

# A Study of the Uses and Advantages of E-Resources Compared to Print Resources in the State Universities in Kerala

C. Baskaran<sup>1</sup>, Binu P.C.<sup>2</sup>

## Abstract

Electronic information resources in libraries have made remarkable change in the users' perception towards print resources. A survey among 421 respondents in six state universities in Kerala reveals that the use of e-resources is considered as an advantage and it benefits the academic community. While analyzing the use of e-resources compared to the print resources, the statement '*E-resources affect the reading habit so it is not be encouraged*' is rejected because it is not an advantage. All the twelve hypotheses set for 'Benefits of electronic resources for accessing scholarly information' are accepted because all the regulatory constructs have significant influence on Benefit of e-resources.

**Keywords:** Academic Libraries; Electronic Resources; Information and Communication Technology (ICT).

## Introduction

The principal part of education and research is 'Access to Information'. The situations of the world have been changed by the development in information and communication technologies. Technological advancements had a great deal of effect on library and information services. Earlier the library collections were just in the conventional bound volumes, yet now it has changed from print to electronic. Most of the libraries offer information both in print and electronic configuration to its users. Now, electronic resources have turned out to be imperative piece of the learning process. With the advent innovative technologies, electronic resources are effortlessly and promptly accessible to users. The present study was conducted among the post graduate students, research scholars and faculty members of six state universities in Kerala. It examines the use and advantages of e-resources compared to print resources.

In the fast growing information explosion, information retrieval process has become very difficult without wasting time. Recent advances in the field of Information technology contribute considerably to enhance the services of libraries. Now electronic resources have become important ingredient of any academic and research libraries. E-resources are usually referred to as databases, books, journals, newspapers, magazines, archives, theses, conference papers, examination papers, government papers, research reports, scripts and monographs in an electronic form. The concept of 'Library without walls' has much significance when we discuss about electronic resources. The ready availability of thousands of electronic databases demanded the proper management of these resources. Thus it results in better usage of these resources and quality improvement in higher education.

The management of electronic resources is being a new momentum in academic and research libraries with the rapid and tremendous growth in electronic publishing. Due to the shrinking library budgets and increasing cost of information resources, libraries require an effective control over the subscription of electronic resources. It involves selection of electronic resources, evaluating the usage and making decisions to which subscriptions are to be continued. Electronic resources management as a system, it affects the library activities concerned with budgeting, collection development, acquisition, IT

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infrastructure, licensing and the user training. Conscious efforts and continual investment is required in electronic resources management.

### Review of Literature

Review of related literature is necessary to empower the researcher to get an unmistakable understanding about the particular field of study. It helps the researcher to have an understanding into the tested methods, procedures and interpretations of similar studies conducted somewhere else. Some prominent studies related to e-resources are reviewed.

*Baskaran [1]* has revealed that the members and research scholars accessing e-journals from UGC-INFONET consortium. A survey was conducted to find out the information usage patterns and needs of the research scholars and faculty members in Alagappa University. This study reveals that, on weekly basis 44% of the faculty members have access to e-journals, 85.99% of the faculty members and research scholars were aware about UGC-INFONET and 17% of the respondents are not aware of this programme.

*Baskaran & Kishorekumar [2]* have analyzed the awareness about the scholarly journals by the faculty members, available through UGC-INFONET. The study examines various pattern of use by the Professors and Associate Professors. As per the study Asst. Professors use the resources for study purposes and the faculty members have learned about UGC INFONET through the Library staff and from the senior faculty members. It is however found that lack of training became an obstacle in proper and full utilization of them.

*Kalbande Dattatraya & Ingle [3]* have discussed Use of e-resources, its impact, and the places from which the users are accessing these resources. A survey among 108 faculty members was conducted at the Mahatma Phule Agricultural University, Rahuri (M.S). The result showed that the awareness about e-resources encourages users to use these resources at maximum. Users are accessing these resources from the department and home. The impact of e-resources was noticeable from the decrease in number of print resources in comparison to the increase in e-resources [4].

*Pramanathan & Baskaran [4]* assess the use of electronic information resources among the research scholars at the Bharathidasan University, Tiruchirappalli. The study is based only on the research scholars of Arts, Science, Social Science,

Management and Education faculties in Bharathidasan University, Tiruchirappalli. revealed that UGC-INFONET Digital Library consortium is providing 7500 plus Journals, Bibliographic Databases and Open Access Journals. The study analyses the use of UGC-INFONET resources by the Science scholars in Bharathidasan University. Questionnaires were distributed to Science scholars of the Bharathidasan University to collect data regarding the use of UGC-INFONET resources. This study helped to assess the impact of UGC-INFONET on university users and also this study will help for the improvements to be made in the existing UGC-INFONET e-journals consortium project.

*Nazir Tawfeek & Zahid Ashraf [5]* have surveyed Library consortiums will be a solution to this problem in India. But library consortia are still in their infancy stage in our country. UGC-INFONET library consortium has provided access to various E-resources to Indian Universities became much beneficial to higher education in India. This article examines the usage of these e-resources under UGC-INFONET digital library consortia.

*Katabalwa Anajoyce Samuel & Anajoyce Samuel Katabalwa [6]* have analysed The use of electronic resource by the postgraduate students in the School of Education at the University of Dar es Salaam. The study showed that most of the students are using e-resources for many purposes. The major difficulties faced in the use of electronic resources are power failure, inadequate bandwidth, slow speed, inability to access the resources from home, lack of training, lack of awareness, limited access to computers and difficulty in searching. Finally, the recommendations for improving the use of electronic journal resources are provided.

*Pal Jiban [7]* has examined Prevalent situations that have been leading to resource sharing; primarily emanated from library cooperatives, interlibrary loan, buying clubs; subsequently changed to utility services, site licensing, and ultimately the Consortium – an emerging toolkit for libraries to survive. The strategic alliances amongst libraries and growth of library consortia have been discussed. The implications of different consortia models to the Indian libraries are explained; which suggests for a sustainable consortia organization among potential partners.

*Bhat Nazir & Shabir Ahmed Gnain [8]* have studied The satisfaction level of users with regard to the following types of Electronic Information Resources (EIRs) relevant to agriculture and allied disciplines, viz. Indexing and Abstracting (I&A) Databases; e-Journals; e-Books; and e-Theses. Seven universities

were surveyed using a questionnaire for collecting data. Wijetunge & Pradeepa [9] have analyzed 99 librarians working in the Sri Lankan public universities. Findings revealed that 65% frequently use open access material for their research, and the majorities (33%) use them for their research, 60% believed that the available e-resources fulfilled their needs. Inability to access the databases from home, absence of some full text articles, lack of relevant material and lack of access to archival material were identified as common barriers to use the e-resources.

### Objectives of the Study

- To assess the use of electronic resources compared to the print resources.
- To examine the level at which e-resources are beneficial to the academic community.
- To study e-resource use pattern by the users.
- To evaluate the benefits of electronic resources for accessing scholarly information.

### Methodology

The study was made by the researcher based on distributed the questionnaire among the users in Six State universities in Kerala. A questionnaire-based survey was conducted among the Post Graduate students, Research Scholars and Teachers from six state universities in the Kerala state. 421 respondents from Cochin University of Science and Technology (CUSAT), University of Calicut, Mahatma Gandhi University, University of Kerala, Sree Sankaracharya University of Sanskrit and Kannur University participated in the survey. The survey was conducted by systematic sampling procedure. The data collected were analyzed via SPSS 20.0 for Windows. Main objective of the study is to assess the uses and

advantages of e-resources compared to print resources in the state universities in Kerala.

### Data Analysis

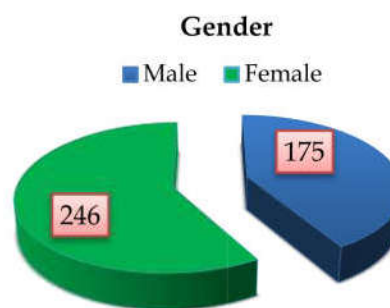
Data analysis is the most important step in research process. It is the link between raw data and significant results leading to conclusions. This process of analysis has to be result oriented.

#### Gender Wise Distribution of Respondents

A study of data in table-1 shows the gender wise distribution of the respondents. It could be noted that out of the total 421 respondents were participated. Out of them, majority of the respondents 246 (58.4%) belong to the female group and the rest of them 175 (41.6%) are males.

#### Age Wise Distribution of Respondents

A study of data in Table 2 indicates that the majority of the respondents 272 (64.6%) are in the 21 to 30 age group. It is followed by, 96 (22.8%) in the 31 to 40 age group, 36 (8.6%) are in 41 to 50 age group and 10 (2.4%) respondents are in the age group above 50. It is also showed that 7 (1.7%) of the respondents belongs to the age group below 20.



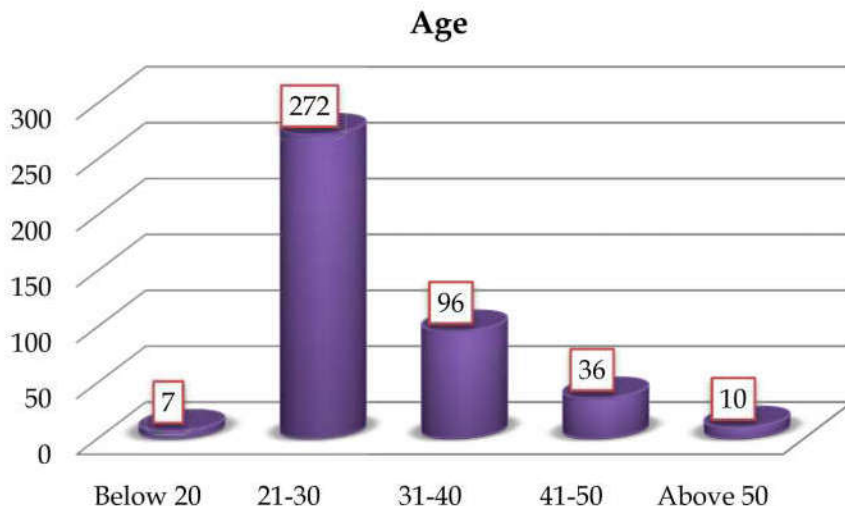
**Table 1:** Gender wise distribution of the respondents

| Gender | Frequency | Percent |
|--------|-----------|---------|
| Male   | 175       | 41.6    |
| Female | 246       | 58.4    |
| Total  | 421       | 100     |

**Table 2:** Age wise distribution of respondents

| Age group | Frequency | Percent |
|-----------|-----------|---------|
| Below 20  | 7         | 1.7     |
| 21-30     | 272       | 64.6    |
| 31-40     | 96        | 22.8    |
| 41-50     | 36        | 8.6     |
| Above 50  | 10        | 2.4     |

Graph 2:



*Educational qualification of the respondents*

It is identified from the Table 3, majority of the respondents 109 (25.9%) of them are Post Graduate and 75 (17.8%) are having PG with NET qualification. It is followed by 61 (14.5%) respondents with M. Phil

and 54 (12.8%) having M. Phil with NET qualification. Among the total respondents 44 (10.5%) are qualified Ph.D and 32 (7.6%) have Ph.D with NET. 46 (10.9%) are Under Graduate.

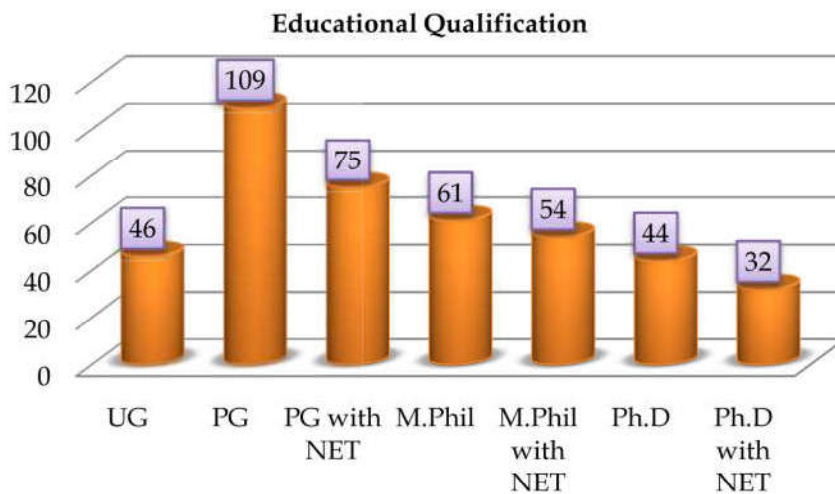
Table 3: Educational qualification of the respondents

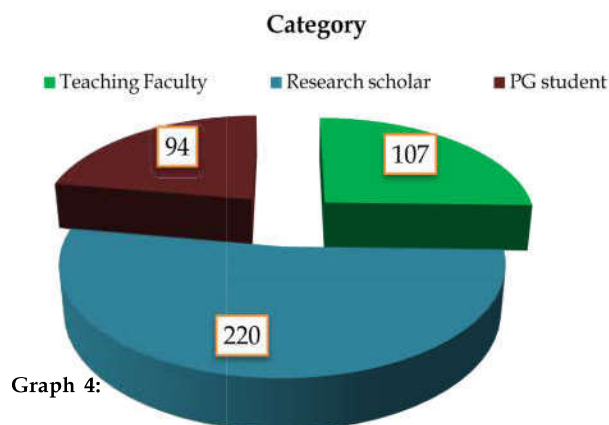
| Educational qualification | Frequency | Percent |
|---------------------------|-----------|---------|
| UG                        | 46        | 10.9    |
| PG                        | 109       | 25.9    |
| PG with NET               | 75        | 17.8    |
| M.Phil                    | 61        | 14.5    |
| M.Phil with NET           | 54        | 12.8    |
| Ph.D                      | 44        | 10.5    |
| Ph.D with NET             | 32        | 7.6     |

Table 4: Distribution of respondents by category

| Category         | Frequency | Percent |
|------------------|-----------|---------|
| Teaching faculty | 107       | 25.4    |
| Research scholar | 220       | 52.3    |
| PG student       | 94        | 22.3    |

Graph 3:





*Distribution of Respondents by Category*

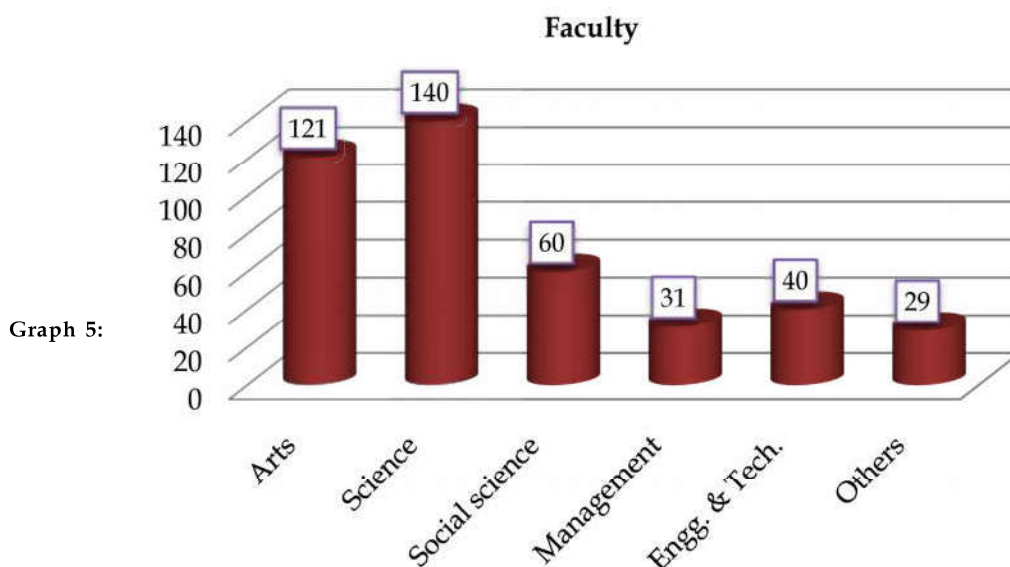
A study of data in table-4 indicates the category wise distribution of respondents. It could be noted that out of the total 421 respondents, 220 (52.3%) of them belong to the Research scholar category and 107 (25.4%) of them come under the Teaching faculty.

In this study, 94 (22.3%) of the respondents are found in the PG student. It is concluded that more than a half of the respondents belong to the Research scholar category.

Graph 4:

Table 5: Faculty wise distribution of respondents

| Faculty        | Frequency | Percent |
|----------------|-----------|---------|
| Arts           | 121       | 28.7    |
| Science        | 140       | 33.3    |
| Social science | 60        | 14.3    |
| Management     | 31        | 7.4     |
| Engg. & Tech.  | 40        | 9.5     |
| Others         | 29        | 6.9     |



Graph 5:

*Faculty wise distribution of the respondents*

A study of data in Table 5 describes the faculty wise distribution of the respondents. It could be seen that out of the total 421 respondents, 140 (33.3%) are belonging to faculty of science. It is clearly understood that 121 (28.7%) are coming under faculty of Arts, 60 (14.3%) of them belongs to Social Science, 40 (9.5%) are from Engineering and Technology, 31 (7.4%) are from Management and 29 (6.9%) are belonging to other faculty. It is concluded that majority of respondents are from science faculty.

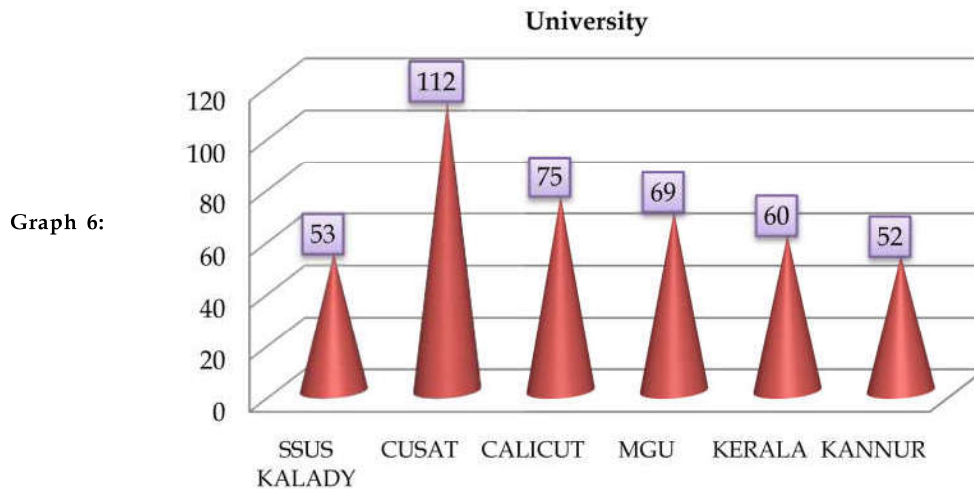
*University wise distribution of respondents*

Data presented in Table 6 represents the University wise distribution of the respondents. Out of 421 respondents 112 (26.6%) belong to Cochin University of Science And Technology (CUSAT).

It is followed by 75 (17.8%) from University of Calicut, 69 (16.4%) from Mahatma Gandhi University, 60 (14.3%) from University of Kerala, 53 (12.6%) from Sree Sankaracharya University of Sanskrit and 52 (12.4%) are from Kannur University.

**Table 6:** University wise distribution of respondents

| Name of university | Frequency | Percent |
|--------------------|-----------|---------|
| SSUS KALADY        | 53        | 12.6    |
| CUSAT              | 112       | 26.6    |
| CALICUT            | 75        | 17.8    |
| MGU                | 69        | 16.4    |
| KERALA             | 60        | 14.3    |
| KANNUR             | 52        | 12.4    |

**Table 7:** Model fit Indices for Confirmatory factor analysis (CFA) -Advantages

|            | $\chi^2$ | DF | P    | Normed $\chi^2$ | GFI  | AGFI | NFI  | TLI  | CFI  | RMR  | RMSEA |
|------------|----------|----|------|-----------------|------|------|------|------|------|------|-------|
| Advantages | 18.126   | 12 | .112 | 1.510           | .989 | .967 | .988 | .991 | .996 | .015 | .035  |

### *Use of electronic resources compared to the print resources*

The respondents are asked, how do you agree with the use of electronic resources compared to the print resources? As this being an opinion converted into a score the answer may be subjected to random variations and may be influenced by psychological factors. So it is better to use psychometric scale development approaches to evaluate the relationship. The best model for testing the convergent validity and for modeling the best method is Structural Equation Model (SEM) or Confirmatory Factor Analysis.

Structural equation modeling (SEM) is a statistical technique that takes a confirmatory approach to the analysis of a structural theory bearing on some phenomenon. SEM conveys two important aspects of the procedures: a) causal process under study is represented by a series of structural (regression) equations, and b) these structural relationships can be modeled to facilitate a clearer conceptualization of the theory under study. The hypothesized model is statistically tested simultaneously to examine its consistency with the data through goodness of fit measures.

Confirmatory factor analysis (CFA) is a type of structural equation modeling (SEM), which deals specifically with measurement models that is relationship between observed measures or indicators (eg. Test items, test scores etc) and the latent variables or factors. A fundamental feature of CFA is its hypothesis-driven nature.

In CFA, the researcher specifies the number of factors and the pattern of indicator factor loading in advance, thus the researcher must have a firm prior sense, based on past evidence and theory of the factors that exist in the data.

In order to evaluate the advantages of the electronic resources compared to the print resources we use the Structural Equation Modeling (SEM) and test the hypothesis;

**H<sub>1</sub>:** Save time of the user is an advantage

**H<sub>2</sub>:** Get variety of information is an advantage.

**H<sub>3</sub>:** Get scholarly information is an advantage.

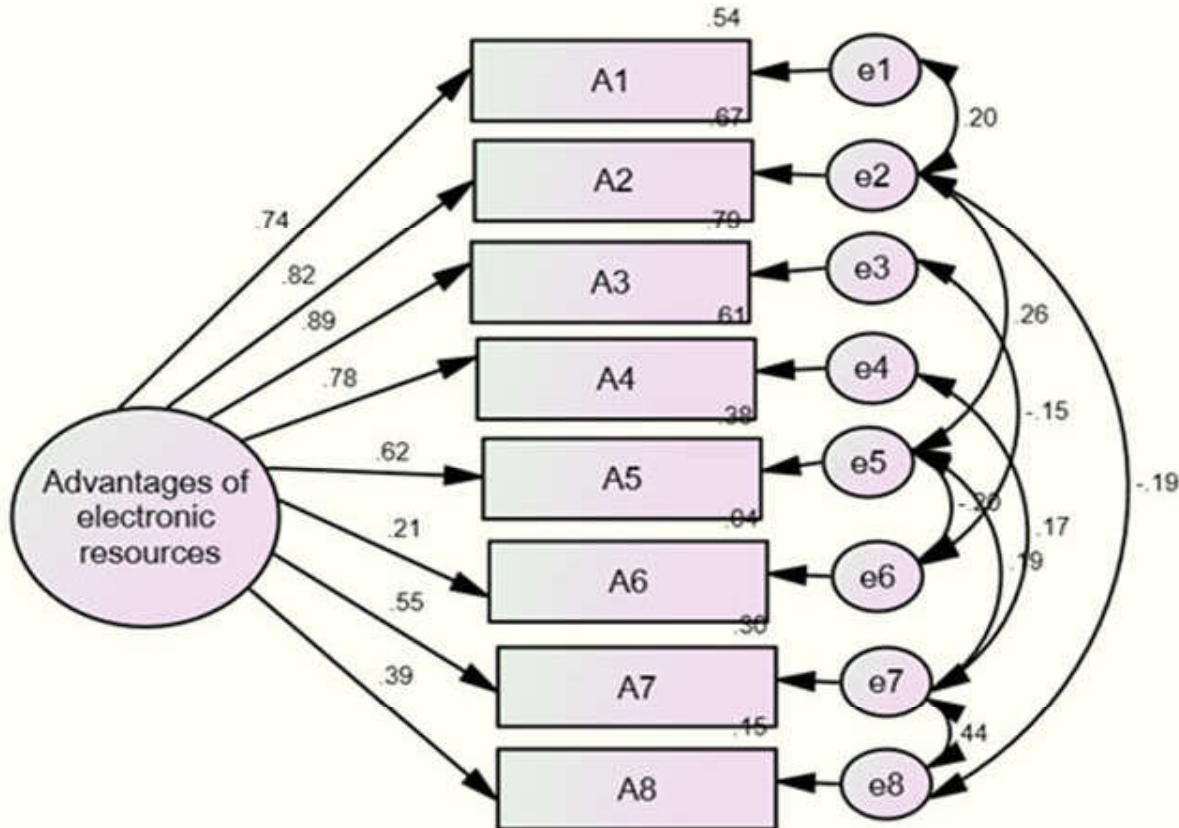
**H<sub>4</sub>:** Better management of information is an advantage.

**H<sub>5</sub>:** Get latest information is an advantage.



**Table 8:** The Regression Coefficient advantages

| Path   | Regression Coefficient | C.R.   | P      | Variance explained (%) | Rank |
|--|------------------------|--------|--------|------------------------|------|
| Save time of the user → Advantage                | 0.737                  | 19.956 | <0.001 | 54.4                   | 4    |
| Get variety of information → Advantage           | 0.818                  | 24.329 | <0.001 | 66.9                   | 2    |
| Get scholarly information → Advantage            | 0.888                  | 29.861 | <0.001 | 78.8                   | 1    |
| Better management of information → Advantage     | 0.779                  | 22.048 | <0.001 | 60.7                   | 3    |
| Get latest information → Advantage               | 0.620                  | 15.328 | <0.001 | 38.4                   | 5    |
| E-resources affect the reading habit → Advantage | 0.211                  | 4.529  | <0.001 | 4.5                    | 8    |
| Fulfill the information needs → Advantage        | 0.552                  | 13.135 | <0.001 | 30.5                   | 6    |
| Any other uses → Advantage                       | 0.385                  | 8.582  | <0.001 | 14.8                   | 7    |



H<sub>6</sub>: E-resources affect the reading habit so it is not encouraged is an advantage.

H<sub>7</sub>: Fulfill the information need is an advantage.

H<sub>8</sub>: Any other uses is an advantage

Model fit Indices for Confirmatory factor analysis (CFA) –Advantages

A study of results in table 7 indicates a reasonable fit model as all the values are above the standard limits.

*The Regression Coefficients -Advantages*

H<sub>1</sub>: Save time of the user is an advantage

The results exhibited in Table 8 revealed that the regulatory construct, ‘Save time of the user’ had

significant influence on advantage of e-resources as the standardized direct effect of this construct on advantage of e-resources was 0.737, which is more than 0.4 (also *p* value was significant). So the hypothesis H<sub>1</sub> is accepted and conclude that save time of the user is an advantage

H<sub>2</sub>: Get variety of information is an advantage.

The results exhibited in Table 8 revealed that the regulatory construct Get variety of information had significant influence on advantage of e-resources as the standardized direct effect of this construct on advantage of e-resources was 0.818, which is more than 0.4 (also *p* value was significant). So the hypothesis H<sub>2</sub> is accepted and concludes that Get variety of information is an advantage.

**H<sub>3</sub>:** Get scholarly information is an advantage.

The results exhibited in Table 8 revealed that the regulatory construct Get scholarly information had significant influence on advantage of e-resources as the standardized direct effect of this construct on advantage of e-resources was 0.888, which is more than 0.4 (also *p* value was significant). So the hypothesis H<sub>3</sub> is accepted and conclude that Get scholarly information is an advantage.

**H<sub>4</sub>:** Better management of information is an advantage.

The results exhibited in Table 8 revealed that the regulatory construct Better management of information had significant influence on advantage of e-resources as the standardized direct effect of this construct on advantage of e-resources was 0.779, which is more than 0.4 (also *p* value was significant). So the hypothesis H<sub>4</sub> is accepted and conclude that Better management of information is an advantage.

**H<sub>5</sub>:** Get latest information is an advantage.

The results exhibited in Table 8 revealed that the regulatory construct Get latest information had significant influence on advantage of e-resources as the standardized direct effect of this construct on advantage of e-resources was 0.620, which is more than 0.4 (also *p* value was significant). So the hypothesis H<sub>5</sub> is accepted and concludes that Get latest information need is an advantage.

**H<sub>6</sub>:** E-resources affect the reading habit so it is not be encouraged is an advantage.

The results exhibited in Table 8 revealed that the regulatory construct E-resources affect the reading

habit had no significant influence on advantage of e-resources as the standardized direct effect of this construct on advantage of e-resources was 0.211, which is less than 0.4 (also *p* value was significant). So the hypothesis H<sub>6</sub> is rejected and conclude that E-resources affect the reading habit is not an advantage.

**H<sub>7</sub>:** Fulfill the information need is an advantage.

The results exhibited in Table 8 revealed that the regulatory construct 'Fulfill the information' had significant influence on advantage of e-resources as the standardized direct effect of this construct on advantage of e-resources was 0.552, which is more than 0.4 (also *p* value was significant). So the hypothesis H<sub>7</sub> is accepted and conclude that fulfill the information needs is an advantage.

**H<sub>8</sub>:** Any other uses is an advantage

The results exhibited in Table 8 revealed that the regulatory construct 'Any other uses' had no significant influence on advantage of e-resources as the standardized direct effect of this construct on advantage of e-resources was 0.385, which is less than 0.4 (also *p* value was significant). So the hypothesis H<sub>8</sub> is rejected and conclude that any other uses is not an advantage.

*Benefits of electronic resources for accessing scholarly information*

Here use the SEM to evaluate the benefits of electronic resources for accessing scholarly information. That is in this case using SEM we test the hypothesizes

**Table 9:** Model fit Indices for CFA-Benefits

|                                  | $\chi^2$ | DF | P    | Normed $\chi^2$ | GFI  | AGFI | NFI  | TLI  | CFI  | RMR  | RMSEA |
|----------------------------------|----------|----|------|-----------------|------|------|------|------|------|------|-------|
| Benefits of electronic resources | 37.991   | 28 | .099 | 1.357           | .985 | .957 | .986 | .991 | .996 | .012 | .029  |

**Table 10:** The Regression Coefficients -Benefits

| Path  | Regression Coefficient | C.R.   | P      | Variance explained (%) | Rank |
|---|------------------------|--------|--------|------------------------|------|
| Information being available at anytime →Benefit | 0.534                  | 12.595 | <0.001 | 51.9                   | 4    |
| Access from any location →Benefit               | 0.527                  | 12.389 | <0.001 | 28.5                   | 11   |
| Diversity of resources →Benefit                 | 0.662                  | 16.837 | <0.001 | 27.8                   | 12   |
| User friendly →Benefit                          | 0.760                  | 21.062 | <0.001 | 43.8                   | 7    |
| Forwarded to others easily →Benefit             | 0.664                  | 16.913 | <0.001 | 57.7                   | 2    |
| Downloading/Copying is very easy →Benefit       | 0.628                  | 15.605 | <0.001 | 44.1                   | 6    |
| Access to back issues is very easy →Benefit     | 0.835                  | 25.464 | <0.001 | 39.4                   | 8    |
| Multiple user access →Benefit                   | 0.757                  | 20.913 | <0.001 | 69.7                   | 1    |
| Economical →Benefit                             | 0.720                  | 19.190 | <0.002 | 57.3                   | 3    |
| Easily searchable →Benefit                      | 0.579                  | 13.974 | <0.003 | 33.3                   | 10   |
| Links to related information →Benefit           | 0.707                  | 18.630 | <0.004 | 33.6                   | 9    |
| Any other Benefits/Usefulness →Benefit          | 0.577                  | 13.911 | <0.005 | 50.0                   | 5    |



H<sub>1</sub>: Information being available at any time is a Benefit

H<sub>2</sub>: Access from any location is a Benefit.

H<sub>3</sub>: Diversity of resources is a Benefit.

H<sub>4</sub>: User friendly is a Benefit.

H<sub>5</sub>: Forwarded to others easily is a Benefit.

H<sub>6</sub>: Downloading/Copying is very easy is a Benefit.

H<sub>7</sub>: Access to back issues is very easy is a Benefit.

H<sub>8</sub>: Multiple user access is a Benefit

H<sub>9</sub>: Economical is a Benefit.

H<sub>10</sub>: Easily searchable is a Benefit.

H<sub>11</sub>: Links to related information is a Benefit.

H<sub>12</sub>: Any other Benefits/Usefulness is a Benefit

### Model fit Indices for CFA-Benefits

Table 10 indicates a reasonable fit model as all the values are above the standard limits.

### The Regression Coefficients -Benefits

H<sub>1</sub>: Information being available at any time is a Benefit

The results exhibited in Table 11 revealed that the regulatory construct Information being available at any time has significant influence on Benefit of e-resources as the standardized direct effect of this construct on Benefit of e-resources was 0.534 which is more than 0.4 (also *p* value was significant). So the hypothesis H<sub>1</sub> is accepted and conclude that Information being available at any time is a Benefit.

H<sub>2</sub>: Access from any location is a Benefit.

It is revealed that the regulatory construct Access from any location has significant influence on Benefit of e-resources as the standardized direct effect of this construct on Benefit of e-resources was 0.527 which is more than 0.4 (also *p* value was significant). So the hypothesis H<sub>2</sub> is accepted and conclude that Access from any location is a Benefit.

H<sub>3</sub>: Diversity of resources is a Benefit.

It is revealed that the regulatory construct Diversity of resources has significant influence on Benefit of e-resources as the standardized direct effect of this construct on Benefit of e-resources was 0.662 which is more than 0.4 (also *p* value was significant). So the hypothesis H<sub>3</sub> is accepted and conclude that Diversity of resources is a Benefit.

H<sub>4</sub>: User friendly is a Benefit.

It is revealed that the regulatory construct User friendly has significant influence on Benefit of e-

resources as the standardized direct effect of this construct on Benefit of e-resources was 0.760 which is more than 0.4 (also *p* value was significant). So the hypothesis H<sub>4</sub> is accepted and conclude that User friendly is a Benefit.

H<sub>5</sub>: Forwarded to others easily is a Benefit.

It is revealed that the regulatory construct Forwarded to others easily has significant influence on Benefit of e-resources as the standardized direct effect of this construct on Benefit of e-resources was 0.664 which is more than 0.4 (also *p* value was significant). So the hypothesis H<sub>5</sub> is accepted and conclude that Forwarded to others easily is a Benefit.

H<sub>6</sub>: Downloading/Copying is very easy is a Benefit.

It is revealed that the regulatory construct Downloading/Copying is very easy has significant influence on Benefit of e-resources as the standardized direct effect of this construct on Benefit of e-resources was 0.628 which is more than 0.4 (also *p* value was significant). So the hypothesis H<sub>6</sub> is accepted and conclude that Downloading/Copying is very easy is a Benefit.

H<sub>7</sub>: Access to back issues is very easy is a Benefit.

It is revealed that the regulatory construct Access to back issues is very easy has significant influence on Benefit of e-resources as the standardized direct effect of this construct on Benefit of e-resources was 0.835 which is more than 0.4 (also *p* value was significant). So the hypothesis H<sub>7</sub> is accepted and conclude that Access to back issues is very easy is a Benefit.

H<sub>8</sub>: Multiple user access is a Benefit

It is revealed that the regulatory construct Multiple user access had significant influence on Benefit of e-resources as the standardized direct effect of this construct on Benefit of e-resources was 0.757 which is more than 0.4 (also *p* value was significant). So the hypothesis H<sub>8</sub> is accepted and conclude that multiple user access is a Benefit.

H<sub>9</sub>: Economical is a Benefit.

It is revealed that the regulatory construct Economical had significant influence on Benefit of e-resources as the standardized direct effect of this construct on Benefit of e-resources was 0.720 which is more than 0.4 (also *p* value was significant). So the hypothesis H<sub>9</sub> is accepted and concludes that Economical is a Benefit.

H<sub>10</sub>: Easily searchable is a Benefit.

It is revealed that the regulatory construct Easily searchable had significant influence on Benefit of e-

resources as the standardized direct effect of this construct on Benefit of e-resources was 0.579, which is more than 0.4 (also  $p$  value was significant). So the hypothesis  $H_{10}$  is accepted and conclude that easily searchable is a Benefit.

$H_{11}$ : Links to related information is a Benefit.

It is revealed that the regulatory construct Links to related information had significant influence on Benefit of e-resources as the standardized direct effect of this construct on Benefit of e-resources was 0.707, which is more than 0.4 (also  $p$  value was significant). So the hypothesis  $H_{11}$  is accepted and concludes that Links to related information is a Benefit.

$H_{12}$ : Access to back issues is very easy is a Benefit

It is revealed that the regulatory construct Any other Benefits/Usefulness had significant influence on Benefit of e-resources as the standardized direct effect of this construct on Benefit of e-resources was 0.577, which is more than 0.4 (also  $p$  value was significant). So the hypothesis  $H_{12}$  is accepted and concludes that any other Benefits/Usefulness is a Benefit.

## Conclusion

The initiation of electronic resources has made significant impact on the usage of traditional print resources in libraries. While testing various hypotheses under 'use of electronic resources compared to the print resources', it is found that two hypotheses ie,  $H_6$  &  $H_8$  are rejected. The hypothesize  $H_6$  is rejected and state that 'E-resources affect the reading habit so it is not be encouraged' is not an advantage. Similarly the regulatory construct 'Any other uses' had no significant influence on advantage of e-resources. All the twelve hypothesizes under 'Benefits of electronic resources for accessing scholarly information' are accepted because the regulatory constructs have significant influence on Benefit of e-resources. To conclude, E-resources have made significant impact and teaching learning process and research activities. The Study finds Majority of the respondents 246 (58.4%) belong to the female group and the rest of them 175 (41.6%) are males. Majority of the respondents 272 (64.6%) are in the 21 to 30 age group. majority of the respondents 109 (25.9%) of them are Post Graduate and 75 (17.8%) are having PG with NET qualification. 220 (52.3%) of them belong to the Research scholar category and 107 (25.4%) of them come under the Teaching faculty.

140 (33.3%) are belonging to faculty of science. It is clearly understood that 121 (28.7%) are coming under faculty of Arts, 60 (14.3%) of them belongs to Social Science, 40 (9.5%) are from Engineering and Technology. 112 (26.6%) belong to Cochin University of Science And Technology (CUSAT). It is followed by 75 (17.8%) from University of Calicut, 69 (16.4%) from Mahatma Gandhi University, 60 (14.3%) from University of Kerala.

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