# Student's Perceptions Toward the Use of the Digital Library for Higher Learning

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## Abstract

*This study attempted to investigate students' perceptions toward the use of the digital library for higher learning.  Attention was given to three variables namely sex, year of study, level of course.  A Likert – type instrument consisting of 10 items was designed to collect information about students perceptions.  The respondents of this study were 72 students enrolled in various Post-graduate courses at Bishop Heber College, Tiruchirappalli.  Collected data were analysed using ANOVA (Analysis of Variance).  The overall results suggest that students had positive perceptions toward the use of digital library.  Sex, year and level of course were found to be significant factors.  Females, first year students and social science students had significantly positive perceptions. Implications for practices are discussed and recommendations are made for future research.*

**Keywords :** Digital Libraries

## 0.    Introduction

The educational field has been attracted by the promise and potential of technology from the advent of films in the 1920s to television in the late 1950s, computers in the 1980s and information technology in the 1990s.  In the 1980s, during the micro computer revolution in higher education, the computer emerged as a personal tool: students, faculty and institutions purchased desk top systems by the track load; emerging applications, falling prices and increased power and convenience brought the desktop and note book computers to thousands of students who never previously though of themselves as "Computer users".  Most people would agree that modest productivity benefits emerged as growing number of faculty transferred much of their work from secretaries, mainframes and mini computer to desktop systems and word processors.

Midway through the 1990s however, colleges and universities benefited by the second major phase of this revolution – a shift in emphasis from computer as a desktop tool to computer as the communications gateway to contents (data bases, images, text libraries, video and more) increasingly accessible via computer networks to both the faculty and students.  Information Technology supporters are fond of describing a future information rich environment that will support learning and scholarly activities in new and exciting ways.

## 1.    The Digital Library

Drabenstott describes the concept digital library as the

- ✎ The digital library is not a single entity;
- ✎ The digital library required technology to link the resources of many;
- ✎ The linkages between the many digital libraries; and information services are transparent to the end users;

- ✍ Universal access to digital libraries is a goal; and

- ✍ Digital library collections are not limited to document surrogates; they extend to digital artifacts that can not be represented or distributed in printed formats.

- ✍ Leiner describes the digital library as the collection of services and the collection of information objects and their organisation, structure and presentation that support users in dealing with information objects available directly or indirectly via electronic / digital mean.

The term virtual libraries and electronic libraries are often used simultaneously and / or interchanged with the term digital libraries.

## 2. Purpose of the study

The study focuses on the use of the digital library in higher learning. The purpose of this study was to investigate students' perceptions toward the use of the digital library that used as the one of the major resources for higher learning. The perceptions of the students may be an important factor in influencing a positive learning outcome. Differences in students' perceptions toward the use of digital library were examined using three variables – gender, year of study and course.

## 3. Methodology

A likert-type instrument consisting of ten items was designed to measure the students' perceptions toward the use of the digital library for higher learning. The instrument represented positively worded statements that collect information about students perceptions.

- ✍ The digital library is a valuable tool

- ✍ By using digital library, I often find materials relevant to what I want.

- ✍ My time is well spent using digital library for higher learning.

- ✍ Using digital library enhances my learning.

- ✍ Use of digital library increases my ability to do a better job.

- ✍ Using the digital library increases my ability to do a better job in learning assignments.

- ✍ Using the digital library is an important part of the learning process.

- ✍ It is worthwhile using the digital library.

- ✍ I feel that I gain a lot by using the digital library.

- ✍ It is a rewarding experience to use the digital library.

The responses to the items were recorded as strongly agree=5, agree=4, neither agree nor disagree = 3 disagree = 2 and strongly disagree = 1.

## 4. Respondents

The respondents of this were 72 students who were enrolled in post graduate programmes in Bishop Heber College, Tiruchirappalli. The respondents were from the courses of Library and Information Science, Maths, Physics, Chemistry, Environmental Science, Biotechnology Information Technology, Computer Science, Computer applications and management. Out of 72 students, 41.66 percent were males and 58.34 were females the purpose of the study and the scoring strategy was carefully explained to the respondents. They were assured that their responses would be anonymous and confidential.

## 5.    Research questions

This study was designed to answer to following questions.

- ✍ Is there a difference in perceptions between males and females using the digital library?

- ✍ Is there a difference in perceptions between first year and second year post graduate students?

- ✍ Is there a difference in perceptions among various course levels (Science, Computer science and Technology and Social science) of respondents using the digital library?

## 6.    Data Analysis

Analyses of variance (three separate ANOVAs) were conducted to answer the research questions. The F statistics generated from the analysis indicate significant differences between the selected variables and students' perceptions toward the use of the digital library for their learning. A predetermined level of significance chosen for this study was 5%.

## 7.    Results

The results of the descriptive analyses indicated that overall students perceived that the use of the digital library for higher learning was a positive learning experience (Table 1)

Table 1

| Item No | N  | Min Score | Max Score | Total Score | Mean  | SD    |
|---------|----|-----------|-----------|-------------|-------|-------|
| 01      | 72 | 2         | 5         | 323         | 4.486 | 1.607 |
| 02      | 72 | 1         | 5         | 279         | 3.875 | 1.207 |
| 03      | 72 | 2         | 5         | 296         | 4.111 | 1.333 |
| 04      | 72 | 2         | 5         | 312         | 4.333 | 1.509 |
| 05      | 72 | 1         | 5         | 271         | 3.764 | 1.219 |
| 06      | 72 | 1         | 5         | 298         | 4.139 | 1.374 |
| 07      | 72 | 2         | 5         | 313         | 4.347 | 1.541 |
| 08      | 72 | 1         | 5         | 289         | 4.014 | 1.253 |
| 09      | 72 | 1         | 5         | 296         | 4.111 | 1.333 |
| 10      | 72 | 2         | 5         | 279         | 3.875 | 0.964 |

The results of ANOVA yielded a significant difference in perceptions between males and females using the digital library for higher learning ($F_{0.05}=5.32$, $F_1=2.15$). Mean scores are presented in Table 2. Female students scored significantly than male did.

Table 2

| Sex    | Score | Mean  | N  | Percent | SD    |
|--------|-------|-------|----|---------|-------|
| Male   | 1213  | 4.043 | 30 | 41.66   | 1.333 |
| Female | 1733  | 4.126 | 42 | 58.34   | 1.374 |

The results of ANOVA for the level of course indicated that a significant difference in perceptions between first year and second year students ($F_{0.05} = 5.32\ F_1 = 0.0486$). Mean scores are presented in Table 3. First year students scored significantly higher than the second year students.

Table 3

| Year | Total Score | Mean | N | Percent | SD |
|------|------------|------|----|---------|------|
| I | 1543 | 4.170 | 37 | 51.39 | 1.397 |
| II | 1361 | 3.888 | 35 | 48.61 | 1.320 |

The results of ANOVA for various courses showed a significant difference among various courses of the respondents using the digital library ($F_{0.05} = 4.1028\ F_1 - 3.666$). The mean score is represented in table 4. It showed that social science students scored significantly higher than science students.

Table 4

| Course | Score | Mean | N | Percent | SD |
|--------|-------|------|---|---------|------|
| Science | 1275 | 3.984 | 32 | 44.44 | 1.271 |
| Computer Science | 1410 | 4.147 | 34 | 47.23 | 1.420 |
| Social Science | 435 | 4.35 | 6 | 8.33 | 1.466 |

## 8.    Discussion

Digital libraries are rapidly gaining attention in digital learning communities, especially higher education. A digital library can provide learners with access to information anytime, anywhere and any place in any format. For this reason, digital libraries can be a great addition to higher learning.

The overall results suggested that students had positive perceptions toward the use of the digital library.

The results of ANOVA for gender showed that female students scored significantly higher than male. This means that female students had higher positive perceptions toward the use of digital library. It is reported that female students appear to dominate the on line learning environment. They are inclined to demonstrate a higher confidence level toward on line learning. It is also noted that male students may have had difficulty with lower confidence levels. The lower confidence level may create the barriers that limit the opportunities and choices for male students in achieving a positive academic learning experience. Therefore, this study recommends that students, especially males be provided with special hands-on training that is uniquely geared toward the learning styles when dealing with the use of digital libraries in their learning. This may help to increase their confidence levels toward the use of the digital library.

The results of ANOVA proved that there is a significant difference between first year and second year students of post graduate education and also there is a significant difference between the sciences and social sciences courses.

This finding points can influence the incorporation of digital library use in higher learning and teaching. The association of class room and digital library as parallel media help the students to connect the learning environment with the research environment. The online access has created the expectation for facility and case of information in all its uses particularly outside class room learning. Therefore this study recommends that the digital library be incorporated as essential part of higher learning assignments. Further more, the institutions of higher learning should support and implement digital libraries to acknowledge in a commensurate way, the inclusion of web based higher learning programmes, the relay on digital library access.

## 9.    Conclusion

It is concluded that future research should focus on a different population sample and refinement of the instrument.  Further the current digital libraries are not following a standard model for retrieving information and many of them have problems regarding system usability.  Absence of standardisation and usability may influence students' negative perceptions toward the use of digital libraries.  Therefore, these variables deserve attention in future research.

## 10.    References

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