

USE OF INFORMATION RESOURCES IN THE ICT ERA BY ISLAMIC SCHOLARS IN KERALA

*Thesis submitted to the University of Calicut in partial fulfillment of the
requirements for the award of the degree of*

**DOCTOR OF PHILOSOPHY IN LIBRARY AND INFORMATION
SCIENCE**

By

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I, **Nasirudheen. T** do hereby declare that, this thesis entitled "**Use of information resources in the ICT era by Islamic scholars in Kerala**" is a record of independent research work carried out by me under the supervision and guidance of Dr. Abdul Azeez T.A, University Librarian, University of Calicut, in partial fulfillment of the requirement for the Doctor of Philosophy in Library and Information Science, University of Calicut and no part of the thesis has been presented for the award of any degree, fellowship or other similar title or recognition before.

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CERTIFICATE

This is to certify that, the thesis entitled "**Use of information resources in the ICT era by Islamic scholars in Kerala**" prepared by Mr. Nasirudheen.T for the award of the degree of Doctor of Philosophy in **Library and Information Science** of the University of Calicut is a record of bonafide research work carried out under my supervision and guidance. No part of this thesis has been submitted for any degree, diploma, fellowship or other similar title or recognition before.

He is permitted to submit the thesis.

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CONTENTS

Declaration
Certificate
Acknowledgement
List of tables
List of Figures
Glossary

Chapters	Page No.
1. Introduction	1-25
2. Islamic Information Resources	26-73
3. Review of Related Literature	74-120
4. Methodology	121-142
5. Analysis & Interpretations	143-241
6. Findings, Suggestions & Conclusion	242-276

Bibliography
Appendices

I-XVII

LIST OF TABLES

SI No.	Title	Page No.
1.	Population Distribution	127
2.	Gender wise distribution of sample	131
3.	Age wise distribution of Islamic Scholars	132
4.	Religious education wise distribution of sample	134
5.	Non-religious education of Islamic scholars	135
6.	Religious Experience of Islamic Scholars	136
7.	Four Point Likert scale.	140
8.	Computer literacy of Islamic Scholars - age wise	145
9.	Computer literacy of Islamic scholars - education wise	146
10.	Computer knowledge acquisition by course -age wise	148
11.	Computer knowledge acquisition by course - education wise	149
12.	Computer courses done by Islamic scholars - age wise	150
13.	Computer courses done by Islamic scholars- education wise	151
14.	Modes of acquisition of ICT skills other than computer courses - age wise	153
15.	Modes of acquisition of ICT skills other than computer courses - education wise	154
16.	Use of smart device by Islamic scholars - age wise	155
17.	Use of smart device by Islamic scholars - education wise	156
18.	Use of different smart devices by Islamic scholars - age wise	158
19.	Use of different smart devices by Islamic scholars - education wise	159
20.	ICT skills of Islamic scholars -age wise	162
21.	ICT skills of Islamic scholars - education wise	165
22.	Preference of Islamic scholarstowards Islamic Information-age wise	168
23.	Preference of Islamic scholars towards Islamic Information- education wise	169
24.	Purpose of using Islamic Information by Islamic Scholars - age wise	171
25.	Purpose of using Islamic Information by Islamic Scholars - education wise	173
26.	Use of Information resource - age wise	175
27.	Users of Information resource (printed and electronic) - age wise	176
28.	Use of Information resource - education wise	178
29.	Users of Information resource (printed and electronic) - education wise	180

SI No.	Title	Page No.
30.	Islamic scholars' preference in type of resources - age wise	182
31.	Islamic scholars' preference in type of resources - education wise	184
32.	Access points of Printed resource -age wise.	186
33.	Access points of Printed resource - education wise.	188
34.	Frequency of use of Printed resource - age wise.	189
35.	Frequency of use of Printed resource - education wise	190
36.	Familiarity and use of Islamic E-resources - age wise	192
37.	Familiarity and use of Islamic E-resources - Education wise	195
38.	Access points of electronic resources by Islamic scholars- age wise	199
39.	Access points of electronic resources by Islamic scholars- education wise	199
40.	Frequency of use e-resource - age wise.	202
41.	Frequency of use electronic resource - education wise.	202
42.	Islamic app usage - age wise	204
43.	Islamic app usage - education wise	205
44.	Familiarity and use of Islamic apps - age wise	207
45.	Familiarity and use of Islamic apps - education wise.	210
46.	Influence of e-resource - age wise.	214
47.	Influence of e-resource - education wise.	215
48.	Change of usage of conventional resources after ICT revolution - age wise.	216
49.	Change of usage of conventional resources after ICT revolution -education wise	217
50.	Satisfaction level of Islamic scholars towards printed resources- age wise.	218
51.	Satisfaction level of Islamic scholars towards printed resources-education wise	219
52.	Satisfaction level of Islamic scholars towards e-resourcesresources- age wise.	220
53.	Satisfaction level of Islamic scholars towards e-resources-education wise	221
54.	Satisfaction level of Islamic scholars towards printed and e-resources- age wise.	222
55.	Satisfaction level of Islamic scholars towards printed and e-resources-education wise	224
56.	Islamic scholars' rating of e-resources - age wise.	225
57.	Islamic scholars' rating of e-resources -education wise	227
58.	Difficulty in e-resources usage - age wise.	230

SI No.	Title	Page No.
59.	Difficulty in e-resources usage - education wise.	230
60.	Types of difficulties in using e-resources - age wise	231
61.	Types difficulties in using e-resources - education wise	232
62.	Necessity of ICT support for Islamic scholars - age wise	234
63.	Necessity of ICT support for Islamic scholars - education wise	234
64.	Necessity of ICT training for Islamic scholars - age wise	236
65.	Necessity of ICT training for Islamic scholars -education wise	236
66.	Mode of ICT training for Islamic scholars - age wise	238
67.	Mode of ICT training for Islamic scholars - education wise	238
68.	E-resource initiatives of Kerala Islamic organizations	240

LIST OF FIGURES

SI No.	Title	Page No.
1.	Islam Onlive web portal- Homepage	41
2.	Islam Padasala blog- Homepage	42
3.	Home page of Maktaba Ashamila	47
4.	Alim –Social network	50
5.	Quran Reading Pen	53
6.	Icons of different Islamic apps	58
7.	Sample Structure	130
8.	Gender vise distribution of sample	131
9.	Age wise distribution of Islamic Scholars	132
10.	Religious education wise distribution of sample	133
11.	Non-religious education	135
12.	Religious Experiences of Islamic Scholars	137
13.	Computer literacy of Islamic Scholars- age wise	145
14.	Computer courses of Islamic scholars	151
15.	Use of smart device by Islamic scholars - age wise	156
16.	Use of smart device by Islamic scholars - education wise	157
17.	Smart devices Possessed by Islamic scholars	160
18.	Use of Information resource - age wise	175
19.	Users of Information resource (printed and electronic) - age wise	177
20.	Use of Information resource - education wise	178
21.	Users of Information resource (printed and electronic) - education wise	180
22.	Preference of Islamic scholars towards printed and electronic resource	182
23.	Islamic scholars' preference in type of resources - age wise	183
24.	Islamic scholars' preference in type of resources - education wise	184
25.	Islamic scholars' preference in type of resources - education wise	186
26.	Frequency of use of printed resources by Islamic scholars	190
27.	Access points of electronic resources by Islamic scholars	200
28.	Frequency of use of e-resources	203
29.	Islamic app usage by Islamic scholars	205
30.	Relationship between age and satisfaction level of Islamic scholars towards information resources	223
31.	Types of difficulties in e-resource usage	232
32.	Necessity of ICT training	237
33.	Modes of ICT training for Islamic scholars	239

Glossary

Adhan/azan	:	An Arabic word, denotes the system of informing Prayer (namaz) time
Alim	:	An Arabic word, denotes Islamic scholar (person with deep knowledge in Islamic subjects)
App	:	Application (mobile applications)
Ayats	:	An Arabic word, denotes verses in holy Quran
CD	:	Compact Disc
CD-ROM	:	Compact Disc-Read Only Memory
DVD	:	Digital Versatile Disc
ETD	:	Electronic Theses & Dissertations
Hajj	:	An Arabic word, denotes pilgrimage to holy Mecca
Hijra Calendar	:	Arabic Calendar
HTML	:	Hypertext Markup Language
ICT	:	Information and Communication Technology
Ilm	:	An Arabic word, denotes knowledge
INFLIBNET	:	Information Library Network
Iqra	:	An Arabic word, denotes command to read
Islam	:	It is a religion, the word Islam comes from an Arabic root word meaning "peace" and "submission"
IT	:	Information Technology
Jumua'	:	An Arabic word, denotes Friday special prayer (namaz)
Juzu'	:	An Arabic word, denotes one of the equal parts in holy Quran

Ka'ba	:	An Arabic word denoting holy mosque in Mecca, which is the centre point five time namaz prayer.
Khalifa	:	An Arabic word, denotes ruler in Islamic society
Khari'	:	An Arabic word, denotes Quran recitator
Khatib	:	An Arabic word, denotes orator of Friday special prayer (Jumua')
Madani surahs	:	An Arabic word, denotes verses of holy Quran which were revealed during the Madeena period of Prophet Muhammed.
Makki surahs	:	An Arabic word, denotes verses of holy Quran which were revealed during the Mecca period of Prophet Muhammed.
NDLTD	:	Networked Digital Library of Theses and Dissertation
PBUH	:	Peace Be Upon Him (it is followed by names of Prophets for indicating respect)
Qadr	:	An Arabic word, denotes Faith in Divine Decree
Qibla	:	An Arabic word, denotes direction towards Ka'ba
Salah	:	An Arabic word, denotes 'Namaz' prayer
Sawm	:	An Arabic word, denotes Fasting

Sahabi	:	Companion of prophet Muhammed
Shahada	:	An Arabic word, denotes Testimony of faith
Surahs/surats	:	An Arabic word, denotes chapters in holy Quran
Tafsir	:	An Arabic word, denotes interpretation of holy Quran
Thajveed	:	An Arabic word, denotes rules for recitation of holy Quran
Tharaveeh Namaz	:	Special namaz offered during fasting time (ramzan period)
TV	:	Tele Vision
UGC	:	University Grants Commission
Ulama	:	An Arabic word, denotes Islamic scholars (persons with deep knowledge in Islamic subjects)
UNESCO	:	United Nations Educational, Scientific and Cultural Organization
Wudu	:	An Arabic word, denotes Ablution
Zakat	:	An Arabic word, denotes Islamic Tax

Chapter 1

INTRODUCTION

-
- ❖ *Introduction*
 - ❖ *Information and Communication Technology (ICT)*
 - ❖ *Electronic Information Resources*
 - ❖ *Islamic Scholars*
 - ❖ *Islamic Scholars and ICT*
 - ❖ *Research Problem*
 - ❖ *Need and Significance of the Study*
 - ❖ *Objectives of the Study*
 - ❖ *Hypotheses of the Study*
 - ❖ *Scope and Limitation of the Study*
 - ❖ *Operational Definition*
 - ❖ *Organization of Thesis*
 - ❖ *Conclusion*
-

1.1 Introduction

Information is the basic asset, which plays a vital role in each and every aspect of human life. People need information right from the organizational level to the personal level, from the highly educated and experienced person to school children, from higher official to layman for taking right decision in every step of life. In brief it can be reported that information is a powerful tool for the development and welfare of society. Along with the development in printing and publishing technology, the physical forms of information resources are also being changed. Initially information were recorded on animal bones, stones, leaves etc. After the invention of printing technology, the then prevailing storage devices were replaced by paper. Information technology marked a turning point and the physical form of information resources shifted to the digital form.

1.2 Information and Communication Technology (ICT)

There are two predominant inventions in the history of mankind which changed the totality of human life. The first one is the invention of wheel and the second one is the invention or revolution of Information and Communication Technology (ICT). The former one helped human being to travel from one place to another, whereas the latter one helped us to bring the whole world into our hand.

Information and Communication Technology (ICT) is an umbrella term that refers to all applications, services and equipments involved in communication such as radio, television, computer, mobile phone etc. According to Tech Terms, an online computer dictionary, “ICT refers to technologies that provide access to information through telecommunications. It is similar to Information Technology (IT), but focuses primarily on communication technologies. This includes the Internet, wireless networks, cell phones, and other communication mediums” (The tech terms computer dictionary, nd).

In broader sense, the term, Information and Communication Technologies (ICT) refers to forms of technologies that are used to create, store, share or transmit and exchange information. This broad definition of ICT includes such technologies as: radio, television, video, DVD, telephone (both fixed line and mobile phones), satellite systems, computer and network, hardware and software; as well as the equipment and services associated with these technologies, such as videoconferencing and electronic mail. (UNESCO, 2003)

ICT have radically changed each and every field of human life. The area of information acquisition, process, organisation, retrieval, storage and usage are not an exception to it. It has eliminated the obstacle of place and time and enabled the communication of any time and any place. Today it is very easy to communicate any message within fractions of second throughout the world.

1.3 Electronic Information Resources / E-resources

Information resource refers to a wide variety of publication types (be it print or digital format) and content categories such as books, monographs, journals, standards, patents, reports, theses, e-books, e-journals, databases etc.

Dictionary of Library and Information Science defines e-resources as “material consisting of data and/ or computer program(s) encoded for reading and manipulation by a computer by the use of a peripheral device directly connected to the computer or remotely via a network such as the Internet. The category includes software application, electronic text, bibliographic databases, etc” (Reitz, 2005).

Any information that is accessible through computer, network, e-book reader, notebook or even mobile phone can be termed as digital information, electronic information and ICT based information resources. After the advent of ICT the conventional form of information resources has been changed as e-resources, such as books became e-books, journals became e-journal, thesis became e-thesis and so on.

1.3.1 Types of e-resources

E-resource is a broader term which includes a wide variety of publishing models such as – CD-ROMs, websites, blogs, social networking sites, e-paper, e-books, e-journals, databases, mobile apps etc.(Anand Y. Kenchakkanavar,2014).

The prominent among them are:-

1.3.1.1 CDs / DVDs

CDs (Compact Disc) and DVD(Digital Video Disc / Digital Versatile Disc) were the popular digital information resources during the initial period of ICT revolution. Both CDs and DVDs are optical disc capable of storing large amount of data. They are made up of a polycarbonate plastic (Polymethyle Metacrlc) and the surface is coated with a thin aluminium layer. Data are stored as a series of tiny pits encoded in a spiral track. The recorded data is retrieved by using CD/DVD players which uses laser technology to read optically recorded data in the form of bits and pits.

1.3.1.2 Websites/ Web portals

A website is combination of web pages which include texts, images, audios and videos. Web pages are typically written in HTML language and they are accessed through web browsers such as Internet explorer, Firefox, Chrome etc. A website is identified with its domain name and is published in at least one web server. During the initial time websites were static i.e only one way communication was possible. But recent advancements changed its nature and presently websites are dynamic in nature i.e interaction of viewers are possible.

1.3.1.3 You tube

You tube is the world's largest free video sharing website which was launched in 2005. The site allows the registered users, the uploading facility and to public the downloading facility. Millions of videos on different discipline have been uploaded to this pool. Definitely it is the strongest video information resource in Internet.

1.3.1.4 Social Networking sites

Social networks are on-line platforms which facilitate to bring the people in a single platform for making new friends, talking and sharing other information. The emergence of social media is one of the developments of web 2.0. Some of the predominant among them are – facebook, Twitter, myspace etc. Whatsapp is the other platform, which is operated through smart phones. Presently social media is the most used communication media.

The leading online dictionary, Dictionary.com defines Social Networks as “a website that allows subscribers to interact typically by requesting that others add them to their visible list of contacts, by forming or joining sub-groups based around shared interests or publishing content so that a specified group of subscribers can access it”(Dictionary.com,nd).

1.3.1.5 E-papers

E-papers are the digital copy of newspapers and can be accessed via

Internet. Most of the regional and national dailies are presently maintaining the printed version and e-papers simultaneously. Archive link attached along with the e-paper is very useful for reading by searching the old copies. In addition to e-papers, some of them are maintaining on-line papers also.

1.3.1.6 E-Journals

E-journals are synonymously known as electronic journals, on-line journals, electronic serials, e-serials, e-zines, d-journals etc. E-journals are that type of scholarly journals, which are published and distributed electronically and their print counterpart may or may not be available. Reitz defined e-journals as, “a digital version of a print journal or a journal like electronic publication with no counterpart, made available via web, e-mail or other means of Internet access”.(Reitz, 2005).

There are mainly four types of e-journals. They are:-

1. Classic e-journals

Classic e-journals are those types of e-journal which are available only through electronic means. The printed counterpart will not be published along with this.

2. Parallel e-journals

Parallel e-journals are published simultaneously in both printed and electronic form. The online version may or may not include the full text.

3. Software model /Database model

Here, the journal resides in the centralized database maintained by the publisher and it can be accessed with special permission.

4. CD-ROM

CD-ROM was the initial form of e-journal. The printed journals as it digitized and built in CDs. The printed journals were accompanied by this form of e-journal.

1.3.1.7 E-Books

E-books are the electronic version of the conventional printed books. Presently there are born e-books without their printed counterparts. E-books can be accessed by using desktop, laptop, e-book reader, smart phone or tablet. Techopedia defines e-book as “a digital publication that can consist of text, images or a combination of both. An electronic book can be read on a proprietary digital device (an e-reader) or on a computer, which requires special software”.(Techopedia, nd.).

There are several e-book formats. They are - EPUB, Mobipocket (PRC, MOBI), eReader (PDB), Kindle (AZW, KF8) and Apple iBook (EPUB variation). Many e-readers also accept generic formats, including Adobe PDF and plain text (TXT).

1.3.1.8 E-Theses and Dissertations (ETD)

Dissertation or thesis is a work submitted in support of candidature for a Doctorate or Master's degree, respectively, which presents the author's research and findings. Electronic theses and dissertations (ETDs) are electronic representations of the printed copies which are available in the Internet. There are a number of ETDs websites in the Internet.

Networked Digital Library of Theses and Dissertation (NDLTD) is the world biggest E-theses and dissertation repository. It was launched in 1996; it provides free access to a huge number of dissertations and theses. It has collaboration with more than 200 universities worldwide.(NDLTD, nd.)

Shodhganga is the national repository of Indian theses and dissertations, which is maintained by Information Library Network (INFLIBNET) Info city, Gujarat. It is an autonomous centre under University Grants Commission (UGC). 293 Indian Universities have signed agreement with Shodhganga and presently there are 1,97,077 theses and 3900 synopsis as full text in this repository as on 31.06.2018.(Shodhganga, nd.).

1.3.1.9 On-line Databases

Online databases are organized collection of electronic information that allows users to search for their particular topic, article, or book.

Normally searching is possible by keyword, subject, author, title etc. Some databases provide full-text of articles, whereas some are confined to bibliographic details. On the basis of the content, there are two types- subject database and multidisciplinary database. Science Direct is an examples of subject database in science and Scopus is the general multidisciplinary database.

1.3.1.10 Institutional Repositories

Institutional repositories are powerful tool to showcase the intellectual output of an organization. Institutional repositories have become a mode of publishing with an advantage of eliminating the intermediary as well as the delay in time. Normally institutional repositories are maintained by Universities, colleges and research organization. In the case of universities and colleges the collection would include – research journal article, PhD theses, Dissertations, assignments etc. Institutional repositories are developed by using specific software such as – Dspace, Eprint, and Greenstone etc.

1.3.1.11 Mobile apps

“App” is the short form of application. Mobile app is type of application software designed to fulfill certain purposes. It is designed to run on smart gadgets such as smart phone, tablets etc. The size of this software will be small with limited functions. The most popular smart phone platforms that support apps are Black berry, windows, Android and

iOS. Presently smart phones are common among people and apps are the highly used resource. The functions of apps are endless such as - entertainment, news, games, social networking, language learning, railway time table, academic purposes etc.

1.3.2 Advantages of e-resources

There are a number of unique features and advantages for e-resources over printed resources. (Chandal, A.S & MukeshSaikia, 2012).

They are:-

1. Multi users accessibility - In this case 'n' number of users can access the same resources by using multiple access points such as computers, laptops, e-book readers or even smart phones. Problem of multiplicity of the resources is unimportant in the case of e-resources.
2. Speed – Speed is the unique feature of ICT revolution. The problem of delay has been vanished. Publishing, circulation, copying, downloading and printing are very speedy.
3. Round the clock availability – Round the clock accessibility is another unique feature of e-resources. It can be possible 24 X 7 days and 365 days irrespective of working hours and working days.
4. No physical boundary – E-resources can be accessed anywhere in the world on the condition of availability of Internet connectivity.

Users would need not to physically visit the libraries.

5. Searching is very easy – Users can search through multiple point of view. It is possible on – author, title, subject, publisher and keywords.
6. Integration of multi-formats – E-resources would support texts, images, graphics and audio & video formats.
7. Less storage space – Less storage space is enough to store e-resources. Thousands of resources can be stored in a small chip.
8. Book marking facility – It is possible to bookmark the favorite resources of users.
9. Every reader has his/her resource- It can be utilized even for physically challenged persons.
10. Preservation and Archiving – Preservation without harm and archiving for future use is very easy in the case of e-resources.
11. Networking- a particular electronic resource or source of resource can be networked with others. So resource sharing is very easy.
12. Cost-effective– Printing, binding and postage charges can be eliminated. No need of much storage space like buildings and shelves. So it is economical.

1.3.3 Disadvantages of e-resources

Even though there are a number of advantages, there are some disadvantages also to e-resources. They are:-

1. Special devices are needed for using e-resources. Since some dependent supporting such as software, Internet connectivity and hardware are needed, without their support it is difficult to use.
2. As far as a reader is concerned, while reading e-resources he does not get satisfaction as in the case of printed book. It would result eye strain and headache.
3. The life span of an e-resource cannot be predicted. Any time it can be affected by virus or loss from the storage device.
4. Technologies are being advanced daily. So the electronic devices are being obsoleted. Once Floppy and CD were the prime storage media, but today both of them are unseen.
5. For using e-resource, some sort of training is needed.
6. Good infrastructure facilities such as uninterrupted power supply, availability of smart devices, speedy Internet connectivity, trained staff, trained users etc. are inevitable in using e-resources.

1.4 Islamic scholars (Ulama)

Scholars are learned persons in any field of studies. Religious scholars are those persons, who have acquired depth knowledge on religion and it is their duty to impart this knowledge to the society. Religious Scholars are the responsible persons to lead the community in the right path and to provide right information at right time on religious matters. Religious scholars have the capacity to build communal harmony among religions especially in the pluralistic environment.

Islamic scholars (Ulama) the persons possessed deep knowledge in Islam. In Arabic language, 'Ulama' is the plural of 'Alim' which means the person who possess deep knowledge. Encyclopaedia Britannica online defines Ulama as those who possess the quality of *'ilm'*, “learning,” in its widest sense. From the *'ulama'*, who are versed theoretically and practically in the Muslim sciences, come the religious teachers of the Islamic community – theologians, canon lawyers (muftis) judges (quadis), professors and high state religious officials like sheikh-al-Islam(Britannica.com, nd).

Islamic scholars are engaged with the following duties:-

- Teaching in Islamic educational Institutions.
- Preaching Friday (Jumua'khutuba) speeches
- Writing Books on Islamic subjects

- Writing articles on Islamic issues
- Conduct special Orations
- Lead Islamic organisations and other endeavours

The sphere of Ulama is not confined to the above areas; it encompasses all the areas of social life.

1.5 Islamic Scholars and ICT

Islam has given high importance to acquisition of knowledge and its dissemination. As and when latest technology emerges, Islam has tried to adopt and utilise these technologies. From the very beginning itself, Information and Communication Technology (ICT) has been utilised by Islamic scholars (Ulama) for information acquisition, storage and communication.

There are some problems faced by Islamic scholars in using ICT based resources. They are:-

1. Digital Divide – Lack of computer literacy and expertise in ICT becomes hindrance in using ICT based resources. Most of the old generation of Islamic scholars are computer illiterates, whereas the young generation have good capacity in using ICT based resources and gadgets.
2. Language Problem – Most of the Internet based resources are in

English language. Without the expertise in English language the maximum utilisation of e- resources are difficult.

3. Lack of cooperation and collaboration between Islamic scholars and IT experts. Since the Islamic e-resources are the product of the cooperative and collaborative endeavor a good relation is needed between them. Without such relation, it will not be ideal.

Even though there are some problems in using electronic information resources, there are enormous Islamic information resources based on ICT. They are Islamic websites / portals, Islamic e-journals, Islamic Social Networks, Islamic TV and Radio channels, Islamic mobile apps(applications) etc. The details of the same are given in the second chapter.

1.6 Research problem

Influence of ICT on information resources in Islamic subject resulted the emergence of Islamic e-resources. Presently there are varieties of Islamic e-resources. The problem of research is how Islamic scholars and Islamic organizations of Kerala handle ICT revolution positively and what is the present status of their usage of these resources. The statement of the research study is the “Use of information resources in the ICT era by Islamic scholars in Kerala”.

1.7 Need and Significance of the study

Recent developments in the field of Information and Communication Technology (ICT) are indeed revolutionary in nature. As its capabilities are increased, they are being increasingly applied in all sectors of the society. ICT has been widely used by the Islamic scholars globally. The web 2.0 tools such as – blogs, YouTube, e-journals, databases and social networks have got great acceptance among this group. Dynamic web portals, online TV/radio and online classrooms are also available on Islamic subjects. In this scenario, an analytical study of the use of information resources among Islamic scholars of Kerala is relevant and important to assess how far these resources are used by the Islamic scholars of Kerala and such a study has not been conducted yet.

1.8 Objectives of the study

ICT based Islamic information resources are enormous. The main objective of the study is to analyse the present usage of these resources among Islamic scholars of Kerala. It is also intended to familiarise and popularise these digital Islamic resources among Islamic scholars.

Specific Objectives

1. To understand the IT literacy of Islamic scholars in Kerala.
2. To know the information needs and Purpose of their usage among

Islamic scholars in Kerala.

3. To assess the use of conventional and electronic information resources by Islamic scholars in Kerala.
4. To find out the most commonly used electronic information resource of Islamic scholars in Kerala.
5. To understand the satisfaction level of Islamic scholars in using Islamic e-resources.
6. To identify the impediments and challenges faced by Islamic scholars in Kerala in using the electronic information resources.
7. To suggest measures for improvement of use of electronic information resources.
8. To identify the initiatives taken by Islamic organisations of Kerala in creating conventional and digital Islamic information resources.

1.9 Hypotheses of the study

1. There is significant difference in the case of computer literacy among Islamic scholars of Kerala based on their age and mode of education.
2. Islamic scholars are using and giving preference to both printed and electronic resources equally.

3. There is no preferential difference in the case of different areas of Islamic information among Islamic scholars of Kerala.
4. There is no significant relation between 'familiarity and usage' of ICT skills and 'age & mode of education' of Islamic scholars.
5. The familiarity and usage of Islamic e-resources by Islamic scholars are not associated with their age and mode of religious education.
6. There is a direct relationship between age of Islamic scholars and their satisfaction level towards printed resources (as the age increase the satisfaction level will be increased) and there is an inverse relationship between age and e-resources (as the age increase the satisfaction level will be decreased).

1.10 Scope and limitations of the study

The study is proposed to analyse the use of information resources by Islamic scholars in Kerala. The Islamic scholars are engaged with their duty i.e imparting knowledge to the community either as teachers in Islamic institutions of higher education and/or 'khatibs' in mosques, and/or writing in publications and/or public speeches. Due to time limitation, the researcher confined the study on the teachers of Institutions of Islamic higher education and Islamic organizational leaders.

1.11 Operational Definition

Use – the New Oxford Thesaurus of English (2000) defines ‘use’ as ‘to take advantage of’.

Information resources – means materials printed or electronic, which give necessary information. The Encyclopedia of Information and Library Science defines Information Resource as “any organization, facility, or individual willing and able to give authorities responses to scientific or technical inquiries out of an existing store of knowledge or expertise” (Corea et al, 1993).

Islamic – Britannica encyclopedia of world religions defines Islam as, Islam is a major world religion. The Arabic word “Islam” means “surrender” which illuminates the fundamental religious idea of Islam. Islamic means related with Islam religion.

Scholars – Webster’s new world college dictionary (2000) defines scholar as ‘a specialist in a particular branch of learning’. In this context, Islamic scholars means, those who have depth knowledge on Islam religion and are engaged in imparting this knowledge to the society through teaching, and/or khutuba (Friday speeches), and/or writings and/or public speeches.

Islamic Scholars – Ulama is the synonym of Islamic scholars. Encyclopaedia Britannica online defines Ulama as those who possess the quality of *'ilm'*, “learning,” in its widest sense. From the *'ulama'*, who are versed theoretically and practically in the Muslim sciences, come the religious teachers of the Islamic community – theologians, canon lawyers (muftis) judges (quadis), professors and high state religious officials like sheikh-al-Islam (Britannica.com, nd).

ICT –International encyclopedia of Information and Library Science defines ICT as a “term used to describe the design and applications of systems and equipment for exchanging data by electrical means between two or more stations”.(International Encyclopedia of Information and Library Science, 2003.)

It is the abbreviation of Information and communication technology. It is an umbrella term that includes, any communication device or application encompassing radio, Television, Cell phones and computer and Internet which facilitate storage, processing, transmission and display of information.

Era- a distinct period (Illustrated Oxford dictionary, 2006). ICT era denotes the years from 2000, which witnessed the ICT explosion.

Kerala—the southern state of India, which is known by the name.

The Kerala state was formed on 1st November 1956. Kerala has the highest literacy rate in India (Manorama Year book, 2015).

1.12 Organization of thesis

The thesis is presented in 6 chapters.

Chapter I – Introduction.

The introductory chapter gives a brief sketch about Information and Communication Technology (ICT), brief description about electronic resources, statement of the problem, need and significance of the study, objectives of the study, hypotheses of the study, scope and limitations of the study and organization of the thesis.

Chapter II – Islamic Information Resources.

The second chapter gives a brief description about Islam religion, doctrines of Islam, sources of Islamic information and detailed description of ICT based Islamic information resources.

Chapter III – Review of related studies.

Third chapter is exclusively for review of related studies. The reviews are arranged in five headings related with the topic of the study,

they are – Information needs, Information use and usage, satisfaction and perception and difficulties in using information resources and Islamic studies and Islamic scholars.

Chapter IV - Research Methodology.

This chapter discusses and justifies the methodology undertaken for this research, which includes the types of data, sampling methods, tools for data collection, variables of the study, objectives and hypotheses of the study and statistical techniques used for the execution of the study.

Chapter V – Analysis and Interpretations

This chapter presents the analysis of data and their interpretations collected by the researcher from the Islamic scholars of Kerala, and libraries of Islamic Institution of Higher education by using questionnaire and interview schedule.

Chapter VI – Findings, Suggestion and Conclusion.

This is the final chapter of the research report. It gives findings on the basis of analysis and interpretations, suggestions for further research related with the topic of study and conclusion.

Bibliographical -references are provided at the end of the thesis in APA style.

Appendix – comprises of questionnaires distributed to Islamic scholars and list of Islamic institutions of Higher education in Kerala.

1.13 Conclusion

Technological invasion to each and every field is increasing day by day. This type of analytical studies helps to get the pulse of this influence among different groups of people. This study is intended to assess the use of information resources by Islamic scholars in Kerala. Based on the study, necessary suggestions are put forwarded to increase the use of electronic information resources among Islamic scholars of Kerala. Thus digital divide among the Islamic scholars can be minimized.

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Chapter 2

ISLAMIC INFORMATION RESOURCES

- ❖ *Islam – Basics*
 - ❖ *Doctrines (sources) of Islam*
 - Quran*
 - Hadith*
 - ❖ *Education and Promotion of knowledge in Islam*
 - ❖ *Digital Islamic Information Resources*
 - CDs/DVDs*
 - Islamic Web portals*
 - Islamic Blogs*
 - YouTube channels*
 - E-books*
 - e-journals*
 - Databases*
 - Digital libraries*
 - Islamic social networks*
 - Online Islamic Universities & Madrassas*
 - Quran Reading Pen*
 - Islamic TV/Radio channels*
 - Islamic mobile apps*
 - ❖ *Kerala (Malayalam) initiatives*
 - ❖ *Conclusion*
-

2. Islamic Information Resources

2.1 Islam - Basics

Islam is a comprehensive way of life revealed to mankind by God through prophets of different periods in human history for promoting peace and prosperity. The religion of Islam is as old as humanity. It is the religion of all prophets, who appeared in different parts of the world at different times. So Islam was the religion of prophet Adam, prophet Noah, prophet Abraham, prophet Ishmael, prophet Isaac, (Peace and Blessings Upon Them) etc. Prophet Muhammed (Peace and Blessings upon Him) is the last link in the prophetic chain. The word 'Islam' comes from an Arabic root word meaning “peace” and “submission”. Islam teaches that one can only find peace in one's life by submitting to Almighty God in heart, soul and deed. (Muhsin Usmani, 2003)

2.1.1 Articles of faith (Iman) of Islam

The religion of Islam is built on six fundamental beliefs. They are known as articles of faith. (Sheikh Hmound, 1995). They are the following:-

2.1.1 .1.Belief in Oneness of God (Monotheism)

It is the belief that Allah is the one and only God, who is the creator and sustainer of the whole universe. He neither begets nor is begotten. He is ever living and omnipresent.

2.1.1 .2. Belief in Angels

Angels are honourable creations of God. It is the belief that, angels are unseen creatures of God and they are created from light, just like man from mud. Angels do not have freedom of choice like human beings. They are unable to rebel the commands of God. The angels are honourable slaves of God and it is their duty to worship and serve him.

2.1.1 .3. Belief in the Revelations

It is the belief that the revelations were sent to selected prophets from God and Quran is the last book of revelation sent to prophet Muhammad (PBUH). Examples of former revelations are ‘Torah’ to Prophet Moosa (Moses), ‘Injeel’ to Prophet Isa, and ‘Zaboor’ to Prophet Dawood.

2.1.1 .4. Belief in Prophets /Messengers.

It is the belief in all of the prophets. Prophets were individuals, who received revelations from God to guide people in the right way of salvation. Through ages, Allah sent lakhs of prophets to provide light of success to people. The prophet Adam (PBUH) is the first prophet and prophet Muhammad (PBUH) is the last prophet.

2.1.1 .5. Belief in the Day of Judgement

It is the belief that all human beings will be resurrected and called to account on the Day of Judgment. It means that, life of this world is

accountable. Those whose good deeds outweigh their evil deeds go to heaven and those whose evil deeds outweigh their good deeds go to hell.

2.1.1 .6. Faith in Divine Decree (Qadr)

It is one of the fundamental beliefs of Islam. It is the belief in God's predestination – it is the belief that all things are prerecorded and predestined.

2.1.2 Pillars of Islam

Islam is built upon five pillars. It is obligatory to each and every believer to observe these pillars. (Abul Hasan Ali Nadvi, 1998). These are:-

2.1.2 .1. Testimony of faith (Shahada)

It is to testify with conviction that “*La Ilahaila Allah, Muhammad arrasoolullah*” which means that there is no God but Allah and the prophet Muhammed (PBUH) is his slave and the last prophet from God. This is known as shahada, which has two parts, first part related with God and the second with prophecy. The former part implies that no person has the right to be worshipped, than the one who is the creator and sustainer of the universe, who has no father, mother or son and who is beyond all deficiencies. The latter part implies that the prophets are selected and dignified personalities to lead human beings in accordance with instructions of God and prophet Muhammed (PBUH) is the last link in the chain of prophets.

2.1.2.2. The prayer – Salah (Namaz)

Salah, the second pillar of Islam is the canonical compulsory prayer which is obligatory upon Muslim adult. It is a time bounded ritual offered five times in a day towards the direction (qibla) of the Ka'ba shrine in Mecca. Salah must always be preceded by ablutions (wudu), which is the ritual washing of face, hands, and feet with pure water. This can be done with sand when either water is not available or not usable because of illness. In addition to five time obligatory prayer there are some optional prayers. The five obligatory prayers are subh Fajr (predawn), Zuhr (early noon), Asr (late afternoon), Maghrib (sunset) and Isha (early night).

2.1.2.3. Fasting (Sawm)

Fasting is an obligatory ritual offered during the month of Ramzan. It is offered by abstaining from food, drink and sex from dawn to dusk. A person should also have control over his thoughts. The exemption from offering fasting is allowed to pre-pubescent children, those who are undergoing medical treatments, elderly people, and pregnant or breastfeeding women. Observing fasts is not permitted for menstruating women. Fasting has its own benefits for both soul and body. They are beneficial for various health problems such as diabetics, obesity etc, self-purification of soul, self-resistance and patience, forgiveness of sins etc. Even though the primary aim of fasting as outlined in the Qur'an is to have God consciousness (Taqwa), it also helps us to show solidarity to the poor by enabling us to appreciate what real hunger is.

2.1.2 .4. Islamic Tax (Zakat)

It is a compulsory taxation levied from a Muslim who possesses a particular quantity (nisab) of wealth. It is utilised for the rehabilitation of poor people in the country. The literary meaning of the word 'zakat' means “to purify or to develop”. It is the duty of Islamic government to collect zakat and distribute it systematically. According to Islamic principles, all things belong to God including wealth. It is obligatory to give zakat to those who fulfill the nisab of zakat. The nisab varies with different forms of wealth. The amount of zakat is 2.5% of the total wealth and it is calculated and given in every year.

2.1.2 .5. Pilgrimage (Hajj)

This is the fifth pillar of Islam. It is the Pilgrimage to the Holy city of Mecca in Saudi Arabia where the shrine of Ka'ba is located. It is offered during the month of Dul Hajj as per the lunar calendar. It is an obligatory ritual to each and every Muslim who is physically and financially capable. Hajj pilgrimage unifies people from different parts of the world irrespective of their country, colour, race, age and even their sex.

2.2 Sources (Doctrines) of Islam

Quran and Hadith are the two doctrines of Islam. (Yusuf Al Qardawi, 2010). These two are the Islamic information sources, which deal with each and every corner of life. Islamic scholars primarily depend on

the Quran and secondly on Hadith for formulating Islamic views on different issues.

2.2.1 Quran

Quran is the message of God (Allah) to the mankind, which was sent through Prophet Muhammed (PBUH), who was the last prophet for guiding mankind in to the right path.

2.2.1.1 Revelation of Quran

The entire Quran was revealed to Prophet (PBUH) over a span of twenty three years. The first revelation came to him in his fortieth year of life in the cave of Hira, where he was on his customary retreat. Hearing an anonymous command “Iqra!” (read) he was frightened . He replied that he did not know how to read. The same voice commanded him again to read. The prophet replied by asking “What shall I read”?. The anonymous voice replied “Read in the name of your lord who created. He created man from clot of blood. Read, your lord is the most bountiful, who taught to use the pen. He taught men what he does not know”. These are the first verses of holy Quran. (Richard, 2014).

2.2.1.2 Organisation of the Holy Quran

The Holy Quran is organised with 114 chapters (surahs) and 6236 verses (ayats) of different lengths. The Quran begins with surah Al Fathiha and ends with surah Al-Nas. The second surah, surah Al Baqarais the

biggest surah having 286 verses (ayats) and the 108th surah, surah Al Kauthar has only three verses. The Quranic chapters are of two types. They are ‘Makkisurahs’ and ‘Madanisurahs’. Makkisurahs were revealed during the life of prophet at Makkah and Madanisurahs were revealed during the Madina life of prophet. Out of the 114 surahs, 86 are Makkisurahs and the rest 28 are Madanisurahs. For the sake of convenience of reading and studying, the whole Quranic texts have been divided into 30 equal parts, which are called “Juzu”.

2.2.1.3 Compilation and recording of the Holy Quran

The prophet used to recite every piece of revelation to his companions and they used to write it down immediately. The exact position of each verse was intimated to the prophet during the time of its revelation and he conveyed the same to the scribes. According to one account, there were more than twenty scribes for recording the Quran revelations. These revelations were written on stone, shoulder bone of camels, leaves of palm tree and leather pieces. These records were kept in the house of prophet. In addition to these collections, some of the companions possessed their own personal record collections. But the prominent mode of preservation was memorization. During the time of prophet’s death, there were about 30,000 companions who committed the Holy Quran to their memory.

During the prophetic period, single copy of compiled book form of Quran was hardly kept. The entire Quran continued to be remembered by

companions. During the period of the first Khalifa Abubakr Siddique, more than a hundred people who committed the whole Quran to memory lost their lives in one battle. This caused the companions to think about compilation of the Quran in written form. The first to speak about it was the prominent Sahabi Umar bin Al Khattab who conveyed it to the then Khalifa Abubakr Al Siddique. He was convinced of the necessity of Quran compilation and thus entrusted this assignment to Zayd bin Thabit, the most prominent scribe of Prophet. This endeavour was successfully completed and the master copy was handed over to Abubakr Al Siddique. During the period of Uthman bin Khaffan the third Khalifa, more copies of this text were taken to use in different remote areas of Islamic world. (John Exposito, 1995)

2.2.1.4 Quran Translations and Interpretations

Quran translations are presently available not only in international languages but also in almost all regional languages. The function of Quran translation is to convey the content of Quran to non-Arabic knowing audience. The first Quran translation came in to existence immediately after the war of crusades, when western people became more acquainted with Islam. Today's prominent contemporary Quran translations are translation of Abdullah Yusuf Ali (in English), AbulA'la Moududi (in Urdu), and Hamka (in Bahasa Indonesia). Presently there are more than ten Quran translations in Malayalam alone.

Quran interpretation (Thafseer) refers to Quranic exegesis. It helps the reader to understand the explanations and contexts of Quranic verses. It gives more clarifications to the divine words. The following are some of the famous and authentic Quran interpretation (Subodh Kapoor, 2004).

- Thafseer Al Imam Raazi
- Thafseer Al Baidavi
- Thafseer Al Jalalaini
- Thafseer Al Kashaf
- Thafseer Al Kasimi
- Thafseer Al Khurtubi
- Thafseer Al Manar
- Thafseer Al Muneer
- Thafheem Al Quran
- Thafseer Al Swafwatathafaseer
- Thafseer Al Thwabri
- Thafseer Fee dhilalil Quran

2.2.2 Hadiths

Hadith refers to the records of daily practice of Prophet Muhammed (PBUH) or the words and deeds of the prophet. It is treated as the second primary source of Islam after Quran. Hadiths serve as a support to the Quran by giving adequate explanations and clarifications. Thus Hadith literature serves as the base of Quran interpretations. Hence, Islamic

ideology without Hadith would be considered incomplete.

During the prophetic period, Hadiths were not recorded systematically. The companions were highly concerned about each and every move of prophet; even his private life was observed and reported by his beloved wives. Companions tried to observe prophet's actions and practices. They used to memorise what he said and some of them recorded them. After Prophet's death, some of the companions started to put down narrations of prophetic life and preserved them. Abuhuraira was the leading among them, who had 5374 channels of Hadith followed by Abdullah bin Abbas with 1600 channels and Abdullah Ibn Amr bin Al Aass with 700 channels.

Systematic way of compilation of Hadith was started during the regime of fifth Khalifa Umar Bin Abdul Azeez. The Khalifa directed Muslim scholars in different parts of Islamic world to collect and compile Hadiths. It was during the end of the first century of Hijra (Muslim calendar) and became a great success. Within a short span of time, a lot of Hadiths were compiled and recorded in the book form. (Tadwin al-Hadith, documentation and recording of Hadith in written form. 2014).

Later in the second century, the endeavour of compilation was continued. During this time, scrutiny of the authenticity was done on the basis of reliability and authoritativeness. Some of the important Hadith collections are listed -

- Fath al Bari by Ibn Hajar Asqalani
- Al Muvatta by Imam Malik
- Sahih al Bukhari by Imam Bukhari
- Sahih Muslim by Imam Muslim
- Sunan Aboodavood by Imam Abu Davood
- Suanan Nasae by Nasae
- Suanan Ibn Maja by IbnMaja
- Attaraghibwattarhib by Ibn Hajar Al Asqalani
- Riyadhu Assaliheen by Imam Navavi

2.3 Education and Promotion of Knowledge in Islam

Islam has given great importance to education and promotion of knowledge. In Arabic language “Ilm” means knowledge and “Alim” means scholar i.e. those who have an in-depth knowledge. The first word of revelation of the Holy Quran and the first verse are on the importance of education in Islam. The first revelation was “Iqra” which means 'to read' and the first verse in Quran is “read in the name of your lord, who created all. He has created man from a clot. Read, your lord is most generous, who has taught writing by pen. He has taught man that which he knew nothing (Quran 96:1-5)

In addition to the first verse, there are some more verses in the Holy Quran giving importance to education and knowledge. Some of them are:

1. “ Oh lord, increase my knowledge” (Quran 20:14)
2. “Are those who have knowledge equal to those who do not have knowledge”. (Quran39:9)

There are some sayings of prophet Muhammed (PBUH) emphasizing the importance of seeking of knowledge in different ways. Some of them are:-

1. “Seek knowledge from cradle to grave”. This saying emphasizes that there is no time restriction for acquisition of knowledge.
2. “Seeking of knowledge is a duty of every Muslim”. This saying maintains that there is no gender discrimination in the seeking of knowledge. It is compulsory for both men and women.

All these show that Islam gives importance not only to the promotion of knowledge but also to the emphasis of democratization of knowledge.(Education in Islam, n.d.).

2.4. Digital Islamic Information resources

ICT based Islamic Information resources are enormous. It is synonymously known as ICT based Islamic resources, Islamic e-resources and Islamic digital resources. They are easy to use, accurate, economical and more time saving. The most popular electronic resources on Islam have been pointed out below. (Ahmed Bakeri Abu baker& Adam Gumbo, 2011),(Mansoor Babu, & Abdul Rasheed, ,2012),(Mohammed Musthafa, 2011), (Nasirudheen & Raheeb, 2013) and (Paul Sukup, 2012).

2.4.1 CD/DVD

CDs and DVDs were the most useful electronic Islamic information resources worldwide. Both audio only CDs and videos were available. The content of these resources varies, such as Quranic CDs, Quran translations in different languages, Quran interpretation of different scholars in different languages, Hadith CDs, Quranic children's stories, cartoons, speeches of Islamic scholars, Islamic songs etc. The usage of these resources was very high, since it can be used even offline, but today the usage of this resource has been replaced by other resources.

2.4.2 Websites

Hundreds of Islamic websites and web portals help in the propagation of Islam. An Islamic website is such a type of website, main objective of which is to propagate Islamic information in accordance with teachings of prophet Muhammed (PBUH). Most of the first generations of websites are static in nature.

<http://tauheed-sunnat.com/>

<http://www.islamicity.com/>

<http://www.ummah.com/>

<http://www.islamieducation.com/>

<http://www.islamicline.com/>

<http://www.books4islam.com/>

<http://www.al-islam.org/>

<http://www.mathaba.net/>

www.sunnahonline.com/main.htm

<http://www.understand-islam.net/>

<http://www.fatwa-online.com/>

2.4.3 Islamic web portals

Islamic web portals are more dynamic than conventional websites, and offer additional services such as on-line discussions, frequent news updates, chatting, online books, fatwas on various issues etc.

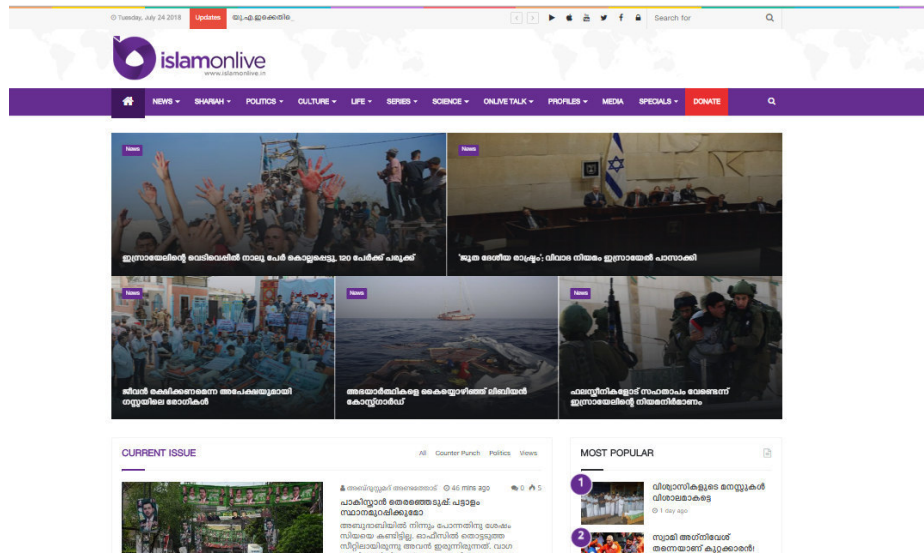


Figure:1 Islam Onlive web portal- Homepage

<http://www.islamic-portal.net/>

<https://www.worldofislam.info>

<http://www.alim.org/>

<http://islam-port.com/>

<http://www.islamicfinder.org/>

<http://www.slmuslims.com/>

<http://www.dawateislami.net/>

<http://www.islamicity.com/>

<http://www.alim.org/>

2.4.4 Blogs

Blogs, which are personal websites, have got great acceptance among Muslim scholars. There are a number of Islamic blogs to impart Islamic information to the community. These blogs are one of the platforms for hot discussions on various Islamic issues. Some of the important among them are:-



Figure:2 Islam padasala blog- Homepage

Ahlu Ssunnaval Jama' - <http://ahle-sunnah-wa-jammat.blogspot.in/>

Al Shifa - <http://www.alshifa.blogspot.in/>

Ikhlas - <https://ekhlas.wordpress.com/>

Al Ihsan - <http://ihsan-buxsoo.blogspot.in/>

Al Noor - <https://annoor.wordpress.com/>

Umma Zahra - <http://ummzahra.blogspot.in/>

2.4.5 YouTube

YouTube, the reservoir of videos in Internet is also one of the general and the most popular digital Islamic information resources. It is treated as the pool of Islamic speeches, discussions, classes in different languages in different topics by different scholars etc. During the initial period of digital revolution, CDs were highly depended by Islamic scholars, whereas presently it has been replaced by Youtube. It is very easy to upload and download any video clipping to and from You Tube by using a net connection and any device such as mobile, tablet, computer. Thus, as and when such types of programmes are conducted, it is uploaded to YouTube.

2.4.6 E-books

There are hundreds of Islamic e-books available on internet. Most of them are in pdf / html format and are freely downloadable. The following are some important websites, which provide Islamic e-books free of cost. (Islamic pdf Books Library Free Islamic pdf Books, 2013).

Al-Islam - <http://www.alislam.org/books>

The Islamic Bulletin–

http://www.islamicbulletin.org/services/all_ebooks_p1.aspx

World of Islam - <https://ebooks.worldofislam.info/>

Islamic Books - <http://www.download-islamic-ebooks.com/>

Islam for University -

<https://islam4universe.wordpress.com/2011/10/24/download-islamic-english-e-books-holy-qur'an-e-books>

Sultan - <http://www.sultan.org/books/>

Khilafa Books - <http://www.khilafahbooks.com/>

Islam & U - <http://www.islamnu.com/downloads/e-books>

Wisdom Islamic Information –

<http://wisdomislamic.info/index/index.php/free-authentic-islamic-ebooks>.

Islamic Line - <http://www.islamicline.com/islamicbooks4.html>

Kalamullah – <http://www.kalamullah.com/books.html>.

Islam House - <http://islamhouse.com/en/books/en/1/>

On Islam - <http://www.onislam.net/english/ebooks.html>

Scholaris - <http://www.scholaris.com/ebooks.htm>

2.4.7 E-journals

The acceptance of latest technologies by Islamic journals were spontaneous. Most of the conventional printed Islamic journals during the course of time started their own websites and electronic versions. Today there are hundreds of electronic Islamic journals. Some of the famous among them are:-

- Journal of Islamic Studies and Culture (Journal of Islamic Studies and Culture, n.d.). It is a peer reviewed international scholarly

journal published by American Research Institute for Policy development. Even though published in English language, it is also available in other ninety languages including Malayalam.

- International Journal of Islamic Thought (International Journal of Islamic Thought. U K M, n.d.). It is published by the International Society of Muslim Philosophers and Theologians (ISOMPT) and the Department of Theology and Philosophy, National University of Malaysia. It has both electronic and printed versions.
- Journal of Muslim World League (Muslim World League, n.d.). This journal is published by Muslim world League (Rabita), the international Islamic organization from Makkah, Saudi Arabia for the last three decades.
- Journal of Arabic and Islamic Studies (Journal of Arabic and Islamic Studies, Lancaster University, UK, n.d.). It is a peer reviewed international journal published from UK since 1995. Till 2002 it was only a printed journal, but in 2002 it was converted into electronic format.
- Al-Jamia Journal of Islamic Studies (Al-Jami'ah Research Centre Sunan Kalijaga State Islamic University Yogyakarta – Indonesia, n.d.). It is a bi-annual journal published by Al-Jami'ah research centre of State Islamic University, Indonesia. It is one of the oldest journals published from South East Asia.

2.4.8 Databases

Islamic library databases are electronic catalogues and access points of wide spectrum of Islamic information resources.

- **Al Manhal** (Al Manhal, n.d.)

Al Manhal, the first Arabic full text database was founded by Mohammed al Badgadi in 2000. The database has 36,216 publications from 270 publishers. It has 13,118 e-books in the collection and hundreds of PhD theses and PG dissertations from different countries. Al Manhal has a collaboration with Turnitin, a plagiarism checking software in order to prevent copyright infringement. The products and services of this database have been divided into three groups, i.e. for publishers, for libraries and for individuals.

Special features of Al Manhal are - it serves as an umbrella of publishers to get published the e-contents cost-effectively and ensures its availability to the international community and individuals can publish their research works without any financial burden, it has a separate online book store, having thousands of Arabic books from which online purchase is possible and it provides MARC21 of all bibliographic records, which is helpful to libraries.

- **Al Makthabath Al shamela** (Maktaba Shamila, n.d.)

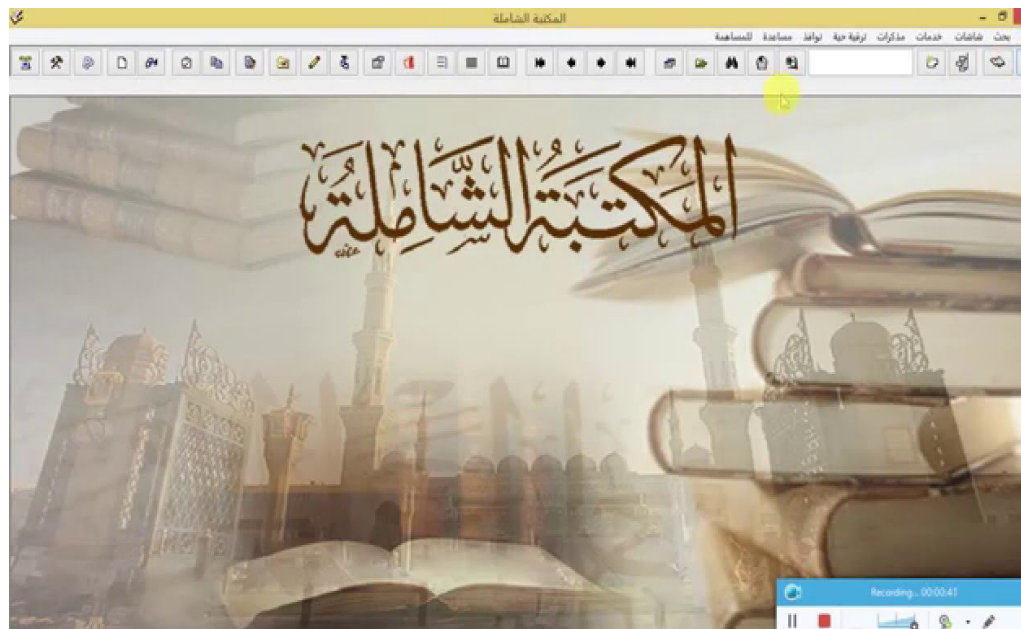


Figure: 3 Home page of Maktaba Ashamila

Al Makthabath al Shamela is the world famous Arabic database having more than 16000 Arabic books on Islam and Arabic language and literature. Both online and offline versions are available. A scholar can upload new resource into the database in the case of online version. Highly advanced searching facilities such as author, title, subjects are available in this database. Boolean searching option is also available in this database.

The 'Shamela' includes almost all interpretations of the Holy Qur'an written by former Islamic scholars. Each and every ayat (verse) can be studied comparing different Quran interpretations which is a unique feature

of this database. The database also has the facility to add more books and to export data to word files.

2.4.9 Digital libraries

There are a number of Islamic digital libraries on the Internet. Most of them provide e-books, e-journals, audio& video lectures etc. Some of the important among them are:-

Islamic Library - <http://islamiclibrary.com/>

Oxford Islamic studies Online - <http://www.oxfordislamicstudies.com/>

Muslim Library - <http://www.muslim-library.com/>

Dawat-e-Islami - <http://www.dawateislami.net/books/bookslibrary>

E-Islamic Library - <http://www.e-islamic-library.com/>

Islamic Library - <http://www.minhajbooks.com/english/index.html>

Way to Allah - <http://www.way-to-allah.com/en/library.html>

International Islamic University-Malasia-Library -

<http://www.lib.iiu.edu.my/>

International Islamic University- Islamabad - <http://www.iiu.edu.pk/>

Ahlul Bayt Digital Islamic Library – www.al-islam.org/organization/ahlul-bayt-digital-islamic-library International Islamic Digital Library-
<http://library.villanova.edu/research/resource/4551>

2.4.10 Islamic Social Networking Sites

Social networking sites are widely used for information communication among Islamic scholars. In addition to the use of general social networking sites such as Facebook, Twitter etc., exclusive Islamic social networking sites such as Alim, Ummaland, SalamYou, QuranEdu etc. are also popular among Islamic scholars.

- **Alim** (Alim - The World's Most Useful Islamic Software, n.d.). Alim is created and maintained by Alim foundation. The philosophy behind this venture is the promotion of acquisition and dissemination of knowledge of Islam. It includes Quran tafsir, hadith, Islamic history, and provides tools for studying Islam and memorizing the Qur'an. Its salient features are:-chatting/discussion facility on various Islamic topics, provides both Apple and Android mobile apps for Islamic education, sharing facility of Islamic knowledge in an organized and intuitive way, biographical sketches of prophets and Sahabaths, and note book facility, which keeps references to sections of the site, ayat or hadith, simply by highlighting.

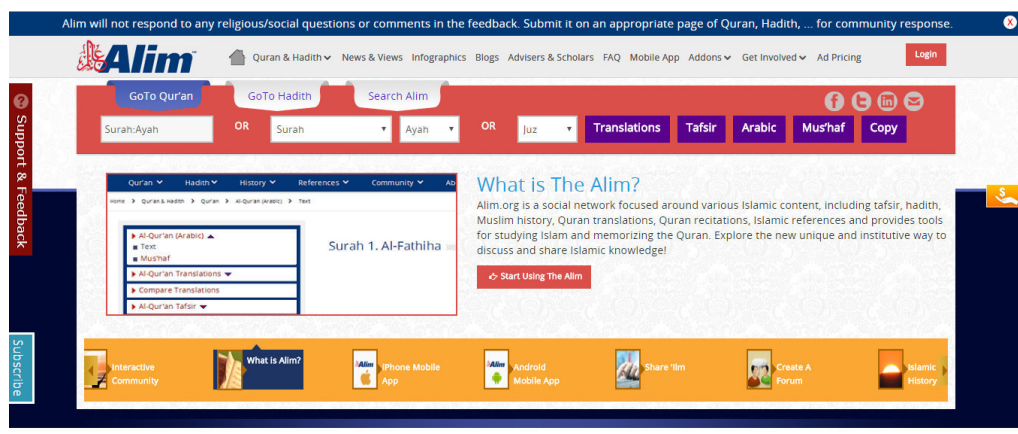


Figure:4 Alim –Social network

- **Ummalnd** (Ummah, n.d.). Ummalnd is a recent Islamic social networking site, which was developed by Jamolidin Daliev, Maruf Yusupov and Mehmudjan Memathaji. It is a platform for Muslims to connect, learn and share information across the world.

Salient features of Ummland are:- fully based on Islamic values, online Quran with audio translations, question and answer session, zakat calculator, academy for Arabic learning, focus on Islamic education, halal advertisements, daily prayer times in metropolitan cities, e-book library and integration with general social networks such as Facebook and Twitter.

- **QuranEdu** (QuranEdu.com - Islamic Social Network - Muslim Ummah Community Site - Quran Education, n.d.). Quran Edu is an exclusive Islamic social networking site. The intention behind this social network is to impart Quran and Islamic education to the Muslim community. It is a single platform to the Muslim

community in the whole world and has been integrated with the general social networks such as Facebook and twitter and YouTube, the largest video pool. Users can make their own accounts, groups and chat with other members. It has been facilitated to write articles, create blogs, create forums and groups, and uploadMP3s and videos.

2.4.11 Online Islamic Universities

Online Islamic courses are being conducted by Islamic Online Universities or Islamic Virtual Universities. They provide online courses on various Islamic specialisations. Some of the leading Islamic Online Universities are:-

- **The Islamic Online University (IOU)** (Islamic Online University (IOU) - Free Educational Courses, n.d.). It is an online, distance-learning Islamic educational institute established in 2001. Dr. Bilal Philips is the founder and chancellor of the institute. An online Da'wah Training Course was launched in 2007. Presently the university offers certificate courses, diploma courses, undergraduate and graduate courses in various Islamic specialisations. In addition to Islamic subjects, courses on psychology, banking, business administration and education are also provided by the institute. In 2013, the University received recognition from the Department of Higher Education, Government Somalia and was added in the list of accredited universities in Somalia. In 2015, the University became a member of ICDE (International Council for Open and

Distance Education), the leading international agency for distance and online education. Presently the University has students from 224 different countries. Most of the courses are offered freely.

- **Maryam Institute** (Maryam Institute, n.d.). It is a non-profit online Islamic institute exclusively for women. The Institute was established in 2012 by Shaykh Moiz Hasan and Alimah Sobia Hasan. As per the 2015 statistics, more than 2500 women from twenty five countries across the world have utilised the Institute. It offers degree courses in alima programme in Karachi, in Urdu and English, online fundamental programme in English and Online Quran programme in English. In addition to these courses, it also conducts online weekly talks on different issues. All programmes provided by the Institute are free of cost.
- **Darul Uloom** (Darululoomonline, n.d.). Darul Uloom is an online institute of Islamic studies, which offers five year Alim degree programme, Alim preparatory course and Intensive Arabic learning course. The subjects of the course are Arabic Grammar (Syntax and Morphology), Arabic Literature (Speech, Composition, and Rhetoric), Islamic Theology ('Aqidah), Principles of Islamic Jurisprudence (Usul al-Fiqh), Fiqh (Jurisprudence), Ulum al-Hadith (Sciences of Hadith Interpretation), Hadith (Prophetic Traditions), Usul al-Tafsir (Principles of Exegesis), Tafsir al Quran (Exegesis) and Sirah (Prophetic Biography). The media of instruction are English and Arabic.

2.4.12 Quran Reading Pen (Quran Learning Pen, n.d.)

The Quran Reading Pen is an electronic device, which makes Quran reading, learning, understanding and memorizing very easy without the help of any teacher. It can be used by the young and old, Arab and non-Arab, beginner and master in IT and even by blind people. It is a small portable device, so that it can be carried anywhere.

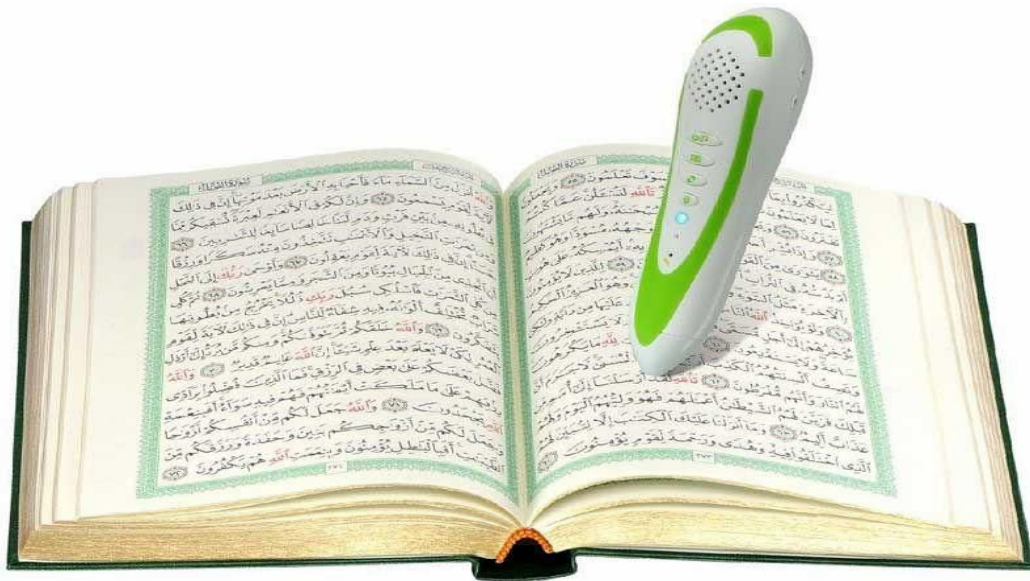


Figure:5 Quran Reading Pen

The Quran text is printed in beautiful fonts and the pages are layered with invisible coded grids. The reading Pen optically detects each unique code on the grid and read the corresponding verse (ayat), page or chapter (surah). When this device is pointed at the beginning title of each chapter or surah, it reads the whole corresponding verse. The sound can be heard by either the small loud speaker on the pen or head set. This device

is equipped with recitation of well-known reciters from different countries in many languages. Thus it is an easy and convenient resource for Quran education.

Features of this device are :- it can also be heard word by word, supports twenty languages including Malayalam, English, Urdu etc., recitations of fifteen world famous khari's (recitators), memory card can be used along with this device, supports Arabic and English Quran interpretations, thajveed (rules for recitation) laws are given and supports voice recording facility.

2.4.13 Islamic Radio

Radio, one of the important communication channels has been widely utilised for Islamic propagation. According to a report (Islamic Radio Stations, n.d.), there are more than 250 Islamic radio stations in the world. Some of the leading international radio services are mentioned here.

- **Umma FM** (Umma FM, n.d.)

It is a British Islamic radio service which broadcasts exclusive Islamic subjects such as Quran recitations, speeches, discussions, songs etc. The mobile application (app) of this radio is also available.

- **Radio Islam** (Radio Islam, n.d.)

It is an American radio service, established in 1999 in Chicago by Sound Vision Foundation with the intention of equipping ICT world with a high quality, informative and creative Internet radio broadcast.

- **Ikim** (Ikim FM, n.d.)

Ikim is a Malaysian Islamic radio founded in 2001. It is telecasted 24 hours and the programmes are in Malay, Arabic and English.

- **Noor Dubai Radio Islam** (Dubai Media Incorporated, n.d.)

It is a Dubai based Islamic radio service established in 2011 under ARN (Arab Radio Network) umbrella.

2.4.14 Islamic TV Channels

Realising the great influence of TV programmes on today's social life, a lot of Islamic TV channels have been established throughout the world. These channels are concentrating on Islamic programmes such as speeches, Khutubas, discussions, Hajj live, etc. Some of the important among them are listed below.

- **Makkah Live TV** (Makkah Al-Mukarramah Live, n.d.)

Makka Live TV is a Saudi based Islamic TV channel telecasted from Holy Makkah, the centre of Muslim world. This channel is popular among people throughout the world due to its programmes such as Hajj live, ‘tharaveehnamaz’ prayer during ramzan etc.

- **Noor TV** (Noor TV, n.d.)

Noor Islamic TV Channel is a UK based satellite Islamic TV Channel. Euro Bird and Paksat have been utilised for telecasting the programmes of this channel. The programmes of this channel are available in Europe, Africa, Middle East and in many parts of Asia.

- **ATN Islamic TV** (ATN Islamic TV, n.d.)

ATN Islamic TV Channel was established in 2014 and telecasted from Bangladesh. It is the first 3G supported Online Islamic Television channel in the country.

- **Islam TV** (Islam Channel, n.d.)

Islam TV is a London based Islamic TV established in 2004. Islam TV telecast not only Islamic programmes, but also current affairs and entertainment programmes in an Islamic perspective. The channel is a member of Commonwealth Broadcasting Association and Association of International Broadcasting.

- **Peace TV** (Peace TV, n.d.)

Peace TV is an International Islamic TV channel available in 125 countries throughout the world. The programmes in this TV are in English and Urdu languages. Most of the programmes are by the world renowned Islamic scholars such as Dr. Zakir Naik (India), Dr. Bilal Philip (Canada), Ahmed Deedat (South Africa) etc.

2.4.15 Islamic Mobile apps (applications)

Presently, smart phones are treated as one of the common device in the hands of modern men. Most of the Internet based services are accessed via this device. There are various types of Islamic mobile apps to facilitate Islamic way of life. Most of them are open source. Some of them are mentioned here. (Islamic apps, n.d.), (Islamic Live Wallpapers, n.d.).



Figure: 6 Icons of different Islamic apps

2.4.15.1 Quran apps

It is application software of Quran. The basic Quran apps have only Quran texts, where as some of the latest have audios of Quran recitation. Latest searching facilities are also available. It can be searched by Juz' (sector), by Sura' (chapter) or by Aya' (verse). Book marking facility is available, which helps to resume the recitation as and when one needs. Al Quran for windows 8, Quran auto reciter, Holy Quran book for windows, Al Quran explorer, iQuran, Quran android, Last 20 sura' of Quran, Daily one Quran verse, Juz' Amma, Al Quran short suras etc. are some of the Quran apps.

2.4.15.2 Quran Translation apps

Presently it is very easy to learn and understand meaning of Quran by using Quran translation apps. Some of them are confined to the translation of a single language, but most of them support multi languages. The Noble Quran, Holy Quran, Quran translation and Quran Android are some of them. The Quran android supports Arabic, English, French, German, Indonesian, Malay, Spanish, Turkish, Transliteration, and Urdu languages.

2.4.15.3 Quran Tafsir (Interpretations) apps

The ICT has facilitated to keep the whole library in the pocket of a scholar. Quran tafsir (interpretations) are available in app forms. Formerly, it was kept in big libraries only. Almost all tafsirs including Tafsir al Maragi, Tafsirathwabri, Tafsir al Kasimi, Tafsir al razi, Tafsir al muneer, Tafsir al manar, Tafsir al Jalalaini, Tafsir al Kashaf, Thafheemul Quran of Sayyid AulA'la Moududi, Fi Dhilalil Quran of Sayyid Qutub etc are available in this format.

2.4.15.4 Quran Tajweed apps

Tajweed is a science which deals with the rules and regulations of Quran recitation, such as pronunciations, full stop, pause etc. There are a number of tajweed mobile apps available in Internet. 'Tajweed Quran', 'Mushaf Tajweed', 'Tajweed al-Quran' etc. are important among them.

2.4.15.5 Hadith apps

Hadiths, the sayings, deeds and approvals of Prophet, are presently available not only in text form but also in digital and app format. 'Sahih Muslim', 'Sahih Bukhari', 'Hadith Navai', 'Sunanu Abeed Davud', 'Sunanu Ibnu Maja' etc are some of the important among them.

2.4.15.6 Islamic Calendar apps

Islamic calendar, also known as Hijra calendar, is based on lunar cycle which was introduced by the second Khalifa Umar bin Khathab. All Islamic rituals are based on this calendar and most of the Arab countries follow this calendar. There are so many Hijra calendar apps. 'Islamic calendar', 'Hijra calendar' etc are the prominent among this group.

2.4.15.7 Dua (prayer) apps

As per the Islamic belief, each and every ritual and deed has its own duas. There are hundreds of duas preached by Prophet Mohammed (pbuh), which are presently available in app format. 'Dua in Quran', 'Muslim dua', 'kids dua', 'Islamic dua', 'daily dua' etc are some of them.

2.4.15.8 Muslim Name apps

Muslim names for children (boys and girls) are available in different mobile apps. The names are first categorised as 'boys' and 'girls' and alphabetically sorted. 'Muslim names', 'Islamic names', 'Muslim baby names' etc are some of this group.

2.4.15.9 Qibla Finding apps

Qibla is the direction towards Ka'ba, the centre of Muslim world located in Holy Mecca. Salah (namaz) is to be offered towards the direction of Ka'ba. While traveling, it is very helpful to identify qibla with the help of mobile apps. 'Qibla connect', 'Qibla compass', 'Qibla direction', 'eQibla', 'find Mecca' are some of the qibla finding apps.

2.4.15.10 Adhan / azan (salah time) apps

Namaz (salah) is a time bounded prayer, which is offered five times a day. The correct time is intimated by adhan from mosques. This time may change slightly from place to place. Mobile apps can be used for getting the correct adhan time. 'Adhan', 'Prayer companion', 'Muslim Prayer time', 'Muslim azan', 'Prayer time' are some among them.

2.4.15.11 Salah (Namaz) teaching app

Salah is a worship which is obligatory to each and every Muslim adult. It is a combination of rituals and prayers. It is very easy to understand this with the help of audio and video support. There are some mobile apps for this purpose. 'Salah teacher', 'Step by step salah', 'Salah step by step' are some of the salah apps.

2.4.15.12 Zakat calculator apps

Zakat, one of the five pillars of Islam is a tax system in Islam. According to Islamic principles, different forms of wealth such as gold, silver, liquid money, insurance, livestock, agricultural products, salary

etc.have zakat if they exceed the specific limit. Presently it is easy to calculate with the help of software. 'Zakat Calculator' is the most famous among them.

2.4.15.13 Inheritance calculator apps

According to Islamic beliefs, the ultimate authority of wealth is God. Man has only the power of handling it. After the death of a person, his wealth is to be divided among the family. It is a complicated task. But it can be done easily with the help of software. 'Islamic inheritance calculator', 'Attashil inheritance cal', Irth- Islami inheritance programme', 'Inheritance calculator' etc. are the examples of such types.

2.5 Kerala (Malayalam) initiatives

The possibilities of Information and Communication Technology have been fruitfully utilised for Islamic activities by Islamic organizations and groups in Kerala. Almost all Islamic organizations have their own IT wing for producing and maintaining IT related works. In addition to these wings, there are a number of private groups engaged in IT related propagation.

During the initial phase of IT revolution, CDs and DVDs were the prominent Malayalam based Islamic e- resources. There are thousands of Islamic CDs and DVDs in Malayalam especially on Islamic speeches, those showing practical aspects of different rituals etc.

2.5.1 Web Portals

There are some full-fledged Kerala based initiatives in Malayalam language for Islamic propagation. The prominent among them are

- Islam Onlive (Islamonline. n.d.)

Islam Onlive is the first Islamic web portal in Malayalam. It was started by D4 Media, the ICT of Jama'ate Islami Kerala chapter. The main objective behind this endeavour is to provide the voice of Islam to the world by using latest technologies. The main links in the portal are news, shariah, politics, culture, life, media, online talk. It also provides the link for downloading ' Quran lalithasaram mobile app, zakat calculator, electronic copy of ' Thafheemul Qur'an', and Quran interpretation of Amani Moulavi. This portal is highly useful not only to Islamic scholars, but also to teachers, students and even to laymen.

- Islam Padasala (Malayalam Portal on ISLAM. n.d.)

Islam padasala is the venture of Azharul Uloom Islamic complex, Aluva. It is run by Azharul uloom charitable trust, which was established by the Muhyudheen Alvae, one of the international Islamic scholars from Kerala. The main objective of this portal is to provide apt information on Islam in Malayalam language and to prevent anti- Islamic deeds in cyber space. The main links of the portal are News, Religion, Culture, Economics, Gallery, Family and Health science. It also provides online video Quran classes by different scholars.

- Sunni Online Class (Kerala Malabar Islamic Class Room.n.d.)

This portal is developed and maintained by Samastha Kerala Jam'eyatul Ulama. The main objective of this portal is to prevent anti-Islamic propagation in the cyber world by providing right information to the society at the right time. The main focus of this portal is live class rooms, such as video live, video audio live, Mobile radio live, Mobile video live, Makkah live and Madeena live. It also facilitates the downloading of various Islamic software.

2.5.2 Blogs

Since blogging is a cost effective way of communication, there are a number of Islamic blogs in Malayalam created and maintained by Islamic groups and scholars. Some of them are:-

Islam - <http://islam-malayalam.blogspot.in/>

Sunni Gallery - <http://sunni-gallery.blogspot.in/>

Islahi Bloggers - <http://islahibloggers.blogspot.in/>

Islahi Yuvatha - <http://islahiyuvatha.blogspot.in/a>

Malabar Islam - <http://malabarislam.blogspot.in/>

Athouheed – <http://athouheed.blogspot.in/>

Tharbiyya - <http://atharbiyya.blogspot.in/>

Mugamugam- <http://mugamugam.blogspot.com>

2.5.3 E-Journals

Most of the conventional Malayalam Islamic journals have started to publish online version along with the printed version. Some of them are

- Prabhodhanam (Prabodhanam, n.d.) - It is a weekly published by Jama'ate Islami Kerala chapter. Its old issues since 2011 are available in archive.
- Bodhanam (Bodhanam Bi Monthly Online Edition, n.d.) It is a quarterly peer-reviewed scholarly journal published by Jama'ate Islami Kerala chapter.
- Shabab (Shabab weekly, n.d.). It is a weekly publication published by ISM (Ithihadushubaul Mujahideen) Kerala.
- Vichindanam (Vichinthanam weekly, n.d.) It is a weekly publication by Kerala Nadvathul Mujahideen.
- Risala (RISALA WEEKLY, n.d.). It is a weekly published by Islamic Publishing Bureau of SSF (Sunni Students Federation).

2.5.4 Radio

Malayalam language Islamic radio broadcasting is also notable for Islamic propagation. Some of them are given below.

- Radio Islam Malayalam (Radio Islam. n.d.)

Radio Islam Malayalam FM Live is the first online Islamic Malayalam radio service, broadcasting round the clock on various Islamic subjects such as Islamic speeches, discussions, Islamic songs, Islamic news etc. As per the statistics, the channel has listeners from eighty different countries around the world.

- Sunni Online Radio (Sunni Online Radio, n.d.)

This is an endeavor of Kerala Malabar Islamic classroom of Samastha Kerala Jam'eyatul Ulama. It has 24 hour programmes in Malayalam language. It has two versions, the computer version and mobile app version.

- Peace Radio (peaceradio, n.d.)

It is a recently launched comprehensive Malayalam Islamic radio channel maintained by Wisdom Global Islamic mission – Kerala.

2.5.5 Islamic Malayalam apps

The use of latest ICT gadgets is common among Keralites. Smart phones are an inevitable part of their daily life. That is why; there are a number of Islamic mobile applications available on the Internet. 'Adkar Malayalam', 'Al-dua Malayalam', 'Islam daily duas' etc. are examples of Malayalam prayer (dua) apps; 'Kerala Islamic classroom', ' Radio Islam',

'Al Islah radio' etc are examples of Malayalam radio apps and 'Malayalam Quran' and 'Quran lalithasaram' etc are the examples of Malayalam Quran translation apps.

2.6 Conclusion

ICT based Islamic information resources are enormous. Compared to other religions, Islam occupies first position in the use of latest technological developments. Because of the ICT revolution, it is very easy to propagate the principles of Islam to the world and easy to understand and study Islam for the non-Islamic community.

But the usage of these resources has been confined to some scholars, due to lack of awareness about these resources, even though they are readily available. Let endeavours like these, become a breakthrough to bridge the digital divide among Islamic scholars and community.

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Chapter 3

REVIEW OF RELATED STUDIES

- ❖ *Information needs*
 - ❖ *Information searching and seeking behaviour*
 - ❖ *Information usage*
 - ❖ *Satisfaction, perceptions and difficulties while using Information*
 - ❖ *Islam Studies and Islamic Scholars.*
-

3. Review of related studies

Review of related studies is a prominent part of research work. Reviewing of related literature helps the researcher to acquire background knowledge of the area of the research topic and to identify the concepts relating to it. It also helps to understand the methodology and findings of the previous research, which may help to design methodology for the research work. In order to carry out an ideal research work, it is essential to be well acquainted with the studies that have already been carried out in the field of research.

The review of the related works have been grouped under five subheadings as below.

- Information needs
- Information searching and seeking behaviour
- Information usage
- Satisfaction, perceptions and difficulties in using information
- Islam Studies and Islamic Scholars.

3.1 Information needs

Information needs refers to the lack of self-sufficiency on one's part. It is a gap in one person's current knowledge. Wilson (1981) defines information needs as "a subjective, relative concept existing only in the mind of the experiencing individuals".

Reitz (2007) opined "information need as a gap in a person's knowledge that when experienced at the conscious level as a question gives rest to a search for answers".

According to Tackie & Adams (2007) "Information needs arise whenever individual finds themselves in a situation requiring knowledge to deal with situation as they deem fit".

According to Zang (1998) a good understanding of user information needs of various professional groups is essential in planning, developing, implementing and operating the ideal information system and services.

Several studies on use of e-resources have been carried out by different types of users in different institutions all over the world. The information needs of different user groups will be different. Taylor (2001) recognized that "user's environment or situation has a critical role on the nature of information needed".

Two Pakistani studies by Anwar Mumthaz & Asghar Muhammed (2009) and Muneer Naseem Ansari & Nizar Ahmed Zuberi (2011) among

media practitioners such as – radio, television and newspaper to understand – types of information needed, forms of information and priority of information needed, found that – they use both formal and informal sources of information. Colleagues are regarded as the most important source of information and they need information mainly for checking facts of news and its authenticity. Media practitioners in Pakistan need all kinds of information in all formats.

Francis Adesoji Fabunmi (2011) opined that, information is the base of the development of both rural and urban communities. So it is the responsibility of the democratic government to make available not only the basic needs such as food and shelter of the people, but also information to solve their day to day problems such as finding consumer goods , locating appropriate medical facilities for health care, investment opportunities, government policies and programs etc. He pointed out the information needs of rural dwellers are – health and safety information, legislating and regulative information, government information, statistics, market news, scientific and technical information, news and current affairs and local events and activities.

Research on information needs of industrial labourers by Shashdhar (2011) and Meitei & Purnima Devi (2007) proved that, each professional group has their own information requirements. They pointed out that, industrial employees need information related with their profession. The former study was conducted among employees of Karnataka Industrial

Area Development Board (KIADB). It was found that, large number of respondents (86%) need to obtain information on new products, safety precautions (80%) followed by working method and market trend in next position, whereas least number of employees seek information for other purpose. The latter study was conducted among small scale industries of Manipur. It was found that, information about raw materials and marketability for their product was the most needed information by the study group.

Studies on information needs of members of legislative assembly in New Delhi, India and Women parliamentarians in Pakistan were carried out by Shailendra, & Hari Prakash (2008) and Maqsood Ahmed, Muhammed Ashraf & Bushra Nasli (2013). Study group of both studies were politicians, i.e members of legislative assembly and members of parliament. Since the study groups were advocates of public issues and representatives of people in the state and nation's highest constitutional centres their information needs were A to Z concerns to the society. The findings of both studies were more or less same. This group needed information for participation in parliament / assembly, calling attention, committee meetings, participating in conferences, preparing speeches and for media discussions. They used newspapers, reports of assembly and parliament committees, government documents, books, journals and reports of international organizations for getting their relevant information.

Mukhyadal & Vaishnaw (2012) tried to understand information needs of LIS teachers in their survey “knowledge needs of LIS teachers in BAMU” and AMU. It was found that, the LIS teachers needed information on developments in their fields, to prepare lecture notes, to generate new information out of curiosity, for participating seminars and conferences, to meet the need of promotional opportunities, to write articles publish books and their research work. The study group used both types of information resources such as – books, periodicals, conference proceedings, CD/DVD, e-journals and e-databases.

Femin & Humayum Kabir (2013) inferred that, as far as research scholars are concerned, their information needs are studies related with their research. On the basis of their study, they put forward a suggestion that, library professionals have to acquire capabilities to give hands on training for research community for the effective and efficient utilisation of e-resources.

According to Satpathy & Biswanth (2010) the faculty members’ attitude towards the e-resources has been changed and it has been widely used for their teaching and research works.

According to Vahida Beegum & Sangeetha (2013) the information needs of legal practitioners are – current decisions of supreme court of India, recent verdicts of high courts of India, recent national statutes and acts and their amendments.

Prakashan (2013) opined that health care professionals are the backbone of healthy society and they should have the sound knowledge in their field of specialization such as – new medicines, latest treatment, new health deceases etc.

In an investigation by Kerins, et.al (2004) about the information needs of engineers in Ireland, found that information needs of engineers were on – documentation and implementation of projects, designing and supporting tools and services for better information. The authors also added that, engineering students were also having the same information needs.

A comparative analysis of information needs and seeking behavior of rural and urban health care professionals was executed by Saad Alghanim (2011). The study was conducted among health care professionals in Riyadh region of Saudi Arabia. It was found that, the information needs were same for health care professionals in rural and urban area and most of their needs were on – diagnosis, treatment and different therapies. But a remarkable difference in the usage of e-resources was observed between rural and urban groups. Some of the barriers were reported by the respondents with regard to use of information resources. They were – lack of libraries in PHC centres, lack of sufficient training and unavailability of on-line information resources especially in rural areas.

Civil servants are the backbone and planners of any country. They are the real policy makers. A research was conducted by Emmanuel, et.al

(2011) on the information needs of civil servants in Nigeria. Three ministries (Agriculture & natural resources, Commerce and Industry and Information & Finance) were selected for the study. The information was collected by interviewing 123 samples. It was revealed that, they were in need of information regarding the policy making and planning such as – government information, statistical reports, directories, administrative information, research reports, financial information etc. Most of the respondents opined (67%) that, they were not getting their sufficient information.

A comparative study of information needs of rural people of developed and developing countries was made by Sharaful Islam & Zabeed Ahmed (2012). The methodology adopted was reviewing of research studies on information needs of rural people in some developed and developing countries. The developed countries selected for literature review were – Australia, France, UK and USA. The developing countries included in the study were – Bangladesh, China, Ghana, India, Kenya, Malaysia, Nigeria, Srilanka, South Africa, Tanzania, Thailand and Zambia. It was found that, the information needs of rural dwellers belongs to developed and developing countries were more or less same. Their information needs were – health education, legal matters, transport, entertainment, social security, jobs, pensions etc.

An interesting research was carried out by Reena Dutta (2009) on the information needs and seeking behavior of people in developing

countries. Reviewing of the research method was used for the study. Sixty six peer reviewed articles were selected for the study. The countries included in the study were – India, Argentina, Botswana, Ghana, Malawi, Malaysia, Nigeria, Uganda and Zambia. The information needs and seeking behavior of indigenous rural and urban residents have been taken for the study. After the analysis of all papers, it was found that, education had a great influence on the information needs and seeking behavior of people of a country. It was also inferred that, ignorance, illiteracy, poverty, diseases were the obstacle of education in rural areas. The study suggested that, further studies have to be conducted on – information needs and seeking habits of educated dwellers in developing countries, urban youths and effectiveness of NGO, librarians and community radio stations among rural and urban dwellers.

Manoj Kumar & Pulak Das (2015) proved that, the main information needs of young rural people were employment and job opportunities and majority of them utilised Television for meeting their information needs.

3.2 Information searching/ seeking behavior

Information searching or seeking refers to users' interaction with information retrieval systems. Information searching behavior is the micro level behavior employed by the searcher in interacting with information systems of all kinds. It may be human to human interaction or human to computer interaction.

The concept of information seeking behavior has been synonymously used as – information behavior, information searching behavior and information use behavior. Information providers like library and information centres are to be aware of their users' information requirements as well as their information seeking and retrieving methods, which will help not only to improve the existing services but also to initiate new services.

According to Girija Kumar (1990) “information seeking behavior refers to who needs what kind of information for what reasons; how information is found evaluated and used”. Lingman (1997) emphasized that, a good understanding of information needs and seeking behavior was the base for the provision of successful information service. Seema Sood (2015) observed that, information seeking behavior of users have been changing due to the availability of information in multiple formats and new information discovery and delivery channels.

Prabhjot (2015) conducted a survey on faculty members of teacher training colleges. It was observed that, cent percent of the respondents were aware of the e-resource and majority of them preferred to use e-resources from their homes. The reason for the preferences of e-resources were analysed and found that 'easiness of access', quick retrieval' and 'time saving feature' were the major reasons for their preferences.

Umesha & Chandrasekara (2013) found in their study on “information seeking behaviour of dental science professionals in

Karnataka” that, most of them were having internet access and regular users of e-resources. It was also found that there is a need for librarians’ collaboration either to teach users or help in searching information, because users were hardly familiar with searching methods and keywords specifying their needs.

Kadli, Kumbar & Gururaj (2011) pointed out in their study that, the commerce faculties keep abreast of current development in their field by reading latest books followed by journals, websites of companies and organizations. Most of them were spending up to three hours per week seeking information for their teaching and research work. The study was summarized by saying that, faculty were under pressure to cop up with changing teaching and learning environment. The solution to resolve the problems of information seeking in the ICT era was to conceive, develop and deliver information literacy to the faculties of each discipline.

Balasubramanyan & Baladhandayuthan (2008) investigated the information seeking behaviour of faculty members in Madhurai Kamaraj University. The results showed that, the frequency distribution of the respondents regarding the purpose of information seeking was – 45% for preparing classes, 14% for keep updating knowledge, 16% for research work 11% for writing papers and 9% for guiding research. The non-availability of materials, lack of time, scattering of information and unawareness of usage of searching tools were identified as the problems of information seeking. The study was concluded by suggesting to increase

the number of reference librarians to help readers in searching their relevant information resources.

Ravi Bellari (2011) tried to understand the information seeking behaviour of the faculty members of post graduate departments of chetana's education institutions. The objectives of the study were - to examine information seeking behaviour of faculty members, to study the purpose of seeking information and to study the problems faced while seeking information. It was found that 100% respondents were seeking information for updating knowledge, 97% for preparing classes, 72% for writing papers 58% for research work and 13% for guiding researchers. The use of conventional and electronic resources were also analysed. In the case of conventional resources their response against usage was – 97% to periodicals, 95% to reference book, 90% to theses, 87% to text book and 70% to newspapers. In the case of electronic resources – 95% to EBSCO database, 92% ICFAI on-line publications and 87% to CD/DVD. The information seeking method was interesting. It was found that 95% were using OPAC facility, while 72% were using abstracting journals and 65% were using bibliographies.

Bindusharma & Sagitha (2012) revealed that, BSNL was the major Internet service provider with mostly dial up connectivity. It was found in “an investigation on information seeking behaviour of faculty members of Sher-e-Kashmir University of Agriculture Science and Technology”. It was also found that most of the faculties were accessing Internet almost

daily. Internet explorer was the highest used web browser. Google and Yahoo were the most used search engines. Majority of the faculty members from both faculties (Agriculture Science and Veterinary Science) preferred to search their information by subject. A significant difference was found between gender and amount of time spent on Internet. The low bandwidth of the Internet was the problem of information seeking.

Ahmed Khan and Rubeena (2011) made an investigation on information seeking habits and impact of ICT among law practitioners. It was concluded that, ICT training is needed to improve the ICT based information seeking behavior of legal practitioners.

Mamun Mostofa (2013) explored the information seeking behavior of faculty members in Darul Ihsan University, the Bangladesh's first private university. The purpose of the study was to investigate – the information searching purpose, preferences of information sources, channels used for information seeking and to find out the hindrance of information seeking. The study was conducted among three faculties – Arts, Natural science and Humanities by using questionnaire method. It was revealed that, most of the respondents prefer their houses to the libraries for information usage and books were the highly utilized reading materials. The respondents faced the problems in information seeking because of the scattering of information, time shortage and unaware of standard key words.

The information seeking behavior of dentists was studied by Umesha & Chandrasekhara (2013). The study was carried out among PG students and faculty members of 12 dental colleges in Karnataka. The objectives of the research were – to identify the searching pattern of dental professionals, dependence of various information resources, and barriers in searching information. It was found that, an RGUHS (Rajiv Gandhi University of health sciences) consortium was the highly used e-resource. Another interesting finding of the study was that, even though various types of resources were available, the dental professionals were depending personal contacts to clarify their doubts. It was also suggested that, the library professionals have to come forward to teach users the easiest and suitable way of information searching.

Lakshmi Sankari,et.al (2011) opined in their research on information seeking behavior of an engineering college in Tamilnadu that, the library and information centres have to identify the needs and information searching methods regularly. It would help in re-engineering the services of the library.

Mohammed Nazim (2008) made a comparative study of information searching behavior of students, research scholars and teaching staff. Questionnaire and interview methods were used for the study. It was found that, most of the respondents had been using Internet for five years. Teaching staff were spending more time on Internet than research scholars and PG students. The Internet search engines were the most preferred searching tool among all of the respondents.

An Australian study by Du, Jia Tina & Evans (2011) on information seeking behavior of research scholars, especially on topic selection revealed that, Google /Google scholar was used by 82% of respondents for topic selection. The rest 18% depended library and other databases. The other interesting finding of the study was related with search function. 73% of the respondents were using ‘basic search’ functions, whereas, the frequency of the use of advanced search was very low. The study was carried out among 42 research scholars of Queens land University of Technology in Brisbane, Australia.

Brindesi, et.al (2013) conducted a study on information searching and seeking behavior of Greek astronomers. The research was done among 103 undergraduate students of astronomy, astrophysics and mechanics, University of Athens. The searching skill rating was measured by using 7 point likert scale. The result said that, the respondents were satisfied with their searching capabilities. The searching behavior measured by analysing six techniques. They were – searching with single term, searching with more than one term, search by words provided in bibliography, boolean logic, search with term truncation and search with new terms. The result showed that, majority of students did not use boolean searching and term truncation methods.

Hemavathy (2015) made an attempt to understand the use of search engines by the students and faculty members of Karnataka Universities. It had been found that, Google, Yahoo and Ask me were the mostly used

search engines, because their comprehensiveness, speed and easiness. The author emphasized that, information literacy programs would help the users to improve the use of e-resources.

Information searching method of doctors had been analysed by Mahendrakuma & Ashu Shoken (2015). It was found that, all respondents were preferring 'key word' for information retrieval followed by 'author' (71%) and 'title'(46%). The use of 'search engines' were also considered in this study and it was found that, 'Google' and 'yahoo' were the mostly used search engines with the response of 53% and 45% respectively. This study was executed in MLB Medical college- Jhansi by using questionnaire method.

3.3 Information usage

Abdul Salam (2015) opined that, utilisation of modern Information communication technology elements for the information dissemination would enable the development inspiring and innovative learning environment.

Tomaszewski (2012) made an attempt to assess the use of information resources by doctoral students and post-doctoral scholars at Georgia State University. The study was conducted by using electronic survey instrument due to the advantage of ease of distribution, fast and direct response and for preventing duplicate answer from same IP address. The most popular resources by the study group were journals followed by

database and books. The least used resource was library blog. The most popular information resources were Pubmed (92%), Science direct (83%), Endnote (83%), library catalogue (64%) and the Web of Science(64%). The most interesting finding of the study was that, majority of (89%) respondents rarely or never checked out books from their library.

The above study gives a sign of less usage of conventional information resources and greater degree of acceptance of electronic information resources.

Bidhan Chandra & Enamul Haque (2008) carried out a study among researchers in veterinary science and animal husbandry in Bangladesh Agricultural University”. The study revealed that, researchers under the study mainly depend up on periodicals for their information use. Periodicals amount to 74.2% of all citations where as non-periodicals sources account for 25.8%.

Another study among the agricultural faculties was done by Rabindra, etal (2012). Majority of them were using both laptops and desktops for information retrieval. It had been found that, e-journals were the most favorite (94.44%) e-resource among them. Most of the faculties were well aware of the prominent agricultural databases like – CAB abstract(77.78%), Agricola (69.44%) and Agris (66.67%). They were also well aware about digital libraries such as – CeRA, E-Grantha, and Krishiparva.

This showed that, primary sources of information especially journals have great influence in research activities and e-resources have great influences among agricultural faculties.

Parvathamm & Shanker Reddy (2009) made a study on “the use of information resources and services in public libraries”. The study was carried out by taking Bidar district Karnataka as a sample. The study pointed out that, majority of the users of public libraries were male within age group – 11-30 years and visit at least once in a week. They spent less than an hour in the library. Newspapers and magazines were the highly used resources. The television was the one and only electronic information resource or tool used by the study group. It was reported that, the inconvenience timing of the library was the reason for the less usage of library. The study showed that, the entering of the ICT in rural areas were very slow compared to urban areas. So the government has to give more attention to rural community and to utilize the people’s universities.

Sunil Kumar & Biswananth Rout (2010) observed during their study on e-resources by the faculty members of an engineering college, that there was a remarkable shift of choice from conventional print resources to electronic resources and 97.5%of users are aware of e-resources. E-databases and e-journals were the most used e-resources by the respondents. Majority of the respondents were aware of copyright issues. Most of them were using the e-resources for teaching purpose. At the same time it was reported some sort of difficulties in searching their relevant

information. The orientation and help from the part of library staff were solicited for the improvement of using e-resources.

A comparative study of use of e-resources by library users of Iran and India has been done by Hassan Moghaddaszadesh & Khaisar Nikam (2011). The study was executed by taking three each universities from Iran and India. These were – Tehran University, Firdousi University, Mashhad and Shiras University from Iran and Mysore University, Bangalore University and Mangalore University from India. It was observed that, most of the respondents were accessing Internet, whereas there was significant differences, i.e. the 94% of respondents from Iran were having Internet accessibility in their houses, but among Indian respondents it was only 65%. The reason for using Internet by these groups were same, i.e. for sending emails, web access online search, file transfer etc.

The respondents recognized some sort of difficulties such as – difficulty in finding relevant information, time lag, slow connectivity, unfamiliarity with e-resources, lack of time etc. A significant difference was observed between two groups of respondents in the use of databases. The respondents from Iran used ‘Elsevier Science’ database most with the mean score of 3.3 followed by Springer Link, Taylor and Francis and web of Science ranking second, third and fourth with mean score of 2.91, 1.9, 1.2 respectively. In the case of Indian respondents, ‘Springer Link ‘ ranks first with a mean score of 2.98 followed by ‘Elsevier Science’, Science Online and Taylor and Francis ranking second, third and fourth with a mean score of 2.88, 2.47, and 2.03 respectively.

Bindu & Seema (2013) tried to investigate the use pattern of conventional and e-resources by research scholars. The study revealed that, research scholars used Internet for research purpose. Majority of them were using Internet because of easiness in access and currency of information. Books and e-journals were found the most used conventional and e-resource respectively. The most cited problem in using conventional resource was the availability of fewer numbers of resources. It was summarized that, even though there were some advantages in using e-resources over conventional resources, print resources are still preferred by the respondents. At the same time it was agreed that, the use of conventional resources has been decreased to a great extent after the commencement of e-resources.

A survey was conducted by Jaspal Kaur (2012) among the teachers of degree colleges in order to investigate the usage of e-resources and services. The objectives of the study were to know the purpose of using e-resources and to find out the difficulties while using them. The study was carried out by using questionnaires which were distributed randomly among 30 teachers of each 10 colleges in Chandigarh. It was revealed that, around 50% of the teachers were having good IT knowledge and awareness about e-resources. It was found that, the most used e-resource was e-books (48%) and e-journals (45%). The majority of the teachers (61%) used CD-ROM. Half of the respondents opined that, they were using e-resources for their academic assignments and to keep themselves updated on their field of interest and specialization. Majority of them

solicited training programme about e-resources, their searching and usage.

A recent study by Salim Ali & Saadat Al Hashimi (2012) stated that, social networks (SNS) were presently the craze of youth especially among students community. The study tried to expose the motive behind the increased use of SNS and it was found that the reason for the frequent use was finding and sharing information. The study was conducted among the students of Shinas College of Science and Technology and it was also found that Google groups, Facebook and Yahoo 360 were the most popular among the students.

KP Singh & Malkeet Singh (2011) evaluated the use of social networking sites among research scholars. The study was done at Guru Nanak Dev University, Amritasar by advocating questionnaire. The students opined that, social networks were the most popular communication channel and Facebook was the most popular social media among them. It was also found that, 65% of them were using social networks by using laptop. The respondents admitted that use of social networks was time consuming.

Mobile communication technology is one of the land marks in the history of mankind. Presently mobile device is widely used to access Internet and e-resources. An investigation was done by Forsberg (2011) on the adoption of e-book reader among Queens College students. It was found that, price hike was greatest barrier to the acquisition of e-reader.

Mehjabin, Vahidabeegum & Jalaja (2013) opined that, mobile phone, pen drive and smart phones are the commonly used mobile technology by the students. It was found that, only a small percent of students use mobile technology for accessing e-resources. It was also observed that the lack of smart phone was the barrier of less usage of this technology for the access of e-resources.

Sambath & Kumar (2010) investigated the usage of e-resources among engineering, medical and management students in Bangalore city. The study was executed among 300 selected engineering, medical and management students by using structured questionnaires. The study revealed that altogether 70% of respondents were aware of e-resources and again 70% were using e-resources for their study purpose. Most of them opined that e-resources were faster, reliable and useful. The study also revealed that 100 percent of the respondents were using Internet and majority of them from their respective libraries.

3.4. Perceptions in using e-resources

The entire resources of the library whether it is printed or electronic, were collected, organized and disseminated by libraries and information centres for the use of its clients. So the success and failure of this system depends upon the satisfaction of the end users. So the feedback of users, periodical review, level of acceptance and happiness and their preferences are to be analysed. Some studies related with these issues have been reviewed here.

A research work was carried out by Holly & Powel (2004) to know the satisfaction of students with electronic library resources at Wayne State University. The rationale behind the study was, the university library decided to re allocate a significant portion of its acquisition budget to electronic resources and wished to get the opinion of its clientele. Wayne State University was a large university with thousands of students doing various courses in on and off campus. Students and faculty often live far away from the main campus and the majority of the graduate students were part time, older and having family commitment. At the same time there was high speed network connectivity to access electronic resources for students and faculty members. In this scenario, the study was highly relevant.

It was aimed to know the students' awareness, current and potential use and satisfaction and give direction toward the new initiative of the library. The findings of the study showed that, around 60% of the students were aware of electronic resources. The response to the questions of satisfaction were – overall satisfaction 65.8%, satisfaction towards easiness to use 62%, satisfaction of resolving problems 50% and satisfaction towards the helping mentality of staff 61 per cent.

Sunilt Tyagi & Ashok Kumar (2011) conducted a study to measure the usage of print and e-resources among scientists especially by pharmacopeia scientists in North India. The main objectives of the study were to find the preferences of scientist towards print and electronic

resources and their satisfaction level towards electronic resources. 40 questionnaires were administered among scientists of 3 pharmaceutical libraries. They are - Indian pharmacopoeia commission (IPC), Pharmacopoeia Laboratory for Indian Medicine (PLIM) and Homeopathic Pharmacopoeia Laboratory (HPL) in North India. It was revealed that, 100 percent respondents preferred electronic information resources to their printed version and all of them were highly satisfied with electronic information resources. The scientists' perception towards the e-resources as a replacement for print in meeting their information needs to a very high extent.

Social science scholars are not depending e-resources as that much of science scholars. A study was conducted by Mohammed Bagher Negahban & Talwar (2010) on "dependency on e-resources among social science faculty in the Universities in Iran". The objectives of the study were to know the level of dependency and preferences of use of electronic information resources. The study covered total 232 randomly collected social science faculty members of seven universities in Iran. They were – Iran University, Shiraz University, Ahvaz University, Karman University, Esfahan University, Tehran University and Mashhad University. Questionnaire method was adopted for collecting the primary data. The study found that, Iranian faculty members in social sciences were highly dependent on conventional information resources except e-reports.

Acceptance and usage of e-resources by the academic community is found very high. One such study was carried out by Vrusahli Dandawate (2012). The main objective of the study was to analyse dependency of teachers and research scholars on e-resources and the perceived impact of e-resources on their academic efficiency. The study was conducted among students and teachers of AISSM College of engineering. Over all 88% of the respondents were satisfied with e-resources available in their college library. It was also found that, overall 82% of respondents were regularly using e-resources.

A study on users' satisfaction on electronic resources and services in Pakistani university libraries was executed by Muhammed Sajid Mirza & Khalid Mahmood (2012). The study was an attempt to evaluate the effectiveness of electronic resources and services in libraries of Pakistan on the basis of user's satisfaction. Survey method was deployed to conduct the research. Eight university libraries four each from Islamabad and Lahore were taken including two each from public and private sector as sample by convenient sampling method, and a semi structured questionnaire was used to collect primary data. A five point likert scale from 1 (dissatisfied) to 5 (extremely satisfied) was used to measure the satisfaction level of respondents. It was found that, the satisfaction level of both users from public and private sector varied significantly. Male and female respondents were equally satisfied with e-resources and services among the users with different qualifications.

Zabed Ahmed (2013) tried to analyse students use and satisfaction with university subscribed on-line resources in two special University libraries in Bangladesh. A structured questionnaire was used to assess the use and satisfaction by students towards the university subscribed electronic resources. ‘Mann-whitney’ and ‘krushkal-wallis’ tests were used for the data analysis. The Mann-whitney test for gender difference among students showed that there was no significant difference between male and female students in terms of their opinion on overall satisfaction with the resources and the krushkal-wallis tests for age difference found no significant differences among students with regard to their opinion on overall satisfaction with the subscribed resources. The study concluded by saying that, the poor ICT infrastructure lead to the unwillingness of respondents to use the resources regularly and ultimately lead to low satisfaction with these resources.

Because of the new policy of China, the country made a noticeable progress in education and economic sector. As a result, Chinese Universities have become competitive in international level and international students started to enroll in Chinese universities. In this scenario, Charles Nzwo & Chen Chaunfu (2013) conducted a study on “international students’ perception of library services and information resources in Chinese academic libraries”. The study was conducted in Wihan University Library. The findings of the study revealed that, Chinese academic libraries were considerably well perceived by international students. It was also acknowledged the need of further studies

regarding perception of academic library services and information resources from lectures and Chinese students view point.

The users of Punjab Agricultural University library were not satisfied with their available e-resources. This was found in a study conducted by Sanjeev Kumar & Yogita Sharma (2010). It was found 55% of the respondents were not satisfied with the e-resources other than Internet. It was suggested that, the faculty as library staffs should go hand in hand to motivate the students in use of e-resources.

According to Jayaprakash (2011), faculty members of universities preferred to use e-resources to conventional information resources and they were highly satisfied with available e-resources in their libraries. Shiny & Gopikkuttan (2013) made a survey to investigate the use of e-resources by research scholars. They revealed that, most of the research scholars were well versed with the use of e-resources, but the main obstacle faced by the research scholars while using e-resources were the limited access of computers. The study concluded by suggesting to improve the Internet speed for the quick access of e-resources.

Constraints and problems in using e-resources and the satisfaction level have been studied by Prangya (2015). The study was conducted among the users of Sikha O Anusandhan University in Orissa. The problems were identified in using the e-resources were – difficulties in finding the relevant information (75%), incomplete information (70%) and time delay of downloading (52%). It was also found that, only a few

percent (6%) were satisfied with off-line e-resources, whereas the satisfaction level of respondents towards the World Wide Web was high with the response of 75 per cent.

Vasisth (2009) tried to point out the constraints of use of electronic resources. He pointed out that – the constraints in using electronic resources were:-

- Electronic resources are power dependent. Uninterrupted power supply has to be ensured for e-resources.
- Necessary infrastructural facilities are to be ensured before using e-resources.
- Use of e-resources and e-infrastructure affected users physically, cognitively and mentally.
- Physically it would cause headache, irritation, eyestrain back pain, wrist pain, muscle pain, stomach pain and mentally it will cause to techno stress and techno strain.

Obasuyi (2013) revealed in a study about pharmacy lectures, that their awareness about computer, Internet and e-resources were average. It was recommended that, hands own training has to be given on Internet and e-resource usage to the pharmacy community to maximize their usage. The same recommendation was given by Isabella and Esmail (2012) in their study on academic community in pharmacy college Chennai.

3.5. Islamic studies / Islamic Scholars

Islam religion has been giving high importance for knowledge and its acquisition and dissemination. From the very beginning itself, the ICT has been widely used by Islamic scholars. But only a few studies have been conducted on Islamic scholars and Islamic institutions in national level and international level.

Mansoor Babu & Abdul Rasheed (2012) found that, Islamic institutions of higher learning have already utilized the possibilities of information and communication technology in various in-house operations and information services. The study was conducted by taking a convenient sample of three Islamic institutions of higher education one each from Sunni, Mujahid and Jama'te Islami stream of Islamic thought. The major findings were – almost all Islamic colleges libraries were automated, CDs were the mostly used e-resource and the usage of conventional resources was higher than electronic resources.

Nasirudheen & Raheeb (2013) made an investigation on “use of e-resources by PG students of Madeenathul Uloom Arabic College, Pulikkal, Malappuram. It was inferred that, most of (82%) the students were using both conventional and e-resources. The respondents unanimously opined that, easiness of accessibility and time saving benefits were the most important attractions of e-resources, so some of the respondents were utilizing e-resources for preparation of Friday khutubas (Friday oration in the mosques).

Shareef & Majeed (2013) attempted to explore the awareness of Arabic College students about the e-resources and their usage. Based on the findings of analysis, investigators made suggestions that, faculties and librarians should work hand in hand to introduce and familiarize e-resources to students, train them to access, use and promote the use of internet, databases, online journals etc.

Mohammed Musthafa (2011) conducted a research on IT application of Islamic libraries in Kerala. The study was carried out by taking three institutions of Islamic higher education of three religious organizations – Sunni, Mujahid and Jamma'te Islami. It was found by the researcher that, Islamic libraries of Kerala have great potential to grow up. But there are a number of hindrances such as – lack of sufficient fund, attitude of higher authorities, lack of skilled library professionals and lack of multi linguistic software support. The researcher gave some suggestions to improve the quality of services of these libraries, they are – to seek financial support from Government and Wakaf board, to conduct training for the library staff and to convince the higher authority for the necessity of ICT on Islamic education and development.

Paul Sukup (2012) reviewed some studies on utilization of Information and Communication Technology (ICT) for Islamic teaching. It was found that, “*Sunni*” group started using Internet from the very beginning itself than “*Shia*” group. It was also found that, there were presently thousands of Islamic websites which offer – Quran

interpretations, Hadith explanations, fatwas etc. it was viewed that, the utilization of Internet for Islamic propagation helped to minimize the misunderstanding of non-Muslims on Islam, because latest technology facilitated the access of any resource without going anywhere.

Ahmed Bakeri & Adam Gumbo (2011) made a study on use of information resources by Islamic scholars in Nigeria, especially their usage preference of information sources and their purpose. The total population of the study was 233 Islamic scholars (Ulama) spread over 27 local government areas registered by Borno State Ministry of Religious affairs. Out of this population, 31 were randomly selected for the study. The result of the study said that, the 'Ulama' need religious information for teaching, preaching, writing and counseling purpose. Their order of preference in usage was – Quran, Hadith, Fiqh, so on and most of them were using their personal libraries for meeting their information needs. They were also depending their family members, other Ulama and friends for their information needs. The study recommended that, there should be a comprehensive electronic information database on Islamic subjects and sufficient ICT training for Islamic scholars has to be carried out so as to enable them to make use of the benefits of latest technology for Islamic propagation.

Islamic Studies have been given great importance by Govt. of UK. In 2007 UK government entrusted HEFCE (Higher education Funding Council for England), a project to develop the enrichment of this field. HEFCE conducted a research study and submitted the report to the

government. It was known as “digiIslam” project report ([http://projects.exeter.ac.uk/digiIslam/documents/digiIslam Report.pdf](http://projects.exeter.ac.uk/digiIslam/documents/digiIslam%20Report.pdf)). The objectives of the study were – to identify and analyse the existing digitized resources on Islamic studies, to identify the gap in the provision of digitized resources and the establishment of criteria for priority of digitization of resources on Islam. An online questionnaire was set up in the project website and 145 library professionals, academicians and researchers were asked to respond. It was found that, more than 90% were using online resources on Islamic studies and their major purpose were – research (92%), and teaching (73.7%) respectively. Answer to the question of subject wise usage was – Islamic history (50%), Quranic studies (47.4%), Fiqh (42.1%) and Hadith (34.2%). Creation of a national gateway of Islamic resources and archiving of websites of Islamic organizations in UK were the two main recommendations of the study.

El-Safty (2010) in his research on information seeking behaviour of Islamic scholars (Muslim Preachers) of republic of Egypt, found that there was a relationship between their professional status and use of various resources. He also made a conclusion that, there was a significant relationship among Muslim preachers’ access of information and demography.

Essam Mansouri (2015) made a research on information seeking behaviour of Islamic scholars (speech makers in Friday prayer) in Kuwait. It was a survey research method by using mailed questionnaire. Out of 795

mosques having permission to conduct Friday khutuba (speech), 575 were selected for the study on the basis of the willingness of respondents for giving sufficient information for the research. It was found that, most of the respondents (82.3%) were young or middle aged (35-55 years) scholars. It was revealed that, 67 % of the respondents were seeking information for religious speeches. 90 % of them preferred conventional print resources for meeting their information needs and 94.5 % of them depended their home libraries or personal collections.

3.6 Conclusion

Total 75 studies related with the topic of research were analysed by the researcher. The selected studies were related with – information needs of different types of users, information seeking behavior, information use, perception towards electronic information resources and studies related with Islamic scholars. Most of the selected studies were studies conducted by using primary data. It can be summed up that, information needs of users highly depended on their environment, most of the users are aware and using electronic resources and Islamic scholars were also well versed with the latest technologies.

Critical analysis of available literature has helped the investigator to finalize the objectives of the present study and arrive at certain assumptions which are defined as hypotheses. During the review of related literature, the investigator could not come across any study on the use of information resources by Islamic scholars in Kerala.

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Chapter 4

METHODOLOGY

- ❖ *Variables used for the study*
 - ❖ *Selection of sample*
 - ❖ *Tools and methods used for data collection*
 - ❖ *Data collection procedure*
 - ❖ *Consolidation of the data*
 - ❖ *Statistical techniques used in the study*
 - ❖ *Style manual used in the report writing*
-

4. Methodology

Research methodology is an approach to solve research problems in a systematic manner. It is the totality of procedure followed by the investigator to execute the research problem in a scientific manner. Success and quality of any research depends on the method of sample selection, data collection tools, techniques and methods and analysis techniques used for the study.

The present study is an attempt to analyze the use of Information and Communication Technology (ICT) by Islamic Scholars of Kerala. The methodology chapter has been organized under the following sub headings.

1. Variables used for the study
2. Selection of sample
3. Tools and methods used for data collection
4. Data collection procedure
5. Consolidation of the data
6. Statistical techniques used in the study
7. Style manual used in report writing

4.1 Variables used in the study

Variable is a quantity, a characteristic or a number having different values in different situations. There are two types of variables used in the study. They are independent (classificatory) variable and dependent (study) variable.

4.1.1 Independent Variables

On the basis of nature of study, the following independent or classificatory variables have been selected. They are:-

- Gender
- Age
- Mode of religious education

Although three independent variables are selected as part of the study, only two variables (age and mode of education) are selected for the analysis because more heterogeneity is found against these two. In addition to this, gender based study on Islamic scholars is irrelevant since female Islamic scholars are very few.

4.1.1.1 Age

Age is taken as an independent variable in this study. Islamic scholars are divided into three age groups, they are:-

- 18-35 (Young scholars)
- 36-55 (Middle aged scholars), and
- 56 and above (Elder scholars)

4.1.1.2 Modes of religious education

Islamic higher education in Kerala has mainly two different modes. They are a) formal education and b) Informal education. Formal education system is a system of Oriental and Arabic colleges with stipulated syllabus and examinations. Whereas in the informal education system, it is hardly seen such types of infrastructural facilities, where students are staying in the mosques along with their teacher. No stipulated syllabus is followed and no examinations are conducted. This is the oldest form of Islamic higher education system prevailed in Kerala. So Islamic scholars in Kerala can be categorized into three categories on the basis of their mode of religious education. They are:-

- Studied under Formal education system only
- Studied under Informal education system only, and
- Studied under both formal and informal systems, which is termed here as '**Hybrid**' mode.

These three modes of education have been taken for this study.

4.1.2 Dependent variables

The following are the dependent variables (study variables) used in the study.

- Computer literacy of Islamic scholars
- Acquisition of ICT skills
- Smart device usage

- Familiarity with different ICT skills
- Use of different Islamic resources (print and electronic)
- Frequency of use of resources
- Familiarly and use of different Islamic e-resources
- Familiarity and use of different Islamic apps, and
- Satisfaction level towards Islamic resources

4.2 Sampling Design

4.2.1 Population of the study

Population of the present study is Islamic scholars of Kerala. Islamic scholars are those who are having in depth knowledge in Islamic subjects. Islamic scholars in Kerala are engaged in leading of Islamic organizations, writing articles in Islamic journals and periodicals, offering Friday Khutubas, conducting public orations, taking study classes and teaching in Islamic institutions of higher education (Arabic and Oriental colleges).

There are many Islamic organizations in Kerala. The prominent among are Sunni, Mujahid and Jama'te Islami. Sunni fraction has again two sub fractions, they are a) Samastha Kerala, which is popularly known as Sunni EK group and, Kerala Muslim Jama'th, which is popularly known as Sunni AP group. There are also two groups in Mujahid fraction and they are united recently. Each organizational group have their own state, district, area/sectoral, and unit committees. State and district committee members of each organizational group have been considered here for the

study. Each district committee has at least 10 members including President, Vice president, Secretary, Joint secretary and treasurer. Thus around 150 members are there as district committee members for each organization. Each state committee will include district committee members plus eminent scholars, which approximately comes 650 -700.

Islamic higher education system of Kerala has two modes, they are a) formal education system and b) Informal education system. Informal education system is the oldest system, in which students are studying under one single teacher residing along with him in the mosques. It is hardly seen a strict syllabus and examination in this system. This system is known as 'Dars' system of education. But formal education system is the latest one and it is systematic and scientific. Arabic and oriental colleges follow this method. Good infrastructural facilities such as class rooms, libraries etc. and a number of teachers are seen here. These colleges are of three types in Kerala. They are:–

1. Affiliated and aided colleges – affiliated to a state University (Calicut university / Kannur university) and aided by Government of Kerala (11 numbers).
2. Affiliated and unaided colleges – affiliated to a state University (Calicut university / Kannur university) but no aid is given by State Government (26 numbers), and

3. Non- affiliated and unaided colleges – no affiliation to any State/Central University and no financial aid by Government (258 numbers).

On the basis of observation and a pilot study, it is understood that, out of the 258 unaided and non-affiliated colleges, most of them are recently started and having fewer number of teaching staff. The total number of teaching staff in these colleges are as follows, aided and affiliated college-120, affiliated and unaided- 250 and unaided and non-affiliated - 1100. Thus teachers of Islamic institutions of higher education comes around 1470. So teachers (1470) plus organizational leaders (670) come around **2140**.

Table 1 Population Distribution

<i>Engagements</i>	<i>Sub groups</i>	<i>Approximate population</i>	<i>Total</i>	<i>Aggregate</i>
Organization leaders	Sunni (Samastha Kerala + Kerala Muslim Jama' th)	340	660	2140
	Mujahid	160		
	Jama'te Islami	160		
Teachers	Aided & affiliated	120	1470	
	Un aided & affiliated	250		
	Unaided & non affiliated	1100		

4.2.2 Sampling Technique and sample size

Population of the study is Islamic scholars of Kerala. Since Islamic scholars of Kerala are engaged in different duties, multi stage stratified sampling technique is used to ensure representation of all categories of scholars. 450 samples were taken by this method and total 450 questionnaires were supplied, out these 300 were supplied among teachers of Oriental and Arabic colleges and 150 were supplied among Organizational leaders. Proportional participation to each category was given.

Teachers of Islamic institutions of higher learning are engaged in three different types of institutions, they are – 1). Affiliated & aided 2). Affiliated & unaided and 3). Non-affiliated & unaided. In the case of first category, out of 11 colleges 4 were randomly selected, in the second category, out of 26 colleges 5 were selected randomly and in the case of third category, out of the 258 colleges, a distillation was done on the basis of minimum staff strength of 10. Thus the number became 30 and out of the 30 colleges 10 colleges were selected. Organizational leaders belong to three main groups and proportional participation was given to all as follows- Sunni - 70, Mujahid-40 and Jama'te Islami - 40.

4.2.3 Sample size selection

The investigator used the sample formulae of Creative Research System of American Marketing Association (<http://www.surveysystem.com>) for the selection of sample size. Formula is:

$$SS = \frac{Z^2 * p * (1-p)}{C^2}$$

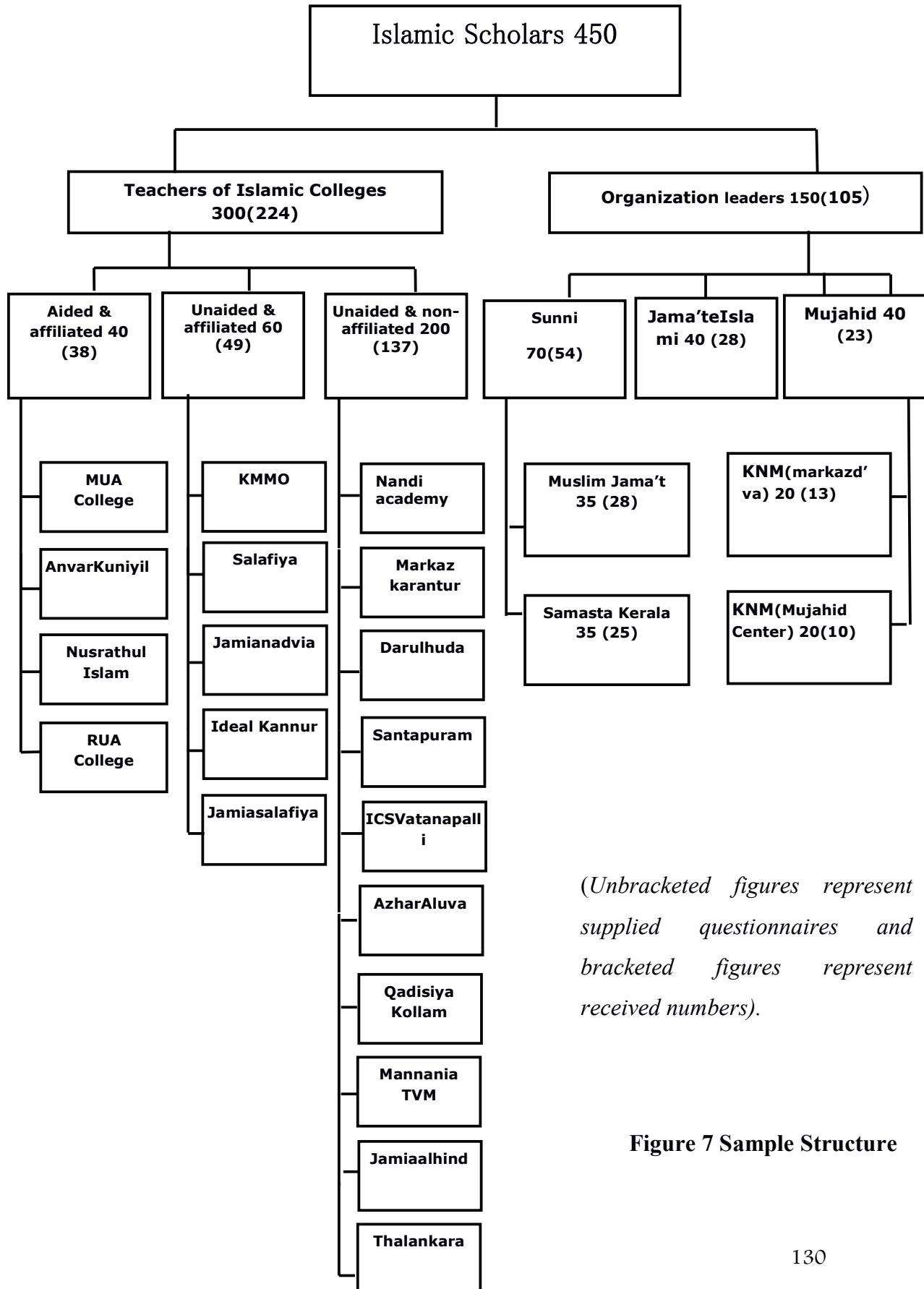
Z = Z value (e.g. 1.96 for 95% confidence level)

P = percentage picking a choice, expressed as decimal (0.5 used for sample size needed)

C = confidence interval, expressed as decimal (e.g. 0.04 = ±4)

Applying this formula the minimum sample size needed for the study is 326 in 95 per cent confidence level and confidence interval 5. Hence 329 samples received out of 450 selected sample for the study is enough and accurate for getting valid inferences and generalizations. Number of supplied questionnaires and received questionnaires to each categories are given in the below figure. Hence these 329 received questionnaires were selected as the baseline sample data for the study.

The following figure (figure:7) depicts the sample structure of the investigation.



(Unbracketed figures represent supplied questionnaires and bracketed figures represent received numbers).

Figure 7 Sample Structure

4.3 Breakup of Sample

4.3.1 Gender wise distribution of sample

Distribution of sample, based on gender is presented in the table 2 and figure 2.

Table 2 Gender wise distribution of sample

Gender	Frequency	Per cent
Male	316	96.05
Female	13	3.95
Total	329	100

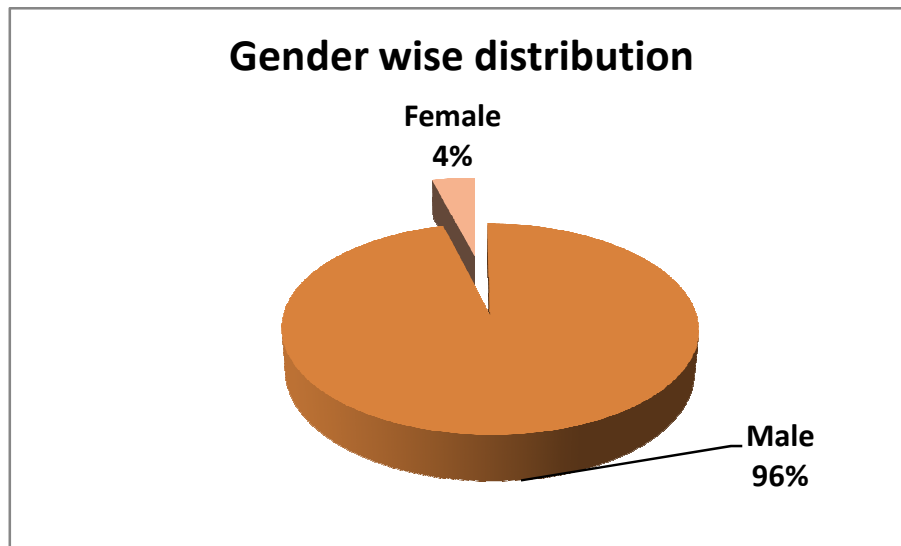


Figure 8 Gender wise distribution of sample

It is clear from the above table and figure that, 96.05 per cent of the

respondents are male and only 3.95 per cent are female scholars. Thus it can be inferred that the female representation in Islamic organizational leadership and teaching in Islamic and oriental colleges are very poor.

4.3.2 Age wise distribution of sample

Age wise distribution of sample selected for the study is given in table 3 and figure 9.

Table 3 Age wise Distribution of Scholars

Age group	Frequency	Per cent
18-35	185	56.23
36-55	98	29.79
56&Above	46	13.98
Total	329	100

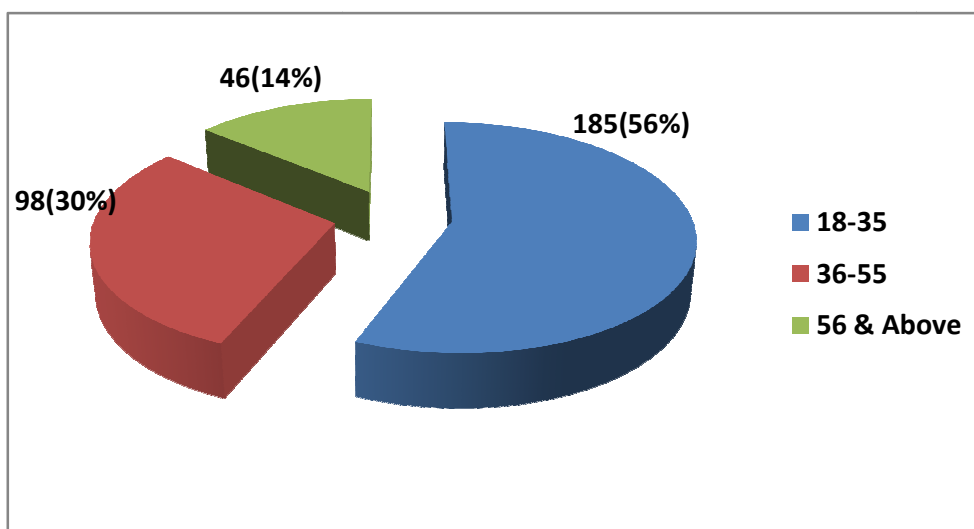


Figure 9 Age wise distribution of Islamic Scholars

From the above table and figure it is clear that, majority of the respondents belongs to youngsters (18-35), followed by middle aged scholars with the representation of 29.79 per cent and lastly elder scholars with 13.98 per cent.

4.3.3 Religious education wise distribution of sample

There are two modes of religious education prevailing in Kerala Islamic environment. They are formal education system and informal education system. So the researcher identified three groups among the Islamic scholars based on their Islamic education, they are - a) formal only, b) Informal only and c) Hybrid mode (studied under both system).

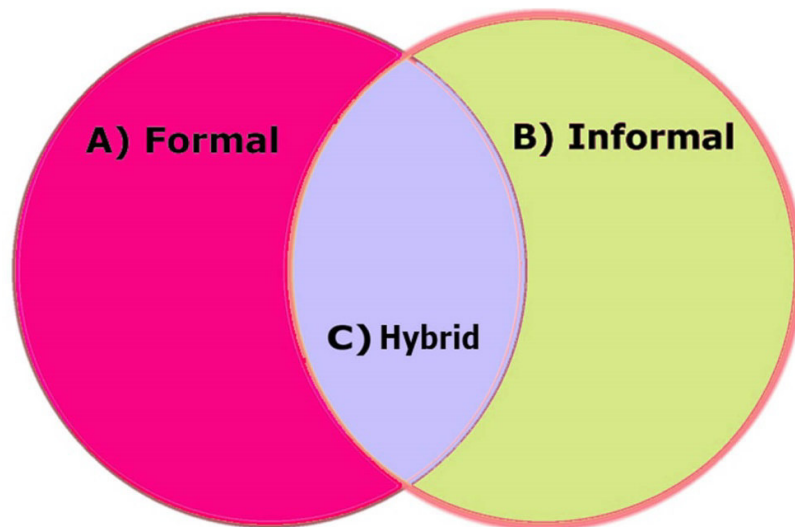


Figure 10 Religious education wise distribution of sample

The above figure correctly represents the three modes of Islamic education,

- a) Formal education system
- b) Informal education system
- c) Hybrid (studied in formal & informal systems)

Table 4 Religious education wise distribution of sample

Mode of education	Frequency	Per cent
Formal only	218	66.26
Informal only	24	7.29
Studied in Both (Hybrid)	87	26.44
Total	329	100

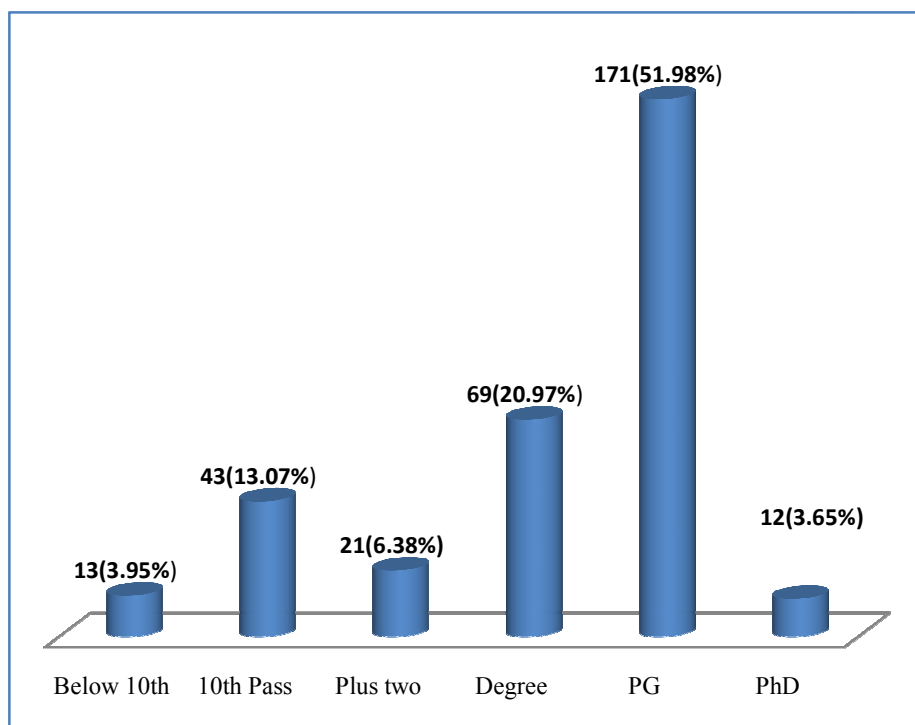
The table data depicts that; majority of the Islamic scholars completed their education through formal education system. A small per cent (7.29) underwent through informal system and 26.44 per cent studied in both systems.

4.3.4 Non-religious education

Islamic scholars of Kerala have acquired non-religious education along with Islamic education. The investigator tried to get their status of non-religious education under the six different courses. It is presented in the below table and diagram.

Table 5 Non-religious education of Islamic scholars

Course	Frequency	Per cent
Below 10 th	13	3.95
10 th Pass	43	13.07
Plus two	21	6.38
Degree	69	20.97
PG	171	51.98
Ph.D	12	3.65
Total	329	100

**Figure 11 Non-religious education**

Data given in the table and presented in the figure show that, majority of Islamic scholars qualified PG (51.98 per cent), around 21 per cent qualified Degree courses and 13.07 per cent 10th pass holders. It is interesting that 3.65 per cent of them are PhD holders.

4.3.5 Religious Experience of Islamic Scholars.

Experiences of Islamic scholars are also studied by the investigator. Four options were given before the respondents regarding their experience. They are – below 2 years, 2-5 years, 5-10 years and above 10 years.

Table 6 Religious Experience of Islamic Scholars

Experience in Years	Frequency	Per cent
Below 2 years	33	10.03
2-5 Years	102	31
5-10 Years	57	17.33
Above 10 Years	137	41.64
Total	329	100

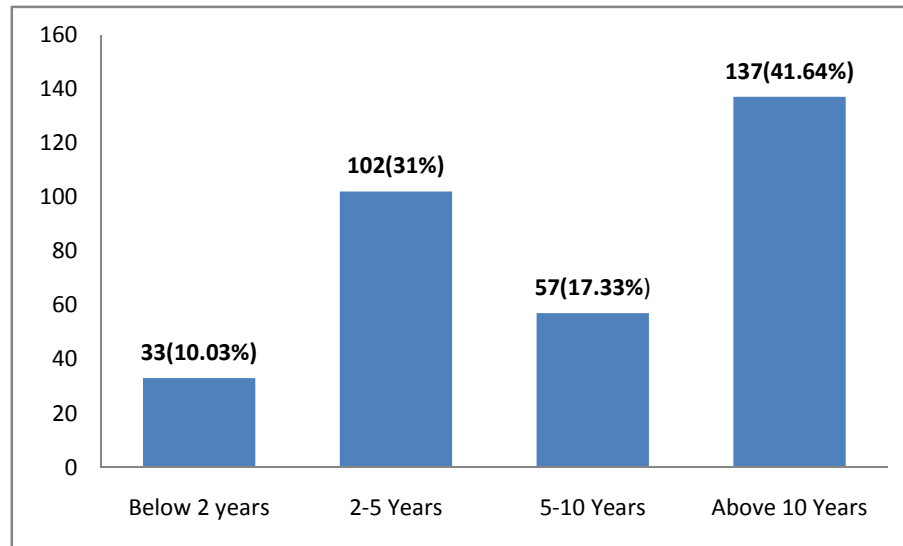


Figure 12 Religious Experiences of Islamic Scholars

From the above table and figure it is understood that, a good number of scholars (41.64 per cent) are having more than 10 years of experience, followed by 2-5 years with the response of 31 percent, 5-10 years with 17.33 per cent and below 2 years with 10.03 per cent.

4.4 Data types, Collection methods & tools used for the study

Findings and recommendations of any research depends on data types, data collection method, tools used for data collection etc. If the collected data is not relevant, biased, unreliable and invalid, result of the investigation will be incorrect. There are mainly two types of data viz, primary and secondary data. Both are used for this investigation.

4.4.1 Data Collection

4.4.1.1 Collection of Primary data

Since the study is on the use of information resources by Islamic scholars of Kerala, Primary data were collected from these groups by using questionnaire and schedule.

4.4.1.1.1 Questionnaire

Comprehensive and structured questionnaire was prepared on the basis of relevance of the study and previous studies. Questionnaire contained five parts, i.e A,B,C,D & E. Part **A** contained personal details such as – gender, age, mode of religious education, non-religious education qualification and year of experience as Islamic scholar. Part **B** contained questions to analyze ICT skills of scholars, **C** for information needs and seeking behavior, **D** for use of Islamic information resources and **E** for assessing satisfaction level and difficulties while using e-resources.

4.4.1.1.2 Schedule

In order to analyze the role of Islamic organizations in the creation of electronic resources, schedule is prepared and utilized. Public relation officers (PROs) of each organizations were interviewed using the schedule.

4.4.1.2 Collection of Secondary data

As far as social science researches are concerned, secondary data are also treated as powerful tool of research. In the case of this investigation secondary data such as – basic concepts related with Islam, Sources of Islamic information, Islamic information resources (print and electronic), names and address of Islamic institutions of higher learning, name and address of Islamic scholars etc. published in books, journals, e-books, e-journals, websites, organization's records were collected and utilized.

4.4.2 Data collection procedure

Because of the heterogeneity of Islamic scholars, the investigator executed two methods for data collection, i.e questionnaire and interview schedule. Questionnaire is further categorised into two. In order to collect information from leaders of Islamic Organizations, 150 prepared questionnaires were sent to their home addresses with stamped return envelope. In order to get information from the teachers of Islamic Organizations investigator directly visited selected 19 Islamic oriental colleges and supplied 300 questionnaires. Interview schedule is executed by visiting Headquarters of four Islamic organizations in Kerala.

4.4.3 Scaling technique used

Likert-type scale or summated scale is used for the analysis of question dealing with different rating. Here respondents have freedom of

agreement and disagreement with each statement or option. Here the investigator used the 4 point scale in the study.

Table: 7

Four Point Likert scale.

Sl. No	Scale used	Scoring	Grading range
1.	Extremely satisfied	4	3.1-4
2.	Very Satisfied	3	2.1-3
3.	Moderately satisfied	2	1.1-2
4.	Not satisfied	1	0.1-1

4.5 Statistical techniques used for analysis

The following statistical techniques were used to analyze the collected data.

4.5.1 Percentage method- Percentage method is used to concise the collected data.

4.5.2 Arithmetic mean- Arithmetic mean is used to calculate the average of collected data.

4.5.3 Weighted average mean - It is the method of calculating central tendency of a given data. Weightage was given to each option on the basis of their preferences. Higher weightage is given to first preference and lowest weightage is given to last preference.

4.5.4 Chi-square test- Chi-square test is a parametric test in statistics, which is used to check the significance of association between variables in the study. Here it is used to check the association between different age groups and different modes of education.

4.6 Consolidation of data

Collected data through questionnaire were consolidated using MS-Excel 2010 and further statistical tests were done by using SPSS and MS-Excel. Findings, suggestions and recommendation were obtained on the basis of this analysis.

4.7 Citation style Used

Reference and bibliography are prepared as per the rules of American Psychological Association (APA style) 6th edition. Citation is prepared with the help of the website – www.citationmachine.com/apa.

4.8 Conclusion

Methodology chapter is one of the very important chapters of a research work. This is termed as ‘blue print’ of research. Here it has been

included the whole subsystems of research system such as data types, data collection methods, sampling design, statistical techniques for data analysis, citation style used in the report etc. It can be summarized that this chapter depicts a brief sketch of research work.

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Chapter 5

ANALYSIS & INTERPRETATIONS

- ❖ *ICT literacy*
 - ❖ *Use of Smart Devices among Islamic Scholars*
 - ❖ *ICT Skills*
 - ❖ *Islamic Information – areas and preferences*
 - ❖ *Use of Information resource – type*
 - ❖ *Familiarity and use of Islamic E-resources*
 - ❖ *Islamic application (app) usage*
 - ❖ *Satisfaction level of Islamic scholars towards
Islamic information resource*
 - ❖ *ICT support for Islamic scholars*
 - ❖ *Initiatives of Kerala Islamic organizations in
developing e-resources*
-

Introduction

In the present age of ICT revolution, literacy means ICT literacy, which is meant not only reading and writing but also ability to manage ICT based devices. Today there are tremendous ICT based information resources. For the better utilization of these resources ICT literacy is essential. Here the investigator has tried to understand the ICT literacy of Islamic scholars, which includes - computer literacy, mode of acquisition of computer knowledge, course details, usage of smart devices and familiarity and use of different ICT skills such as browsing, blogging, social networking use, use of clouds etc.

5.1 ICT literacy

Computer is the basic and typical ICT device. Ability to use computer is a need of the age and it is inevitable not only for Islamic scholars but also to each and every person. Computer literacy of Islamic scholars is measured both age wise and education wise. Data regarding computer literacy of Islamic scholars - age wise and education wise is given in table 8 and 9 respectively.

Table: 8

Computer literacy of Islamic Scholars - age wise

Age groups	Opinion		Sample Total
	Yes	No	
	Frequency & %	Frequency & %	
18-35	165(89.19)	20(10.81)	185
36-55	86(87.76)	12(12.24)	98
56& above	35(76.19)	11(23.91)	46
Aggregate	286(86.93)	43(13.06)	329
Chi-square = 5.65 df= 2 p=0.059			

(Figures in brackets indicate respective percentage)

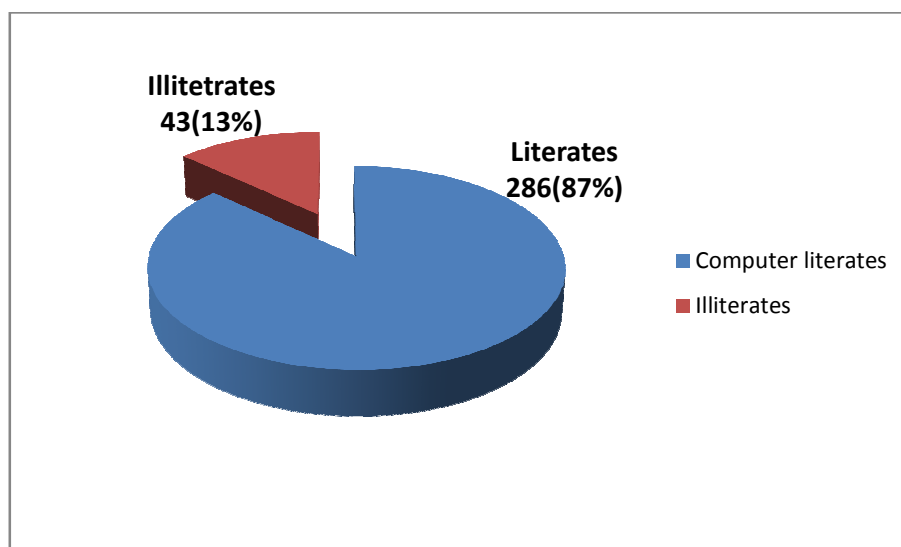


Figure: 13
Computer literacy of Islamic Scholars- age wise

It can be inferred from the table 8 and figure 13 that, majority of the Islamic scholars of Kerala (86.93 percent) are computer literates and only a few among them (13.06 percent) are computer illiterates. When age wise analysis is done, it is found that, the age group 18-35 has the highest computer literacy rate followed by 36-55 and 56 and above age groups respectively with the percent of 89.19, 87.76 and 76.19 respectively.

A Chi-square statistics was calculated to test the significance regarding the association in the age of Islamic scholars and computer literacy. The P value denotes there is significant connection between age and computer literacy of respondents.

Table: 9

Computer literacy of Islamic scholars - education wise

Modes of Education	Opinion		Sample Total
	Yes	No	
	Frequency &%	Frequency &%	
Formal	192(88.07)	26(11.92)	218
Informal	15(62.50)	9(37.50)	24
Hybrid	79(90.80)	8(9.19)	87
Aggregate	286(86.93)	43(13.06)	329
Chi-square = 14.0 df= 2 p=0.001			

(Figures in brackets indicate respective percentage)

The table 9 gives the information that, the Hybrid group (studied under both formal education and informal education systems) have the highest computer literacy rate followed by formal education group and informal group respectively with the per cent of **90.80**, 88.07 and 62.50 respectively. It shows that Islamic scholars of Kerala are moving along with the developments.

As per the statistical test, it can be found that, there exists significant difference between different groups based on their mode of education and computer literacy since the 'p' value is 0.001.

5.1.1 Acquisition of ICT Skills by courses

Acquisition of basic ICT skills can be done through different modes. They are by doing computer related courses, from friends, reading books and online support. In order to get this information, a question was asked whether they have done any computer courses or not and it is applicable to those who possess computer knowledge. It is 286 out of 329 total samples as seen in table 8. Table 10 and 11 exhibits the number of scholars who have undergone computer courses for acquiring computer skills. The table 10 shows the age wise details and table 11 shows the education wise information.

Table: 10**Computer knowledge acquisition by course -age wise**

Age groups	Opinions		Sample Total
	Yes	No	
	Frequency & %	Frequency & %	
18-35	61(36.97)	104(63.03)	165
36-55	21(24.42)	65(75.58)	86
56& above	3(8.87)	32(91.43)	35
Aggregate	85(29.72)	201(70.28)	286

(Figures in brackets indicate respective percentage)

It is found that most of the Islamic scholars (70.28 per cent) acquired computer knowledge not through any of the computer courses. Percent of those Islamic scholars who acquired computer literacy through computer courses is only 29.72. when age wise analysis is done it can be inferred that, youngsters (18-35 age group) are in the top position with 36.67 percent followed by middle age group (36-55) and age group (56& above) with 24.42 and 8.87 percent respectively.

Table: 11**Computer knowledge acquisition by course education wise**

Modes of Education	Opinions		Sample Total	
	Yes			No
	Frequency &	%		Frequency & %
Formal	65 (33.85)		127 (66.15)	192
Informal	3 (20)		12 (80)	15
Hybrid	17 (21.51)		62 (78.49)	79
Aggregate	85 (29.72)		201 (70.28)	286

(Figures in brackets indicate respective percentage)

It can be explored from table 11 that, most of the Islamic scholars acquired computer knowledge from ways other than courses. In the education wise analysis, it is seen that those who have studied in formal education system, 33.85 percent acquired by doing any of the computer course. Those who underwent informal education system and Hybrid system do not give much importance to computer course. Their respective percentages are 20 and 21.51.

5.1.2 Computer courses and Islamic scholars

In order to cater the computer knowledge, some Islamic institutions of higher education offer their own computer course. In addition to this there are different agencies providing computer courses. An exploration

has been done by the investigator to identify the course details done by Islamic scholars. Four options were given before them viz MS-office& Office automation, DCA (Diploma in Computer application) and PGDCA (Post Graduate Diploma in Computer Application) and short term training programmes.

The following two tables (table 12 and 13) and figure (14) give the brief picture of computer courses done by Islamic scholars.

Table 12 gives details of various computer courses done by Islamic scholars (age-wise).

Table: 12

Computer courses done by Islamic scholars - age wise

Age groups	Courses				Sample total
	Short term training & certificate course	MS-office	DCA	PGDCA	
18-35	27(44.26)	6 (9.83)	23(37.70)	5(8.19)	61
36-55	8(38.09)	4(19.04)	6 (28.57)	3(14.28)	21
56& above	1(33.33)	2(66.66)	0(0.00)	0(0.00)	3
Aggregate	36(42.35)	12(14.11)	29(34.11)	8(9.41)	85

(Figures in brackets indicate respective percentage)

Table 13 gives details of various computer courses done by Islamic scholars (education wise)

Table: 13

Computer courses done by Islamic scholars- education wise

Modes of Education	Courses				Sample total
	Short term / certificate courses	MS-Office	DCA	PGDCA	
Formal	29(48.33)	6(10)	21(35)	4(6.66)	60
Informal	0(0.00)	3(100)	0(0.00)	0(0.00)	3
Hybrid	7(31.81)	3(13.63)	8(36.36)	4(18.18)	22
Aggregate	36(42.35)	12(14.11)	29(34.11)	8(9.41)	85

(Figures in brackets indicate respective percentage)

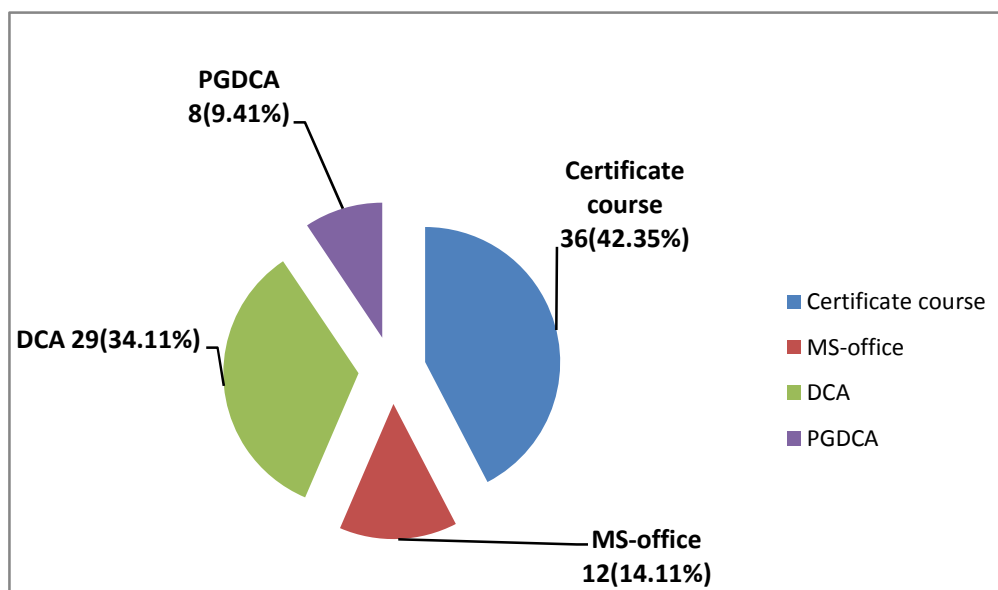


Figure: 14
Computer courses of Islamic scholars

When an overall analysis is done on table 12 and 13 and figure 14, it is found that a good number of Islamic scholars(42.35 per cent)among those who have undergone computer courses have completed short term training programmes or certificate course conducted by their respective institutions. DCA course is in the second position with representation of 29 (34.11 per cent). A few have completed MS-Office and PGDCA with the frequency of 12(14.11per cent)and 8(9.41 per cent) respectively.

As per the table 12,it is understood that, a good number of Islamic scholars belongs to young scholars (18-35) and middle aged scholars (36-55) completed short term course from their respective institutions. Their representations are 44.26 per cent and 38.09 percent respectively. While in the case of elder scholars (56 &above), majority of them (66.66 per cent) secured MS-office course and none of them studied DCA and PGDCA courses.

As per the education wise analysis as presented in table 13, around half (48.33 per cent) of the scholars, who studied in formal system completed short term courses from their respective institutions. While in the case of scholars of Informal system, there is no such chance since such type of practice is hardly seen in such system of education. It is also noted that, none of the informal scholars have qualified DCA or PGDCA courses.

5.1.3 Modes of acquisition of ICT skills other than computer courses

ICT literacy can be acquired not only through computer courses but also through hands on training with trial and error or studying with the help of friends or with the help of books or studying with online help etc. The investigator tried to get a clear picture of Islamic scholars' modes of acquisition of ICT literacy other than computer courses. Table 14 represents the modes of acquisition of ICT skills other than computer courses by Islamic scholars (age wise) of Kerala.

Table: 14
Modes of acquisition of ICT skills other than computer
Courses - age wise

Age groups	Mode of acquisition of ICT skills				Sample total
	Self-practice	With the help of friends	With the help of books	With the help of online tutorials	
18-35	78(75)	72(69.23)	12(11.53)	23(22.11)	104
36-55	48(73.84)	34(52.30)	4(6.15)	10(15.38)	65
56& above	21(65.62)	12(37.5)	6(18.75)	3(9.37)	32
Aggregate	147(73.13)	118(58.70)	22(10.94)	36(17.91)	201

(Figures in brackets indicate respective percentage, this is a Multiple answer question)

Table 15 represents the modes of acquisition of ICT skills other than computer courses by Islamic scholars of Kerala (education wise).

Table: 15

**Modes of acquisition of ICT skills other than computer courses -
education wise**

Modes of Education	Mode of acquisition of ICT skills				Sample total
	Self-practice	With the help of friends	With books	With online tutorials	
Formal	97(76.37)	73(57.48)	10(7.87)	20(15.74)	127
Informal	12(100)	5(41.66)	0(0.00)	4(25)	12
Hybrid	38(61.29)	40(64.51)	12(19.35)	12(19.35)	62
Aggregate	147(73.13)	118(58.70)	22(10.94)	36(17.91)	201

(Figures in brackets indicate respective percentage; this is a Multiple answer question)

As per the overall analysis of table 14 and 15, a good number of Islamic scholars who never underwent computer courses but were computer literates, utilized all available options before them to acquire the knowledge. Self-training and friends' help have remarkable place in making them computer literates. It is also seen that, online tutorials have less acceptance among Islamic scholars.

Table 14 for age wise analysis, says that young scholars, middle aged scholars and elder scholars are highly depending on both self-study and friends' help, but in the case of elders, they are not so depending as youngsters. While dependency on book is high among elder group than young and middle aged scholars. According to table 15, cent per cent of informal scholars depend on self-study, while formal and Hybrid group are 76.37 per cent and 61.29 per cent respectively.

5.2 Smart Devices and Islamic Scholars

Smart gadgets are presently a common device even among laymen. Islamic scholars are not an exception. Laptops, smart phones, tablets and ipads are the widely used popular smart gadgets. The investigator has tried to analyse the use of smart devices by Islamic scholars. Table 16 and 17 represent use of smart devices by Islamic scholars out of these, table 16 and figure 15 represent age wise use of smart devices.

Table: 16
Use of smart device by Islamic scholars - age wise

Age groups	Opinion		Sample total
	Yes	No	
18-35	176(95.13)	9(4.87)	185
36-55	90(91.83)	8(8.17)	98
56& above	38(82.60)	8(17.40)	46
Aggregate	304(92.40)	25(7.60)	329

(Figures in brackets indicate respective percentage)

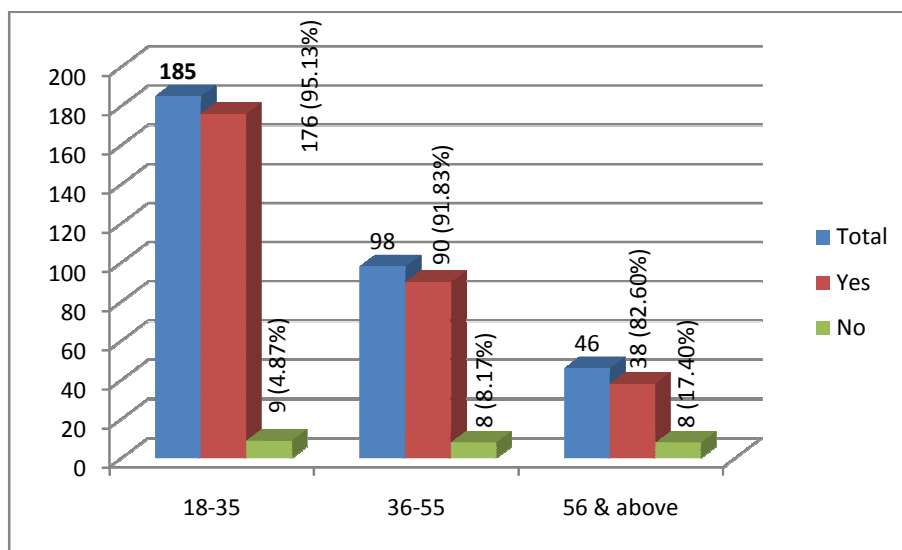


Figure: 15

Use of smart device by Islamic scholars - age wise

Table 17 and figure 16 represent education wise use of smart devices.

Table: 17

Use of smart device by Islamic scholars - education wise

Modes of Education	Opinion		Sample total
	Yes	No	
Formal	204(93.57)	14(6.43)	218
Informal	19(79.16)	5(20.84)	24
Hybrid	81(93.1)	6(6.9)	87
Aggregate	304(92.4)	25(7.6)	329

(Figures in brackets indicate respective percentage)

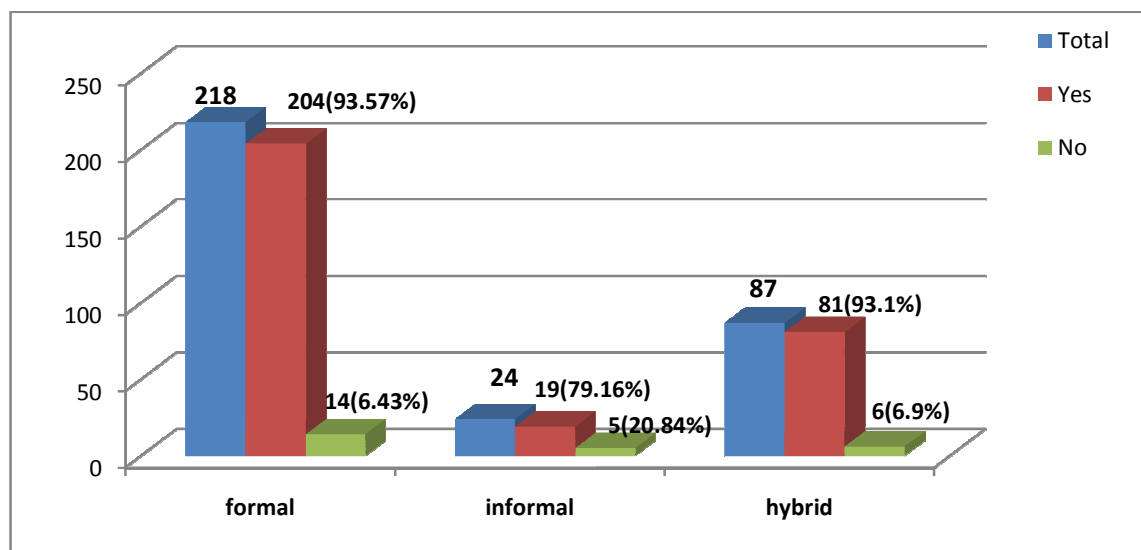


Figure: 16

Use of smart device by Islamic scholars - education wise

Tables 16& 17 and figure 15 &16 indicate that a good number of respondents (92.40 per cent) are using at least one of the smart devices and a few among them (7.6 per cent) are not using any of the smart devices. Age wise analysis is done in table 16, which depicts that the youngsters (18-35) are in the first position in the use of smart devices with 95.13 per cent followed by middle aged (36-55) and elders (56 & above) with 91.83 per cent and 82.16 per cent respectively. Education wise analysis done in table 17, shows that, first and third groups i.e. ‘formal’ and ‘Hybrid’ groups are more or less same with 93.57 and 93.10 per cent respectively, whereas the use of smart device by informal group is comparatively less with 79.16 per cent.

5.2.1 Smart devices - types

There are varieties of smart devices. Mostly used among them are – smart phones, laptops, tablets and ipads. Since the study is of use of ICT among Islamic scholars, it has been tried by researcher to identify the use of smart device (item wise) by using questionnaire.

Table 18 explores the use of different items of smart devices by Islamic scholars (age wise).

Table: 18

Use of different smart devices by Islamic scholars - age wise

Age groups	Smart devices				Sample total
	Smart phone	Laptop	ipad	Tablet	
18-35	156 (88.63)	118 (67.04)	11 (6.25)	42 (23.86)	176
36-55	82 (91.11)	53 (58.8)	9 (10)	23 (25.55)	90
56& above	35 (92.1)	25 (65.78)	2 (5.26)	9 (23.68)	38
Aggregate	273(89.8)	196 (64.47)	22 (7.23)	74(24.34)	304

(Figures in brackets indicate respective percentage; this is a multiple answer question)

Table 18 explores that, elder group (56& above) of Islamic scholars is in the top position in smart phone use with 92.1 per cent followed by middle aged group (36-55) and youngsters (18-35) with 91.11 per cent and

88.63 per cent respectively. But in the case of laptops it is just reverse order of smartphones. It is also noted that around one fourth of the Islamic scholars are using tablets, and ipad usage is also very less among them.

Table: 19

Use of different smart devices by Islamic scholars -education wise

Modes Education	Smart devices				Sample total
	Smart phone	Laptop	Ipad	Tablet	
Formal	181 (88.72)	121 (59.31)	14 (6.86)	44 (21.56)	204
Informal	16 (84.21)	14 (73.68)	0 (0.00)	1 (5.26)	19
Hybrid	76 (93.82)	61 (75.3)	8 (9.87)	29 (35.8)	81
Aggregate	273(89.8)	196 (64.47)	22 (7.23)	74(24.34)	304

(Figures in brackets indicate respective percentage; this is a multiple answer question)

Figure 17 exhibits the use of different smart device among Islamic Scholars.

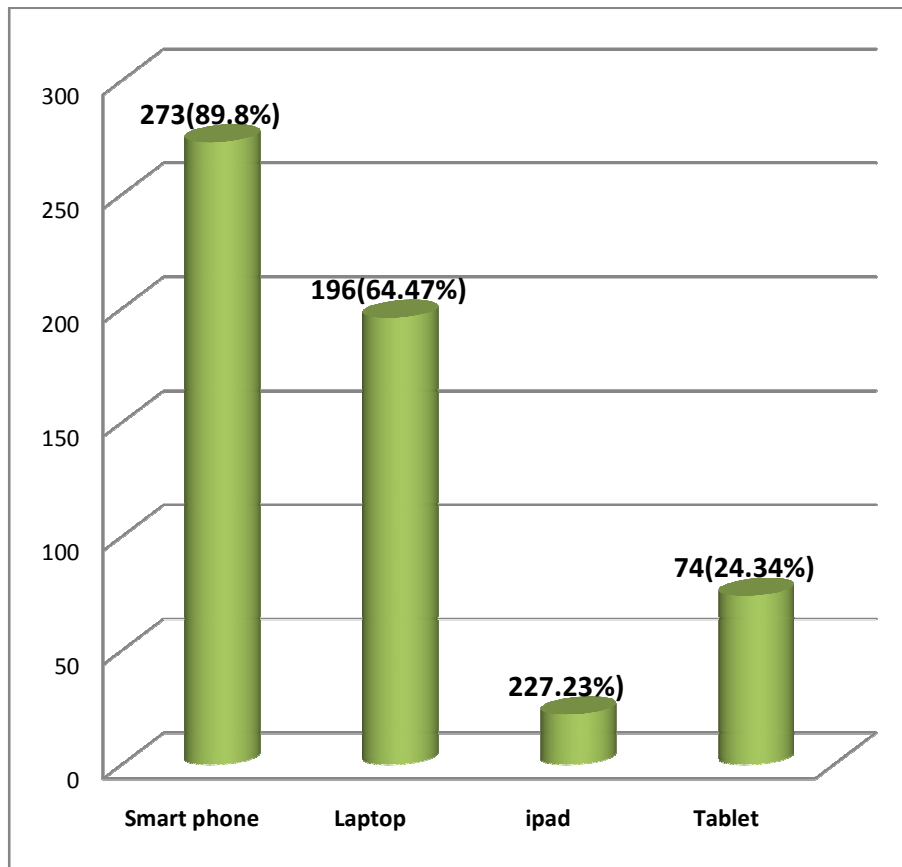


Figure: 17

Smart devices Possessed by Islamic scholars

As far as education wise analysis on the basis of table 19 is concerned, the third group i.e 'hybrid' category use smart phone widely. Their use is 93.82 per cent out of 81 respondents. The use per cent of 'formal' and 'informal' is 88.72 and 84.21 respectively. In the case of laptops, it also keeps the same pattern, i.e Hybrid group stands in the first position, informal group in the second position and formal group in the third position.

Tables 18 & 19 and figure 17 articulate that, smart phone is the highest used smart device (89.8 per cent), while laptop is in the second position (64.7 per cent), and tablet in the third position (24.34 per cent). The least used smart device among them is ipads (7.23 per cent).

5.3 ICT Skills

Basic ICT skills of Islamic scholars have been analyzed by the investigator by advocating questionnaire. It has been sought about the basic ICT services/abilities such as searching of information, sending and receiving e-mails, downloading files from internet, use of You tube, use of different social networking sites, use of blogs, ability of recording audio and videos and familiarity with Google drive. Tables 20 and 21 represent the basic skills of Islamic scholars age wise and education wise respectively.

The corresponding questions for these tables have been organized with three options. They are- a) not familiar, b) familiar but not using and c) familiar and using.

Table: 20
ICT skills of Islamic scholars -Age wise

ICT Services	Age groups	Familiar & using	Familiar But not using	Unfamiliar	Total sample	
1. Browsing & information searching	18-35	156(84.34)	12(6.48)	17(9.18)	185	Chi=15.2 df=4 p=0.004
	36-55	72(73.48)	11(11.22)	15(15.30)	98	
	56 & above	27(58.7)	8(17.39)	11(23.91)	46	
2. E-mailing	18-35	149(80.55)	17(9.18)	19(10.27)	185	Chi=7.65 df=4 p=0.105
	36-55	69(70.4)	15(15.3)	14(14.30)	98	
	56 & above	30(65.21)	6(13.06)	10(21.73)	46	
3. You tube	18-35	166(89.74)	14(7.56)	5(2.70)	185	Chi=15.2 df=4 p=0.004
	36-55	66(67.36)	21(21.42)	11(11.22)	98	
	56 & above	28(60.86)	4(8.69)	14(30.45)	46	
4. Blog	18-35	57(30.82)	95(51.35)	33(17.83)	185	Chi=36.6 df=4 p=0.000
	36-55	22(22.44)	30(30.61)	46(46.95)	98	
	56 & above	5(10.87)	15(32.60)	26(56.52)	46	
5. Social networks	18-35	164(88.66)	14(7.56)	7(3.78)	185	Chi=83.7 df=4 p=0.000
	36-55	64(65.3)	31(31.63)	3(3.07)	98	
	56 & above	27(58.7)	3(6.52)	16(34.78)	46	
6. Google drive	18-35	52(28.10)	39(21.08)	94(50.82)	185	Chi=7.60 df=4 p=0.107
	36-55	24(24.49)	24(24.49)	50(51.92)	98	
	56 & above	13(28.26)	3(6.52)	30(65.22)	46	
7. Using Pen drive/ DVD	18-35	91(49.18)	83(44.86)	11(6.04)	185	Chi=47.9 df=4 p=0.000
	36-55	49(50)	36(36.74)	13(13.26)	98	
	56 & above	19(41.3)	7(15.21)	20(43.49)	46	
8. Sound & Video recording	18-35	142(76.75)	27(14.6)	16(8.65)	185	Chi=57.2 df=4 p=0.000
	36-55	46(44.93)	35(35.71)	17(17.36)	98	
	56 & above	12(26.09)	16(34.78)	18(39.13)	46	

(Figures in brackets indicate respective percentage)

The above table depicts the familiarity and use of basic ICT based services. It says that young scholars (18-35) are in the forefront of using these services. It is seen that, a good number of young scholars are having familiarity with basic ICT services. Their familiarity (familiar but not using + familiar and using) towards different ICT skills as follows; browsing & searching of information-90.82 per cent, e-mailing -89.73 per cent, use of You tube- **97.3** per cent, use of blogs- 82.17 per cent, use of social networks- 96.22 per cent, use of drives- 49.18 per cent, use of external storage devices (pen drive/CD,DVD)- 93.96 per cent and sound & video recording-91.35 per cent.

The familiarity and use of basic ICT services by the middle aged scholars (36-55) are also good. Their familiarity (familiar but not using + familiar and using) towards different ICT skills are as follows – browsing & searching of information -84.70 per cent, e-mailing -85.70 per cent, use of You tube- **88.78** per cent, use of blogs- 53.05 per cent, use of social networks- 96.93 per cent, use of drives- 48.08 per cent, use of external storage devices (pen drive/CD,DVD)- 86.74 per cent and sound & video recording-82.64 per cent.

As far as elder scholars are concerned, compared to youngsters and middle aged groups, familiarity and use of basic ICT services are not high. Their familiarity (familiar but not using + familiar and using) towards different ICT skills are as follows, browsing & searching of information - 76.09 per cent, e-mailing -78.27 per cent, use of You tube- 69.55 per cent,

use of blogs - 43.48 per cent, use of social networks- 65.22 per cent, use of drives-34.78 per cent, use of external storage devices(pen drive/CD,DVD)- 56.51 per cent and sound & video recording - 60.87 per cent.

When overall analysis is done, it can be inferred from the above table that, Islamic scholars of Kerala are well versed with almost all basic ICT services. Use of social networking sites and YouTube especially among youngsters are very high. But blogs and drives are not that much familiar among this group. It can be expressed in more clearly that, overall use of you tube and social network are **-90.89** per cent and **92.1** per cent respectively, while in the case of Blog and Google drive are **69** per cent and **48.64** per cent respectively.

Chi-square test is applied to find out association between different age group among Islamic scholars and their ICT skills. As per the test result, it can be inferred that, there is significant association between age of Islamic scholars and internet browsing, use of YouTube, use of blogs, use of social networks, use of external storage devices and sound & video recording. In the case of e-mail and Google drive, there is no relation with the age of Islamic scholars.

Table: 21
ICT skills of Islamic scholars - Education wise

ICT Services	Modes of education	Familiar & using	Familiar But not using	Unfamiliar	Total Sample	
1. Internet browsing	Formal	176(80.73)	23(10.55)	19(8.72)	218	Chi=74. 3 df=4 p=0.000
	Informal	13(54.7)	3(12.5)	8(33.33)	24	
	Hybrid	66(75.86)	5(5.74)	16(18.40)	87	
2. E-mailing	Formal	176(80.73)	18(8.25)	24(11.02)	218	Chi=27. 7 df=4 p=0.000
	Informal	8(33.33)	7(29.16)	9(37.51)	24	
	Hybrid	64(73.56)	13(14.94)	10(11.50)	87	
3. You tube	Formal	188(86.23)	14(6.42)	16(7.35)	218	Chi= 29.3 df=4 p= 0.000
	Informal	11(45.83)	8(33.33)	5(20.87)	24	
	Hybrid	61(70.11)	17(19.54)	9(10.35)	87	
4. Blog	Formal	67(30.78)	102(46.78)	48(22.47)	218	Chi= 21.7 df=4 p= 0.000
	Informal	5(20.84)	6(25)	13(54.16)	24	
	Hybrid	12(13.79)	32(36.76)	43(49.43)	87	
5. Social networks	Formal	188(86.23)	23(10.55)	7(3.22)	218	Chi= 37.8 df=4 p= 0.000
	Informal	10(41.67)	8(33.33)	6(25.00)	24	
	Hybrid	57(65.51)	17(19.54)	13(14.95)	87	
6. Google drive	Formal	65(29.81)	49(22.47)	104(47.70)	218	Chi= 7.61 df=4 p= 0.107
	Informal	3(12.50)	6(25)	15(62.50)	24	
	Hybrid	21(24.15)	11(12.64)	55(63.21)	87	
7. Using Pen drive/ DVD	Formal	113(51.83)	86(39.44)	19(8.73)	218	Chi=20. 6 df=4 p=0.000
	Informal	11(45.83)	4(16.67)	9(37.50)	24	
	Hybrid	35(40.22)	36(41.37)	16(18.41)	87	
8. Sound & Video recording	Formal	135(61.92)	55(25.22)	28(12.86)	218	Chi= 8.53 df=4 p=0.074
	Informal	10(41.66)	6(25)	8(33.34)	24	
	Hybrid	55(63.21)	17(19.54)	15(17.25)	87	

(Figures in brackets indicate respective percentage)

The overall data of the above table reflects that, those who have studied under ‘formal’ education system are in the fore front in the use and familiarity of basic ICT services, followed by ‘Hybrid’ and ‘informal’ groups.

In the case of ‘formal’ group, a good number of scholars are familiar and use the basic ICT services. Their familiarity (familiar but not using + familiar and using) towards different ICT skills are as follows, browsing & searching of information - 91.28 per cent, e-mailing -88.98 per cent, use of You tube- 92.65 per cent, use of blogs - 77.53 per cent, use of social networks- 96.78 per cent, use of drives- 52.30 per cent, use of external storage devices (pen drive/CD, DVD)-91.27 per cent and sound & video recording-87.14 per cent.

The second position in the familiarity(familiar but not using + familiar and using) of ICT services in this category is for ‘Hybrid’ group. Their representations are, browsing & searching of information –81.60 per cent, e-mailing - 88.50 per cent, use of You tube - 89.65 per cent, use of blogs - 50.57per cent, use of social networks - 85.05 per cent, use of drives - 36.79 per cent, use of external storage devices(pen drive/CD,DVD)– 81.59per cent and sound & video recording - 82.75 per cent.

Compared to the other two categories, the familiarity and use of basic ICT services among the third group, i.e. ‘informal’ is lesser. Their representations in familiarity (familiar but not using + familiar and using) of ICT services are – browsing & searching of information- 66.67 per cent, e-mailing - 62.49 per cent, use of You tube -79.13 per cent, use of blogs-

45.84 per cent, use of social networks- 75 per cent, use of drives- 37.50 per cent, use of external storage devices (pen drive/CD,DVD) - 62.50 per cent and sound & video recording- 66.66 per cent.

The statistical test result shows that, in the case of internet browsing, e-mailing, YouTube use, blogging, use of Social networking sites and use of external storage devise there exists association between education mode and these ICT skills. But in the case of use of Google drive and audio& video recording there is no association with different education groups.

5.4 Islamic Information - areas and preferences

There are different areas of Islamic information. The prominent among them are - Quran, translations and its interpretations, Hadith and explanations, Islamic history, Islamic jurisprudence, thouheed, Arabic language and literature, contemporary Islamic news and movements etc. The preference of this information may vary from person to person. Hence the investigator has tried to understand the preference of Islamic information by Islamic scholars. Users were asked to mark their preferences (1 to 7) corresponding to each options in the questionnaire supplied to them. It is analyzed by giving weightage to each options as - first preference-7, second preference-6, third preference-5, fourth preference - 4, fifth preference - 3, sixth preference - 2 and seventh preference - 1.

The following table shows the preference of Islamic scholars (age wise) towards Islamic Information.

Table: 22**Preference of Islamic scholars (age-wise) towards Islamic Information**

Information- type	Age wise weighted mean			Average	Rank
	18-35	36-55	56& Above		
a) Quran	1049(37.46)	585(20.89)	283(10.10)	22.81	1
b) Hadith	933(33.32)	511(18.25)	248(8.85)	20.14	2
c) Islamic History	796(28.42)	404(14.42)	201(7.17)	16.67	4
d) Fiqh	861(30.75)	364(13)	192(6.85)	16.86	3
e) Thouheed	263(9.39)	300(10.71)	156(5.57)	8.55	7
f) Language & literature	547(19.53)	266(9.5)	163(5.82)	11.61	5
g) Recent developments	536(19.14)	280(10)	149(5.32)	11.57	6

(Figures in brackets indicate weighted mean scores)

As per this table, in the case of young scholars (18-35), Quran (Mean=37.46) is their first preference followed by Hadith (Mean=33.32) and Fiqh(Mean=30.75) respectively. While the first, second and third preference of middle aged group (36-55) are Quran (Mean=20.89), hadith (Mean=18.25) and Islamic history (Mean=14.42) respectively. The third group (56& above) also follows the preference rhythm of second group.

Collected data is also categorized as education wise and it is presented in table below.

Table: 23

Preference of Islamic scholars (education wise) towards Islamic Information.

Information-type	Modes of Education wise weighted mean			Average	Rank
	Formal	Informal	Hybrid		
a) Quran	1259(44.96)	151(5.39)	507(18.10)	22.81	1
b) Hadith	1118(39.92)	125(4.46)	433(15.46)	20.14	2
c) Islamic History	908(32.42)	107(3.82)	387(13.82)	16.67	4
d) Fiqh	976(34.85)	92(3.28)	351(12.53)	16.86	3
e) Thouheed	594(21.21)	237(8.46)	300(10.71)	8.55	7
f) Language & literature	632(22.57)	53(1.89)	271(9.67)	11.61	5
g) Recent developments	619(22.10)	68(2.42)	276(9.85)	11.57	6

(Figures in brackets indicate weighted mean scores)

Table 23 depicts the preferences of Islamic scholars (education wise) towards different types of Islamic information. In the ‘formal’ education group, first, second and third preferences are - Quran with mean of 44.96, followed by Hadith with 39.92 and Fiqh with 34.85 respectively. The data about the ‘informal’ group is quite different. According to their opinion, thouheed is in the first position with mean weightage of 8.46, followed by Quran with 5.39 and Hadith with 4.46 mean score.

In the case of Hybrid group, it is seen again different opinion from the other two categories. According to the table data, again Quran in the

first preference with mean weight of 18.10, followed by Hadith in second position with 15.46 and Islamic history in third position with 13.82 mean weight.

As per the overall analysis of table 22 and 23, the weighted mean score of preferences of Islamic scholars towards the different areas of Islamic information. The highly preferred type is Quranic Information with average weighted mean of 22.81, followed by Hadith with 20.14, fiqh with 16.86, Islamic history with 16.67, language & literature with 11.61, recent Islamic information with 11.57 and thouheed with 8.55.

5.4.1 Purposes of using Islamic information resources

Islamic scholars are those who have depth knowledge in Islamic information. They have diverse services in the society, such as – teaching in Madrassas, Darses, Oriental colleges etc., offering religious classes based on Quran and Hadiths, writing articles in Islamic periodicals and journals, providing fatwas (religious verdicts), offering khutabas (Friday speech in mosques), pubic orations etc.

The investigator has tried to understand the purpose of using Islamic information by Islamic scholars by using questionnaire in which six options for using religious information were given and wanted to give their preferences. Table 24 and 25 represent the data about this. Users were asked to mark their preferences (1 to 6) corresponding to each options in the questionnaire supplied to them. It is analyzed by giving weightage to

each option as - first preference-6, second preference-5, third preference-4, fourth preference - 3, fifth preference - 2 and sixth preference-1.

The following two tables depict the purpose of using different Islamic information resources by Islamic scholars of Kerala.

Table: 24

**Purpose of using Islamic Information resource by Islamic Scholars -
age wise**

Information- type	Age wise weighted mean			Average	Rank
	18-35	36-55	56& Above		
a) Teaching	865 (30.89)	429 (15.32)	202 (7.21)	17.80	1
b) Preaching (Quran & Hadith classes)	728 (26)	420 (15)	206 (7.35)	16.11	2
c) Offer Friday Khutuba	533 (19.03)	315 (11.28)	144 (5.14)	11.91	4
d) Writing articles	592 (23.07)	323 (11.53)	144 (5.14)	13.24	3
e) Giving Fatwa	457 (16.32)	226 (8.07)	108 (3.85)	9.41	6
f) Offer Public speeches	533 (19.03)	268 (9.57)	131 (4.67)	11.09	5

(Figures in brackets indicate weighted mean scores)

The table 24 expresses the age wise weighted mean score of Islamic scholars about their preferences of using Islamic Information. According to table data, in the case of young group (18-35) their most preferred option is ‘teaching’ with mean score 30.89 followed by Quran & Hadith class with 26, writing articles in Islamic journals and periodicals with 23.07, offering Khutuba and public oration with 19.03 each, and offering fatwas with 16.32 mean score.

In the case of middle aged (36-55) group, it is more or less same pattern with former group, i.e teaching is the first preferred option with mean score of 15.32, followed by Quran & Hadith class with 15, writing articles with 11.53, khutuba with 11.28, public speech with 9.57 and fatwa with 8.07.

In the case of elder group(56 & above), according to table data some sort of difference is seen compared to the other two groups. Here the first preferences goes to Quran & Hadith classes with 7.35 mean score followed by teaching with 7.21, khutuba and writing articles with 5.14 each, public speech with 4.67 and fatwa with 3.85 mean score.

The following table represents the data about preferences of Islamic scholars (education-wise) towards different purposes.

Table: 25
**Purpose of using Islamic Information resources by Islamic Scholars -
 education wise**

Information- type	Education wise weighted mean			Average	Rank
	Formal	Informal	Hybrid		
a) Teaching	950(33.92)	104(3.71)	442(15.78)	17.80	1
b) Preaching (Quran & Hadith classes)	858(30.64)	119(4.25)	377(13.46)	16.11	2
c) Offer Friday Khutuba	661(23.60)	80(2.85)	260(9.28)	11.91	4
d) Writing articles	742(26.5)	81(2.89)	290(10.35)	13.24	3
e) Giving Fatwa	541(19.32)	48(1.71)	202(7.21)	9.41	6
f) Offer Public speeches	630(22.5)	64(2.28)	238(8.5)	11.09	5

(Figures in brackets indicate weighted mean scores)

The table data says that, in the case of formal education group, the first preference is given to teaching with 33.92 mean score, followed by Quran & Hadith classes with 30.64, writing in journals with 26.5, offering khutuba with 23.6, public orations with 22.5, and fatwas with 19.32 mean score.

The response of informal group is found some sort of differences with the former group. Here the first preference goes to Quran & Hadith classes with mean score of 4.25, the second preference is seen teaching

with 3.71 mean score, followed by writing with 2.59, khutuba with 2.85, public speech with 2.28 and fatwa with 1.71 mean score.

The response of the third group, 'Hybrid' education group is found same pattern as first group. Here also the first preference is given to teaching with 15.78 weighted mean score, followed by Quran & Hadith class with 13.46, writing with 10.35, khutuba with 9.28, public oration with 8.5 and fatwa with 7.21 mean score.

On the basis of average weighted mean of each options given in tables 24 and 25, a rank list is prepared. The option 'teaching' became the first position with average weighted mean of 17.8. Preaching gets the second position with 16.11, writing articles gets third rank with 13.24, offering khutuba gets fourth position with 11.91, public speech in fifth position with 11.09 and fatwa in sixth position with 9.41. In short, teaching is the most preferred option and offering fatwa is the least preferred option of Islamic scholars of Kerala in the use of Islamic information.

5.5 Use of Information resource – type

Information resources are broadly classified into two, based on their physical features, they are conventional printed resources and digital or electronic resources. As in the other fields of specialization, in the sphere of Islamic information, this type of categorization is there. Here the researcher has tried to analyse and assess the use of conventional and electronic resources by Islamic scholars.

Table: 26

Use of Information resource - age wise

Age groups	Information resource-types			Total sample
	Printed only	Electronic only	Both	
18-35	8 (4.32)	3(1.62)	174 (94.06)	185
36-55	30 (30.61)	3 (3.06)	65(66.33)	98
56& above	19 (41.3)	2(4.34)	25 (54.36)	46
Aggregate	57(17.32)	8(2.43)	264(80.24)	329
Chi-square =55.3 df = 4 p = 0.000				

(Figures in brackets indicate respective percentage)

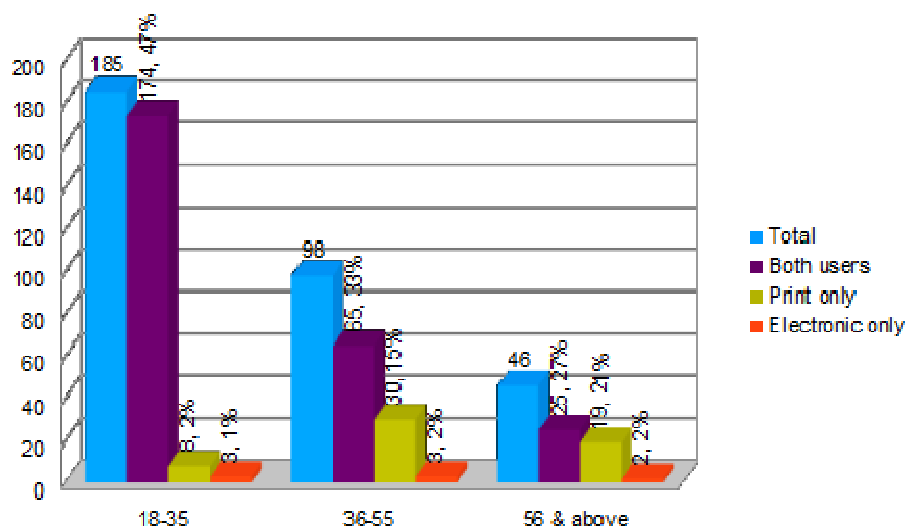


Figure: 18

Use of Information resource - age wise

As per the above table and figure, Islamic scholars who are concentrating on printed resources are only 17.32 per cent. In this category, it is seen that age and print resource have a positive relationship, i.e elder scholars are more concentrating on print resource than young scholars. At the same time, those who are using only electronic resources are a very few. Their representation is only 2.43 per cent. In short majority of the scholars are using both type of resources simultaneously.

Chi-square test also establishes the relationship between use of different types of resources and the age of respondents.

5.5.1 Users of printed resources and electronic resources (age wise)

Extracting data from the table 26, one more table is created here for better clarification. It is for getting number and per cent of printed users (printed only + both type users) and electronic (electronic only + both type of users) users categorically classified on the basis of their ages.

Table: 27
Users of Information resource (age wise)- printed and electronic

Age group	Printed users	Electronic users	Total sample
18-35	182(98.37)	177(95.67)	185
36-55	95(96.93)	68(69.38)	98
56& above	44(95.65)	27(58.69)	46
Aggregate	321(97.56)	272(82.67)	329

(Figures in brackets indicate respective percentage)

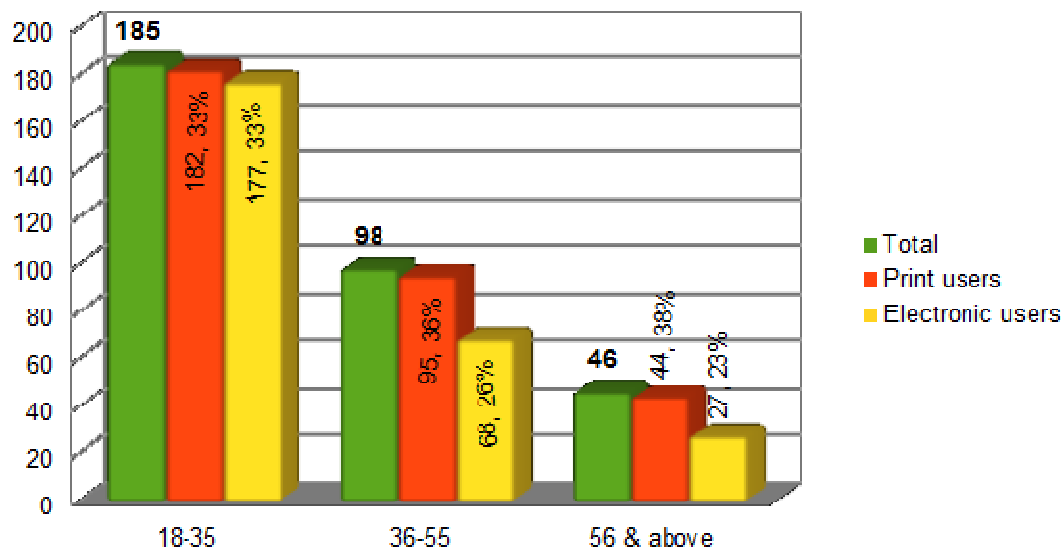


Figure: 19
Users of Information resource (age wise) - print and electronic

According to the table data, out of 329 samples, 97.56 per cent use printed resource, while 82.67 use electronic resources. When age wise analysis is done, it is seen that, in the case of young (18-35) scholars, 98.37 per cent use printed resources where as it is 95.67 per cent in electronic resources. In the case of middle aged (36-55) scholars, the difference between printed and electronic resources is more than that of the former group. It is 96.93 and 69.38 per cent respectively. This difference is again increased in the case of aged (56 & above) scholars. It is 95.65 and 58.69 respectively.

The following table and figure give clear picture of use of information resource type by Islamic scholars classified on the basis of mode of education.

Table: 28

Use of Information resource - Education wise

Modes of Education	Information resource-types			Total sample
	Print only	Electronic only	Both	
Formal	29(13.30)	5(2.29)	184(84.40)	218
Informal	9(37.5)	2(8.33)	13(54.16)	24
Hybrid	19(21.83)	1(1.149)	67(77.01)	87
Aggregate	57(17.32)	8(2.43)	264(80.24)	329
Chi-square =15.4 df = 4 p = 0.004				

(Figures in brackets indicate respective percentage)

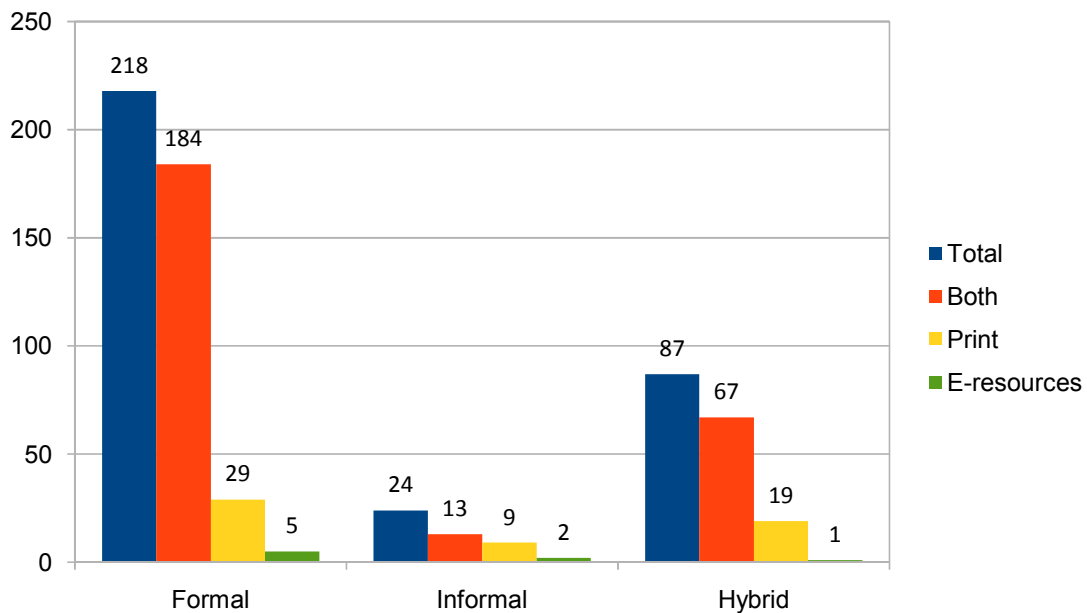


Figure: 20

Use of Information resource - Education wise

It is clear from the table and figure that, out of the total sample of 329, a good number (218) belongs to 'formal' group. The second largest

group is 'hybrid' with 87 followed by 'informal' with number of 24. In the case of 'formal' group, 29 scholars (13.3 %) use only printed resources and 5 (2.29 %) use only electronic resources, whereas majority 84.4% use both printed and electronic resources.

In the case of 'informal' group, per cent of users, who make use of only printed resources is higher (37.5%) than the formal group (13.3%). Here the users of only electronic resource is 8.33 and 'both' with 54.16 per cent. In the case of 'hybrid' group, per cent of printed only, electronic only and both are 17.32, 2.43 and 80.24 respectively.

The test of independence was applied to check the relationship between the variables. It is found that, there exists significant relation between use of different types of resources and the education mode of Islamic scholars.

5.5.2 Users of printed resources and electronic resources (education wise)

Extracting data from the table 28, one more table is created here. It is for getting number and per cent of printed users (printed only + both type users) and electronic (electronic only and both) users with categorically classified on the basis of mode of education.

Table: 29

Users of Information resource (education wise) - printed and electronic

Modes of Education	Printed users	Electronic users	Total sample
Formal	213(97.7)	189(86.69)	218
Informal	22(91.66)	15(62.5)	24
Hybrid	86(98.85)	68(78.16)	87
Aggregate	321(97.56)	272(82.67)	329

(Figures in brackets indicate respective percentage)

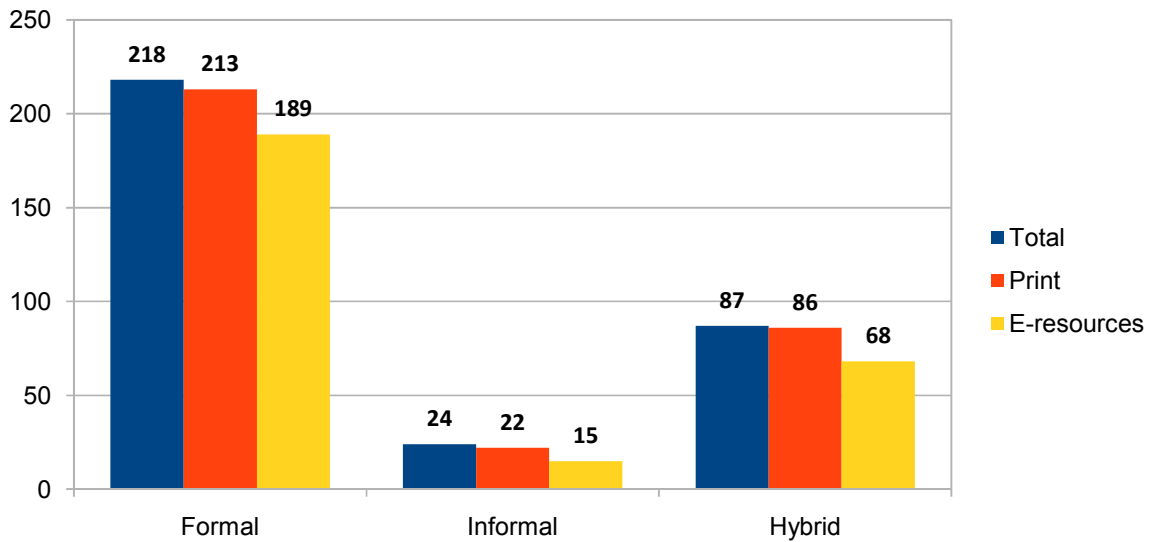


Figure: 21

Users of Information resource (education wise)- printed and electronic

According to the table data, users of print resources are higher than users of electronic resources. When education-wise analysis is done, it is seen that, in the case of 'formal' scholars, 97.7 per cent use print resources where as it is 86.69 per cent in electronic resources. In the case of 'informal' scholars, the difference between print and electronic resources is more than that of the former group. It is 91.66 and 62.5 per cent respectively. In the case of 'hybrid' group, it is 98.85 per cent and 82.67 per cent respectively.

5.5.3 Preference of type of Islamic Information resources

As far as Islamic scholars are concerned, there are both conventional print resources and modern electronic resources before them. It is their choice which of them are to be selected and used. Here the researcher tried to get answers from Islamic scholars about their preferences of type of resources. The following figure portrays the preference of Islamic scholars in using print and electronic resources irrespective of their ages and mode of education.

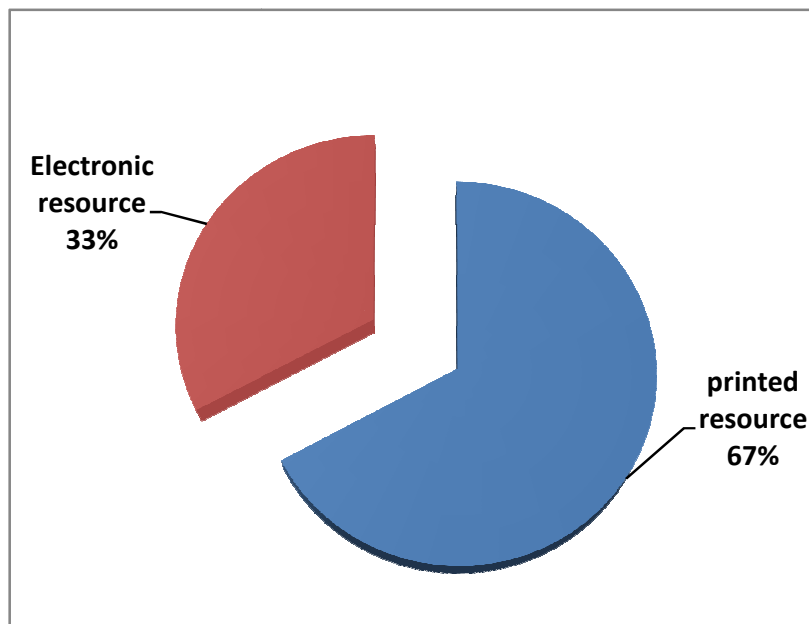


Figure: 22

Preference of Islamic scholars towards printed and electronic resource

The following table and figure show their preference of use of type of resources age wise.

Table: 30

Islamic scholars' preference in type of resources - age wise

Age groups	Type of resources		Total sample
	Printed resource	Electronic resource	
18-35	107(57.83)	78(42.17)	185
36-55	74(75.5)	24(24.5)	98
56& above	40(86.95)	6(13.05)	46
Aggregate	221(67.17)	108(32.83)	329

(Figures in brackets indicate respective percentage)

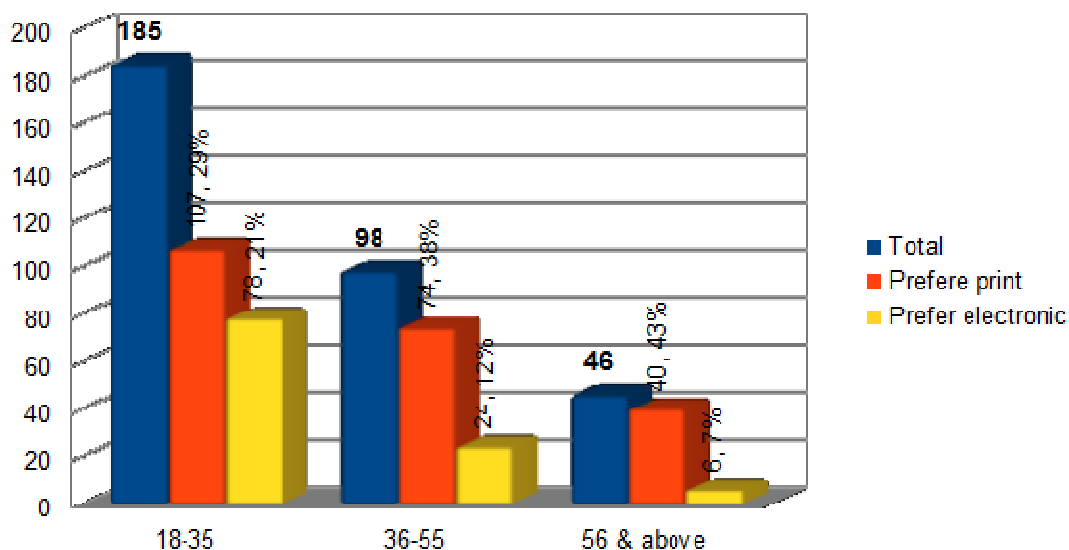


Figure: 23

Islamic scholars' preference in type of resources - age wise

The age wise analysis of preference of type of resources says that, in the younger group (18-35), the preference to conventional printed resources is 57.83 per cent, while preference to electronic resource is 42.17 per cent. In the case of middle aged (36-55) scholars, it is 75.5 per cent and 24.5 per cent respectively. In the case of elder (56&above) scholars, their preference to printed resource is very high compared to the other two groups, it is 86.95 and their preference to electronic resource is only 13.05 per cent. In short it is understood from the overall table data that, there is an inverse relationship between age of Islamic scholars and their preference to electronic resources, i.e. when age increases their preference to electronic resources decreases.

The following given table 31 and figure 24 show the preference of Islamic scholars (education wise) regarding type of resources.

Table: 31

Islamic scholars' preference in type of resources - education wise

Mode of Education	Type of resources		Total sample
	Printed resource	Electronic resource	
Formal	139(63.76)	79(36.24)	218
Informal	18(75)	6(25)	24
Hybrid	64(73.56)	23(26.44)	87
Aggregate	221(67.17)	108(32.83)	329

(Figures in brackets indicate respective percentage)

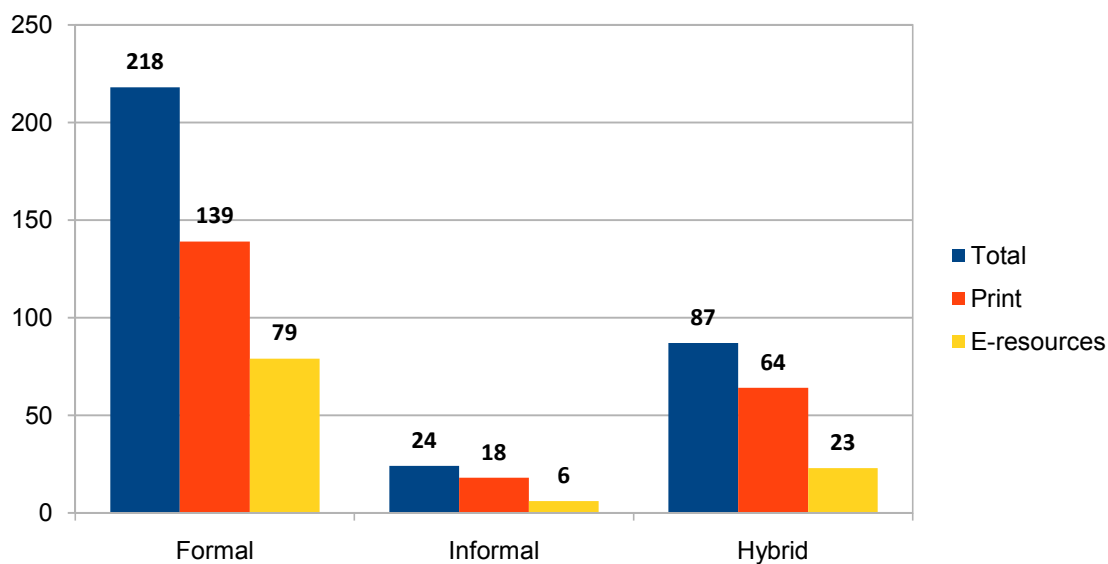


Figure: 24

Islamic scholars' preference in type of resources - education wise

The table data and figure say that, in the case of formal group, their

preference to printed resources is 63.76 percent while to electronic resource is 36.24 per cent. In the case of informal group, their preference to print resource is 75 percent and electronic resource is 25 per cent. In the case of 'hybrid' group, it is 73.56 per cent and 26.44 per cent respectively.

The overall analysis of tables 30 and 31 depict that, out of the total sample 329, a good number of Islamic scholars prefers (67.17) printed resources, whereas their preference to electronic resources is only 32.83 per cent. It is noted that, even during the time of ICT revolution, the importance and relevance of conventional print resource still exists.

5.5.4 Access places of printed resources

There are different places where printed Islamic resources are available. The prominent among them are college libraries, mosque libraries, personal collections, home libraries etc. It has been tried here to find out the access places of printed resources by Islamic scholars. Four options were given before them, and it is treated as a multi-answerable question.

The following table and figure explore the places of access of printed resources by Islamic scholars (age wise).

Table: 32

Access points of Printed resource -age wise.

Age groups	Access places				Total sample
	Own collection	Friends' collection	College Libraries	Mosque libraries	
18-35	101(55.49)	39(21.42)	143(78.57)	14(7.69)	182
36-55	76(80)	21(22.10)	74(77.89)	5(5.26)	95
56& above	40(90.9)	7(15.9)	31(70.45)	5(11.36)	44
Aggregate	217(67.60)	67(20.87)	248(77.25)	24(7.47)	321

(Figures in brackets indicate respective percentage. This is a multiple answer question)

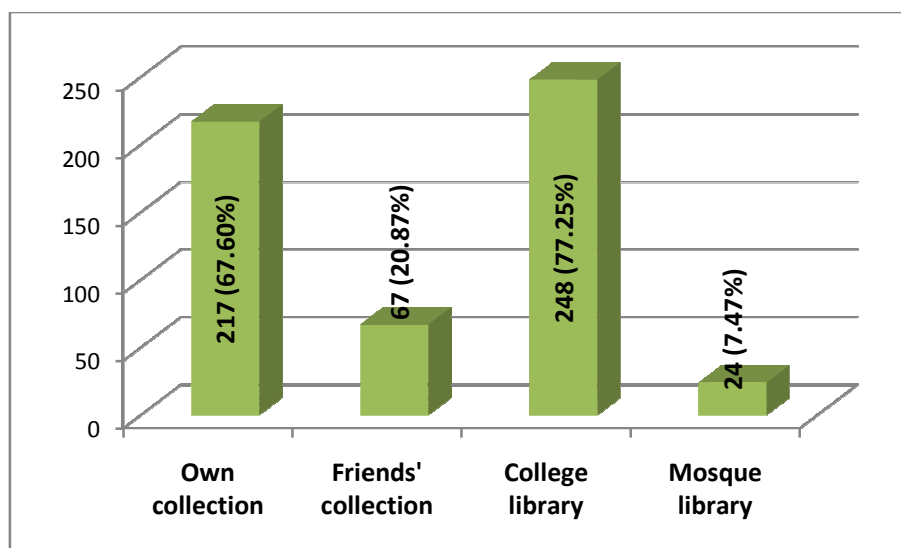


Figure: 25

Islamic scholars' preference in type of resources

As per the age wise analysis, in the case of young scholars (18-35), their top most preference is college libraries (78.57 Per cent), followed by personal collections (55.49 per cent), friends' collections (21.42 per cent) and mosque libraries (7.69 per cent). In the case of middle aged (36-55) scholars, their first preference for using printed resources is - personal collections-80 per cent, followed by college libraries (77.89 per cent), friends' collections (22.1 per cent) and mosque libraries (5.26 per cent).

In the case of elder group (56 &above), their dependency towards own collection is high. A good number (90.9 percent) use personal collections. They also use college libraries (70.45 per cent), friends' collections (15.9 per cent) and mosque libraries (11.36 per cent).It is found from this table that, there is a direct relationship between age and use of personal collections in the case of printed Islamic information resources, i.e. usage among of young scholars towards personal collection is less whereas it is very high in aged scholars.

The following table represents the access places of printed resources by Islamic scholars (education wise).

Table: 33**Access points of Printed resource - education wise.**

Mode of education	Access places				Total sample
	Own collection	Friends' collection	College Libraries	Mosque libraries	
Formal	128(60.09)	38(17.84)	176(82.62)	10(4.69)	213
Informal	17(77.27)	8(36.36)	15(68.18)	2(9.09)	22
Hybrid	72(83.72)	21(24.41)	57(66.27)	12(13.95)	86
Aggregate	217(67.60)	67(20.87)	248(77.25)	24(7.47)	321

(Figures in brackets indicate respective percentage)

As per the education wise analysis, the first preference of 'formal' group for the use of print resources is college libraries (82.62 per cent), while in the case of 'informal' group and 'hybrid' group it is personal collections with mean score of 77.27 per cent and 83.72 per cent respectively. Libraries in mosques are the least utilized collection by this group.

When an overall analysis is done, it is understood that college libraries and personal collections are the main access point of print resource by Islamic scholars, while use of friends' collection have a moderate use and mosque libraries have the least usage.

5.5.5 Frequency of use of print resources

Frequency of use of print resources varies from person to person and profession to profession. The teachers have to refer daily for taking classes, while those who are offering Friday khutuba, will have to refer at least one day per week and those who offer fatwas need to refer as and when needed. It is attempted to find out the frequency of use of print resources among Islamic scholars of Kerala. Four options have been given before them, they are- daily, once in a week, two or three times per week and as and when needed.

Tables 34 and 35 and figure 26 give the details of frequency age wise and education wise respectively.

Table: 34

Frequency of use of Print resource - age wise.

Age groups	Frequency				Total sample	Chi-square = 2.42 df = 4 p = 0.659
	Daily	Once in a week	2/3 times in a week	As & when needed		
18-35	83(45.6)	2(1.09)	1(.54)	96(52.7)	182	
36-55	40(42.1)	3(3.15)	1(1.05)	51(53.68)	95	
56& above	8(18.18)	0(0.00)	0(0.00)	36(81.81)	44	
Aggregate	131(40.80)	5(1.55)	2(.62)	183(57)	321	

(Figures in brackets indicate respective percentage)

Table: 35

Frequency of use of Printed resource - education wise

Mode of education	Frequency				Total sample	Chi-square = 5.0 df = 4 p = 0.287
	Daily	Once in a week	2/3 times in a week	As & when needed		
Formal	91(42.72)	4(1.87)	1(.46)	117(54.92)	213	
Informal	8(36.36)	0(0)	0 (0)	14(63.63)	22	
Hybrid	32(37.20)	1(1.6)	1(1.16)	52(60.46)	86	
Aggregate	131(40.80)	5(1.55)	2(.62)	183(57)	321	

(Figures in brackets indicate respective percentage)

The following figure represents frequency of use of print resources by Islamic scholars irrespective of their ages and mode of education.

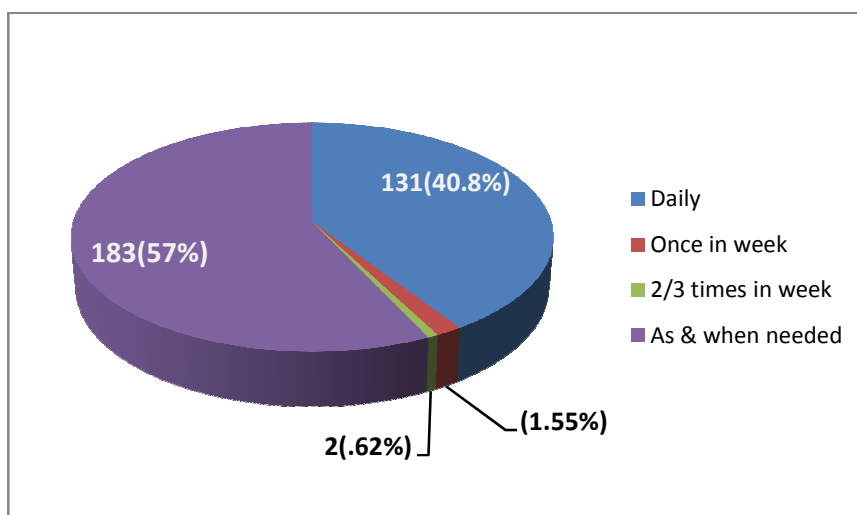


Figure: 26

Frequency of use of print resources by Islamic scholars

The table 34 conveys age wise analysis of frequency of use of print resources. It says that around half of the young and middle aged scholars use it as and when needed, where as its usage among old scholars are more than eighty per cent. Daily use of print resource by young and middle aged scholars are reasonable. Table 35 shows the education wise frequency of use of print resources. Here also it is seen that all of the three group prefer to use as and when needed followed by daily, once in a week and lastly two/three times in a week.

Both tables depict that, most of the Islamic scholars are using their respective resources as and when needed (57 per cent) followed by daily (40.80 per cent). Users of once in a week or two/ three times per week are very few.

According to table 34, frequency of daily users belonging to aged group (56& above) is very less compared to the other two groups. But as per the chi-square test, there is no significant difference among different age groups. The reason for this variation may be because the number of respondents belonging to that group is very less. As per the chi-square test result of table 35, there is also no significant difference between different education groups in the frequency of use of printed resources.

5.6 Familiarity and use of Islamic E-resources

Exclusive Islamic e-resources are enormous, such as – Islamic websites/portals, Islamic blogs, e-books, e-journals, databases, digital libraries, online-madrassas and online-universities, Quran reading pen,

Islamic social networks etc. The investigator has tried to get a clear picture by giving three options, i.e. of unfamiliarity, familiar but not using and familiar plus using. The result has been given in the tables 36 and 37 age wise and education wise respectively.

Table: 36**Familiarity and use of Islamic E-resources - age wise**

Islamic E-resources	Age groups	Familiar & using	Familiar But not using	Unfamiliar	Total sample	Chi-Square Value
1. Islamic CD/DVD	18-35	38(20.54)	137(74.05)	10(5.40)	185	Chi= 10.5 df=4 p=0.033
	36-55	11(11.22)	83(88.29)	4(4.08)	98	
	56& above	15(32.60)	28(60.86)	3(6.52)	46	
2. Islamic web sites/ portals	18-35	155(83.78)	17(9.78)	13(7.02)	185	Chi= 10.2 df=4 p=0.038
	36-55	73(74.48)	10(10.20)	15(15.30)	98	
	56& above	33(71.73)	3(6.52)	10(21.73)	46	
3. Islamic Blogs	18-35	96(51.89)	54(29.18)	35(18.91)	185	Chi= 34.1 df=4 p=0.000
	36-55	22(22.44)	52(53.06)	24(24.48)	98	
	56& above	13(28.26)	14(30.43)	19(41.30)	46	
4. Islamic E-journals	18-35	101(54.59)	51(27.56)	33(17.83)	185	Chi= 20.3 df=4 p=0.000
	36-55	44(44.89)	31(31.63)	23(23.46)	98	
	56& above	13(28.26)	11(23.91)	22(47.82)	46	
5. Islamic E-books	18-35	34(18.37)	83(79.04)	68(36.75)	185	Chi= 14.2 df=4 p=0.007
	36-55	10(10.20)	34(34.69)	54(55.10)	98	
	56& above	3(6.52)	16(34.78)	27(58.69)	46	
6. Online Madrassa	18-35	34(18.37)	83(44.86)	68(36.75)	185	Chi= 16.1 df=4 p=0.003
	36-55	10(10.20)	34(34.69)	54(55.10)	98	
	56& above	2(4.34)	16(34.78)	28(60.86)	46	

Islamic E-resources	Age groups	Familiar & using	Familiar But not using	Unfamiliar	Total sample	Chi-Square Value
7. Online Islamic University	18-35	34(18.37)	86(46.48)	65(35.13)	185	Chi= 26.0 df=4 p=0.000
	36-55	10(10.20)	33(33.67)	55(56.12)	98	
	56& above	2(4.34)	11(23.91)	33(71.73)	46	
8. Digital libraries	18-35	45(24.32)	104(56.21)	36(19.45)	185	Chi= 23.1 df=4 p=0.000
	36-55	24(24.48)	33(33.67)	41(41.83)	98	
	56& above	10(21.73)	19(34.78)	20(43.47)	46	
9. Databases	18-35	69(37.29)	57(47.02)	59(31.89)	185	Chi= 7.71 df=4 p=0.103
	36-55	28(28.57)	24(24.48)	46(46.93)	98	
	56& above	12(26.08)	13(28.26)	21(45.65)	46	
10. Social networks	18-35	13(7.02)	39(21.08)	133(71.89)	185	Chi= 7.02 df=4 p=0.135
	36-55	9(9.18)	29(29.59)	60(61.22)	98	
	56& above	4(8.69)	17(36.95)	25(54.34)	46	
11. Quran reading pen	18-35	65(35.13)	90(48.64)	30(16.21)	185	Chi= 21.7 df=4 p=0.000
	36-55	28(28.57)	43(43.87)	27(27.55)	98	
	56& above	8(17.39)	16(34.78)	22(47.82)	46	
12. Islamic Videos in YouTube	18-35	133(71.89)	37(20)	15(8.10)	185	Chi= 10.5 df=4 p=0.033
	36-55	50(51.02)	30(30.61)	18(18.36)	98	
	56& above	22(47.82)	7(15.21)	17(36.95)	46	
13. Islamic radio	18-35	72(38.91)	84(45.40)	29(15.67)	185	Chi= 20.5 df=4 p=0.000
	36-55	23(23.46)	45(45.91)	30(30.61)	98	
	56& above	14(30.43)	13(28.26)	19(41.30)	46	
14. Islamic TV	18-35	71(38.37)	92(49.72)	22(11.89)	185	Chi= 37.6 df=4 p=0.000
	36-55	13(13.26)	58(59.18)	27(27.55)	98	
	56& above	3(6.52)	28(60.86)	15(32.80)	46	

(Figures in brackets indicate respective percentage)

The table shows that, most of the Islamic scholars are familiar with almost all types of Islamic electronic resources. It can be observed from the table that, there is an inverse relationship between age and use of Islamic e-resources, i.e as the age increases the use of e-resources decreases. In the case of Islamic CDs/DVDs, around 95 per cent are familiar, but around 20 per cent are using it presently. In the case of Islamic websites/ portals, a good number of all categories of Islamic scholars are using, where as in the case of blogs, even the use among youngsters are around 50 per cent and the others are very low.

It is also noted that, use of e-journals by young and middle aged scholars are moderate, while it is very less among aged scholars. But in the case of e-books their use is very poor among all categories. In the case of online madrasa and online universities, their usage is same. It is 18.34 per cent, 10.20 per cent and 4.34 per cent among young, middle aged and aged scholars respectively. In the case of digital libraries, the users come around one fourth of scholars. It is very interesting that, even though general social networking sites are very popular among this group, the uses of Islamic social networks are very low (below 10 per cent).

Chi-square test was executed to identify the association between age and familiarity and use of e-resources. As per the result, it is inferred that, in the case of database and Islamic social networks there is no association with the age of Islamic scholars. In the case of other e-resources, there exists an association with age of Islamic scholars.

Table: 37

Familiarity and use of Islamic E-resources - Education wise

Islamic E-resources	Modes of education	Familiar & using	Familiar But not using	Unfamiliar	Total sample	Chi-Square Value
1. Islamic CD/DVD	Formal	36(16.51)	171(78.44)	11(5.04)	218	Chi= 8.98 df=4 p=0.062
	Informal	10(41.66)	13(54.16)	1(4.16)	24	
	Hybrid	18(20.68)	64(73.56)	5(5.74)	87	
2. Islamic web sites/ portals	Formal	176(80.73)	22(10.09)	20(20.17)	218	Chi= 13.9 df=4 p=0.008
	Informal	16(66.66)	0(0)	8(33.33)	24	
	Hybrid	69(79.31)	8(9.19)	10(11.49)	87	
3. Islamic Blogs	Formal	92(42.20)	81(37.15)	45(20.64)	218	Chi= 7.93 df=4 p=0.094
	Informal	4(16.66)	11(45.83)	9(37.5)	24	
	Hybrid	35(40.22)	28(32.18)	24(27.58)	87	
4. Islamic E-journals	Formal	115(52.75)	59(27.06)	44(20.08)	218	Chi= 13.3 df=4 p=0.010
	Informal	10(41.66)	3(12.5)	11(45.83)	24	
	Hybrid	33(37.93)	31(35.63)	23(26.43)	87	
5. Islamic E-books	Formal	38(17.43)	96(44.03)	84(38.53)	218	Chi= 15.1 df=4 p=0.004
	Informal	4(16.66)	8(33.33)	12(50)	24	
	Hybrid	5(5.74)	29(33.33)	53(60.91)	87	
6. Online Madrassa	Formal	40(18.34)	94(43.11)	84(38.53)	218	Chi= 17.7 df=4 p=0.001
	Informal	1(4.16)	7(29.16)	16(66.66)	24	
	Hybrid	5(5.74)	32(36.78)	50(57.47)	87	
7. Online Islamic University	Formal	41(18.0)	84(38.53)	93(42.66)	218	Chi= 13.4 df=4 p=0.009
	Informal	2(8.33)	9(37.5)	13(54.16)	24	
	Hybrid	3(3.44)	37(42.52)	47(54.02)	87	

Islamic E-resources	Modes of education	Familiar & using	Familiar But not using	Unfamiliar	Total sample	Chi-Square Value
8. Digital libraries	Formal	60(27.52)	102(46.78)	56(25.68)	218	Chi= 7.36 df=4 p=0.118
	Informal	5(20.83)	9(37.5)	10(41.66)	24	
	Hybrid	14(16.09)	42(48.27)	31(35.63)	87	
9. Databases	Formal	85(38.99)	62(28.44)	71(32.56)	218	Chi= 12.7 df=4 p=0.013
	Informal	4(16.66)	8(33.33)	12(50)	24	
	Hybrid	20(22.98)	24(27.58)	43(49.42)	87	
10. Social networks	Formal	17(7.79)	48(22.01)	153(70.18)	218	Chi= 5.45 df=4 p=0.244
	Informal	2(8.33)	9(37.5)	13(54.16)	24	
	Hybrid	7(8.04)	28(32.18)	52(59.77)	87	
11. Quran reading pen	Formal	72(33.02)	104(47.70)	42(19.26)	218	Chi= 9.26 df=4 p=0.055
	Informal	5(20.83)	9(37.5)	10(41.66)	24	
	Hybrid	24(27.58)	36(41.37)	27(31.03)	87	
12. Islamic Videos in YouTube	Formal	149(68.34)	46(21.10)	23(10.55)	218	Chi= 17.8 df=4 p=0.001
	Informal	9(37.5)	6(25)	9(37.5)	24	
	Hybrid	47(54.02)	22(25.28)	18(20.68)	87	
13. Islamic radio	Formal	85(38.99)	92(42.20)	41(18.80)	218	Chi= 21.0 df=4 p=0.000
	Informal	2(8.33)	9(37.5)	13(54.16)	24	
	Hybrid	22(25.28)	41(47.12)	24(27.58)	87	
14. Islamic TV	Formal	69(31.65)	118(54.12)	31(14.22)	218	Chi= 36.9 df=4 p=0.000
	Informal	2(8.33)	7(29.16)	15(62.5)	24	
	Hybrid	16(18.39)	53(60.91)	18(20.68)	87	

(Figures in brackets indicate respective percentage)

As per the education wise analysis given in the above table, it is understood that familiarity and use of Islamic e-resources are high among formal group, 'hybrid' group and it is not so good among informal group. It is very interesting that, even though 95 per cent of scholars from all groups are familiar with CDs/DVDs, their use is very less.

In short the trend in the above table with regard to education of Islamic scholars is that, the use is high among formal group followed by 'hybrid' and 'informal' groups. The highly used Islamic e-resource is Islamic website/portal, i.e 80.73 per cent, 66.66 per cent and 79.31 per cent among formal, informal and hybrid group respectively. While the lowest used e-resources is different among this sub groups, i.e the lowest used e-resource among formal group is Islamic Social networks with the use of 7.79 per cent and in the case of informal group and 'hybrid' group, it is online madrassa with the use of 4.16 per cent and 5.74 per cent respectively.

It can be inferred from the tables 36 and 37 that, Islamic e-resource have good usage among Islamic scholars of Kerala irrespective of their age and education. At the same time young scholars make use of e-resources in the education wise categorization followed by middle aged scholars and elder scholars. In the case of education wide categorization, those who have completed under formal stream are in the first position followed by hybrid group and informal group. It is also noted that use of CDs/DVDs are being decreased even though its usage is familiar among them. It shows

CDs and DVDs are being obsoleted. Islamic e-books and e-journals are not highly used by this group. In the case of online madrasa and online universities, majority of them are unaware of these resources, but few among them are using it presently. Another interesting finding is that even though most of them are aware and using general social networks, most of them are unaware of exclusive Islamic social networks.

As per the chi-square test result, in the case of digital libraries, Islamic social networks, Islamic blogs and CD/DVD there is no association with mode of education of Islamic scholars. But in the case of other resources the mode of education and use are significantly associated.

5.6.1 Access places of electronic resources

Electronic resources can be accessed from different places such as – from home by using own desktop/laptop, by other smart devices such as ipad, tablet etc., from college libraries, mosque libraries etc. Islamic scholars have been asked to convey their answers regarding this by giving four options before them in the questionnaire.

The results are given presented in the table 38 and 39 age wise and education wise respectively.

Table: 38**Access points of electronic resources by Islamic scholars- age wise**

Age groups	Access places				Total sample
	Own Desktop /laptop	Other smart device	College Libraries	Mosque libraries	
18-35	100(56.49)	79(44.63)	50(28.24)	2(1.12)	177
36-55	64(94.11)	41(60.23)	11(16.17)	0(0)	68
56& above	10(37.03)	20(74.07)	10(37.03)	0(0)	27
Aggregate	174(63.97)	140(51.47)	71(26.10)	2(.73)	272

(Figures in brackets indicate respective percentage)

As per the data of table 38, majority of middle aged Islamic scholars (94.11 per cent) use desktops/laptops for accessing electronic resources and a good number of (56.49 per cent) young scholars use the same devices for accessing e-resources. Use of other smart devices than laptops are also used moderately. But dependency of mosque libraries are very low among scholars and it is hardly seen among middle aged and elder scholars.

Table: 39**Access points of electronic resources by Islamic scholars- education wise**

Modes of Education	Access places				Total sample
	Own Desktop /laptop	Other smart device	College Libraries	Mosque libraries	
Formal	113(59.78)	100(52.91)	44(23.28)	0(0)	189
Informal	15(100)	2(20)	2(13.33)	2(13.33)	15
Hybrid	46(67.64)	37(54.41)	25(36.76)	0(0)	68
Aggregate	174(63.97)	140(51.47)	71(26.10)	2(.73)	272

(Figures in brackets indicate respective percentage)

The education wise analysis conveys that, cent per cent of informal scholars use desktop/laptops for accessing e-resources. While it is moderate among the other two groups. Use of the other smart devices among formal and ‘hybrid’ group are moderate, while it is very less (20 per cent) among informal group. It is also noted that mosque libraries are used only by informal group and it is hardly seen such practice among formal and ‘hybrid’ groups.

The overall analysis result of tables 38 and 39 convey that, dependency of desktops/laptops are in the first position with 63.97 per cent followed by other smart devices than laptop and college libraries. The utilization of mosque libraries for the access of e-resources is very poor.

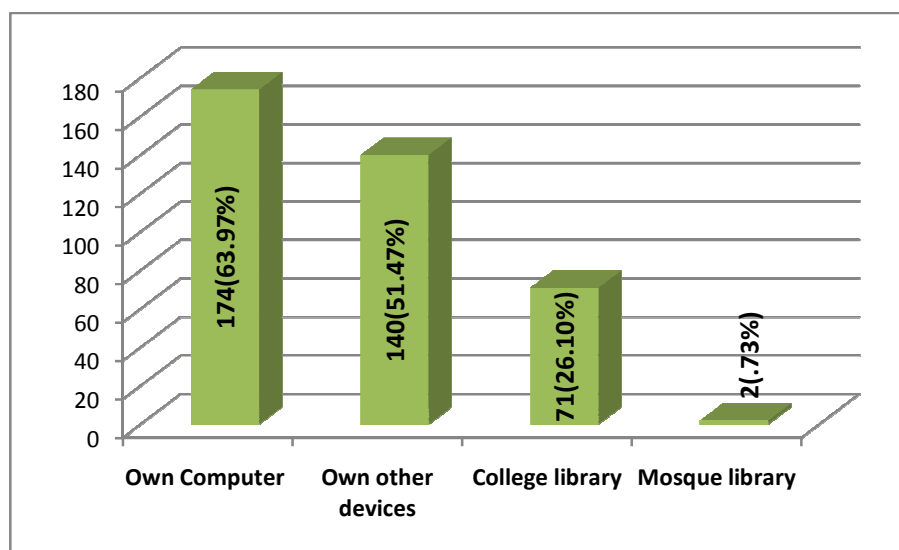


Figure: 27

Access points of electronic resources by Islamic scholars

When we analyse the results of 38 and 39 and figure 27 regarding access points of printed resources by Islamic scholars, college libraries and own collection were in the first and second position with the use of 77.25 per cent and 67.60 per cent respectively. In the case of e-resource, the first and second positions goes to own desktop/laptop and other smart devices.

5.6.2 Frequency of use of Islamic e- resources

Frequency of use of resources vary from person to person and profession to profession whether it is printed or electronic. Article writers use it as and when they need, Friday kutubap reacher use it once in a week and so on. Here it is tried to find out the frequency of use of electronic resources among Islamic scholars of Kerala. Four options have been given before them; viz. daily, once in week, two or three times per week and as and when needed.

Tables 40 and 41 represent the description age wise and education wise respectively.

Table: 40

Frequency of use E-resource - age wise.

Age groups	Frequency				Total sample	Chi-Square Value
	Daily	Once in week	2/3 times in week	As & when needed		
18-35	80(45.19)	2(1.12)	4(2.25)	91(51.41)	177	Chi-square = 5.99 df = 4 p = 0.200
36-55	5(22.05)	1(1.47)	1(1.47)	51(75)	68	
56& above	6(22.22)	0(0)	2(7.40)	19(70.37)	27	
Aggregate	101(37.1)	3(1.10)	7(2.57)	161(59.19)	272	

(Figures in brackets indicate respective percentage)

Table: 41

Frequency of use electronic resource - education wise.

Mode of education	Frequency				Total sample	Chi-Square Value
	Daily	Once in week	2/3 times in week	As & when needed		
Formal	73(38.62)	2(1.05)	4(2.11)	110(58.20)	177	Chi-square = 2.07 df = 4 p = 0.722
Informal	4(26.66)	0(0)	1(6.66)	10(66.66)	68	
Hybrid	24(35.29)	1(1.47)	2(2.94)	41(60.29)	27	
Aggregate	101(37.1)	3(1.10)	7(2.57)	161(59.19)	272	

(Figures in brackets indicate respective percentage)

Tables 40 articulates that, irrespective of age group, majority of Islamic scholars use Islamic e-resources as and when needed, followed by the option daily, two/three times per week and lastly once in a week. It can be seen that, daily users belong to young and middle aged categories are more or less same. Data from table 41 indicates that majority scholars of formal, informal and hybrid group prefer to use e-resources as and when needed with the per cent of 58.2, 66.66 and 60.29 respectively. It is also noted that, a good number from all groups use e-resource daily.

The chi-square test results of table 40 and 41 depict the significant relation between frequency of use of electronic resources and age and mode of education of Islamic scholars. It is found that there are no significant differences between the variables.

The following figure represents the core of the above two tables very clearly.

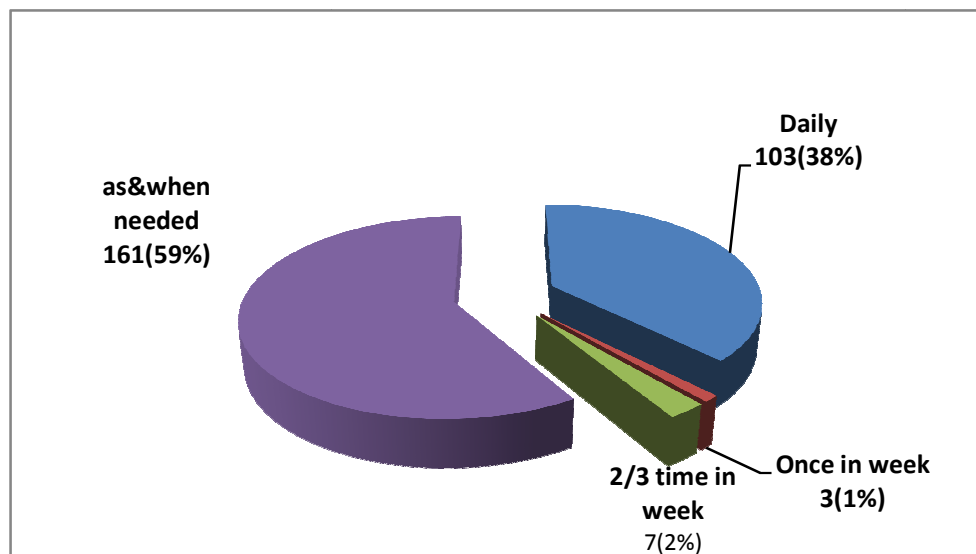


Figure: 28
Frequency of use of e-resources

The overall analysis of tables 40 and 41 and figure 28 convey that majority of the respondents use Islamic e-resource as and when needed with the per cent of 59.19 followed by daily with the per cent of 37.13. The same result is seen in the use of printed resource (first to ‘as and when’ and second ‘daily’) which is mentioned in the tables 40 and 41. The response to the other two options are seen very less.

5.6.3 Islamic application (app) usage

Presently smart phone is a common device not only among educated people but also among laymen. Mobile apps are application software for execution of various tasks. Here the investigator tried to get the data about the use of mobile apps from those who use smart phone (304) among the total sample.

The results are shown in the following two tables.

Table:42

Islamic app usage - age wise

Age	Opinions		Sample Total	Chi-square = 26.8 df = 2 p = 0.000
	Yes	No		
	Frequency & %	Frequency & %		
18-35	160(90.90)	16(9.09)	176	
36-55	69(76.66)	21(23.34)	90	
56& above	22(57.89)	16(42.11)	38	
Aggregate	251(82.56)	53(17.44)	304	

(Figures in brackets indicate respective percentage)

Table: 43

Islamic app usage - education wise

Mode of education	Opinions		Sample Total	Chi-square = 9.48 df = 2 p = 0.009
	Yes	No		
	Frequency & %	Frequency & %		
Formal	178(83.17)	26(16.83)	204	
Informal	14(73.68)	5(26.32)	19	
Hybrid	59(72.83)	22(27.17)	81	
Aggregate	251(82.56)	53(17.44)	304	

(Figures in brackets indicate respective percentage)

Irrespective of age and education, the usage of Islamic app is given in the following figure.

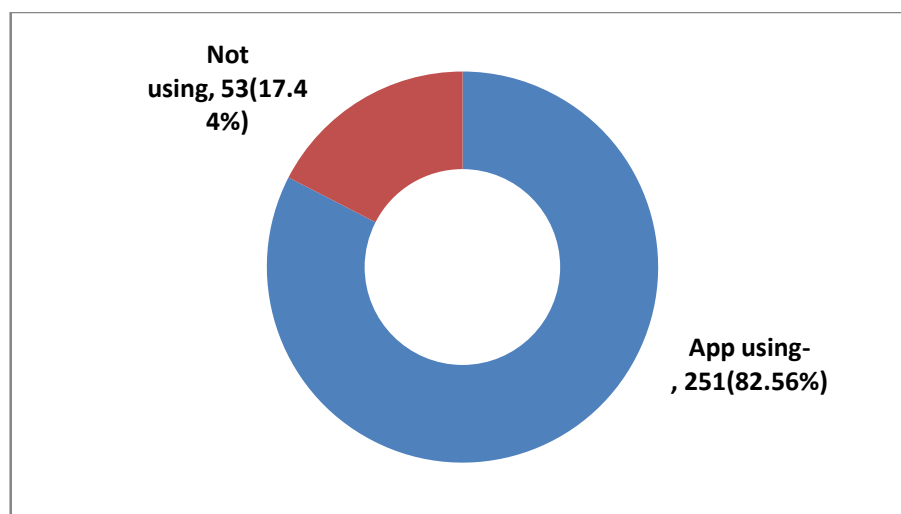


Figure: 29
Islamic app usage by Islamic scholars

Analysis of data presented in both tables 42 & 43 and figure 29 show that, out of the total sample population those who use smart phone (304), majority(82.56 per cent) are using at least one of the Islamic apps. When age wise analysis is done as per table data 42, it is found that young scholars are in the fore front in using apps with 90.90 per cent, followed by middle aged scholars with 76.66 per cent and lastly the elder scholars with 57.89 per cent.

When education wise analysis is done as per table data 43, it is clear that, Islamic scholars who completed formal education system are in the first position (83.17 per cent) followed by informal group (73.68 per cent) and lastly 'hybrid' group (72.83 Per cent) in using Islamic apps.

As per the chi-square test results of tables 42 and 43, there is an association between age and mode of education of Islamic scholars and their usage of mobile applications.

5.6.3.1 Familiarity and use of Islamic mobile apps

Here the investigator tried to get clear picture of Islamic app usage among Islamic scholars. It has been given three options before the scholars, viz. 1. Not familiar, 2. Familiar but not using presently and 3. Familiar and using presently. The following two tables represent the answers clearly and briefly.

Table: 44
Familiarity and use of Islamic apps - age wise

Apps	Age	Familiar & using	Familiar But not using	Unfamiliar	Total sample
1. Quran app	18-35	159(85.94)	10(5.40)	16(8.64)	185
	36-55	65(66.32)	11(11.22)	22(22.44)	98
	56& above	28(60.86)	1(3.57)	17(36.95)	46
2. Quran translation app	18-35	129(70.87)	31(16.75)	25(13.51)	185
	36-55	57(58.16)	18(18.36)	23(23.46)	98
	56& above	20(43.47)	7(15.21)	19(41.30)	46
3. Quran thafseer app	18-35	123(66.48)	35(18.91)	27(14.59)	185
	36-55	45(45.91)	30(30.61)	23(23.46)	98
	56& above	21(45.65)	7(15.21)	18(39.13)	46
4. Thajveed app	18-35	62(33.51)	87(47.02)	36(19.45)	185
	36-55	18(18.36)	48(48.97)	32(32.65)	98
	56& above	10(21.73)	15(32.60)	21(45.65)	46
5. Hadith app	18-35	87(47.02)	65(35.13)	33(17.83)	185
	36-55	42(42.85)	30(30.61)	26(26.53)	98
	56& above	20(43.47)	6(13.04)	18(39.13)	46
6. Hijra calendar app	18-35	73(39.45)	81(43.78)	31(16.75)	185
	36-55	26(26.53)	39(39.79)	33(33.67)	98
	56& above	11(23.91)	5(10.86)	30(65.21)	46
7. Dua app	18-35	104(56.21)	51(27.56)	30(16.21)	185
	36-55	35(35.71)	36(36.73)	27(27.55)	98
	56& above	15(32.60)	8(17.39)	23(50)	46

Apps	Age	Familiar & using	Familiar But not using	Unfamiliar	Total sample
8. Muslim name app	18-35	60(32.43)	81(43.78)	44(23.78)	185
	36-55	10(10.20)	53(54.08)	35(35.71)	98
	56& above	3(6.52)	20(43.47)	23(50)	46
9. Namaz app	18-35	32(17.29)	112(60.54)	41(22.16)	185
	36-55	10(10.20)	54(55.10)	34(34.69)	98
	56& above	3(6.52)	20(43.47)	23(50)	46
10. Qibla finding app	18-35	98(52.97)	64(34.59)	23(12.43)	185
	36-55	28(28.53)	41(41.83)	29(29.59)	98
	56& above	16(34.78)	7(15.21)	23(50)	46
11. Azan time app	18-35	90(48.64)	68(36.75)	27(14.59)	185
	36-55	29(29.59)	38(38.77)	31(31.63)	98
	56& above	17(36.95)	11(23.91)	18(39.13)	46
12. Zakat calculator app	18-35	34(18.37)	106(57.29)	45(24.32)	185
	36-55	9(9.18)	49(50)	40(40.81)	98
	56& above	5(10.86)	18(39.13)	23(50)	46
13. Inheritance calculating app	18-35	23(12.43)	124(67.02)	38(20.54)	185
	36-55	21(21.42)	46(46.93)	31(31.63)	98
	56& above	4(8.69)	7(15.21)	35(76.08)	46

(Figures in brackets indicate respective percentage)

The overall trend of the above table is that, most of the Islamic scholars are well versed with different mobile apps and a good number of

them are using it. When age wise analysis is done, it is found that young scholars (18-35) are in first position followed by middle aged scholars (36-55) and lastly the elder (56& above) scholars in the usage of different Islamic mobile apps.

Familiarity(familiar but not using + familiar and using) of young scholars towards different Islamic mobile apps are as follows- Quran app 91.36 per cent, Quran translations 86.49 per cent, Quran Tafseer 85.41 per cent, Thajveed app 80.55 per cent, Hadith app 82.17 per cent, Islamic calendar app with 83.25 per cent, Dua apps 83.79 per cent, Muslim name apps 76.22 per cent, Namaz app 77.84 per cent, Qibla finding app 87.57 per cent, Azan time app 85.41 per cent, Zakat app 76.58 per cent and Inheritance calculating app 79.46 per cent.

Familiarity(familiar but not using + familiar and using) of middle aged scholars towards different Islamic mobile apps are as follows- Quran app 77.56 per cent, Quran translations 76.54 per cent, Quran Tafseer 76.54 per cent, Thajveed app 67.35 per cent, Hadith app 73.47 per cent, Islamic calendar app 66.33 per cent, Dua apps 72.45 per cent, Muslim name apps 64.29 per cent, Namaz app 65.31 per cent, Qibla finding app 70.41 per cent, Azan time app 68.37 per cent, Zakat app 59.19 per cent and Inheritance calculating app 68.37 per cent.

Familiarity(familiar but not using + familiar and using) of elder scholars towards different Islamic mobile apps are as follows - Quran app (63.05), Quran translations (58.70), Quran Tafseer (60.87), Thajveed

app(54.35), hadith app(60.87), Islamic calendar app (34.79), Dua apps (50), Muslim name apps (50), Namaz app(50), Qibla finding app (50), Azan time app(60.87), Zakat app(50) and Inheritance calculating app(23.92).

It is found that, most familiar app by all group of scholars is Quran app, while least familiar apps used by young and elder scholars are inheritance calculator app, but in the case of middle aged scholars, it is Zakat calculating app. Same results are seen in the case of use of these apps, ie Quran app is the most used one and inheritance calculator app is the least used one.

The following table depicts the brief details on the basis of mode of education.

Table: 45

Familiarity and use of Islamic apps - education wise.

Apps	Education	Familiar & using	Familiar But not using	Unfamiliar	Total sample
1. Quran app	Formal	177(81.19)	15(6.88)	26(11.92)	218
	Informal	15(62.5)	3(12.5)	6(25)	24
	Hybrid	60(68.96)	4(4.59)	23(26.43)	87
2. Quran translation app	Formal	148(68.83)	36(16.51)	34(15.59)	218
	Informal	10(41.66)	5(20.83)	9(37.5)	24
	Hybrid	48(57.14)	15(17.24)	24(27.58)	87

Apps	Education	Familiar & using	Familiar But not using	Unfamiliar	Total sample
3. Quran thafseer app	Formal	134(61.46)	52(23.85)	34(15.59)	218
	Informal	9(37.5)	6(25)	8(33.33)	24
	Hybrid	46(52.87)	14(16.09)	26(29.88)	87
4. Thajveed app	Formal	59(27.06)	107(49.08)	52(23.85)	218
	Informal	5(20.83)	9(37.5)	10(41.66)	24
	Hybrid	26(29.88)	34(39.08)	27(31.03)	87
5. Hadith app	Formal	97(44.49)	79(36.23)	42(19.26)	218
	Informal	8(33.33)	5(20.83)	11(45.83)	24
	Hybrid	45(51.72)	18(20.68)	24(27.58)	87
6. Hijra Calendar app	Formal	86(39.44)	81(37.15)	51(23.39)	218
	Informal	4(16.66)	6(25)	14(58.33)	24
	Hybrid	20(22.98)	38(43.67)	29(33.33)	87
7. Dua app	Formal	112(51.37)	66(30.27)	40(18.34)	218
	Informal	6(25)	8(33.33)	10(41.66)	24
	Hybrid	36(41.37)	21(24.13)	30(34.48)	87
8. Muslim name app	Formal	60(27.52)	106(48.62)	52(23.88)	218
	Informal	4(16.66)	6(25)	14(58.33)	24
	Hybrid	9(10.34)	42(48.27)	36(58.33)	87
9. Namaz app	Formal	36(16.51)	134(61.6)	48(22.01)	218
	Informal	2(8.33)	8(33.33)	14(58.33)	24
	Hybrid	7(8.04)	44(50.57)	36(41.37)	87
10. Qibla finding app	Formal	97(44.49)	85(38.99)	36(16.51)	218
	Informal	7(29.16)	6(25)	11(45.83)	24
	Hybrid	38(43.67)	21(24.13)	28(32.18)	87
11. Azan time app	Formal	90(41.28)	90(41.28)	41(18.80)	218
	Informal	10(41.66)	10(41.66)	11(45.83)	24
	Hybrid	36(41.37)	36(41.37)	24(27.58)	87
12. Zakat calculator app	Formal	37(16.97)	123(56.42)	58(26.60)	218
	Informal	1(4.16)	8(33.33)	15(62.5)	24
	Hybrid	10(11.49)	42(48.27)	35(40.22)	87
13. Inheritance calculating app	Formal	30(13.76)	134(61.46)	54(24.77)	218
	Informal	3(12.5)	6(25)	15(62.5)	24
	Hybrid	15(17.24)	37(42.52)	35(40.22)	87

(Figures in brackets indicate respective percentage)

When education wise analysis is done, it is found that formal scholars are in the first position followed by hybrid and lastly informal scholars in the usage of different Islamic mobile apps.

Familiarity (familiar but not using + familiar and using) of formal group towards different Islamic mobile apps are as follows- Quran app 88.08 per cent, Quran translations 84.41 per cent, Quran Tafseer 84.41 per cent, Thajveed app 76.15 per cent, Hadith app 80.74 per cent, Islamic calendar app with 76.61 per cent, Dua apps 81.66 per cent, Muslim name apps 76.12 per cent, Namaz app 77.99 per cent, Qibla finding app 83.49 per cent, Azan time app 81.19 per cent, Zakat app 73.40 per cent and Inheritance finding app (75.23).

Familiarity (familiar but not using + familiar and using) of informal scholars towards different Islamic mobile apps are as follows; Quran app - 75 per cent, Quran translations -62.5 per cent, Quran Tafseer - 66.66 per cent, Thajveed app -58.34 per cent, Hadith app -54.17 per cent, Islamic calendar app - 41.67 per cent, Dua apps - 57.34 per cent, Muslim name apps - 41.67 per cent, Namaz app -41.67 per cent, Qibla finding app - 54.17 per cent, Azan time app -54.17 per cent, Zakat app -37.5 per cent and Inheritance finding app -37.5 per cent.

Familiarity (familiar but not using + familiar and using) of 'hybrid' scholars towards different Islamic mobile apps are as follows; Quran app - 73.57 per cent, Quran translations - 72.42 per cent, Quran Tafseer - 70.12 per cent, Thajveed app -68.97 per cent, Hadith app -72.42 per cent, Islamic

calendar app - 66.66 per cent, Dua apps - 65.52 per cent, Muslim name apps 41.67 per cent, Namaz app 58.63 per cent, Qibla finding app - 67.82 per cent, Azan time app - 72.42 per cent, Zakat app- 59.78 per cent and Inheritance finding app- 59.78 per cent.

The familiarity (familiar but not using + familiar and using) of different Islamic mobile apps by Islamic scholars are as follows ; Quran app 86.32 per cent, Quran translations - 79.63 per cent, Quran Tafseer – 79.33 per cent, Thajveed app – 72.94 per cent, Hadith app – 75.98 per cent, Islamic calendar app -71.42 cent, dua apps – 75.68 per cent, Muslim name apps – 68.99 per cent, Namaz app – 70.31 per cent, Qibla finding app – 77.20 per cent, Azan time app – 76.89 per cent, Zakat app - 67.16 per cent and Inheritance finding app – 68.38 per cent.

The usage of different Islamic mobile apps by Islamic scholars are as follows ; Quran app 76.59 per cent, Quran translations 62.61 per cent, Quran Tafseer - 57.44 per cent, Thajveed app - 27.35 per cent, Hadith app - 45.70 per cent, Islamic calendar app -33.43 per cent, Dua apps - 83.79 per cent, Muslim name apps - 76.22 per cent, Namaz app - 77.84 per cent, Qibla finding app - 87.57 per cent, azan time app - 85.41 per cent, Zakat app - 76.58 per cent and Inheritance finding app - 79.46 per cent.

It is found that, most familiar app by all group of scholars is Quran app, while least familiar apps by formal group is Zakat calculator app, among informal group the least used apps are Zakat calculator and inheritance calculator, but in the case of hybrid group, the least used is Muslim name apps.

5.6.4 Influence of use of e-resources

Electronic resources have some additional unique features and benefits than print resources. They are - ease of use, save time, save money, ease of searching and procurement etc. Here the investigator tried to collect the benefits experienced by Islamic scholars through questionnaire. The results are given below two tables (table 46 & 47).

Table: 46

Influence of e-resource - age wise.

Age	Benefits				Total sample
	Ease of use	Save time	Easy access & preservation	Cost effective	
18-35	109(61.58)	101(57.06)	97(54.80)	89(50.28)	177
36-55	60(88.23)	56(82.35)	41(60.29)	51(75)	68
56 & above	20 (74.07)	24(88.88)	17(62.96)	23(85.18)	27
Aggregate	189(69.48)	181(66.54)	155(56.98)	163(59.92)	272

(Figures in brackets indicate respective percentage)

Table: 47**Influence of e-resource - education wise.**

Mode of education	Benefits				Total sample
	Ease of use	Save time	Easy access & preservation	Cost effective	
Formal	129(68.25)	116(61.37)	100(52.91)	111(58.73)	189
Informal	14(93.33)	12(80)	6(40)	8(53.33)	15
Hybrid	46(67.64)	53(77.94)	49(72.05)	44(64.70)	68
Aggregate	189(69.48)	181(66.54)	155(56.98)	163(59.92)	272

(Figures in brackets indicate respective percentage)

As per the overall results, majority of scholars agree that, the use of e-resources helped them with ease of usage of resource (69.48 per cent), could save their time (66.54 per cent), collection and procurement of their respective resources made easy (56.98 per cent) and could save their money (59.92 per cent).

When age wise analysis is done as indicated in table 46, it is found that most experienced benefit of e-resource for young scholars and middle aged scholars is 'ease of use' with the responses of 61.58 per cent and 88.23 per cent respectively. While the highest response of elder scholars is towards saving of time (88.88 per cent). The lowest response of all groups is ease of collection and procurement.

5.6.5 Change of usage of conventional resources after ICT revolution

The investigator assessed the sample population through questionnaire for getting the opinion on change of use of conventional resources by Islamic scholars after the ICT revolution. There were three options before them, i.e. increased, decreased and no change. The results are given in table 48 and 49.

Table: 48

Change of usage of conventional resources after ICT revolution - age wise.

Age	Changes			Total sample
	Increased	Decreased	No change	
18-35	18(9.72)	105(56.75)	62(33.51)	185
36-55	5(5.10)	30(30.61)	63(64.28)	98
56 & above	2(4.34)	13(28.26)	31(67.39)	46
Aggregate	25(7.59)	148(44.98)	156(47.41)	329

(Figures in brackets indicate respective percentage)

Table: 49

**Change of usage of conventional resources after ICT revolution -
education wise**

Mode of education	Changes			Total sample
	Increased	Decreased	No change	
Formal	19(8.71)	115(52.75)	84(38.53)	218
Informal	1(4.16)	9(37.5)	14(58.33)	24
Hybrid	5(5.74)	24(27.58)	58(66.66)	87
Aggregate	25(7.59)	148(44.98)	156(47.41)	329

(Figures in brackets indicate respective percentage)

The overall data in tables 48 and 49 reveal that, ICT revolution has affected Islamic scholars greatly in the usage of conventional resources. A good number of them (44.98 per cent) opined that it has caused to decrease the use of conventional resource. Almost same number of scholars (47.41 per cent) opined that ICT neither affected to increase nor decrease the conventional use. A few among them opined that it has caused to increase their conventional resource use.

When age wise analysis is done, it is found that in the case of young scholars, majority (56.7 per cent) opined that, ICT revolution has decreased their conventional resource usage. In the case of middle aged and elder scholars, majority opined that, ICT could not make any change in their use of conventional resources. Their responses towards 'no change' are 58.33 per cent and 66.66 per cent respectively.

When education wise analysis is done, in the case of formal group, a good number (52.75 per cent) opined the ICT influence made their conventional usage decreased. While opinion of informal and ‘hybrid’ group are quite different from the former group. Majority of these groups opined ICT could not affect their conventional resource usage.

5.6.6 Satisfaction level of Islamic scholars towards conventional print resource

Satisfaction is a relative term, which may vary person to person group to group. Here satisfaction level of Islamic scholars towards conventional print resource has been studied. Data were examined by using four point scale of satisfaction. The results are given in the following two tables (50 & 51).

Table: 50

Satisfaction level of Islamic scholars (age wise) towards print resources

Age	Satisfaction level				Sample total
	Extremely satisfied	Very satisfied	Moderately satisfied	Not satisfied	
18-35	101(55.49)	80(43.95)	1(1.54)	0(0.00)	182
36-55	58(61.05)	34(35.78)	3(3.15)	0(0.00)	95
56 & above	23(52.27)	19(43.18)	2(4.54)	0(0.00)	44
Aggregate	182(56.69)	133(41.43)	6(1.86)	0(0.00)	321*

**Refer page No.180, table 29. (Figures in brackets indicate respective percentage)*

As far as satisfaction level of respondents (age wise) towards the use of print resources is concerned, none of the scholar opined dissatisfaction

in using print resources. But some sort of variation in satisfaction has been identified. Majority of the scholars reported that they are extremely satisfied (youngsters- 55.49 per cent, middle aged scholar- 61.05 per cent and elder scholars- 52.27 percent) followed by very satisfied (youngsters- 43.95 per cent, middle aged scholar- 35.78 per cent and elder scholars- 43.18 percent) and lastly moderately satisfied.

Table: 51

Satisfaction level of Islamic scholars (education wise) towards print resources

Education	Satisfaction level				Sample total
	Extremely satisfied	Very satisfied	Moderately satisfied	Not satisfied	
Formal	120(56.33)	90(42.25)	3(1.40)	0(0.00)	213
Informal	12(52.54)	10(45.45)	0(0)	0(0.00)	22
Hybrid	50(58.13)	33(38.37)	3(3.48)	0(0.00)	86
Aggregate	182(56.69)	133(41.43)	6(1.86)	0(0.00)	321

(Figures in brackets indicate respective percentage)

As far as satisfaction level of respondents (education wise) towards the use of printed resources is concerned, all of the respondents are satisfied and none of them are dissatisfied, but satisfaction level varies from group to group. It is noted that above fifty per cent are extremely satisfied (formal group- 56.33 per cent, informal group - 52.54 per cent and hybrid group - 58.13 percent) followed by very satisfied (formal- 42.25 per

cent, informal -45.45 per cent and hybrid group - 38.37 percent) and lastly moderately satisfied.

When an overall analysis is done on the basis of table 50 and 51, it can be understood that out of the total sample, 56.69 per cent are extremely satisfied, 41.43 per cent are very satisfied and only 1.86 per cent are moderately satisfied. So it can be inferred that around cent per cent of Islamic scholar are satisfied (extremely satisfied +very satisfied) with the use of print resources.

5.6.7 Satisfaction level of Islamic scholars towards e-resource.

As in the case of printed resources, satisfaction level of the Islamic scholars towards the use of e-resources has been taken for the study. It is also measured in four point scale. The results are given in the following two tables (52& 53).

Table: 52

Satisfaction level of Islamic scholars (age wise) towards e-resources

Age	Satisfaction level				Sample total
	Extremely satisfied	Very satisfied	Moderately satisfied	Not satisfied	
18-35	65(36.72)	99(55.93)	13(7.34)	0(0)	177
36-55	14(20.58)	31(45.58)	11(16.17)	12(17.64)	68
56 & above	7(25.92)	11(40.74)	5(18.51)	4(14.81)	27
Aggregate	86(31.61)	141(51.83)	29(10.66)	16(5.87)	272

(Figures in brackets indicate respective percentage)

As per the age wise analysis, it is found that cent per cent of young scholars (18-35) expressed their satisfaction towards e-resources and no

dissatisfaction is noted. When middle aged scholars (36-55) are taken, it is seen that 82.36 per cent are satisfied (extremely satisfied + very satisfied + moderately satisfied), while a few (17.64 Per cent) remarked their dissatisfaction towards e-resources.

Table: 53

Satisfaction level of Islamic scholars (education wise) towards e-resources

Education	Satisfaction level				Sample total
	Extremely satisfied	Very satisfied	Moderately satisfied	Not at satisfied	
Formal	57(30.15)	99(52.38)	21(11.11)	12(6.34)	189
Informal	3(20.00)	5(33.33)	4(26.66)	3(20.00)	15
Hybrid	26(38.23)	37(54.41)	4(5.88)	1(1.47)	68
Aggregate	86(31.61)	141(51.83)	29(10.66)	16(5.87)	272

(Figures in brackets indicate respective percentage)

As per the education wise analysis, satisfaction (extremely satisfied / very satisfied / moderately satisfied) and dissatisfaction responses are, in the case of formal scholars, it is 93.66 per cent are satisfied and 6.34 per cent are dissatisfied. In the case of informal group, 80 per cent are satisfied and 20 per cent are dissatisfied. In the case of 'hybrid group' it is 98.53 per cent and 1.47 percent respectively.

It can be inferred from the above two tables that, out of the e-resource users among Islamic scholars, 31.61 per cent are extremely

satisfied, 51.83 per cent are very satisfied, 10.66 per cent are moderately satisfied and 5.87 are not satisfied. It can be summed up that 94.12 per cent of Islamic scholars who use e-resources are satisfied and 5.87 per cent are dissatisfied with e-resources.

Weighted mean score of three age groups towards printed resources and electronic resources are calculated here. It is given in the following two tables (54 & 55) and figure 30.

Table: 54

Satisfaction level of Islamic scholars (age wise) towards printed and e-resources

Satisfaction level towards	Age	18-35	36-55	56 & above	Aggregate Mean
	Types of resource				
	Printed resources	3.54	3.57	3.47	3.52
	Electronic resources	3.29	2.69	2.67	2.88

Satisfaction level of different age groups of Islamic scholars shows that, all age groups are extremely satisfied with printed resources, where as in the case of electronic resources, youngsters (18-35) are extremely satisfied while the other two groups are very satisfied.

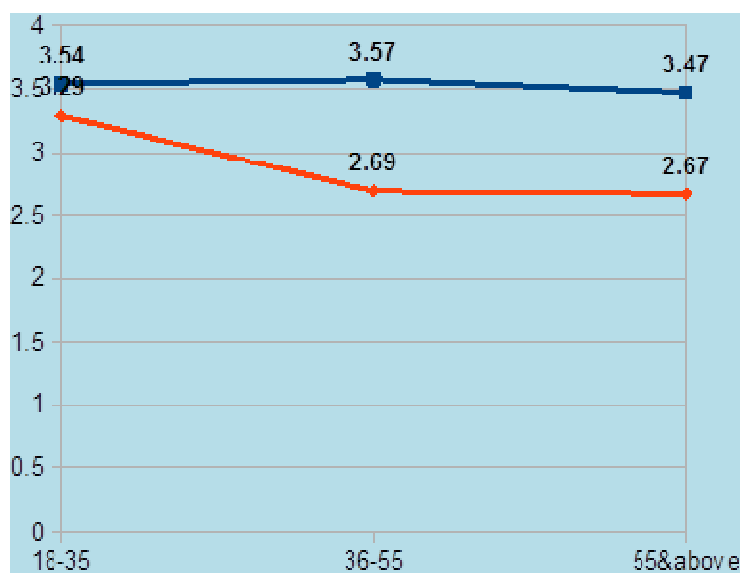


Figure: 30

Relationship between age and satisfaction level of Islamic scholars towards information resources

It can be stated from the above table and figure that, there is neither direct relationship nor inverse relationship between age and satisfaction level in the case of printed resources. It cannot be proved that as age increases the satisfaction level increase or decrease. The satisfaction level of 18-35 group is 3.54, while the satisfaction level of second age group 36-55 is 3.57. A slight increase is seen there. But it is seen as decreased as 3.47 in the case of elder (56& above) group.

In the case of electronic resources, an inverse relationship is seen between age and satisfaction level. It is seen as the age increases the satisfaction level decreases. The satisfaction level of 18-35 group is 3.29, 36-55 group - 2.69 and the 56& above - 2.67.

Satisfaction level of Islamic scholars (education wise) towards printed and e-resources is given in the table below.

Table: 55

Satisfaction level of Islamic scholars (education wise) towards printed and e-resources

Satisfaction level towards	Education				
	Types of resource	Formal	Informal	Hybrid	Aggregate Mean
	Printed resources	3.54	3.54	3.54	3.54
	Electronic resources	3.06	2.53	3.29	2.96

Satisfaction level of different groups based on their mode of education shows that, all groups are extremely satisfied with the printed resources, where as in the case of electronic resource, formal group and 'hybrid' group are extremely satisfied, while informal groups are very satisfied.

5.6.8 Rating of e-resources

Rating of electronic resources by Islamic scholars is studied by the investigator. It is studied by applying three point scales (excellent, good and poor) with regard to five features of e-resources, i.e. availability of

information, authenticity of information, stability of information, ease of use and economic benefits. It is briefly given in the following two tables (56 and 57).

Table: 56

Islamic scholars' rating of e-resources (age wise)

Features	Age	Rating			Total sample
		Excellent	Good	Poor	
1. Availability of Information	18-35	129(72.88)	43(24.29)	5(2.82)	177
	36-55	40(58.82)	19(27.94)	9(13.23)	68
	56& above	14(51.85)	10(37.03)	3(11.11)	27
	Average	61.18	29.75	9.05	
2. Authenticity of information	18-35	25(14.12)	110(62.14)	42(23.72)	177
	36-55	4(5.88)	43(63.23)	21(19.52)	68
	56& above	1(3.70)	17(62.96)	9(33.33)	27
	Average	7.90	62.77	25.52	
3. Stability of Information	18-35	26(14.68)	124(70.05)	27(15.25)	177
	36-55	8(11.76)	47(69.11)	13(19.11)	68
	56& above	2(7.40)	18(66.66)	7(25.92)	27
	Average	11.28	68.60	20.09	
4. Ease of use	18-35	132(74.57)	41(23.16)	4(2.25)	177
	36-55	46(67.64)	18(26.47)	4(5.88)	68
	56& above	15(55.55)	7(25.95)	5(18.51)	27
	Average	65.92	25.19	8.88	
5. Profitability	18-35	102(57.62)	59(33.33)	16(9.03)	177
	36-55	35(51.47)	28(41.17)	5(7.35)	68
	56& above	15(55.55)	6(22.22)	6(22.22)	27
	Average	54.88	32.24	12.86	

(Figures in brackets indicate respective percentage)

As far as rating on 'availability' is concerned, majority of scholars belong to all groups rated as excellent. Their rating is as follows – youngsters - 72.88 per cent, middle aged scholars 58.82 per cent and elders - 51.85 per cent. It is seen that age and excellency is inversely related. While 'good' rating is directly related with age, i.e. youngsters rated low and elders rated high. The rating of 'good' is as follows – youngsters-24.29 per cent, middle aged scholars - 27.94 per cent and elders - 37.03 per cent. In the case of poor rating, youngsters' is very low compared to the other two groups.

It is seen that, 'excellency' rating for authenticity is very less from all three groups. It is 14.12 per cent by youngsters, 5.88 per cent by middle aged scholars and 3.70 by elders. Majority of all groups rated 'good' for this feature. It is around 60 per cent from all groups. 'poor' rating of all groups are comparatively less.. It is – 23.72 per cent, 19.52 and 33.33 per cent by youngsters, middle aged scholars and elders respectively.

In the case of 'stability of information', 'good' rating stands in the first position from all groups. It is 70.05 per cent by young scholars, 69.11 per cent by middle aged scholars and 66.66 per cent by elder scholars. The second position gets 'poor; rating and last position to excellency.

It is found that, majority of all three groups rated excellent for 'ease of use' feature of e-resource. It is as follows- 74.57 per cent by youngsters, 67.64 by middle aged scholars and 55.55 per cent by elder scholars followed by 'good' and lastly 'poor' by all three groups. It is also noted that, 18.51 per cent of elder scholars rated use of e-resource is difficult.

From the table, it is clear that, above 50 per cent of all groups responded money saving feature of e-resource as excellent. It is 57.62 per cent, 51.47 per cent and 55.55 per cent by youngsters, middle aged scholars and elders respectively.

As per the overall analysis, the summary of the rating of Islamic scholars towards availability of information, authenticity of information, stability of information, ease of use and monetary benefits are as follows - ease of use is reported as the highest 'excellent' rating (65.92) feature, stability is reported as the highest 'good' rating (68.60) feature, and authenticity is reported as the highest 'poor' rating (25.52) feature of e-resources on the basis of age wise analysis.

Table: 57

Islamic scholars' rating of e-resources (education wise)

Features	Mode of education	Rating			Total sample
		Excellent	Good	Poor	
1. Availability of Information	Formal	132(69.84)	47(24.86)	10(5.29)	189
	Informal	6(40)	3(20)	6(40)	15
	Hybrid	45(66.17)	22(32.35)	1(1.47)	68
		58.67	25.73	15.58	
2. Authenticity of information	Formal	26(13.75)	123(65.07)	40(21.16)	189
	Informal	0(0.00)	9(60)	6(40)	15
	Hybrid	4(5.88)	38(55.88)	26(38.23)	68
	Average	6.54	60.31	33.13	

Features	Mode of education	Rating			Total sample
		Excellent	Good	Poor	
3. Stability of Information	Formal	25(13.22)	133(70.37)	31(16.40)	189
	Informal	2(13.33)	12(80)	1(6.66)	15
	Hybrid	9(13.23)	44(64.70)	15(22.02)	68
	Average	13.26	71.69	15.02	
4. Ease of use	Formal	136(71.95)	48(25.39)	5(2.64)	189
	Informal	9(60)	2(13.33)	4(26.66)	15
	Hybrid	48(70.58)	16(23.52)	4(5.86)	68
	Average	67.51	20.74	11.72	
5. Profitability	Formal	112(59.25)	61(32.27)	16(8.46)	189
	Informal	4(26.66)	6(40)	5(33.33)	15
	Hybrid	36(52.94)	26(38.23)	6(8.82)	68
	Average	46.28	36.83	16.87	

(Figures in brackets indicate respective percentage)

As far as 'excellent' rating is concerned, a good number of formal group (69.84 per cent) and 'hybrid group' (66.17 per cent) responded very positively. But excellent rating by informal group is only 40 per cent. The second rating is given to 'good' by all three groups. As far as informal group's rating is concerned, their rating to 'poor' is same as excellent, i.e. it is 40 per cent. It is also noted that 'poor' rating of 'hybrid group' is very low, it is only 1.47 per cent.

'Excellent' rating for authenticity feature from all three groups are found very low compared to other two ratings. It is noted that responses of informal group as 'excellent' to authenticity is zero. Majority from all groups (formal- 65.07 per cent, informal – 60 per cent and hybrid group – 55.88) rated as good in the case of authenticity.

In the case of stability of information, 'good' rating gets the first position from all three categories. It is 70.37 per cent by formal group, 80 per cent by informal group and 64.70 by hybrid group. The second highest rating was noticed 'poor' by formal and hybrid group. It is excellent among informal group and 'poor' rating is very less here compared to the other two groups.

It is found that a good number from all three groups rated 'excellent' for the feature of 'ease of use' of e-resource. It is - 71.95 per cent by formal group, 60 per cent by informal group and 70.58 per cent by hybrid group'. Around three fourth of formal (71.95 per cent) and 'hybrid group' (70.58 per cent) rated 'good' for ease of use. Around that much per cent belong to informal group rated ease of use feature as 'poor'.

It is also found from the table that, a good number from formal (59.25 per cent) and hybrid group (52.94 per cent) rated economic advantage of e-resource as excellent. The highest rating of informal group is found 'good' (40 per cent) followed by 'poor' (33.33 per cent). The poor rating by formal and hybrid group are found below 10 per cent.

5.6.9 Difficulty while using e-resources

E-resources are unlike conventional print resources. The usage may be difficult for some persons. Here the investigator tried to measure the number of scholars who face difficulties while using e-resources. The results are given in the following two tables (58 & 59).

Table: 58

Difficulty in e-resources usage (age wise).

Age	Opinion		Sample total
	Yes	No	
18-35	115(62.16)	70(37.84)	185
36-55	67(68.36)	31(31.64)	98
56 & above	34(73.91)	31(26.09)	46
Aggregate	216 (65.65)	113(34.35)	329

(Figures in brackets indicate respective percentage)

Table: 59

Difficulty in e-resources usage (education wise).

Mode of education	Opinion		Sample total
	Yes	No	
Formal	138(63.30)	80(36.70)	218
Informal	14(58.33)	10(41.67)	24
Hybrid	64(73.56)	23(26.44)	87
Aggregate	216(65.65)	113(34.35)	329

(Figures in brackets indicate respective percentage)

The overall data depict that; majority of respondents (65.65 per cent) opined that, they are having at least one of the problems while using e-resource. At the same time 36.70 per cent do not have problem in using the same. As per the age wise analysis it is seen that elder scholars feel more difficulty than young scholars. The per cent of difficulty of young scholars are seen as 63.30 per cent but it was 73.91 per cent to elder scholars. As per the education wise analysis, it is seen that the scholars from hybrid group is having more problem with e-resources usage.

5.6.9.1 Types of difficulties in e-resource usage

There are some unique difficulties with the use of e-resources, they are – lack of ICT knowledge and experience, lack of English knowledge, problem of abundance of information, power problem and lower speed. These problems among the study group have been analysed by the investigator through questionnaire with provision of multiple answers. The data are tabulated in table 60 (age-wise) and table 61 (education-wise).

Table: 60

Types of difficulties in using e-resources - age wise

Age	Difficulties					Total sample
	ICT inexperience	English language problem	Abundance of information	Power problem	Speed problem	
18-35	36(31.30)	19(16.52)	33(28.69)	34(29.56)	70(60.86)	115
36-55	43(64.17)	34(50.74)	23(34.32)	15(22.38)	21(31.34)	67
56 & above	30(88.23)	22(64.70)	12(35.29)	15(44.11)	17(50)	34
Aggregate	109(50.46)	75(34.72)	68(31.48)	64(29.62)	108(50.70)	216

(Figures in brackets indicate respective percentage. This is a multiple answer question)

Table: 61
Types difficulties in using e-resources - education wise

Age	Difficulties					Total sample
	ICT inexperience	English language problem	Abundance of information	Power problem	Speed problem	
Formal	56(40.57)	42(30.43)	42(30.43)	37(26.81)	72(52.17)	138
Informal	9(64.28)	5(35.71)	2(14.28)	0(0.00)	7(50)	14
Hybrid	44(68.75)	28(43.75)	24(37.50)	27(42.18)	29(45.31)	64
Aggregate	109(50.46)	75(34.72)	68(31.48)	64(29.62)	108(50.70)	216

(Figures in brackets indicate respective percentage. This is a multiple answer question)

The core of the above two tables has been represented diagrammatically in figure 31

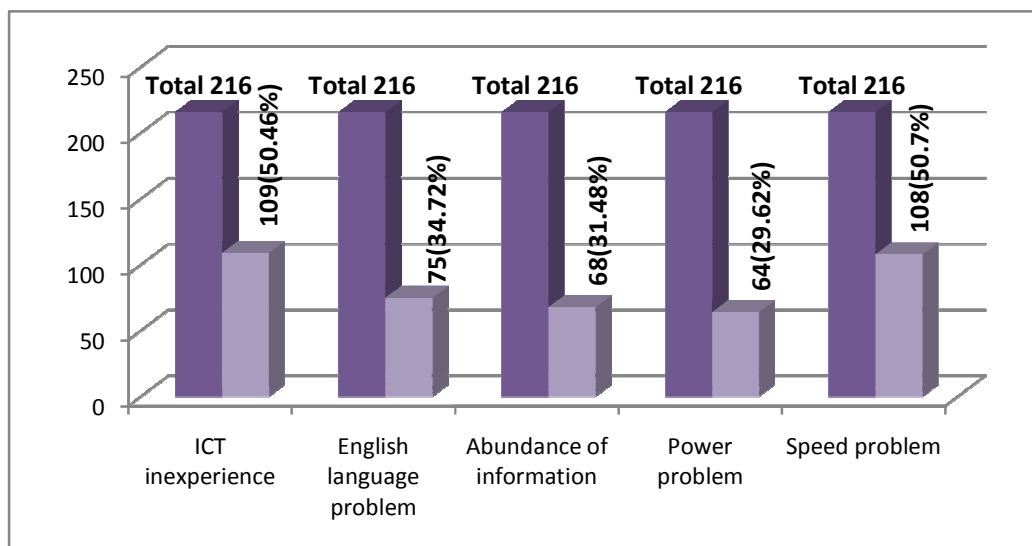


Figure: 31
Types of difficulties in e-resource usage

It is found from the above two tables and figure that, around fifty per cent of Islamic scholars were facing ICT inexperience problem and internet speed problem, while around one third of scholars opined there is English language problem, abundance of knowledge and power failure.

As far as young scholars are concerned, 60.86 per cent are facing poor internet speed, 31.30 per cent – ICT inexperience, 29.56 per cent power failure, 28.69 per cent – abundance of information and 16.52 English language problems. As far as middle aged scholars are concerned, their difficulties per cent are as follows, ICT inexperience – 64.17. English language problem – 5.74, abundance of information - 34.32, speed problem - 31.34 and power failure 22.38. In the case of elder scholars, they feel more difficulty in ICT inexperience (88.23 per cent), lesser in abundance of information (35.29 per cent).

As far as formal education group scholars are concerned, they feel more difficulty in internet speed (52.17 per cent) followed by ICT inexperience (40.57 per cent), language problem & information abundance (30.43 per cent), and lastly power problem. In the case of informal scholars, their difficulty per cents to different problems are:- ICT inexperience - 64.28, speed problem – 50 per cent, language problem - 35.71 per cent, and information abundance - 14.28 per cent. As far as ‘hybrid’ education group scholars are concerned, they feel more difficulty in ICT inexperience (68.75 per cent). The rest of them are more or less same.

5.6.10 ICT support for Islamic scholars

ICT has been utilized in all spheres of human being, including in religious matters. Islam is not an exception. Here the investigator tried to understand the responses of Islamic Scholars regarding necessity of ICT support for this group. The results are shown in the two tables below.

Table: 62

Necessity of ICT support for Islamic scholars - age wise

Age	Opinion			Sample total
	Yes	No	No opinion	
18-35	179(96.75)	2(1.08)	4(2.16)	185
36-55	93(94.89)	4(4.08)	1(1.02)	98
56 & above	40(86.95)	4(8.69)	2(4.34)	46
Aggregate	312(94.83)	10(3.03)	7(2.12)	329

(Figures in brackets indicate respective percentage)

Table: 63

Necessity of ICT support for Islamic scholars - education wise

Education	Opinion			Sample total
	Yes	No	No opinion	
Formal	213(97.70)	4(1.83)	1(.45)	218
Informal	18(75)	2(8.33)	4(16.66)	24
Hybrid	81(93.10)	4(4.59)	2(2.29)	87
Aggregate	312(94.83)	10(3.03)	7(2.12)	329

(Figures in brackets indicate respective percentage)

The overall analysis of both tables (62 & 63) show that, around 95 per cent of the Islamic scholars have the opinion that, ICT support is needed for smooth availing of services given to the Islamic scholars. A few among the group could not recognize the role and importance of ICT.

As the age wise analysis is done (table 62), it is found that, almost same report is received. It says that, young scholars are in the fore front followed by middle aged scholars and lastly elder scholars with regard to their support for necessity of ICT knowledge with the per cent of 96.75, 94.89 and 86.95 respectively.

Result of education wise analysis (table 63) shows that, formal group is in the fore front followed by 'hybrid group' and lastly informal group in supporting necessity of ICT for Islamic scholars' services. Those who have negative approach and 'no opinion' are found very few.

5.6.11 ICT training for Islamic scholars

ICT is growing day by day. Time to time training is needed to get updated. Frequent training is the best method for getting updated. The investigator tried here to collect opinions of Islamic scholars regarding their views on necessity of frequent training for this group. The results are given in the below tables and figure.

Table: 64**Necessity of ICT training for Islamic scholars - age wise**

Age	Opinion			Sample total
	Yes	No	No opinion	
18-35	179(96.75)	5(2.70)	1(.54)	185
36-55	94(95.91)	3(3.06)	1(1.02)	98
56 & above	42(91.30)	3(6.52)	1(2.17)	46
Aggregate	315(95.74)	11(3.34)	3(.91)	329

(Figures in brackets indicate respective percentage)

Table: 65**Necessity of ICT training for Islamic scholars - age wise**

Education	Opinion			Sample total
	Yes	No	No opinion	
Formal	211(96.78)	7(3.21)	0(0.00)	218
Informal	22(91.66)	1(4.16)	1(4.16)	24
Hybrid	82(94.25)	3(3.44)	2(2.29)	87
Aggregate	315(95.74)	11(3.34)	3(.91)	329

(Figures in brackets indicate respective percentage)

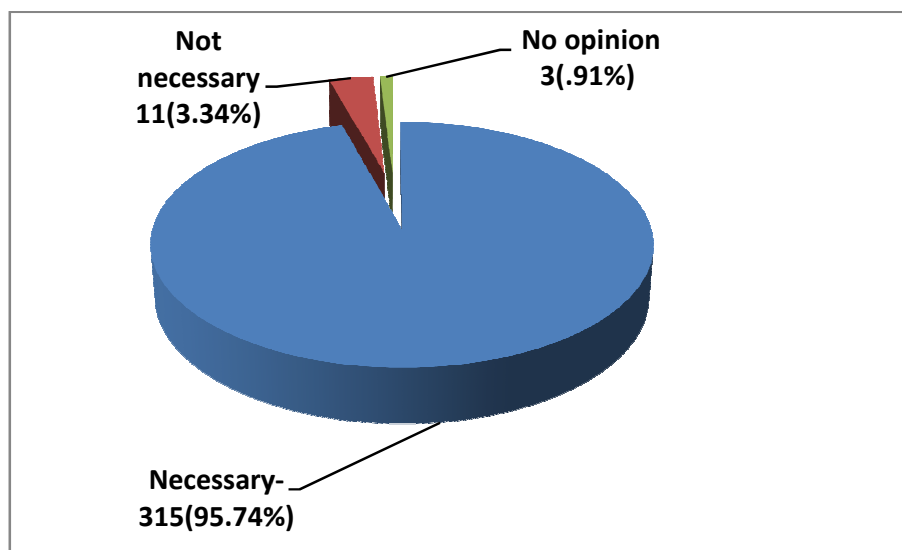


Figure: 32
Necessity of ICT training

The overall data says that, majority (95.74 per cent) have the opinion that, frequent training are to be given to Islamic scholars and a few among them (3.34 per cent) are having the negative approach i.e. it is not needed. When the age wise analysis is done (table 46), it is found that above 90 per cent of all groups have the positive approach for frequent training while a few among them have negative approach or no opinion. The education wise analysis (table 47) show that almost same result seen in the former table, i.e. above 90 per cent of all groups opined ICT training is needed. Those who have negative approach are below 5 per cent.

5.6.12 Mode of ICT training

ICT training can be offered through different methods such as – hands on training, online training, distance mode etc. It has been tried here by the investigator through questionnaire having three options (multi answerable – hands on training, online training and distance training method). The answers are given in the following two tables and one diagram.

Table: 66

Mode of ICT training for Islamic scholars – age wise

Age	Training modes			Sample total
	Hands own training	Online	Distance	
18-35	180(81.08)	36(19.45)	22(11.89)	185
36-55	82(83.67)	25(25.51)	8(8.16)	98
56 & above	41(89.13)	4(8.69)	5(10.86)	46
Aggregate	273(82.73)	65(19.75)	35(10.63)	329

(Figures in brackets indicate respective percentage. This is a multiple answer question)

Table: 67

Mode of ICT training for Islamic scholars – education wise

Education	Modes of training			Online Hands own training
	Hands own training	Online	Distance	
Formal	176(80.73)	45(20.64)	7(3.21)	218
Informal	21(87.5)	3(12.50)	22(91.66)	24
Hybrid	76(87.35)	17(19.54)	6(6.89)	87
Aggregate	273(82.73)	65(19.75)	35(10.63)	329

(Figures in brackets indicate respective percentage. This is a multiple answer question)

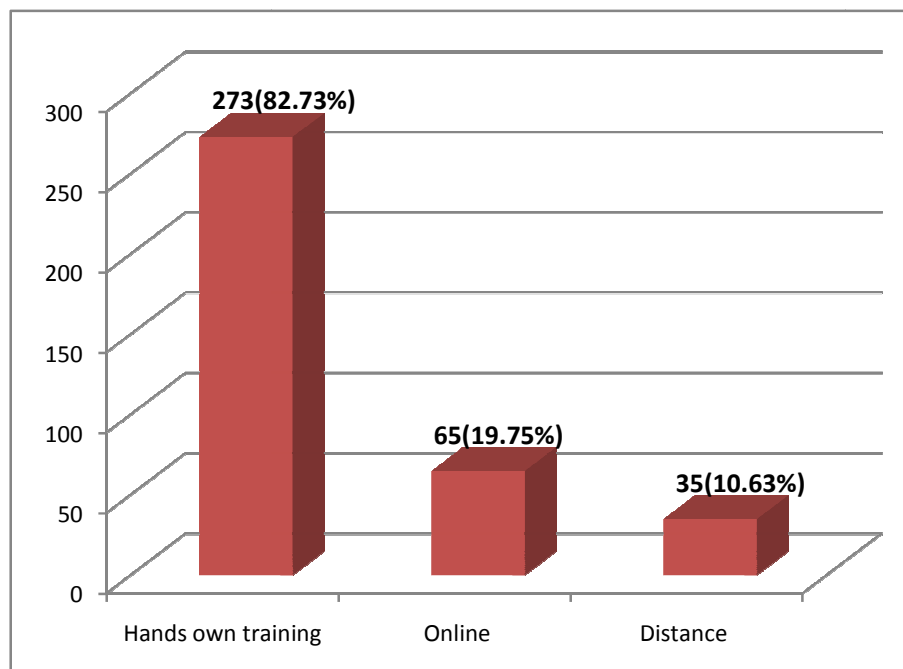


Figure: 33

Modes of ICT training for Islamic scholars

The overall analysis of these two tables depict that, out of the 329 total sample, 82.97 per cent support hands on training, 19.5 per cent online training and 10.63 per cent distance training. As per the table data of 66, on age wise analysis, it is found that, the preference of elder group is higher than middle aged and young scholars in the matter of hands on training. Their respective supports are 89.13 per cent, 83.67 per cent and 81.08 percent. Whereas their responses towards online training are young scholars- 19.45 per cent, middle aged scholars - 25.51 per cent and elder scholars - 8.69. Their responses towards distance learning are near by 10 per cent.

5.7 Initiatives of Kerala Islamic organizations in e-resources

It is seen that, Kerala Muslim organizations are adopting ICT and its benefits at their beginning stage itself. Here the investigator tried to analyze the initiatives taken by different Islamic organizations in the state in Islamic e-resource development. Data regarding this were collected by using interview schedule from Public Relation Officers (PROs) of each organizations.

Table: 68

E-resource initiatives of Kerala Islamic organizations

Islamic organization	Initiatives					
	Official website	Islamic web portals	Islamic e-journals	Islamic radio channels	Islamic TV channels	Islamic mobile apps
Samastha Kerala (EK sunni)	1	1	2	0	0	0
Kerala Muslim Jama't (AP)	1	1	2	1	0	0
Kerala Nadvatul Mujahideen	1	1	1	2	0	0
Jamaa'teIslmi Kerala –	1	2	2	0	0	3
Total	4	5	7	3	0	3

The table shows that, each organization maintains their own official websites. All organizations maintain at least one Islamic web portal. In the case of e-journals the performance is also very good. All organizations publish electronic journals supporting their print versions. There are three internet based Islamic radio channels and no TV channel is maintained. Islamic mobile apps are also developed in Kerala. In short Islamic organizations in Kerala are well aware of ICT developments and their services and it is highly utilized.

Conclusion

Data collected by using questionnaire and schedule from 329 samples of Islamic scholars of Kerala have been analysed here. For the better understanding of the data, this has been presented by using tables, diagrams and graphs. It can be summed up that, investigator has tried to analyse the IT literacy, information needs and seeking behavior, familiarity and use of different Islamic information resources (print and electronic), problems while using these resources, satisfaction levels towards these resources among Islamic scholars and different ICT initiatives taken by different Islamic organizations in Kerala.

Chapter 6

FINDINGS, SUGGESTIONS AND CONCLUSION

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- ❖ *Introduction*
 - ❖ *Findings of the Study*
 - ❖ *Tenability of Hypotheses*
 - ❖ *Implications and Suggestions of Study*
 - ❖ *Suggestions for further Research*
 - ❖ *Conclusion*
-

6.1 Introduction

This study is intended to analyse the use of information resources (both conventional & electronic) among Islamic scholars of Kerala. On the basis of analysis of collected data, certain findings have been developed. Followed by the findings, certain suggestions have been formulated. This last chapter of the research report presents the findings of the study, tenability of hypotheses, suggestions for improvement of ICT resources and services, suggestions for further research and conclusion.

6.2 Findings of the study

After the analysis and interpretation of primary data, collected from the Islamic scholars (teachers of Islamic institutions of higher learning & Islamic organizational leaders & PROs of Islamic Organisations) in Kerala, it was able to draw certain findings based on the objectives and the hypotheses. The major findings are given below.

6.2.1 ICT literacy of Islamic scholars

1. Majority of the Islamic scholars of Kerala (86.93 percent) are computer literates and only a few among them (13.06 percent) are computer illiterates. Computer literacy rate is high among young

Islamic scholars than elder Islamic scholars. So there is an inverse relationship between age and computer literacy. When age wise analysis is done, it is found that, the age group 18-35(young) has the highest computer literacy rate followed by 36-55 (middle aged) and 56& above (elder) age groups respectively with the percent of 89.19, 87.76 and 76.19 respectively.

2. There is significant association between age and computer literacy of Islamic scholars of Kerala.
3. Islamic scholars, who studied under hybrid mode of religious education, have the highest computer literacy rate followed by formal education group. Computer literacy of scholars who studied in informal system of education is seen lesser compared to the other two groups.
4. Significant difference is seen among Islamic scholars based on their mode of religious education and their respective computer literacy.
5. Most of the Islamic scholars acquired their computer literacy not by undergoing any computer course. Only 30 per cent of them acquired this by undergoing any of the computer courses.
6. Among the different age groups, young scholars are in the fore front followed by middle age and elder scholars in undergoing computer

courses. When the education wise categorization is done, scholars who studied in formal education system are in the leading position.

7. Islamic colleges are conducting short term computer courses as part of their curriculum, and scholars studying there are undergoing this course. This short term course has great acceptance among Islamic scholars.
8. DCA course has the second acceptance and MS-Office has the third acceptance among Islamic scholars. A few among the Islamic scholars of Kerala have acquired PGDCA qualification.
9. None of the elder scholars and scholars belong to informal group did PGDCA course, because it is an advance course in computer science.
10. It is found that, a good number of Islamic scholars who did not undergo computer courses but still computer literates utilized all available options before them to acquire the knowledge. Self-training and friends' help have remarkable place in making them computer literates. It is also seen that, online tutorials have less acceptance among Islamic scholars.
11. Self-practice method is highly utilized by young Islamic scholars, while use of books for acquisition of computer knowledge is highly utilized by elder Islamic scholars. Cent per cent of informal scholars

depend self-study, while formal and hybrid groups are 76.37 per cent and 61.29 per cent respectively.

6.2.2 Use of Smart device by Islamic scholars

12. Large majority of (92.4 per cent) of Islamic scholars are using smart devices. It is seen an inverse relationship between age of Islamic scholars and smart device usage, i.e. usages of smart device by Young scholars are greater than elder scholars. Use of smart devices by elder scholars is only 82.6 per cent.

13. The usage of smart devices by informal education group is less compared to the other two groups. It is more or less same among formal and hybrid education groups.

14. Smart phones are the highly used smart device among Islamic scholars, followed by laptops, tablets and ipads. Large majority of Islamic scholars are having smartphones.

Same result was found in a study by Mehjabin, Vahidabeegum & Jalaja (2013) on access to e-resources with mobile devices by PG students of University of Calicut. Smart phone were the highly used smart device by the students of universities.

15. Around one fourth of the Islamic scholars are using tablets, while iPad usage is very less among Islamic scholars.
16. Smartphone and laptop usage is higher among hybrid mode of Islamic scholars than formal and informal mode of Islamic scholars.

6.2.3 ICT Skills

17. Majority of the Islamic scholars in general are familiar with almost all ICT tools and services such as – internet browsing, e-mailing, YouTube, blogs, social networks, Google Drive, use of external storage devices, and sound and video recording. Most of them are using them for their teaching and learning and information dissemination.
18. Young Islamic Scholars are in the forefront in the familiarity and usage of ICT tools and services followed by middle aged and elder scholars.
19. Compared to young and middle aged scholars, familiarity and use of basic ICT services of elder scholars are less.

20. Blogs are not much familiar among middle aged and elder Islamic scholars, but even though its familiarity is greater among young scholars, its usage is very less among this group also.
21. Social networking sites and YouTube are the highly used internet services by Islamic scholars irrespective of age and mode of education.
22. It is found that, there is significant association between age of Islamic scholars and internet browsing, use of YouTube, use of blogs, use of social networks, use of external storage devices and sound & video recording. In the case of e-mail and Google drive, relation is hardly seen with the age of Islamic scholars.
23. Islamic scholars belong to formal education system stand fore front in use and familiarity of basic ICT services, followed by hybrid and informal groups.
24. Familiarity towards Google drive is less among Islamic scholars irrespective of their age and mode of education.
25. Compared to the formal and hybrid groups, familiarity and use of basic ICT services among informal group is fewer.
26. It is found that, in the case of internet browsing, e-mailing, use of YouTube, blogging, use of Social networking sites and use of external storage device, there exists association between education

mode and these ICT skills. But in the case of use of Google drive and audio& video recording there is no association with different education groups.

6.2.4 Islamic Information – areas, preferences and use

27. The major Islamic information areas concentrated by Islamic scholars are:- Quran, Hadiths, Islamic History, Islamic jurisprudence, Thouheed, Arabic language & literature and recent developments in the Islamic world.

28. All areas of Islamic information do not have equal importance, and there exists a preferential sequence among Islamic scholars.

29. The preferential sequence of Islamic information by Islamic scholars of Kerala are:-

1st. Quran

2nd .Hadith

3rd . Fiqh (Islamic jurisprudence)

4th . Islamic History

5th . Arabic Language & literature

6th . Recent developments in Islamic world, and

7th . Thouheed (monotheism).

Result of the study conducted in England by Higher education Funding Council for England of “digiislam” project was more or less same. It was a study about the subject wise usage of Islamic scholars in England and it was found that, their usage were – Islamic history (50%), Quranic studies (47.4%), fiqh (42.1%) and Hadith (34.2%).

30. The purpose (needs) of using Islamic information is: - teaching, preaching, conduct Friday special speeches (khutuba), giving fatwas, writing articles and offering public speeches.

This was pointed out by Taylor (2001), that user’s environment has critical role in the information needs. This is the main core of his ‘Information environment theory’. According to him each profession have their own information needs.

31. The preference on the purpose of using Islamic information are:-

1st. Teaching

2nd. Preaching Quran & Hadith classes

3rd. Writing articles

4th. Offering Friday speeches

5th. Offering public speeches and

6th. Giving fatwas.

32. There are differences among different age groups in the preferences on the purpose of using Islamic resources. The young scholars and middle aged scholars give first preference to teaching, while the first preference of elder scholars is Quran and Hadith class.

6.2.5 Use of Information resource – type and their preferences

33. Majority (80.24 per cent) of the Islamic scholars are using both print and electronic information resources.

34. A small per cent (17.32) of Islamic scholars are using only print resources, while those who are using only electronic resources are very few (2.43 per cent).

35. Most of the Islamic scholars, who are using only print resources, belong to elder group.

36. There is significant relation between age of Islamic scholars and use of different forms of resources.

37. Users of print resource are higher than users of electronic resources among Islamic scholars. Users of print (print only + both) are 97.56 per cent and users of electronic (electronic only + both) are 82.67 per cent.
38. Majority (67.17 per cent) of scholars prefer to use print resources, while some of them (32.83 per cent) prefer e-resources in case they have access to both type of resources. It is believed that, print resources are more authentic and reliable than electronic resources.
39. It is found that there is a direct relationship between age and preferences of conventional print resources, i.e. young scholars prefer lesser and elder scholars prefer higher.
40. It is also found that, there is an inverse relationship between age and preferences of electronic resources, i.e. young scholars prefers higher and elder scholars prefer lesser.
41. In the case of education wise analysis, preference of informal groups towards print resource is very high (75 per cent), while their preference to electronic resource is only 25 per cent. It is more or less same in the case of 'hybrid' group. In the case of formal scholars it is around 64 per cent and 36 per cent respectively.

6.2.6 Access places of resources (print & electronics) and their frequencies

42. The prominent access places of print resources by Islamic scholars are:- own collection (home library), friends' collection, college libraries and mosque libraries. The dependency of these places is as follows. Own collection – 67.6 per cent, friends' collection – 20.87 per cent, college libraries – 77.25 per cent and mosque libraries – 7.47 per cent.

Finding of the study of Mamun Mostofa (2013) was more or less same to the findings of this study. It was done among the faculty members of Darul Ihsan University, Bangladesh and found that they were more using books from their respective houses than college libraries.

43. The most preferred access place of print resources by young Islamic scholars is college libraries, while personal collections are the most preferred access place by middle aged and elder scholars. It means that, young scholars have less practice of collecting books

personally, while it is a practice of elder and middle aged scholars to possess the same.

44. Libraries attached with mosques are found the least used print collection by Islamic scholars compared to the other access places.
45. The most preferred access place of print resources by formal group of Islamic scholars is college libraries, while personal collections are the most preferred access place by informal group and hybrid group.
46. Most of the Islamic scholars (57 per cent) irrespective of their age and mode of education use the print resources 'as and when needed' and a good number of them (40.8 per cent) use it daily.
47. There is no significant difference among different age groups in the case of frequency of use of conventional print resources as in the case of different education groups.
48. Islamic CD/DVD, Islamic web portals, Islamic blogs, Islamic e-journals, Islamic e-books, digital libraries, online databases, online madrassas, online universities, Islamic social networks, Quran reading pen, Islamic radio and Islamic TV channels are the exclusive electronic Islamic information resources.
49. There is an inverse relationship between age and use of Islamic e-resources, i.e as the age increases the use of e-resources decreases.

50. It is also noted that, usage of e-journals by young and middle aged scholars are moderate, while it is very less among aged scholars. But in the case of e-books, usage is very poor among all categories. In the case of online madrasa and online universities, their use is same. It is 18.34 per cent, 10.20 per cent and 4.34 per cent among young, middle aged and aged scholars respectively. In the case of digital libraries, the users are a few (come around one by fourth of scholars). It is very interesting that, even though general social networking sites are very popular among Islamic scholars, the usage of exclusive Islamic social networks is very low (below 10 per cent).
51. In the case of familiarity and use of database and Islamic social networks there is no association with the age of Islamic scholars, while in the case of other e-resources, there exists an association with age of Islamic scholars.
52. Familiarity and use of Islamic e-resources are high among formal group, and hybrid group. It is less among informal group. It is very interesting that, even though 95 per cent of scholars from all groups are familiar with CDs/DVDs, but their usage is very less. It means that that type of resources are almost obsoleted.

53. The highly used Islamic e-resource is Islamic website/portal, i.e. 80.73 per cent, 66.66 per cent and 79.31 per cent among formal, informal and hybrid group respectively.
54. The lowest used e-resources is different among this sub groups, i.e it is Islamic social networks among formal group with the use of 7.79 per cent and online madrassa among informal group and hybrid group.
55. In the case of usage of Islamic e-resources, young scholars in the forefront as per age-wise categorization, followed by middle aged scholars and elder scholars. In the case of education wise categorization, those who have completed in formal stream are in the first position followed by hybrid group and lastly the informal group. It is also noted that Use of CDs/DVDs are being decreased even though its use are familiar among them. It shows CDs and DVDs are being obsoleted. Islamic e-books and e-journals are not highly used by this group.
56. In the case of online madrasa and online universities, majority of them are unaware of these resources, but a few among them are using it presently. Another interesting finding is that even though most of them are aware and using general social networks, most of them are unaware of exclusive Islamic social networks.

57. In the case of familiarity and use of - digital libraries, Islamic social networks, Islamic blogs and CD/DVD, there is no association with mode of education of Islamic scholars. But in the case of other resources the mode of education and familiarity and use are significantly associated.
58. The access points of Islamic e-resources by Islamic scholars are – own computers, other smart devices, college libraries and mosque libraries. Majority of them use their own computer systems followed by other smart devices and college libraries. Mosque libraries are the least utilized access place of e-resources.
59. The first priority of Islamic scholars in using print resource is their own home collection and in the case of electronic resource, it is their own computer systems.
60. Frequency of use of e-resource is more or less same as print resources, i.e majority of the scholars (59 per cent) use e-resources as and when needed and a good number of them (37 per cent) use the same daily.
61. There is no significant difference between different age groups and different education groups in the case of frequency of use of Islamic e-resources.

6.2.6 Islamic mobile apps – familiarity and usage.

62. Most of the Islamic scholars (82.56 per cent) who use smart phones make use at least one of the Islamic mobile applications (mobile app).

63. The prominent Islamic mobile apps are:- Quran app, Quran translation app, Quran interpretation app, Quran thafseer app, Thajveed app, Hadith app, Hijra calendar app, Prayer app, Baby name app, Namaz app, Qibla finding app, azan app, Zakat calculating app and Inheritance calculating app etc.

64. There is an association between age of Islamic scholars and their usage of mobile applications. Age and use of app are inversely related.

65. Significant relation between mode of education of Islamic scholars and their usage of mobile applications has been identified.

66. Most of the Islamic scholars are well versed with different mobile apps and a good number of them are using them. When age wise analysis is done, it is found that young scholars are in first position followed by middle aged scholars and lastly the elder scholars in the usage of different Islamic mobile apps.

67. It is found that, most familiar app by all group of scholars is Quran app, while least familiar apps by young and elder scholars are inheritance calculator app, but in the case of middle aged scholars, the least one is Zakat calculating app. Same results are seen in the case of use of these apps, i.e Quran app is the most used one and inheritance calculator app is the least used one.
68. As per the education wise analysis, it is found that formal scholars are in first position followed by hybrid group and lastly informal scholars in the usage of different Islamic mobile apps.
69. The most familiar app by all education groups is Quran app, while the least one by formal group is zakat calculator app, among the informal group – Zakat calculator and inheritance calculator and among hybrid group is the Muslim names app.
70. Majority of the scholars opined that, the advantages of e-resources are, ease of the usage of resources (69.48 per cent), could save their time (66.54 per cent), collection and procurement of their respective resources made easy (56.98 per cent) and could save their money (59.92 per cent).
71. Most experienced benefit of e-resource for young scholars and middle aged scholars is ‘ease of use’, While the highest response of

elder scholars is towards saving of time. The lowest response of all groups is 'ease of collection and procurement'.

72. ICT revolution has affected Islamic scholars greatly in the usage of conventional resources. A good number of them (44.98 per cent) opined that it has caused to decrease the conventional resource use. Almost same number of scholars (47.41 per cent) opined that ICT neither affected to increase nor decrease the conventional use.

73. In the case of young scholars, ICT revolution became the cause for decrease in the use of conventional resources, but in the case of middle aged and elder scholars, it did not affect on conventional resource usage.

74. Majority of the formal education group have the opinion that ICT has become the reason for decrease of the use of print resources, while in the case of informal and hybrid group, ICT has no influence over their conventional print resource usage.

6.2.8 Satisfaction level of Islamic scholars towards information resources (both print & electronic)

75. None of the scholar opined dissatisfaction in using print resources. But some sort of variation in satisfaction level has been identified. Majority reported that, they are extremely satisfied followed by very

satisfied and lastly moderately satisfied. More or less same opinion was noted by different education groups.

76. It is understood that, out of the total print resource users, 56.69 per cent are extremely satisfied, 41.43 per cent are very satisfied and only 1.86 per cent are moderately satisfied.

77. It is found that cent per cent of the young scholars have expressed their satisfaction towards e-resources and no dissatisfaction is marked. When middle aged scholars are taken, it is seen that 82.36 per cent are satisfied (extremely satisfied / very satisfied / moderately satisfied), while a few (17.64 Per cent) remarked their dissatisfaction towards e-resources.

78. It is inferred that, out of the e-resource users among Islamic scholars, 31.61 per cent are extremely satisfied, 51.83 per cent very satisfied, 10.66 per cent moderately satisfied, 5.87 per cent are dissatisfied. It can be summed up that 94.12 per cent are satisfied and 5.87 per cent are dissatisfied with e-resources.

79. Satisfaction level of different age groups of Islamic scholars shows that, all age groups are extremely satisfied with print resources, where as in the case of electronic resources, youngsters are extremely satisfied while the other two groups are very satisfied.

80. There is neither direct relationship nor inverse relationship between age and satisfaction level in the case of print resources. It cannot be proved that as age increases the satisfaction level increase or decrease. The weighted mean score of satisfaction level of 18-35 (young) group is 3.54, while the satisfaction level of 36-55 (elder)age group is 3.57. A slight increase is seen there, but it is seen as decreased as 3.47 in the case of 56& above.
81. In the case of electronic resources, an inverse relationship is seen between age and satisfaction level. It is seen as the age increases the satisfaction level decreases. The satisfaction level of 18-35 group is 3.29, 36-55 group is - 2.69 and the 56& above group is - 2.67.
82. Five features of e-resources, i.e. availability, authenticity, stability, ease of use and profitability were taken for the rating and found that, the rating of all age groups and education group to availability of information is excellent followed by good, while in the case of authenticity, rating of majority of all age groups and education groups was 'good' followed by 'poor'. Stability of information was rated almost same to the authenticity.
83. In the case of ease of use and profitability, rating of the majority scholars belonging to all age groups and all education groups are excellent followed by good.

84. Lack of computer expertise, language barrier, abundance of information, power failure, and internet speed problem are the main problem faced by Islamic scholars while using electronic resources.
85. Most of the Islamic scholars were facing at least one of the problems while using electronic resources.
86. Elder scholars are facing more problems than young scholars.
87. As far as young scholars are concerned, they feel more difficulty in internet speed problem while less affected by English language problem. In the case of middle aged scholars, they feel more difficulty in ICT inexperience and less difficulty in power failure. In the case of elder scholars, they feel more difficulty in ICT inexperience and less in abundance of information.
88. As far as former education group scholars are concerned, they feel more difficulty in poor internet speed and fewer problems with power failure, while informal group scholars are concerned, they feel more difficulty in lack of computer expertise and less in power problems. As far as hybrid groups are concerned, they feel more difficulty in lack of computer expertise and less in information abundance.
89. Around 95 per cent of the Islamic scholars have the opinion that, ICT support is mandatory for better services of Islamic scholars, and

frequent training has to be given. A few among the group could not recognize the role and importance of ICT.

Need of frequent training was pointed out in a study conducted by Jaspal Kaur (2012) among the teachers of degree colleges in Chandigarh. The objectives of the study were to know the purpose of using e-resources and finding difficulties while using them. Majority of the respondents solicited frequent training programs for using e-resources.

90. It is found that, out of 329 total samples, 82.97 per cent demanded for hands on training, 19.5 per cent for online training and 10.63 per cent distance training.

91. The preference of elder group is higher than middle aged and young scholars in the matter of hands on training.

92. Muslim organisations are exploiting maximum benefits of ICT. All organisations maintain their own official websites. All organizations publish e-journals along with their print versions. There are three internet based radio channel maintained by Kerala Muslim organizations. There are good Islamic web portals giving the latest developments and trends in the Islamic world and fatwas on

religious issues. Some mobile apps are also developed by Kerala Muslim organizations.

6.3 Tenability of Hypotheses

Hypothesis 1

There is significant difference in the case of computer literacy among Islamic scholars of Kerala, based on their age and mode of education.

This hypothesis has been proved by tables 8 and 9 and findings 2 and 4. Chi-square statistics was calculated to test the significance regarding the association of the age of Islamic scholars and computer literacy. The P value (0.059) denotes that, there is significant connection between age and computer literacy of respondents. As per the statistical test, it can be found that, there exists significant difference between different groups based on their mode of education and computer literacy since the 'p' value is 0.001. So this hypothesis is almost fully substantiated.

Hypothesis 2

Islamic scholars are using and giving preference to both print and electronic resources equally.

As per the findings 34, 37, 38 & 41 based on table 27, 29,30 &31 and figure 21, 22, 23 & 24, it is proved that there are differences between print resources and electronic resources with regard to their usage and preference. Users of printed resources are 97.56 per cent, whereas the users of e-resources are 82.67 per cent. When the preference is taken, it is seen that, 67.17 per cent prefer print resources, while it is 32.83 per cent in the case of e-resources. So the second hypothesis is not fully substantiated.

Hypothesis 3

There is no preferential difference in the case of different areas of Islamic information among Islamic scholars of Kerala.

Findings 27, 28 & 29 based on tables 22 & 23 explored that, on the basis of average weighted mean score of each areas of Islamic Information, differences are seen and a sequential order is generated as follows:–

Quran (weighted mean =22.81) – 1st rank

Hadith (weighted mean =20.14) – 2nd rank

Fiqh (weighted mean =16.86) – 3rd rank

Islamic History (weighted mean =16.67) – 4th rank

Language & literature (weighted mean =11.61) – 5th rank

Recent developments (weighted mean =11.57) – 6th rank

Thouheed (weighted mean =8.55) – 7th rank

So the third hypothesis is not substantiated.

Hypothesis 4

There is no significant relation between familiarity & usage of ICT skills and age & mode of education of Islamic scholars.

Finding 22 based on table 20 revealed that, there is significant association between age of Islamic scholars and internet browsing, use of YouTube, use of blogs, use of social networks, use of external storage devices and sound & video recording. In the case of e-mail and Google drive, there is no relation with the age of Islamic scholars.

Findings 26 based on table 21 proved that, in the case of internet browsing, e-mailing, YouTube use, blogging, use of Social networking sites and use of external storage devise there exist association between education mode and these ICT skills. But in the case of use of Google drive and audio& video recording there is no association with different education groups. So this hypothesis is partially substantiated.

Hypothesis 5

The familiarity and usage of Islamic e-resources by Islamic scholars are not associated with their age & mode of religious education.

As per the finding 51 based on table 36, Chi-square test depicted that, in the case of database and Islamic social networks there is no association with the age of Islamic scholars since their p values are 0.103 and 0.135 respectively. In the case of other e-resources, there exists an association with age of Islamic scholars.

As per the finding 57 based on table 37, in the case of digital libraries, Islamic social networks, Islamic blogs and CD/DVD there

is no association with mode of education of Islamic scholars, since their p values are 0.118, 0.244, 0.094, and 0.062 respectively. But in the case of other resources the mode of education and use are significantly associated. So this hypothesis is not fully substantiated.

Hypothesis 6

There is a direct relationship between age of Islamic scholars and their satisfaction level towards print resources (as the age increase the satisfaction level increases) and there is an inverse relationship between age and e-resources (as the age increase the satisfaction level decreases).

As per the finding number 80 based on table 54 and figure 30 (graph), there is neither direct relationship nor inverse relationship between age and satisfaction level in the case of usage of print resources. As per the table data, mean score of satisfaction level of youngsters (18-35) is 3.54, while the satisfaction level of middle aged group (36-55) is 3.57. A slight increase is seen there. But it is seen as decreased as 3.47 in the case of elder scholars (56& above). It cannot be proved that as age increased the satisfaction level increased or decreased (occurred both increase and decrease).

In the case of electronic resources, as per the finding number 81 based on table 54, an inverse relationship is seen between age and satisfaction level. It is seen that, as the age increased the satisfaction level decreased. The satisfaction level of young (18-35) group is 3.29, while 36-55 (middle aged) group is - 2.69 and the 56& above (elder) is - 2.67.

So this hypothesis is partially substantiated.

6.4 Suggestions and Recommendations of the Study

On the basis of analysis and findings, the following recommendations have been put forwarded by the investigator.

1. Informal religious education system (Dars) may be modernized with structured syllabus and modern non-religious subjects are to be added to the curriculum.
2. Along with the formal education, non-religious education has to be mixed; it is being practiced in some religious and oriental colleges.
3. ICT courses are to be included in the syllabus of formal religious education system. Government recognized courses are to be included in the syllabus.

4. Islamic organisations have to come forward for conducting frequent computer training programmes, workshops and seminars for Islamic scholars of Kerala. Hands on training is the preferred training system by Islamic scholars.
5. Since print resources have great acceptance among Islamic scholars, print publication has to be fostered.
6. In order to get more acceptances about Islamic e-resources among Islamic scholars, special workshops can be conducted. Even though youngsters are good in using these resources; elder scholars are keeping away from these resources.
7. Majority of Islamic scholars are more engaged in YouTube, Whatsapp and face book. So awareness programs on cyber laws, cyber-crimes and punishments are to be included in the awareness programmes.
8. The present conditions of the mosque libraries have to be improved. New good collections are to be added and new services are to be implemented in mosque libraries.
9. Presently there is no exclusive Islamic TV channel in Kerala, so there is a scope of such TV Channel.

10. Even though there are many Islamic apps, familiarity and use of these apps are not satisfactory, it has to be increased. The awareness and training programmes can be conducted to overcome the problem.
11. Authenticity of Islamic e-resources has to be properly identified, lest misleading may happen. There are different varieties of web portals in the internet. Authenticity of those web portals has to be assessed and published periodically.
12. There is a great scope of an exclusive Islamic social networking site in the Kerala context. Presently general social networking sites are being used by Islamic scholars for sharing religious information.
13. Each organization has to form IT focused group to coordinate ICT based services.
14. Organizational polarization is being occurred in the cyber side of Islam, especially in Facebook and Whatsapp. Special byelaw has to be formed by all organizational groups for maintaining organizational harmony.
15. Smart classrooms have to be developed in the oriental and Arabic colleges so as to facilitate online interaction with remote scholars.
16. Online Islamic courses have great scope in Kerala, so it can be started either by organizations or institutions.

17. There is a scope of Islamic library consortia in the state. Presently there are good Islamic libraries attached with prominent Islamic institutions of higher learning. Some of these libraries keep rare and old books. By developing a library consortium, such collection can be accessed from any place at any time.

6.5 Suggestion for further research

Based on the analysis and discussion of the present study, the investigator would like to suggest following research areas for further research.

1. Replicative studies can be conducted about familiarity and use of e-resources by other religious scholars such as Hinduism and Christianity.
2. Use of information resources (non-Islamic) of Islamic scholars can be taken for study.
3. A comprehensive study can be executed on students of Islamic institutions of higher education with regard to their use and satisfaction of e-resources.
4. There is a scope of a study on collection and services of Islamic libraries in Kerala.

5. A detailed study can be planned and conducted on Church libraries and temple libraries in Kerala.
6. A feasibility study on consortium of Islamic libraries in Kerala can be conducted.
7. There is a scope of comparative study on different religious e-resources available in Malayalam language.

6.6 Conclusion

Information and Communication Technology is growing even beyond the imagination. Presently no field is seen without the involvement of ICT. Religion is not an exception. All religions are utilizing the benefits of ICT for their different services. Technological invasion has greatly affected Islamic religion which resulted the transformation of conventional Islamic resources to electronic resources.

This research was an endeavor to analyse the use of information resources (print & electronic) by Islamic scholars in Kerala. Islamic scholars are engaged in different religious duties such as leading Islamic organisations, teaching at Islamic institutions of higher learning, writing books and articles, preaching etc. This study was focused on only teachers and organizational leaders.

Total 450 questionnaires were supplied among 150 organisational leaders and 300 teachers of Arabic / Islamic colleges in Kerala. Analysis was done based on the 329 received questionnaires and 4 schedules from Islamic organisations. Age of Islamic scholars and mode of religious education was the two variables in the study and ICT literacy, familiarity and use of different ICT tools, familiarity and use of different Islamic e-resources and use of different Islamic mobile apps were analysed.

It was found that, most of the Islamic scholars are ICT literates and large majority of them were using smart devices. It was also found that a good number of Islamic scholars were familiar and using recent Islamic e-resources especially different mobile apps. It was revealed that, majority of scholars preferred print resources than electronic resources because of their authenticity and reliability.

. On the basis of the analysis and findings, certain recommendations have been put forwarded and it will be made available to all Islamic organizations in Kerala for further actions.

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Appendices

B. ICT SKILLS

6. Are you computer literate
Yes
No

7. If Yes, have you undergone any computer course?
Yes
No

8. If yes, Please specify the name of course and duration.

a) DCA
b) PGDCA
c) Office automation
d) Short term training course
e) Others (Specify...

9. If No (you did not undergo any courses) how did you acquire the computer knowledge?

a) Self-hands on study
b) Seeking helps from friends
c) By using books
d) Any other means, please specify

10. Do You have any smart devices?
Yes
No

11. If yes, which of the following?

a) Smart phone
b) Ipad
c) laptop
d) Tablet
e) Any other

12. Please specify your familiarity and usage of the following skills? (Please put a tick mark against each one)

Skills	Unfamiliar	Familiar but not using	Familiar & using
Browsing & searching information			
E-mailing			
Use of Youtube			
Use of Blogs			
Use of Social Networks			
Use of Google drive			
Use of external storage devices			
Sound & video recording			

C. INFORMATION NEEDS & SEEKING BEHAVIOUR

13. Please specify your information needs (please give ranking like 1,2,3 etc)

- a) Quran and Tafseer
- b) Hadith and interpretations
- c) Islamic History
- d) Fiqh
- e) Thouheed
- f) Arabic language and Literature
- g) Recent developments in Islamic world

14. Your purpose of information seeking (please give ranking like 1,2,3 etc)

- a) For Teaching
- b) For Preaching Quran & Hadith
- c) For offering Friday speeches
- d) To write articles
- e) To give fatwas
- f) Public speeches

15. Which type of information resource do you use?

- a) Conventional resources only
- b) Electronic resources only
- c) Both

16. If the same information is available in both conventional and e-resources, which will be your preference?

- a) Conventional resources
- b) Electronic resources

17. In the case of conventional resources, from where do you use it? (Please give your preference in ranking like 1,2,3 etc)

- a) From personal collection
- b) From friends' collection
- c) From college library
- d) From Mosque library
- e) Any other place, please specify

18. Frequency of use of conventional resources

- a) Daily
- b) 2/3 times in a week
- c) Once in a week
- d) As and when needed

USE OF ISLAMIC E-RESOURCES

19. Familiarity and use of Islamic electronic information resources.

Islamic E- resources	Familiar	Familiar but not using	Familiar & using
Islamic CD/DVD			
Islamic Websites/portals			
Islamic blogs			
Islamic e-journals			
Islamic e-books			
Online Madrasa			
Online University			
Digital library			
Islamic Databases			
Islamic Social networks			
Quran reading pen			
Youtube for uploading & downloading Islamic videos			
Online Islamic radio			
Online Islamic TV			
Any other, Please specify			

20. In the case of e-resources, from where do you access?
- a) By using own computer
 - b) Own smart device
 - c) From college library
 - d) Mosque library
 - e) From any other place, please specify.....
21. Frequency of use of electronic resources
- a) Daily
 - b) 2/3 times in a week
 - c) Once in a week
 - d) As and when needed
22. Do You use any of the Islamic mobile apps (application)
- a) Yes
 - b) No

23. If yes, mention your familiarity with the following Islamic apps

Mobile Apps	Familiar	Familiar but not using	Familiar & using
Quran app			
Quran translation app			
Quran tafseer app			
Tajveed app			
Hadith app			
Islamic calendar app (Hijra)			
Dua app			
Muslim name app			
Namaz training app			
Qibla finding app			
Azan time app			
Zakat calculating app			
Inheritance calculating app			

24. In what way the e-resources have improved your career / occupation (please give ranking like 1,2,3 etc)

- a) Knowledge base improvement
- b) Time saving
- c) Easiness of accessibility & saving
- d) Cost effectiveness

25. After starting the usage of e-resources, the usage of conventional resources has been

- a) Increased
- b) decreased
- c) No change

D. SATISFACTION DIFFICULTIES, & SUGGESTIONS ON E-RESOURCES

26. Satisfaction level in using conventional and electronic resources.

Type	Extremely satisfied	Very Satisfied	Moderately satisfied	Not satisfied
Conventional resources				
E- resources				

27. How do you rate the information retrieved from e-resources?

Features	Excellent	Good	Poor
Availability of information			
Authenticity of information			
Stability of information			
Easiness of use			
Economy/profitability			

28. Do you experience any problem while using e- resources?
- a) Yes
- b) No
-
29. If yes, which of the following problem do you encounter (please give ranking like 1,2,3 etc)
- a) Lack of computer expertise
- b) Language (English) barrier
- c) Abundance of information
- d) Power supply problem
- e) Any Other (please specify).....
-
30. Do you believe that, "ICT is essential for Islamic teaching and learning in contemporary Islamic society"
- a) Agree
- b) Do not agree
- c) No comments
-
31. Do you believe that, ICT usage training is needed to Islamic scholars in Kerala?
- a) Yes
- b) No
-
32. If yes, which type of training do you prefer?
- a) Hands own training
- b) Online training
- c) Distance mode
- d) Any Other (please specify).....

* Thank You for kind patience and co-operation*

Appendix –II

Interview schedule for PROs of Islamic organizations

Name of the organization :

1. Do you maintain website for your organization?

Yes No

2. Do you maintain any Islamic web portal?

Yes No

3. Do you publish e-journals?

Yes No

4. If yes, numbers please

5. Do you have exclusive Islamic Radio channel?

Yes No

6. If yes, numbers please

7. Do you have exclusive Islamic TV channel?

Yes No

8. If yes, numbers please

Yes No

9. Have you developed any Islamic app?

Yes No

Appendix –III

List of Aided Arabic Colleges by State Govt. & Affiliated to State Universities in Kerala

SI No.	Name of College	Affiliated to
1.	Nusrathul Islam Arabic College – Kadavathur, Kannur	Kannur University
2.	Darul Irshad Arabic College – Paral, Thalasseri, Kannur	Kannur University
3.	Sunniyya Arabic College – Chennamangallur, Kozhikode	Calicut University
4.	Rouzathul Uloom Arabic College – Farook, Kozhikode	Calicut University
5.	Madeenathul Uloom Arabic College - Pulikkal, Malappuram	Calicut University
6.	Ansar Arabic College - Valavannur, Malappuram	Calicut University
7.	Darul Uloom Arabic College, Vazhakkad, Malappuram	Calicut University
8.	Anvarul Islam Arabic College – Kuniyil, Malappuram	Calicut University
9.	Sullamussalam Arabic College – Areakode, Malappuram	Calicut University
10.	Anwarul Islam Women’s Arabic College – Mongam, Malappuram	Calicut University
11.	Darunnajath Arabic College – Karuvarakund, Malappuram	Calicut University

Appendix - IV

List of Un-aided & Affiliated (To State Universities) Arabic Colleges in Kerala

SI No.	Name of College	District	Affiliation
1.	Ideal Arabic College – Uliyil, Kannur	Kannur	Kannur University
2.	Al Maquar Arabic College 'DarulAman' , Thalipparamba, Kannur	Kannur	Kannur University
3.	MarkazWayanad Women's College – Noolpuzha, Wayanad	Wayanad	Calicut University
4.	Al Furqan Arabic College- Nadapuram	Kozhikode	Calicut University
5.	BaithulIzza Arabic College – Narikkuni	Kozhikode	Calicut University
6.	DarulMa'arifa Arabic College – Puduppady	Kozhikode	Calicut University
7.	Jalaliya women's Arabic College – Kuttikkattur	Kozhikode	Calicut University
8.	Rahmaniya Arabic College – Kadameri	Kozhikode	Calicut University
9.	Saqafathul Islam Arabic College – Parakkadavu	Kozhikode	Calicut University
10.	Salafiya Arabic College - Mepayyur	Kozhikode	Calicut University
11.	Anwaru Islam Arabic College – Tirurkad	Malappuram	Calicut University
12.	Al Hidayah Arabic College – Kondotty	Malappuram	Calicut University
13.	Assabah Arabic College – Pavittapuram	Malappuram	Calicut University

SI No.	Name of College	District	Affiliation
14.	Falahiya Arabic College – Malappuram	Malappuram	Calicut University
15.	Ishahathul Islam Arabic College – Putharikkal	Malappuram	Calicut University
16.	Ilahia Arabic College – Tirurkad	Malappuram	Calicut University
17.	Jamia Nadwia women’s Arabic College – Edavanna	Malappuram	Calicut University
18.	KMMO Arabic College – Tirurangadi	Malappuram	Calicut University
19.	Orphans Education Trust Arabic College – Pookkattiri	Malappuram	Calicut University
20.	Shareeath College for women - Thenjipalam	Malappuram	Calicut University
21.	Al Abrar Oriental College – Mannarkad	Palakkad	Calicut University
22.	Islamia College – Alathur	Palakkad	Calicut University
23.	Markaz Oriental College – Ottappalam	Palakkad	Calicut University
24.	Salafiya Arabic College - Karinganad	Palakkad	Calicut University
25.	Busthanul Uloom Arabic College – Kaipamangalam	Trhissur	Calicut University
26.	Taqwa Afzal ulama Women’s Arabic College – Andathode	Thrissur	Calicut University

Appendix – V

List of Un-aided & Non-affiliated Arabic Colleges in Kerala

SI No.	Name of College	District
1.	Darul Huda Arabic College - Mannanjeri	Alappuzha
2.	Hidayathul Islam Arabic College - Vaduthala	Alappuzha
3.	Hashimiya Arabic College - Alappuzha	Alappuzha
4.	JamiaHasaniya Arabic College - Kayamkulam	Alappuzha
5.	Farooqi Arabic College Alappuzha	Alappuzha
6.	Hasaniya Arabic College - Kallekkad	Alappuzha
7.	HidayaShareea' College - Vaduthala	Alappuzha
8.	Ma'dinulUloom Arabic College - Aratupuzha	Alappuzha
9.	MajlisulAbrar - Vaduthala	Alappuzha
10.	JamiaAzhariya - Ernakulam	Ernakulam
11.	Azeeziya Arabic College - Madavanna	Ernakulam
12.	Markazwafi college - South kalamasseri	Ernakulam
13.	BeeviKhadeeja Islamic & Arts College - Kompara, Aluva	Ernakulam
14.	DarulUloom Arabic College - Pullepadi	Ernakulam
15.	Madeena Arabic College - Perumbavoor	Ernakulam
16.	RabiyaWoemem's College - Perumbavoor	Ernakulam
17.	Women's Islamiya College - Muvattupuzha	Ernakulam
18.	Women's Islamiya College - Mannam, North Paravoor	Ernakulam
19.	Asasudda'vathulIslamiyaChelakkulam	Ernakulam
20.	AzharulUloom Islamic Complex - Aluva	Ernakulam
21.	HimayathulMuslimeen Arabic College - Randarakkara	Ernakulam
22.	JamiaBadariya Arabic College - Peezhakkapilly	Ernakulam
23.	JamiaFareediya Arabic College - Ernakulam	Ernakulam
24.	JamiaHasaniya Arabic College - Vazhakkulam	Ernakulam
25.	JamiaKousariya Arabic College - Edathala	Ernakulam
26.	Kulliyya Arabiya SirathulMuslimeen - Kaladi	Ernakulam
27.	DarulFathah Arabic College- Thodupuzha	Idukki
28.	Badariya Arabic College - Nedumkandam	Idukki
29.	DarulFathah Arabic College - Thodupuzha	Idukki
30.	Munavvirul Islam Arabic College -	Idukki

	Thodupuzha	
31.	Shamsul Islam Arabic College - Kumili	Idukki
32.	Jamaliya Arabic College, Panoor,	Kannur
33.	Irfaniya Arabic College - Chapparapadavu	Kannur
34.	Al Abrara Arabic College - Kannur	Kannur
35.	Al Maqar Arabic College - Thalipparamba	Kannur
36.	Assuhada Islamic & Arabic College - Muzhappala	Kannur
37.	MTM Islamic & Arts College - Chokli	Kannur
38.	MTM Islamic & Arts College for women's - Olvilam	Kannur
39.	JamiaSa'diya Arabic College - Thrikkarippur	Kannur
40.	Al Maqarussunniyya Arabic College - Thalipparamba	Kannur
41.	Jamiazahra Arabic College - Panoor	Kannur
42.	ManshauThazkiyathulIslamiya - Mattool	Kannur
43.	MarkazuDa'vathulIslamiya - Koyyam	Kannur
44.	Quvvathul Islam Arabic College - Thalipparamba	Kannur
45.	Wadi Huda - Pazhayangadi	Kannur
46.	Munavvirul Islam Shareea' College, Thrikkarippur, Kasargode	Kasargod
47.	Markazudda'vathulIslamiya,- Padanakkad, Neeleswaram	Kasargod
48.	Azeeziya Arabic College - Kanjangad	Kasargod
49.	ShamsulUlama education centre - Chenkala	Kasargod
50.	UmaraliShihabthangal Islamic Academy - Kokkachal, Uppala	Kasargod
51.	Aliya Islamic College - Paravanadukkam	Kasargod
52.	JamiaSa'diyaKasargod	Kasargod
53.	Latheefiya Islamic Complex Kumbala	Kasargod
54.	Nusrathul Islam Arabic College - Kadavathur	Kasargod
55.	Qadisiya Arabic College - Kollam	Kollam
56.	Al Hadi College of Arabic - Pathanapuram	Kollam
57.	MSM Academy - Kadakkal	Kollam
58.	AnvarulHikam Arabic College	Kollam
59.	Muslim Jama'th Arabic College - Kulathupuzhi	Kollam
60.	Darul Huda Arabic College - Mullikkala	Kollam
61.	Darussalam Arabic College - Muthayil	Kollam
62.	Fareediya Arabic College - Kilikkollor	Kollam
63.	Jalaliya Arabic College - Koottikkada	Kollam
64.	Jamiussalhath Arabic College - Chithara	Kollam
65.	Ma'dinulUloom Arabic college - Kollorviala	Kollam

66.	Misbahul Huda Arabic College - Edathara	Kollam
67.	Sirajul Islam Arabic College - ValavuPachaChithara	Kollam
68.	Markazul Huda Arabic College - Changanasseri	kottayam
69.	Al Ameen Islamic Complex - Eerattupetta	Kottayam
70.	Al Azhar Arabic College - Eerattupetta	Kottayam
71.	Anvarul Islam Arabic College - Sasthamkotta	Kottayam
72.	Falahiya Arabic College - Changanasseri	Kottayam
73.	JamiaFareediya Arabic College - Kanjiramattam	Kottayam
74.	Noorul Huda Arabic College - Kanjirappalli	Kottayam
75.	DarulIhsanShareea' College - Pariyangad	Kozhikode
76.	Jabalunnoor Arabic College - Perambra	Kozhikode
77.	DarulHidaya Islamic Academy - Kuttambur	Kozhikode
78.	Shihabthangalcentre Junior college - Pullaloor	Kozhikode
79.	Hujjathul Islam Arabic College - Cheruvannur	Kozhikode
80.	JamiaFurqaniya - Purakkad, Malappuram - Purakkad	Kozhikode
81.	DarulHidaya Arabic College - Eengapuzha	Kozhikode
82.	Darul Huda Arabic College - Nadapuram	Kozhikode
83.	Hidaya Arabic College - Palazhi	Kozhikode
84.	Madeenathunnoor Arabic College - Puroor	Kozhikode
85.	Sirajul Huda Arabic College - Kuttiadi	Kozhikode
86.	Misbahul Huda Islamic academy - kuttiadi	Kozhikode
87.	Al Anwar Islamic & Arts College - Feroke	Kozhikode
88.	Irshadiya Arabic College - Farook	Kozhikode
89.	Isha'athusunna Arabic College - Poonoor	Kozhikode
90.	Mubarak Arabic College - Poonoor	Kozhikode
91.	Al Banath Islamic College - Cheruvadi	Kozhikode
92.	Al MarkazFarookhi - Idiyankara	Kozhikode
93.	Badariya Women's Arabic College - Koyilandi	Kozhikode
94.	CM Centre - Madavoor	Kozhikode
95.	DarulHidaya Arabic College - Eengapuzha	Kozhikode
96.	DarulKhairath - Nadapuram	Kozhikode
97.	DarulM'arif Arabic College - Kadampuzha	Kozhikode
98.	Darussalam Arabic College - Nandi	Kozhikode
99.	ICS Koduvally	Kozhikode
100.	Islamiya College - Omasseri	Kozhikode
101.	JamiaFalahia Arabic College - Nadapuram	Kozhikode

102.	Riyaduswaliheen Arabic College - Koduvalli	Kozhikode
103.	Shamsul Ulama Arabic College - Kuttikkattoor	Kozhikode
104.	Islamiya College - Kuttiadi	Kozhikode
105.	Sirajul Huda Educational Complex - Kuttiadi	Kozhikode
106.	Tharbiyath Islam Arabic College - Kodyathoor	Kozhikode
107.	Kottumala Aboobacker Musliyar Islamic Complex- Malappuram	Malappuram
108.	Al Hasanath Arabic College - Mampuzha, Karuvarakund	Malappuram
109.	Najath Shareea' College - Karuvarakund	Malappuram
110.	Markazul Uloom Arabic College - Chandakkunn, Nilambur	Malappuram
111.	Nusrathul Isam Arabic College - Olavattru, Kondotty	Malappuram
112.	Badariya Shareea' College - Kuttaloor, Vengara	Malappuram
113.	Anvarul Huda College - Ramapuram	Malappuram
114.	Jamia Islamiya Arabic College - Karakkunn, Manjeri	Malappuram
115.	Shuhada Islamic Complex, Puthanangadi, Angadippuram	Malappuram
116.	Anvarul Islam Arabic College - Thirurkad, Malappuram	Malappuram
117.	Mazharul Uloom Arabic College, Karuvakallu, Kannamangalam	Malappuram
118.	Ashareea' shareea' college, Puramannur, Valancheri	Malappuram
119.	Sayyid Umarali Shihabthangal Academy - Armbra	Malappuram
120.	Thrippanachi Usthad Smaraka Junior College	Malappuram
121.	Edappulam Manu Musliyar Smaraka college - Cherukode	Malappuram
122.	Darul Islam Arabic College - Veliamkode	Malappuram
123.	Al Huda Shareea college - Kodur, Malappuram	Malappuram
124.	Shihabthangal Smaraka Shareea' College - Cherur, Vengara	Malappuram
125.	Anvarul Huda Junior College - vettathur	Malappuram
126.	Darul Hikam Junior College - Chemmaniyod	Malappuram
127.	Noorul Huda Islamic College - Kadancheri, Kaladi	Malappuram
128.	Kanniyath Usthad Arabic College -	Malappuram

	Vazhakkad	
129.	Ma'dinulUloom Arabic College - Thazhekode	Malappuram
130.	Al farook Junior College - Oruvambram	Malappuram
131.	Manbau' ssada Arabic College - Ayyaya	Malappuram
132.	Al Ansar Arabic College - Pandikkad	Malappuram
133.	Al Irshad Arabic College - Pandavoor	Malappuram
134.	Al Fathah Arabic College - Thennala	Malappuram
135.	Al Furqan Arabic College - Wandoor	Malappuram
136.	Al Ihsan Arabic College - Kattippara	Malappuram
137.	Al Ihsan Arabic College - Kidangayam	Malappuram
138.	Al Ihsan Arabic College - Vengara	Malappuram
139.	Al Irshad Arabic College - Thrippanachi	Malappuram
140.	Al Jalal Arabic College - Padapparamba	Malappuram
141.	Al Irshad Arabic College - Manalippuzha	Malappuram
142.	BukhariDa'va College - Kondotty	Malappuram
143.	DarulAman Arabic College - Edavannappara	Malappuram
144.	DarulFathah Arabic College - Thazhekode	Malappuram
145.	DarulHidaya Arabic College - Parakkadavu	Malappuram
146.	DarulMa'arif Arabic College - Kadampuzha	Malappuram
147.	DarulMa'arif Arabic College - Valiyora	Malappuram
148.	Hidaya Arabic College - Vellila	Malappuram
149.	DaruRahma Arabic College - Pookalathoor	Malappuram
150.	Hikamiya Arabic College - Manjeri	Malappuram
151.	Ihyaussunna Arabic College - Othukkungal	Malappuram
152.	Ihyaussunna Arabic College - Varanakkara	Malappuram
153.	Irshadiya Arabic College - Kolathur	Malappuram
154.	Ma'din - Melmuri, Malappuram	Malappuram
155.	Majma' Arabic College - Areekode	Malappuram
156.	Majma' Arabic College - Iringalloor	Malappuram
157.	Majma' Arabic College - Nilambur	Malappuram
158.	Majma' Arabic College - Vettichira	Malappuram
159.	Nusrathul Islam Arabic College - Randathani	Malappuram
160.	KKHM Islamic Arst College - Karthala, Valancheri	Malappuram
161.	Rasheediya Arabic College - Edavannappara	Malappuram
162.	Majma' Shareea' college - Kavanoor	Malappuram
163.	HaidrosMuslyar Islamic arst college - Pookkiparamba	Malappuram

164.	Al Maqdoom Arabic College - Moonakka, Valancheri	Malappuram
165.	PMSA Islamic and arts college - Kattilangadi	Malappuram
166.	DarulUloom Islamic Arsts college - Thootha	Malappuram
167.	Subulurrashad Islamic & Arts college - karuvarakundu	Malappuram
168.	Bafakhi Islamic Arts college - Kalpakancheri	Malappuram
169.	MarkazussaqaqathulIslamiya - Kundoor	Malappuram
170.	BusthanulUloom Arabic College - Valancheri	Malappuram
171.	Darul Islam Arts & Islamic College - Chennara, Tirur	Malappuram
172.	Gracevalley Islamic & Arts College - Kottakkal	Malappuram
173.	Liwahul Huda Islamic & Arts college - Keezhuparamba	Malappuram
174.	Maqdoomya Islamic & Arts College - Valluvambram	Malappuram
175.	DarulIhsan Islamic Academy - Punnkkal, changaramkulam	Malappuram
176.	Thanveerul Islam Islamic & Arts College - Peruvalloor, Kondotty	Malappuram
177.	DarulIhsan Islamic Arts College - Chungathara	Malappuram
178.	Srajul Huda Islamic & Arts College- parappur, Kottakkal	Malappuram
179.	Anwariya Arabic College - Pottachira	Malappuram
180.	Women's Islamiya College - Wandoor	Malappuram
181.	MadaruthaskiyathulIslamiya - Areekode	Malappuram
182.	Al IhsanD'va College - Vengara	Malappuram
183.	Darussunna Arabic College - Pappinippara	Malappuram
184.	Izzathul Islamic Complex - Kuzhimanna	Malappuram
185.	JamiaHikamiya - Pappinippara	Malappuram
186.	JamiaWahabia Arabic College - Wandoor	Malappuram
187.	Ma'dinusaaqafathulIslamiya - Melmuri	Malappuram
188.	Jamia Al Hind -Mini Ootty , Oorakam	Malappuram
189.	IrshadulAnamshareea' College, koppam	Palakkad
190.	DarulQirathShareea' College - Ottappalam	Palakkad
191.	Darul Islam Arabic College - Vallappuzha	Palakkad
192.	MeeranOuliyasmaraka Arabic College, Nellaya	Palakkad
193.	Majma' tharbiyathulRahmaniya, Karumanangkurishi, Cherpulasser	Palakkad

194.	PMSA PTM Junior college - Edappalam	Palakkad
195.	Irshadiya Arabic College - Kumaranellur	Palakkad
196.	Najath Junior College - Mannarkad	Palakkad
197.	Ansarul Islam Arabic College - Nellore	Palakkad
198.	JannathulUloom Arabic College Valiyangadi	Palakkad
199.	Darul Anwar Arabic College - Peringottukurshi	Palakkad
200.	DarulHasanath Arabic College - Karimba	Palakkad
201.	Hasaniya Arabic College - Palakkad	Palakkad
202.	Ishahath Arabic College - Ottappalam	Palakkad
203.	MarkazulHidaya Arabic College - Komban	Palakkad
204.	NattukalMaqam Arabic College - Nattukal	Palakkad
205.	Muhammadiya Islamic & Arts College - Maryamangalam	Palakkad
206.	DarulAman Arabic College - Kalladikkodu	Palakkad
207.	DarulAnvar Arabic College - Pallippuram	Palakkad
208.	Darunnajath Arabic College - Mannarkad	Palakkad
209.	Darunnajath Arabic College - Nellippuzha	Palakkad
210.	Irshadiya Arabic College - Alathur	Palakkad
211.	Islahiya Arabic College - Kumaranellur	Palakkad
212.	Izzathul Islam Arabic College - Koppam, Pattambi	Palakkad
213.	Mujahideen Arabic College - Parali	Palakkad
214.	SharafulMuslimeenarabic college - Edathanattukara	Palakkad
215.	Hasaniya Arabic College - Kallekkad	Palakkad
216.	JannathulUloom Arabic College - Palakkad	Palakkad
217.	JamiaRahmathulAnam - Vaipur	Pathanamthitta
218.	Noorul Islam Shareea' College - Beemapalli	Thiruvananthapuram
219.	Vadi Al UloomShareea' College - Kaniyapuram	Thiruvananthapuram
220.	MaqdoomiyaDa'va College - Attingal	Thiruvananthapuram
221.	Mannaniya Arabic College	Thiruvananthapuram
222.	NibrasulIslami& Arts college - Kaniyapuram	Thiruvananthapuram
223.	Women's Islamia College - Azheekode	Thiruvananthapuram
224.	DarulAmanArabic College - Balaramapuram	Thiruvananthapuram
225.	Hidayathul Islam Arabic College - Poonthura	Thiruvananthapuram
226.	Hudaibiya Islamic College - Vellanchira	Thiruvananthapuram
227.	MannaniyaIslamia Arabic College	Thiruvananthapuram
228.	Madrassa KashifulUloom	Thiruvananthapuram
229.	KTM Arabic College - Kallambalam	Thiruvananthapuram

230.	DarulFalah Islamic & Arts College - Attur	Thissur
231.	QadiriyaShareea' College Porkalayangad, Kunnamkulam	Thrissur
232.	DarulIhsan Junior College - Choolur	Thrissur
233.	Daruthaqva Islamic Academy - Palappilly	Thrissur
234.	Darurahma Islamic & Arts College - Thozhiyoor	Thrissur
235.	Malik bin Deenar Islamic & Arts College - Kunnatheri	Thrissur
236.	Shamsul Huda Islamic Academy - Vadanappalli	Thrissur
237.	Al Azhar -Manakkodi	Thrissur
238.	Women's Arabic College - Eriyad	Thrissur
239.	Madarudda'vathulIslamiya - Vadanappalli	Thrissur
240.	IrshadulMuslimeen Arabic College - Kodungallur	Thrissur
241.	JamiaAzeziya - Madavana	Thrissur
242.	JamiaMahmoodiya - Perinjanam	Thrissur
243.	Manbaul Huda Arabic College - Kecheri	Thrissur
244.	DarulUloom Arabic College - SulthanBathery	Wayanad
245.	Imam Gazzali Arabic College - Kooliwayal	Wayanad
246.	Sa'ada Islamic College - Varambatta, wayanad	Wayanad
247.	DarulFalah Arabic College - Kalpetta	Wayanad
248.	ShamsulUlama Islamic academy - Vengappalli	Wayanad
249.	WMO Islamic & Arts College - Meenangadi	Wayanad
250.	MuassassathunoorulIslamiya - Mananthavadi	Wayanad