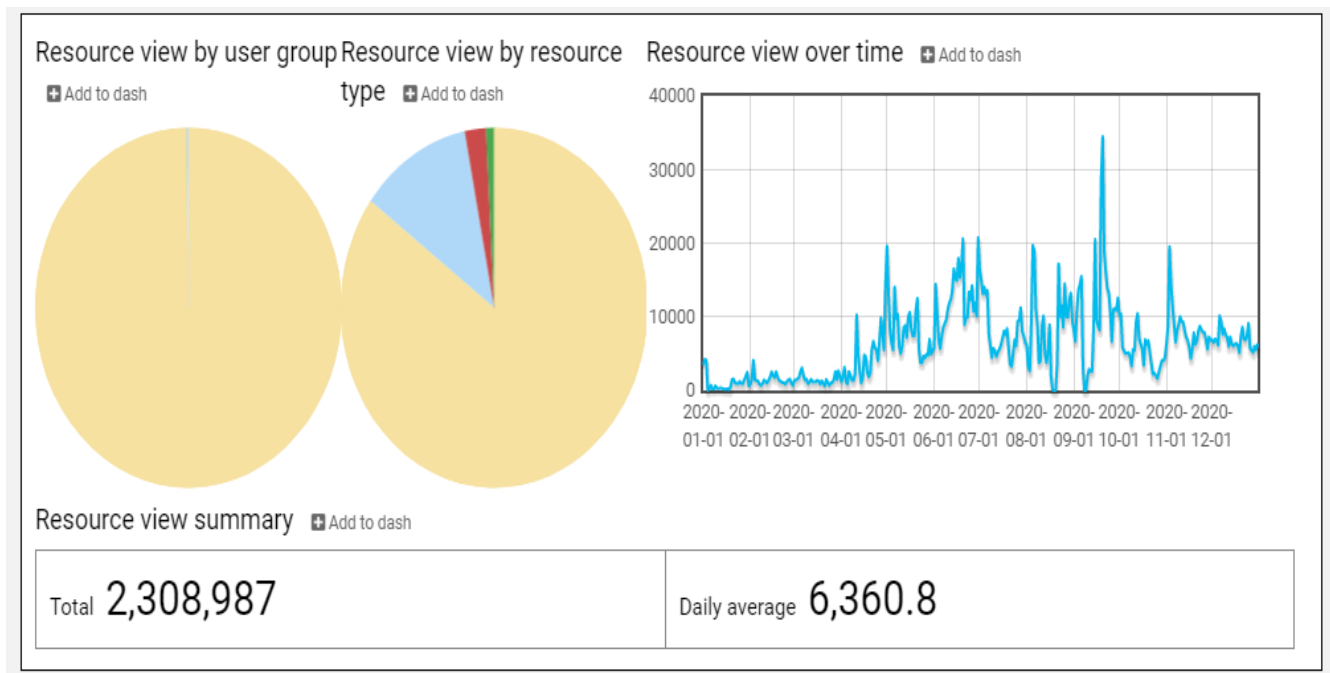
**Figure 10: Resources Viewed Report of 2019 (January - December)**



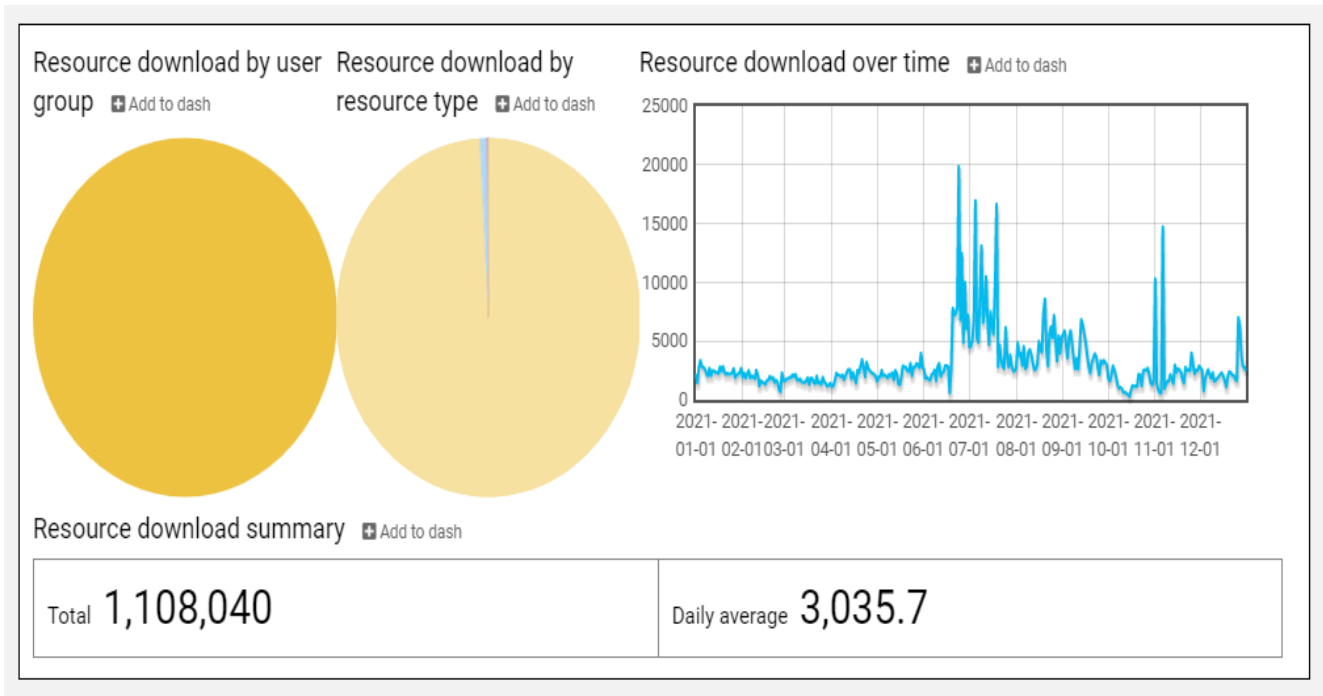
**Figure 11: Resources Download Report of 2020 (January - December)**



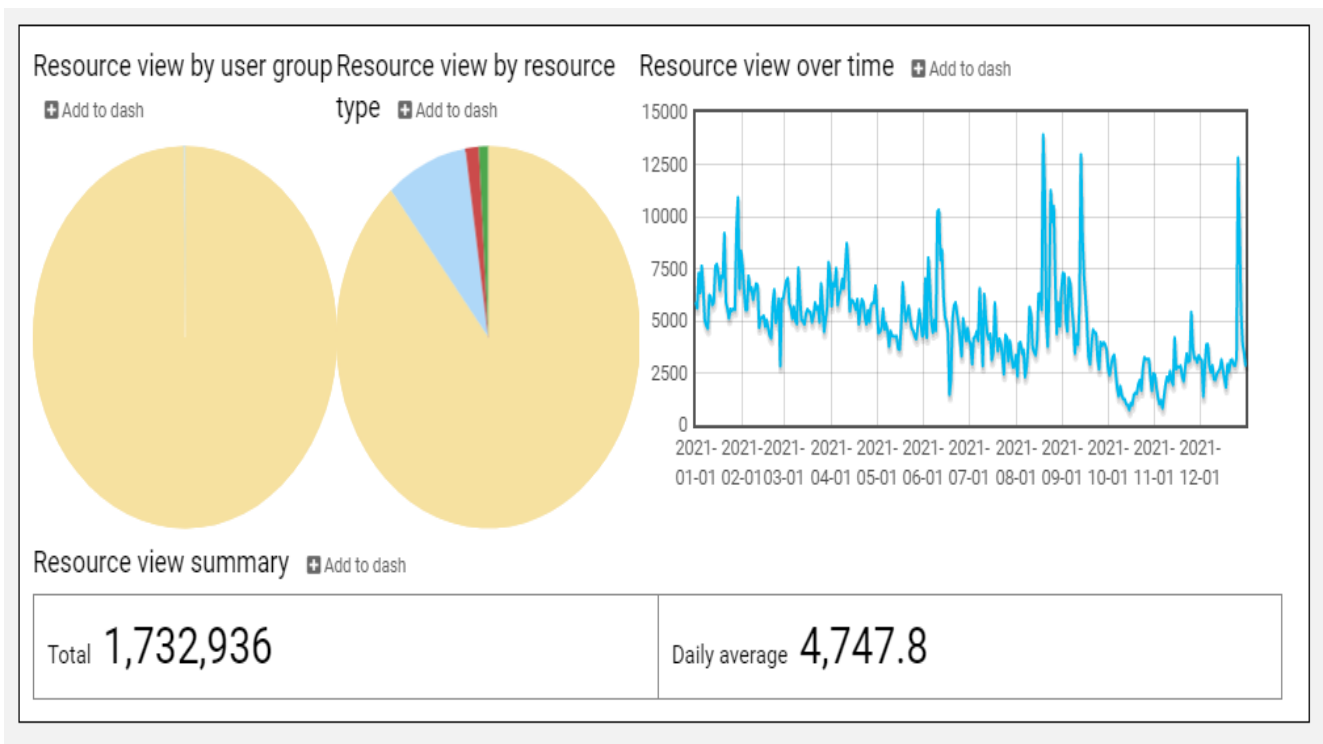
**Figure 12: Resources Viewed Report of 2020(January - December)**



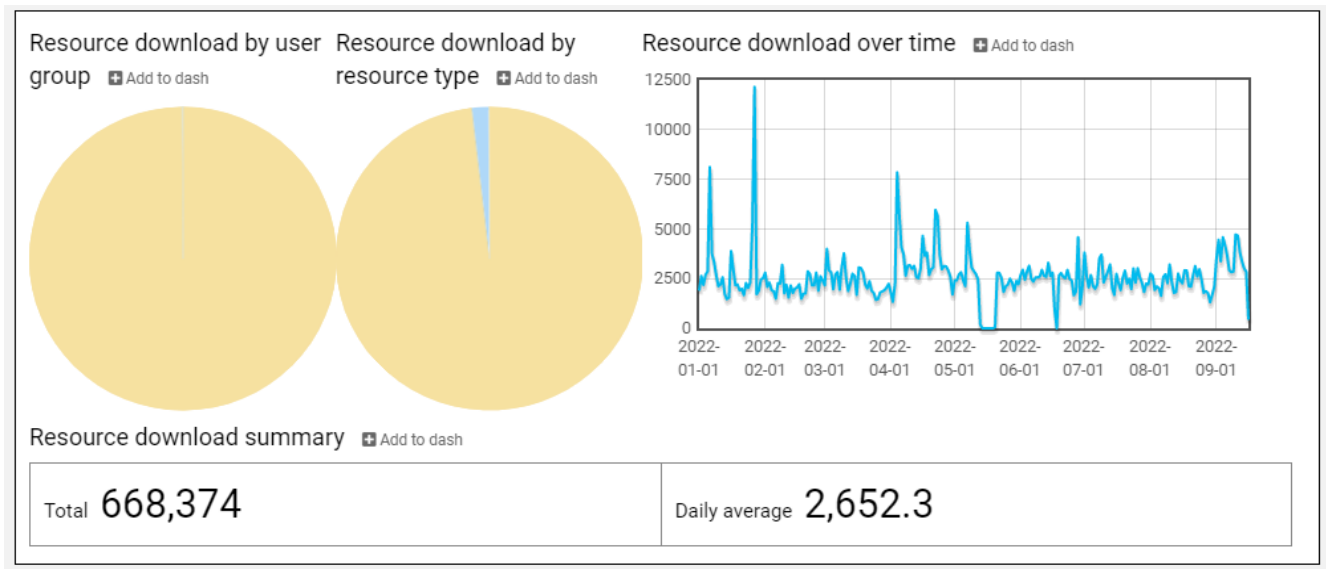
**Figure 13: Resources Download Report of 2021(January - December)**



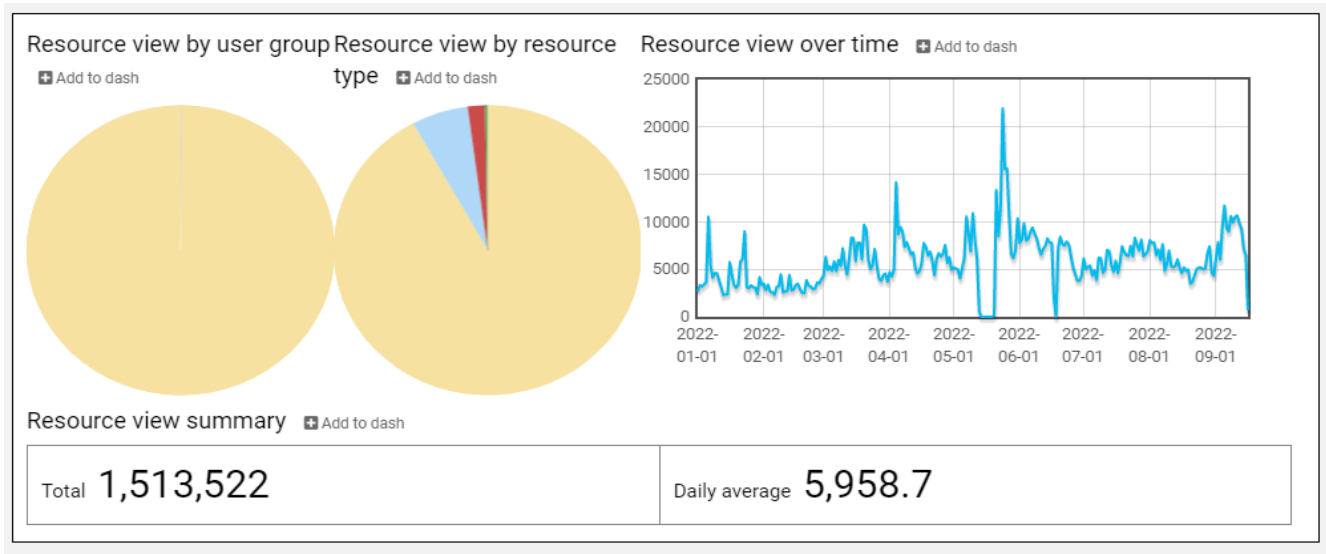
**Figure 14: Resources viewed Report of 2021(January - December)**



**Figure 15: Resources Download Report of 2022(January - September)**



**Figure 16: Resources Viewed Report of 2022(January - September)**



# APPENDIX C

## TAM Variable Score

Data Set 1				
TAM variables score of Perceived Ease of Use (PEU) and Attitude(AT)				
PEU1	1.2	AT1	0.46	pearson correlation between PEU and AT  R: -0.919765419 R1: -0.919765419 Relationship Strong Negative correlation
PEU2	1.3	AT2	0.65	
PEU3	1.2	AT3	0.8	
PEU4	1.3	AT4	0.61	
PEU5	0.95	AT5	1.58	
PEU6	1.04	AT6	1.3	
PEU7	1.06	AT7	1.32	
PEU8	1.15	AT8	1.09	

Data Set 2				
TAM variables score of Perceived Ease of Use (PEU) and Usefulness (PU)				
PEU1	1.2	PU1	1.08	pearson correlation between PEU and PU  R: -0.674854216 R:1 -0.674854216 Relationship: Negative
PEU2	1.3	PU2	0.96	
PEU6	1.04	PU3	1.04	
PEU7	1.06	PU4	1.17	

Data Set 3				
TAM variables score of Perceived Usefulness (PU) and Attitude (AT)				
PU1	1.08	AT1	0.46	pearson correlation between PEU and AT  R: -0.300443855 R1: -0.300443855 Relationship: None
PU2	0.96	AT2	0.65	
PU3	1.04	AT3	0.8	
PU4	1.17	AT4	0.61	



## APPENDIX D

### Researcher's Curriculum Vitae



**Name:** Arun Kumar Rai  
**Mother's Name:** Panchi Maya Rai  
**Father's Name:** Purma Bahadur Rai  
**Address:** Hathiban, Lalitpur, Nepal  
**Permanent:** Ram Prasad Rai Village Committee-6,  
Bhojpur, Koshi, Nepal  
**Contact /Home:** Mahalaxmi Municipality-4 Lalitpur  
9843849457 (mob.)  
Email: arunrai5411@gmail.com

#### Qualification:

1. Passed M.A. in English from TU.
2. Passed B. Library and Information Science from TU
3. MPA from Purbanchan University
4. Studying MLISc Final year

**Working:** Under Secretary (Ministry of Federal Affair and General Administration, Singha Darbar, Kathmandu)

#### Experience and Training

1. Working as the expert on Integrated Web based Open Source Library Management Software "PMB (PhpMyBibli, Library automation software) and Resource Space (For developing e-library-text, audio, video, image, animation) ".
2. Worked as Librarian in Patan Hospital for 2 years
3. Worked as Assistant Librarian in Nepalgunj Medical College for one year.
4. Worked as a Consultant Librarian Kathmandu Medical College Teaching Hospital Sinamangal, Kathmandu for 7 years.

5. Worked as a library officer Ministry of Education for seventeen years, Curriculum Development Center, Sanothimi, Bhaktapur, Nepal
6. Worked as library expert for managing library of Public Service Commission, Centre Office, Ministry of General Affairs and Administration, Department of Forest Survey, Non-Formal Education Centre, Nepal
7. Worked as expert on the two days training on "Library Management Training" organized by ECCA Nepal.
8. Worked as library expert on one-week training on "Library Management " organized by Himalayan Trust, Lukla, Nepal
9. Participated on the national workshop on "National Meeting on Strengthen Collaboration & Networking among all Health Libraries of Nepal" in 2002, 2004, and 2005.
10. Got the training on "Basic Journalism Training" in Regional Media Centre Nepalgunj
11. Got training on "Use of Computer and Internet for Accessing & Management of Health Information" Health Net Nepal, HLMC and WHO.
12. Got four days training on "Train the Trainer to Support Electronic Resource Usage" organized by TUCL, Nepal and INASP, UK.
13. Got three months training (Colombo Plan) on "Developing Teaching Learning Materials Using Digital Media" in TTTI, Bhupal, India.

## Publications

1. राई अरुणकुमार र अन्य (२०६४) "पुस्तकालय व्यवस्थापन" , काठमान्डौ: विधार्थी पुस्तक भण्डार
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5. राई, अरुणकुमार, सुब्बा,दिपेन्द्र र निरौला, डुकहरि (२०७९) . "पुस्तकालय तथा सूचना विज्ञानको ब्रह्माण्ड", काठमाडौँ: समझना प्रकाशन (२०७९) .

6. "Nepalese Medical Websites: Online Nepalese Medical Libraries", published on KUMJ, Vol.2; issue10 (April-June): 165-69, 2005.(This is the indexed Nepalese medical journal on MEDLINE Database).
7. "g]kfnf] ;Gbe{df x]g/L (HINARI) / g]kfnL d]l8sn k':tsfno " published on TULSAA Journal Vol.4 No.1: 47-49, July 2005.
8. "Searching the Medical Literature through Internet: Review of MEDLINE Database" published on TULSAA Journal.
9. "AGORA: Online Gift for Nepalese Researchers in the Field of Food and Agriculture", submitted on annual publication of Nepal Library Association.
10. INASP/PERI Pp6f e/kbf]{ ONLINE Resources: Ps hfgsf/L " Published on Shickya Journal,2065, (half yearly publication of Curriculum Development Center).
11. æg]kfnf lzlff cf]of]usf k|ltj]bgx?df pNn]lvt k':tsfno ;DalGw ;'emfjx?M Ps ljj]rgfÆ lzlff klqsf,aif{ @&, c<sup>a</sup>s !, (half yearly publication of Curriculum Development Center).
12. "Writing Bibliographies and Citing References: A General Review of APA and MLA Styles"/ Arun Kumar Rai lzlff klqsf,aif{ @(&, c<sup>a</sup>s !, (half yearly publication of Curriculum Development Center).
13. Invention of Paper: Beginning of the Knowledge Era in Human History / Arun Kumar Rai in SHIKSHA : BIENNIAL EDUCATION JOURNAL- शिक्षा: शिक्षा जगतको पत्रिका, 2069,28:2 (2069 Magh)
14. राई, अरुणकुमार र अन्य (२०७३) "पुस्तकालय तथा सूचना विज्ञानको ब्रह्माण्ड" , काठमाडौँ : सम्झना प्रकाशन

### Member:

- Life member of TULSSA (Tribhuvan University Library Science Students' Alumni Association).
- Life member of NLA (Nepal Library Association).
- Executive member of Nepal Library Association (2063 BS-2067 BS).
- ;Nnfxsf/ ;b:o, k':tsfno tyf ;"rgf ;]jf k|f= ln
- ;Nnfxsf/ ;b:o, k':tsfno tyf ;"rgf Joj:yfkg k|f= ln