Impact of Digital Library Resources on Higher Education Student Development

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Abstract

With the application of Information Communication Technology (ICT), the universities at all levels are focusing more and more on the creation, development, and use of library digital resources. This paper analyzes the digital resources (DRs) available in universities for their study and research. This study aims to provide the use of digital resources in university libraries. An Empirical research was conducted to know the influence of Digital resources on student development. The study's sample included 105 undergraduate students of commerce, computer science, management and arts at JAIN University in Bangalore.

Keywords: *Universities, Library; Digital Resources; Student Development, Bangalore.*

1. Introduction

Digital resources are informational resources including text, images, sounds, and animations that have been stored in the form of electronic data. The advancement and application of modern information technology have encouraged the creation and use of digital materials in university libraries. More and more colleges and universities are investing more budgets for building digital libraries and thereby expand the effectiveness of using digital resources of books (Wang & Zhao, 2021).Digital libraries have gathered digital resources and make them available to its users. The Digital Library (DL) is a depository that keeps retrievable digital materials; nevertheless, due to the Internet's rapid expansion and shifting user information habits, the role of the digital library has reformed significantly.(Hu & Hu, 2014). Digital libraries provide new opportunities for students. By pressing a button, these students can instantly access the most pertinent informational sources using digital library

items. With the basic requirements of energy and network accessibility for the Internet, the resources of digital libraries are available from any location in the globe (Khan, 2021).

The current study examines the digital library resources offered by the JAIN (deemed-to-be University) library in Bangalore, as well as their impact on students' development at the university. The goal of this study was to ascertain how digital library resources affected students' knowledge –gaining process.

2. Review of related work

(Wang & Zhao, 2021) investigated the current state of the college library's use of digital resources and problems that are present and discusses the use strategy of college library's digital resources from the investment, talent, and cultivation, and resource integration optimization. There are still issues with the development and improvement of the digital resource management platform, as well as repetitive content, resource waste, and a lack of compatibility between different information resource systems. Furthermore, many students are unfamiliar with how to obtain and borrow digital resources like those from an electronic database or a digital library because they are used to the traditional reading mode and borrowing format.

(Ilahl, 2019) examined and researched the literature on the use of the digital library as a repository for learning resources. The effects of a digital library system in education on potential readers were examined using research publications from 2003 to 2018. According to the study, students can participate in the process of learnt teaching by using a digital library, and the university can help by assisting in the acquisition of catalogues, references, and research-related information.

According to Ekere's (2016) research, users generally have a favourable opinion of the MTN Digital Library's resources, offerings, and facilities. The results also showed that the MTN library offered more advanced services than other basic services, including email, internet search and online reference. Therefore, it was suggested that the library provide users with a variety of information access and delivery options in order to broaden the extent of the services and resources that are now available to them.

(Saaid, 2014) conducted a research with the objective of determining how the use of digital resources has affected students' reading behaviors. According to the findings, the majorities of respondents utilize online newspapers, e-books, and e-magazines as learning resources for leisure rather than research and study. The majority of the students used laptops to access the digital resources, and none of the respondents used the Amazon's Kindle portable or an Apple iPod. The findings also showed that students preferred digital materials over print materials, which had an impact on their reading skills.

It is evident from the discussion above that there have been several studies on the use of digital library resources. The dearth of research on the examination of digital library resources and student growth at the university level makes this study essential. This study intends to determine the effect of a user-friendly search system for digital resources on the development of a student's personality using regression, ANOVA, and correlation tests.

3. Objectives

1. To study the impact of digital library resources on students' knowledge-gaining process and personality building.

2. To understand the role of digital libraries in promoting innovation.

3. To determine the impact of user convenience and efficient search system on the growth of student's personality.

4. Hypothesis

H0: Digital library resources do not impact the student's knowledge-gaining process

H0: Personality building is not influenced by Digital library resources

H0: Use of Digital resources is not related to the Incremental development of the students

5. Research Methodology

5.1: Research design: Empirical research was conducted to know the influence of Digital resources on student development. Well-structured questionnaire was developed to know the perception of students.

5.2: Sample size: A total of 105 JAIN college students are selected on a random basis for data collection

5.3: Tests used:

- Regression
- ANOVA
- Correlation

6. Data analysis

H0: Digital library resources do not impact the student's knowledge-gaining process

Regression analysis was done to examine whether digital library resources influence students' knowledge-gaining process.

Table 1: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.822^a	.676	.673	.796

a. Predictors: (Constant), Extent of use of digital resources in the library
b. Dependent Variable: Knowledge Improvement

The effect of the use of digital resources on the DV is explained by R2. The impact is to the extent of 67.6% which is moderate enough. Hence not only digital resources, other factors also do influence the knowledge-gaining process of students.

To know the significance of the impact, an ANOVA test was conducted.

Table 2: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	136.098	1	136.098	214.697	.000^b
	Residual	65.292	103	.634		
	Total	201.390	104			

a. Dependent Variable: Knowledge Improvement
b. Predictors: (Constant), Extent of use of digital resources in the library

The significant value being less than 5%, will explain a significant impact of IV on the DV. A higher F-value will explain that though the impact is moderate, it is significant enough to say that digital library resources will also influence students' knowledge gaining process.

H0: Personality building is not influenced by Digital library resources

Table 3: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.676[a]	.457	.452	.994

a. Predictors: (Constant), Extent of use of digital resources of library

b. Dependent Variable: Personality Building

Regression analysis was conducted to determine whether students' personality-building processes will be influenced by using digital library resources. The R2 being 45.7%, explains a low influence. Hence it can be said that digital resources can help students to gain knowledge to some extent, but for personality building many other factors together influence.

Table 4: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.188	.257		4.615	.000
	Extent of use of digital resources of library	.676	.073	.676	9.314	.000

a. Dependent Variable: Personality Building

Though the influence is less, it is significant which can be stated that digital resources will help in personality development in a significant way hence null hypothesis was rejected.

H0: Use of Digital resources is not related to the Incremental development of the students

Table 5: Correlations

			I experience an incremental development over years using DL resources	Extent of use of digital resources of library
Spearman's rho	I experience an incremental development over years using DL resources	Correlation Coefficient	1.000	.864[**]
		Sig. (2-tailed)	.	.000
		N	105	105
	Extent of use of digital resources of library	Correlation Coefficient	.864[**]	1.000
		Sig. (2-tailed)	.000	.
		N	105	105

**The significance level for correlation is 0.01 (2-tailed).

This substantial positive relationship between these two variables can be explained by their 86.4% correlation. As the use of digital resources increases, it results in higher incremental development. The p-value is less than 5%, indicating that the link is significant. The null hypothesis was thus disproved.

Student start-ups is a factor in a more informed and developed student mentality. To ascertain whether digital library resources will serve as a start-up support system, regression analysis was carried out. A hypothesis was developed to know whether digital resources equip the students to take up any start-up and to build their careers.

H0: Digital resources do not impact the start-up eco system

Table 6: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.826[a]	.682	.679	.76750

a. Predictors: (Constant), Extent of use of digital resources of the library
b. Dependent Variable: Digital resources keep students updated and act as a support system for student's start-up's

The R2 value is 68.2%, which explains the moderate influence of IV on DV. Hence start-up ecosystem is to some extent influenced by the information which is sought by students using digital library resources.

Table 7: ANOVA[a]

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	130.318	1	130.318	221.230	.000[b]
	Residual	60.673	103	.589		
	Total	190.990	104			

a. Dependent Variable: Digital resources keep students updated and act as a support system for student's start-up's
b. Predictors: (Constant), Extent of use of digital resources of the library

The significant value is Less than 5% explains IV's significant influence on the start-up eco system. Hence it can be said that digital resources will provide information which helps students to take up their own start-ups and build their own careers. The null hypothesis was disproved.

7. Findings

The study was conducted to find the impact of digital library resources on student's knowledge gaining process and also its impact on personality building. Multiple tests were conducted to analyse the same. Digital resources enrich student's knowledge. To know the impact of the same regression analysis was conducted. R2 explained moderate influence on the dependent variable. Though it is moderate the impact was significant enough to conclude that digital resources impact student's knowledge gaining process. The influence could be moderate because of other factors which also impact the knowledge gaining process.

Digital resources promote innovation through learning. The study focused on understanding how digital resources promote innovation regression analysis was conducted R2 was explaining a lower impact of use of digital resources of library on innovation and personality building. With the help of ANOVA test, the significant value being less than five percent, Null hypothesis was rejected.

Hypothesis was also developed to analysis the impact of digital resources as start-up eco systems. With the help of R2 it was clear that the Independent Variable will moderately influence the dependent variable and the P-value being less than Five percent null hypothesis was rejected. With the help of multiple hypothesis, it could be conducted that digital resources impact knowledge gaining

process. Personality building and also help by contributing knowledge impact to start-up eco system.

8. Conclusion

The application of using a digital library in education can aid in swiftly and dynamically obtaining information. In universities, students can access digital resources from anywhere at any time, regardless of their geographic location, and can obtain current and relevant information on a variety of disciplines. The result of the current study revealed that digital resources can help students gain knowledge to some extent and also take up any opportunities to build their careers. Based on the findings, this study recommended that the libraries should arrange training sessions on digital resources that are helpful for taking up new initiatives to build their careers. The universities should consider students' requirements for digital resources while subscribing to the digital contents frequently. A proper feedback from the students' on the use of digital resources is required to subscribe to more digital resources in libraries.

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