

Use Pattern of Printed Information Resource by Students and Teachers of Horticultural Colleges in Karnataka: A Study

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ABSTRACT

Printed information resources continue to play an important role in higher education despite the rapid growth of electronic information sources. The present study examines the use of printed information resources among students and teachers of horticultural colleges in Karnataka. The study was conducted in twelve horticultural colleges using a structured questionnaire. A total of 2,033 respondents, comprising 207 teachers and 1,826 students, participated in the study. Descriptive and inferential statistical techniques were used for data analysis. The findings revealed that 98.43% of the respondents used printed information resources, with books being the most preferred, followed by journals and reference sources. Printed resources were mainly used for project work, examination preparation, and assignments, while their use for research and teaching was comparatively low. Significant differences were observed between teachers and students in the use and duration of printed information resources. The study concludes that printed resources remain an essential component of horticultural education and should be effectively integrated with digital resources to support teaching, learning, and research.

KEYWORDS: Printed Information Resources, Horticultural Colleges, Teachers, Students, Academic Libraries, Information Use, Karnataka.

1. INTRODUCTION

Printed information resources continue to play a vital role in higher education despite the rapid growth of digital information sources. Resources such as textbooks, reference books, journals, conference proceedings, theses, dissertations, and government publications remain essential for teaching, learning, and research due to their credibility, reliability, and comprehensive coverage. These resources complement electronic information sources and continue to be widely used in academic libraries.

In horticultural education, students and teachers rely on printed information resources to support classroom instruction, research, project work, and professional development. Academic libraries serve as the primary source for accessing these materials and play a crucial role in meeting the information needs of the academic community. Understanding the extent and pattern of printed resource use is important for developing library collections and improving user services.

Although numerous studies have examined the use of electronic information resources, relatively few have focused on the utilization of printed information resources in horticultural colleges. Therefore, the present study investigates the use of printed information resources among students and teachers of horticultural colleges in Karnataka. The findings will provide valuable insights into users' preferences and contribute to the effective planning and management of library collections and services.

2. LITERATURE REVIEW

Sarala and Varghese (2006) examined the information-seeking behaviour of agricultural scientists and reported that printed scholarly journals, books, and research reports remained the primary sources of information for teaching, research, and extension activities. Similarly, Satija and Singh (2006), in their review of information-seeking behaviour of agricultural scientists in India, observed that researchers relied extensively on printed journals, books, and government publications, highlighting the continued importance of print collections in agricultural libraries. Belwal and Batcha (2012) investigated the information access patterns of postgraduate students and faculty members at G.B. Pant University of Agriculture and Technology and found that both user groups frequently utilized printed books and journals for academic and research purposes.

Naganna and Kumbar (2014) analyzed the information use patterns of students in agricultural science colleges in Karnataka and reported that printed textbooks, reference books, and library collections remained the dominant sources of information for coursework and examination preparation. Kiran Kumar and Kumbar (2012) and Surendra and Kumbar (2025) also attempted to bring out the trends and developments in these areas. Parvathamma and Shinde (2015) studied the use of information resources and library services among students of the University of Horticultural Sciences, Karnataka, and observed that printed textbooks and reference books continued to be the most preferred resources despite the increasing availability of digital resources. Hemavathi and Chandrashekara (2019) investigated the information literacy skills of faculty members at the College of Horticulture, Bagalkote, Karnataka, and emphasized that effective utilization of both printed and electronic information resources depends on users' information literacy competencies and awareness.

Furthermore, Naqvi (2017) examined the use of collections and services at the Indian Agricultural Research Institute Library and concluded that specialized printed collections, including books, journals, technical reports, and government publications, continued to be extensively used by researchers. Collectively, these studies demonstrate that printed information resources remain indispensable for teaching, learning, and research in agricultural and horticultural institutions, while information literacy plays a crucial role in maximizing their effective utilization.

3. OBJECTIVES OF THE STUDY

The present study was undertaken with the following objectives:

1. To examine the use of printed information resources among students and teachers of horticultural colleges in Karnataka.
2. To identify the types of printed information resources used by the respondents.
3. To analyse the purpose and duration of using printed information resources.
4. To compare the use of printed information resources between students and teachers.

4. METHODOLOGY OF THE STUDY

The present study was conducted in 12 horticultural colleges in Karnataka to examine the use of printed information resources among students and teachers. A convenience sampling technique was adopted to select the respondents. Data were collected using a structured questionnaire administered to students and teachers. A total of 2,033 valid questionnaires were received, comprising 207 (10.18%) teachers and 1,826 (89.82%) students. The collected data were coded and entered into Microsoft Excel for data management and subsequently analyzed using appropriate statistical software. Descriptive statistics, including frequencies, percentages, mean, and standard deviation, were used to summarize the data, while suitable inferential statistical tests were employed to examine significant differences and associations between the study variables. The results were presented using tables for comparative analysis and interpretation.

5. ANALYSIS AND INTERPRETATION OF DATA

The data collected from students and teachers were systematically analyzed using appropriate descriptive and inferential statistical techniques. The findings are presented and interpreted through tables to facilitate a comparative understanding of the use of printed information resources.

Table 5.1 Distribution of Questionnaire to Students and Teachers

Sl. No.	Name of College	Total No. of Questionnaires		
		Distributed	Received	%
1	Kittur Rani Channamma College of Horticulture, Belagavi	285	208	72.98
2	College of Horticulture, Bidar	247	188	76.11
3	College of Horticulture, Bagalkot	264	204	77.27
4	College of Horticulture, Koppal	228	172	75.44
5	College of Horticulture, Kolar	180	145	80.56
6	College of Horticulture, Bengaluru	300	229	76.33
7	College of Horticulture, Mysuru	315	171	54.29
8	College of Horticulture, Sirsi	243	133	54.73
9	College of Horticulture, Haveri	170	137	80.59
10	College of Horticulture, Vijayapura	200	83	41.50
11	College of Horticulture, Mudigere	265	162	61.13
12	College of Horticulture, Hiriyuru	280	201	71.79
Total		2977	2033	(68.29)

Note. Numbers mentioned in the parenthesis are percentage.

Table 5.1 depicts the distribution and response rate of questionnaires across the selected horticultural colleges in Karnataka. A total of 2977 questionnaires were distributed, out of which 2033 were received, yielding an overall response rate of 68.29%. Among the colleges, the highest response rate was recorded at the College of Horticulture, Haveri (80.59%), indicating strong participation, whereas the lowest was observed at the College of Horticulture, Vijayapura (41.50%), followed by Mysuru (54.29%), reflecting comparatively lower engagement levels.

Table 5.2 Category-wise Distribution of Respondents

Sl. No.	Name of the College	Category		Total Respondents
		Teachers	Students	
1	Kittur Rani Channamma College of Horticulture, Belagavi	18 (8.70)	190 (10.41)	208 (10.23)
2	College of Horticulture, Bidar	16 (7.73)	172 (9.42)	188 (9.25)
3	College of Horticulture, Bagalkot	22 (10.63)	182 (9.97)	204 (10.03)
4	College of Horticulture, Koppal	15 (7.25)	157 (8.60)	172 (8.46)
5	College of Horticulture, Kolar	20 (9.66)	125 (6.85)	145 (7.13)
6	College of Horticulture, Bengaluru	23 (11.11)	206 (11.28)	229 (11.26)
7	College of Horticulture, Mysuru	18 (8.70)	153 (8.38)	171 (8.41)
8	College of Horticulture, Sirsi	19 (9.18)	114 (6.24)	133 (6.54)
9	College of Horticulture, Haveri	13 (6.38)	124 (6.79)	137 (6.74)
10	College of Horticulture, Vijayapura	8 (3.86)	75 (4.11)	83 (4.08)
11	College of Horticulture, Mudigere	22 (10.63)	140 (7.67)	162 (7.97)
12	College of Horticulture, Hiriyuru	13 (6.28)	188 (10.30)	201 (9.89)
Total		207 (10.18)	1826 (89.82)	2033 (100)

Note. Numbers mentioned in the parenthesis are percentage.

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Table 5.2 provides the distribution of respondents across the selected horticultural colleges in Karnataka based on two categories, namely students and teachers. Out of the total 2033 respondents, 207 (10.18%) are teachers and 1826 (89.82%) are students, indicating a predominant representation of students in the study. Among the colleges, the highest proportion of total respondents is observed from the College of Horticulture, Bengaluru (11.26%), followed by Hiriya (9.89%) and Belagavi (10.23%), whereas the lowest proportion is from Vijayapura (4.08%). This variation reflects differences in institutional size as well as response rates across colleges.

Table 5.3 Gender-wise Distribution of Respondents

Sl. No.	Gender	Respondents		Total (n=2033)
		Teachers (n=207)	Student (n=1826)	
1	Male	135 (65)	1032 (57)	1167 (57)
2	Female	72 (35)	794 (43)	866 (43)
Total		207 (100)	1826 (100)	2033 (100)

Note. Numbers mentioned in the parenthesis are percentage.

Table 5.3 expresses the distribution of respondents based on gender across teachers and students. Out of the total 2033 respondents, 1167 (57%) are male and 866 (43%) are female, indicating a higher representation of male respondents in the study. Among teachers, 65% are male and 35% are female, showing a notable gender imbalance in teaching staff. In contrast, the student category shows a relatively more balanced distribution, with 57% male and 43% female respondents.

Table 5.4 Use of Printed Information Resources

Use of Printed Information Source	Teachers (n=207)	Students (n=1826)	Total (n=2033)
Yes	198 (95.65)	1803 (98.74)	2001 (98.43)
No	09 (4.35)	23 (1.26)	32 (1.57)
Total	207 (100)	1826 (100)	2033 (100)
Fisher's Exact Test (two-tailed $p = .0034$)			

Note. Numbers mentioned in the parenthesis are percentage.

Table 5.4 shows that the vast majority of respondents used printed information resources. Among the teachers, 198 (95.65%) reported using printed resources, while 1,803 (98.74%) students indicated their use. Overall, 2,001 (98.43%) of the respondents used printed information resources, whereas only 32 (1.57%) did not. The Fisher's

Exact Test (two-tailed $p = .0034$) indicates a statistically significant difference between students and teachers in the use of printed information resources.

Table 5.5 Duration of Use of Printed Information Sources

Duration of use	Teachers (n=198)	Students (n=1803)	Total (n=2001)
Less than 1 year	05 (2.53)	183 (10.15)	188 (9.40)
Between 1 to 2 years	21 (10.61)	239 (13.26)	260 (12.99)
Between 3 to 4 years	23 (11.62)	428 (23.74)	451 (22.54)
Between 5 to 6 years	34 (17.17)	637 (35.33)	671 (33.53)
More than 6 years	115 (58.08)	316 (17.53)	431 (21.54)
Total	198 (100)	1803 (100)	2001 (100)
$\chi^2 = 177.40$ df = 4 $p < .001$ V = .30			

Note. Numbers mentioned in the parenthesis are percentage.

Table 5.5 presents the duration of use of printed information sources among students and teachers. A majority of the teachers (58.08%) had been using printed information sources for more than 6 years, whereas the highest proportion of students (35.33%) reported using them for 5 to 6 years. Overall, 33.53% of the respondents had used printed information sources for 5–6 years, followed by 21.54% for more than 6 years. The Chi-square test revealed a statistically significant association between the duration of use and the respondent category ($\chi^2 = 177.40$, df = 4, $p < .001$). The Cramer's V value of 0.30 indicates a moderate association between the two variables.

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Figure 5.1 Use of Various Types of Printed Information Sources

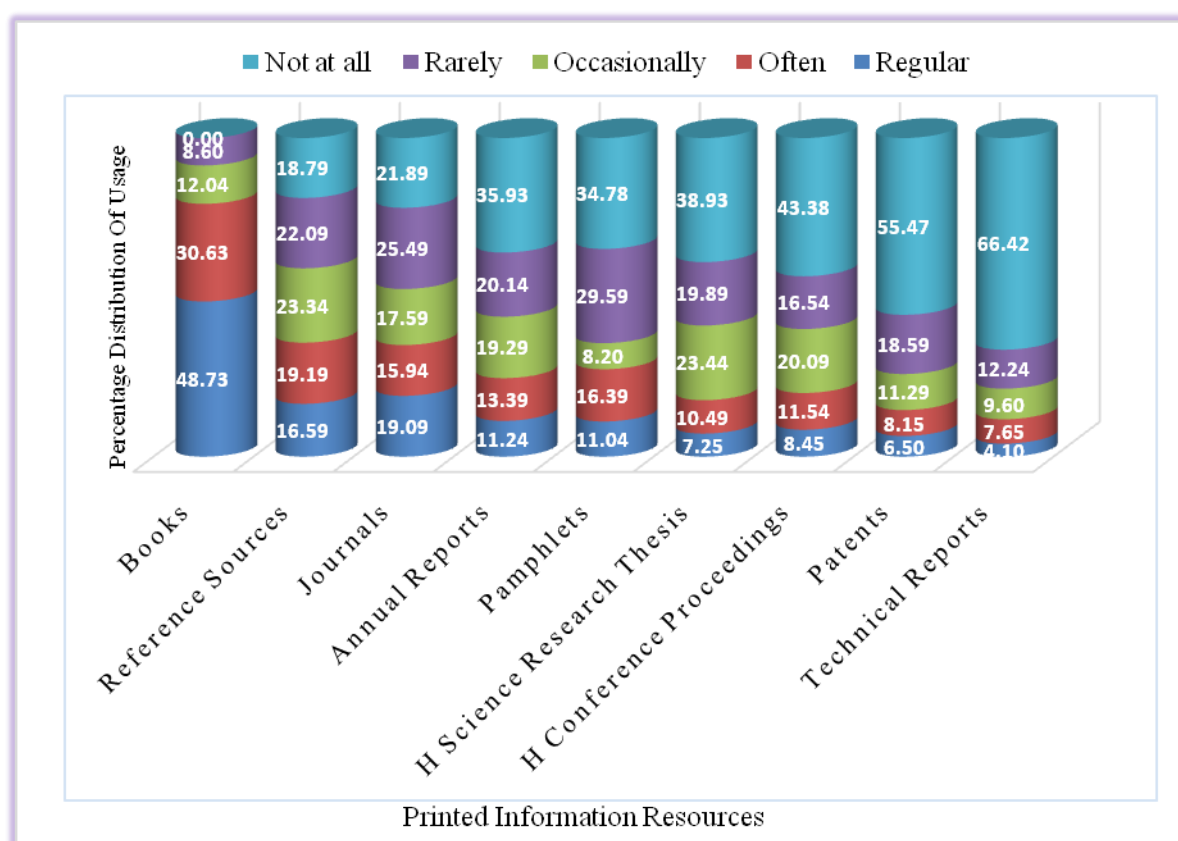


Figure 5.1 illustrates the frequency of use of various printed information resources by the respondents. Books were the most frequently used printed resource, with 48.73% of the respondents using them regularly, followed by journals (19.09%) and reference sources (16.59%). In contrast, technical reports (66.42%), patents (55.47%), and conference proceedings (43.38%) were the least utilized resources, with a majority of respondents reporting that they did not use them at all. Overall, the findings indicate that books continue to be the most preferred printed information resource, whereas specialized resources are comparatively less used.

Table 5.6 Purpose of Use of Printed Information Sources

Purpose	Great extent	Moderate extent	Little extent	Not at all	Cannot say	Weighted Mean Score	Rank
Project work	1261	480	210	0	50	4.45	1
Examination	1261	290	400	0	50	4.36	2
Assignment/Seminar	965	800	196	0	40	4.32	3
Research	75	123	0	1800	3	2.23	4
Writing research article	60	138	0	1800	3	2.23	5
Teaching	125	73	0	1400	403	2.06	6
Mean WMS						3.27	
SD						1.21	

Note. Numbers mentioned in the parenthesis are percentage. Weighted Mean Score (WMS) was calculated using the following weights: Great extent = 5, Moderate extent = 4, Little extent = 3, Not at all = 2, Cannot say = 1.

Table 5.6 presents the purpose of using printed information sources among the respondents. Project work emerged as the primary purpose of use with the highest Weighted Mean Score (WMS = 4.45), followed by examination (WMS = 4.36) and assignment/seminar preparation (WMS = 4.32). In contrast, printed information sources were used to a lesser extent for research (WMS = 2.23), writing research articles (WMS = 2.23), and teaching (WMS = 2.06). The overall mean WMS of 3.27 (SD = 1.21) indicates that printed information sources are used primarily for academic and learning-related activities rather than research and teaching.

FINDINGS OF THE STUDY

The major findings of the study are as follows:

1. The study found that 98.43% of the respondents used printed information resources, indicating their continued importance in horticultural education.
2. A statistically significant difference was observed between students and teachers in the use of printed information resources (Fisher's Exact Test, $p = .0034$).
3. More than half of the teachers (58.08%) had been using printed information resources for more than six years, whereas the largest proportion of students (35.33%) had used them for five to six years.
4. The duration of use of printed information resources was significantly associated with the respondent category ($\chi^2 = 177.40$, $p < .001$), with a moderate association (Cramer's $V = 0.30$).
5. Books were the most frequently used printed information resource, followed by journals and reference sources.
6. Specialized printed resources such as technical reports, patents, and conference proceedings were the least utilized by the respondents.
7. Project work was the primary purpose for using printed information resources (WMS = 4.45), followed by examination preparation (WMS = 4.36) and assignment/seminar preparation (WMS = 4.32).
8. Printed information resources were comparatively less used for research, writing research articles, and teaching.
9. Overall, the findings indicate that printed information resources continue to play a vital role in supporting the academic and learning activities of students and teachers in horticultural colleges, despite the increasing availability of digital information resources.

CONCLUSION

The study concludes that printed information resources continue to play a significant role in horticultural education despite the increasing availability of electronic resources. Books, journals, and reference sources remain the most preferred printed resources for academic activities, particularly for project work, examination preparation, and assignments. The findings also reveal significant differences between students and teachers in the use and duration of printed information resources. Therefore, horticultural college libraries should continue to strengthen their print collections while maintaining a balanced integration of print and digital resources to effectively support teaching, learning, and research.

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