

**THE USE OF GOOGLE SCHOLAR AS AN ONLINE SEARCH TECHNOLOGY AMONG RESEARCHERS**

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**Abstract**

*Prior research to get an overview of the research topic is difficult in traditional databases. Google scholar, Emerald, Web of Science, Ebsco, Elsevier are few new Information Technology applications in the research area and helping researchers to find peer-reviewed articles, for preparing better literature reviews, citations, books, journals, and thesis. Online databases like Google scholar makes the work of the researchers easy as the ease of using online platforms play an important role in completing research work on time. The present study focuses on various research questions like to what degree researchers find Google scholar helps them in locating and managing the available information and also to what degree researchers feel it is easy/difficult to learn and use Google scholar. The study uses Correlation and Regression analysis to analyze the research question.*

*Keyword: Research, Google Scholar, online databases, ease of use*

**I. Introduction**

Technology disrupted the way researchers collect data from various parts of the world and conduct surveys. The fast growth of information and communication technology and particularly the internet has changed traditional methods of research, storage, retrieval, and communication of scholarly information (Sudhier, Anitha, C. K. 2014). Conducting prior research is very difficult for a researcher or a doctoral student to get a quick overview of the literature associated with their topic in traditional databases. In this context, the use of online platforms to locate scholarly work is increasing significantly in the area of research.

Google scholar, Emerald, Web of Science, Ebsco, Elsevier are the examples of Information Technology applications in the research area and helping researchers to find peer-reviewed articles, for preparing better literature reviews, citations, books, journals, and thesis. These platforms also facilitate collaborative work, publish, and share their articles in academic research.

Information technology not only offers opportunities but throws a few challenges to researchers and technology adoption is one among them. The biggest challenge is accessing and managing the ever increasing amount of information on online platforms and the identification of relevant scholarly information from the abundance of data, which really complicates the work of researchers. So, online platforms like Google Scholar makes the work of the researchers easy as the ease of using this plays an important role.

From its early appearance in 2004, Google scholar showed a strong growth and a serious alternative to the more traditional journal-based systems of Web of Science and Scopus. Given the growing use of Google Scholar not only as a gateway to searching for academic literature, but as a bibliometric tool, the identification, classification and quantification of its errors and limitations when calculating bibliometric indicators is of paramount importance. Google Scholar is assumed to list up to 10% erroneous, undated records (Orduña-Malea et al. 2015). Studies have shown that GS provides fewer citation counts than WoS in biology, physics, and chemistry, but more in information technology, human-computer interaction, social sciences, economics, management, engineering, and mathematics (Amara and Landry 2012; Bar-Ilan et al. 2007).

Following this reasoning, it is challenging to identify crucial determinants of individuals'

intention toward accepting Google scholar.

The research will be conducted on the academicians and research scholars across various disciplines of Telangana state universities. The respondents of the questionnaire are research scholars and academicians. The present paper gives a brief introduction to the Google Scholar, provides Review of Literature, further explains research methodology used, Hypothesis development, provides discussion on the finding, conclusion.

### **I.I Research Question**

- To what degree researchers find Google scholar helps them in locating and managing the available information.
- To what degree researchers feel it is easy/difficult to learn and use Google scholar.
- To what degree the availability of technical infrastructure supports researcher intention to use Google scholar.
- To what degree researcher's superiors and peers' opinions influence researcher's intention to use Google scholar.

## **II. Literature Review**

Individuals are constantly making decisions about accepting, adopting, using computer and information technologies. Once a model or stream becomes well-established within a given domain, it is often a basis for studies in other areas.

Anne-Wil Harzing and Satu Alakangas(2015) in their study on Google Scholar, Scopus and the Web of Science: a longitudinal and cross-disciplinary comparison suggests that all three databases provide sufficient stability of coverage to be used for more detailed cross-disciplinary comparisons. Their study includes four key research metrics (publications, citations, h-index, and hI, annual, an annualized individual h-index) and five major disciplines (Humanities, Social Sciences, Engineering, Sciences and Life Sciences).

In a 3 yr longitudinal study on early career researchers by Nicholas et. al(2017) performed in depth interviews of 116 researchers from seven countries regarding discovery and access to scholarly information. The study findings confirmed the popularity of Google scholar among researchers.

A qualitative research conducted by Pekdemir (2018) at Turkish University between 2018 and 2019 to assess academics and students viewpoints on Google scholar. The research revealed that most participants found google scholar quite useful, mostly used for citations and for research literature. The study revealed that google scholars made their work easier, saved time and benefited by obtaining authors information. The study also discussed issues cited by participants including being unable to access/scan every single database, incorrect citation figures and problems of overlapping or lack of specificity.

However, previous research on Google scholar focused on the questions of what tools are being used, how it is useful, type of articles published, citations method and for cross-disciplinary study. The current study attempts to go beyond this question and consider what factors influence research scholar's adoption and use of Google Scholar.

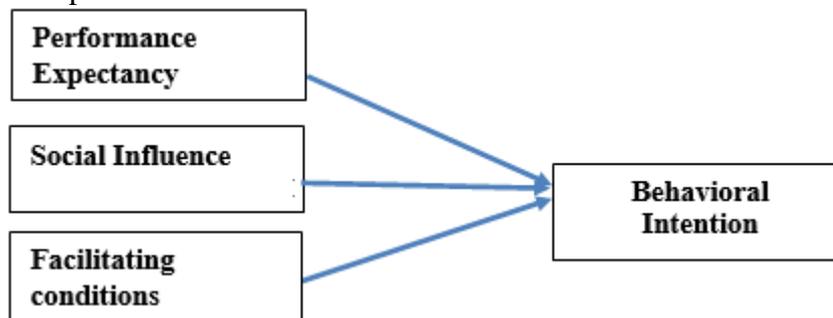
## **III. Research Methodology**

**Data Collection:** The data used for the study is primary as well as secondary data. The primary data is collected from research scholars from various Telangana Universities. The secondary data is from printed material and from online websites.

**Sample Size:** 87 research scholars from Telangana Universities.

**Sampling Technique Used:** Simple random sampling technique.

**Hypotheses Development :** Based on the results of original work done by previous authors hypotheses was developed to find factors that influence the intention and use of Google Scholar:



Questionnaire is divided into four components: Performance Expectancy (PE) , Social Influence (SI) , Facilitating Conditions and Behavioral Intention(BI). Acquired data was analyzed using correlation and regression. Dependent variable is Behavioral Intention and Independent variables are Performance Expectancy, Social Influence and Facilitating Conditions.

Table 1: Variables

Dimensions	Variables Observed
Performance Expectancy	1. Google scholar makes my search for research related materials efficiently. Use of Google scholar makes data management faster
Social Influence	I find people close to me suggest that I should use Google Scholar Overall, my social circle supports the usage of Google Scholar 3. I would use the Google Scholar if my friends used them
Facilitating Conditions	1. I have the technical resources y to use Google Scholar 2. I have the knowledge necessary to use Google Scholar
Behavioral Intention	Plan further to use Google Scholar in the next four months I intend to continue Google scholar in the near future

**Hypothesis:**

*H0: Performance Expectancy, Social Influence and Facilitating Conditions will not have a positive influence on the Behavioral Intention (BI) to use Google Scholar among research scholars in Telangana.*

*H1: Performance Expectancy , Social Influence and Facilitating Conditions will have a positive influence on the Behavioral Intention (BI) to use Google Scholar among research scholars in Telangana.*

**IV. Correlation Analysis**

	BI	PE	SI	FC
BI	1			
PE	0.689660031	1		
SI	0.289921026	0.409629208	1	
FC	0.439434036	0.55628694	0.289573827	1

**Table 2: Relationship among the variables**

If the correlation coefficient is <0.3 it is considered as a weak relationship between the variable, 0.3 to 0.7 is considered as a moderate relationship and the value above 0.7 is considered as a strong relationship.

From the Table 2 , we conclude that there is a positive relationship exists among all the variables. The table further explains that PE(0.68) and FC (0.43)variables are moderately correlated where as SI (0.28)is weakly correlated with BI.

## V. Regression Analysis

Regression Statistics	
Multiple R	0.692924725
R Square	0.480144675
Adjusted R Square	0.461354724
Standard Error	0.752235541
Observations	87

**Table 3: Regression analysis among the variable**

The Adjusted R Square 0.48 value implies that 48% of the variation in the dependent variable is explained by the independent variables.

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	43.37858789	14.4595293	25.55327	8.32939E-12
Residual	83	46.96623969	0.56585831		
Total	86	90.34482759			

**Table 4: Summary of Regression Analysis**

The overall regression model was significant. Significance  $F(3,83) = 25.55327$ , p-value is less than 0.05. Hence, Null Hypothesis is rejected and there exists a significant and positive relationship between dependent (BI) and independent variables (PE, SI, FC).

$R^2 = 0.48$  taken as a set, the predictors PE, SI, FC variables account for 48% of the variance in BI.

## VI. Conclusion

Google scholar provides a way to search related publications in various areas with additional features like citations, library, a facility to check who is citing your article. Google scholar is facing fierce competition from web of science, Microsoft Academics etc. with advanced technologies like AI. The present study found out that Performance Expected by the user of google scholar is strongly recommending use of it for searching research related material and to manage the data. Facilitating Conditions like technical support and knowledge necessary to use google scholar is also available with the research scholars. Superiors, friends and fellow scholars influence on use of google scholar is very low indicating the competition in the market and google scholar must improve its feature to attract more users.

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