Awareness on Information Literacy of the Respondents in Tamil Nadu Agricultural University, India: A Discriminant Function Analaysis Approach

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Abstract

The study relates to the importance of different library information services and information literacy variables in determining the information seeking behaviour of the sample respondents of Tamil Nadu Agricultural University. The contributing variables towards the awareness on information literacy are overall rating Library resources (X_1), Information literacy satisfaction (X_2), Number of e-resources (X_3),Opinion about circulation (X_4), Opinion about user education (X_5),Usefulness of current literature (X_6) and Use of browsing internet (X_7). The results of discriminate function analysis have showed that out of 450 respondents, the percentage of correctly classified respondents was 70.7 % towards the awareness on information literacy. The percentage of wrongly classified respondents under awareness on information literacy groups is 28%. The percentage of wrongly classified respondents under unawareness on information literacy groups is 39%.

Keywords*:Discriminate Function, Factors of Information Literacy, Information Literacy, Library and Information Services.*

1. INTRODUCTION

Agriculture is the prime sources of income for majority of the people in our country. Development in this sphere largely depends upon the information gathered from teaching, research and extension activities. The history of modern higher education in agriculture in India can be traced back to establishment of agricultural colleges during 1905 at Nagpur, Kanpur, Lyalpur, and Coimbatore. At the time of independence, there were about 11 colleges offering programmes in agriculture and allied sciences. The establishment of a postgraduate school at Indian Agricultural Research Institute during 1958 was one of the important mile stones in the history of farm education. Today, we have 50 Agricultural Universities with 212 Colleges producing annually about 21,000 Undergraduates, 10,000 Postgraduates and around 2,700 Research scholars in the varied disciplines of agriculture. About 26,000 teachers and scientists are involved in agriculture education and training activities [1].

Tamil Nadu Agricultural University (TNAU) has been playing a significant role in the agricultural development of Tamil Nadu for the past four decades by conducting research in agriculture and disseminating the information for the development of agriculture in Tamil Nadu. Tamil Nadu Agricultural University library is one of the oldest libraries in India.

Information literacy is the ability to define one's information needs, and then to access, process, evaluate and use information for decision making, learning, and problem-solving. It is a tool for lifelong learning in the network era. Libraries are providing extensive support and training to users and also supplying access to information resources using all the available technologies [2].

The information services are the keys to the development of agriculture, agriculture based education, research, extension services and agribusiness etc. Various services are provided by the agricultural libraries for the betterment of the users and the country as a whole.

2. OBJECTIVES

The present study has the following objectives:

1. To determine the factors that discriminate the respondents into awareness and unawareness groups of information literacy;
2. To suggest the policy implication to improve the awareness of information literacy for the development of the sample respondents

3. HYPOTHESIS

The factors of Information Literacy and Library Information Services discriminate the respondents into two groups.

4. SAMPLING PROCEDURE AND COLLECTION OF DATA

The users of libraries of ten constituent colleges of TNAU viz., Under-Graduate and Post-Graduate students, Research scholars and Faculty were purposively selected for the study. From the list of users, the respondents were selected by simple random sampling technique. Data were collected from 450 respondents from ten Constituent Colleges of Tamil Nadu Agricultural University which includes 259 Undergraduates, 87 Postraduates, 33 Research Scholars and 71 Faculty Members.

The primary data were collected during the period of 2008-09. From the selected respondents by using pre-tested standard questionnaire, secondary data were collected from published and un-published sources.

5. TOOLS OF THE ANALYSIS

Discriminant function analysis was carried out to classify the respondents into two groups namely awareness group and unawareness group of information literacy. The mathematical model of the discriminant function is as follows [3]:

$$Z = \sum_{i=1}^{n} I_i X_i$$

Where Z =Total discriminant score for Information Literacy awareness group and Information Literacy unawareness group.

I_i = Co-efficient of the i^{th} variable estimated from the data i = 1,2,…….

X_i = Information Literacy and Socio-economic variables i = 1,2,……..n

6. VARIABLES

X_1= Over all Rating Library Resources

X_2= Information Literacy Satisfaction

X_3= Number of R-resources

X_4= Opinion about Circulation

X_5= Opinion about User Education

X_6= Usefulness of Current Literature

X_7= Use of Browsing Internet

7. DATA ANALYSIS

The discriminant function analysis was applied to identify the factors of Information Literacy and Library Information Services that discriminate the respondents into awareness of Information Literacy group and unawareness of Information Literacy group. The results are furnished in the following tables:

1. Group Means and Mean Differences for Discriminating Variables;
2. Percentage Contribution Individual variables to the Total Discriminant Score;
3. Classification of Respondents into Awareness of Information Literacy Group and Unawareness of Information Literacy Group by Using Discriminant Function.

Table 1 Group Means and Mean Differences for Discriminating Variables

S.No.	Variable	Awareness Group	Unawareness Group	Mean Group Difference
1	Over all Rating Library Resources (x_1)	2.68	2.25	0.43
2	Information Literacy Satisfaction (x_2)	3.47	3.05	0.42
3	Number of e-resources(x_3)	6.29	5.33	0.96
4	Opinion about Circulation(x_4)	3.07	3.33	-0.26
5	Opinion about User Education(x_5)	3.18	3.41	-0.23
6	Usefulness of Current literature(x_6)	3.46	3.00	0.46
7	Use of Browsing Internet(x_7)	3.94	3.31	0.63

The mean difference of awareness group and unawareness group of information literacy was worked out from the individual mean of the two groups for the significant variables such as over all rating library resources, information literacy satisfaction, number of e-resources, opinion about circulation, opinion about user education, usefulness of current literature, use of browsing internet. It is observed that the highest mean difference between the two groups with respect to the variable 'number of e-resources' was 0.96. The lowest mean difference for the two groups with respect to the variable 'opinion about user education' was -0.23. The relative contribution of the factors to the total discriminant score was estimated and expressed in percentage form. The results are furnished in Table 2.

Table 2 Percentage Contribution Individual Variables to the Total Discriminant Score

S. No.	Variable	Co-Efficient	Mean Group Difference	Co-efficient x Mean Difference	Percent Contribution
1	Over all Rating Library Resources (x_1)	0.55	0.43 (3.81)**	0.24	18.60
2	Information Literacy Satisfaction (x_2)	0.29	0.42 (2.95)**	0.12	9.30
3	Number of E-resources(x_3)	0.28	0.96 (2.24)*	0.27	20.93
4	Opinion about Circulation(x_4)	-0.49	-0.26 (-2.11)*	0.13	10.08
5	Opinion about User Education(x_5)	-0.42	-0.23 (-1.91)	0.09	6.98
6	Usefulness of Current Literature(x_6)	0.37	0.46 (2.74)**	0.17	13.18
7	Use of Browsing Internet(x_7)	0.43	0.63 (3.58)**	0.27	20.93
Total				1.29	100

Figures in the parenthesis are the calculated t values
* Significant at 5 percent level of significance ** Significant at 1 percent level of significance

The table shows that the variables 'over all rating library resources', 'information literacy satisfaction', 'number of e-resources', 'opinion about circulation', 'opinion about user education', 'usefulness of current literature', 'use of browsing internet' were the major factors of information literacy and library information services which classified the respondents into two groups namely Awareness and Unawareness of Information Literacy.

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Their respective power in discriminating two groups were 20.93, 20.93, 18.60,13.18,10.08,9.30 and 6.98 % respectively. Further, student't' test was applied to test the significant of mean differences of seven variable used for discriminating the two groups. The test showed that awareness group differed significantly from unawareness group with respect to all the seven variables. Therefore the discriminate equations which classify the respondents into two groups are as follows:

$Z = 0.55x_1 + 0.29x_2 + 0.28x_3 - 0.49x_4 - 0.42x_5 + 0.37x_6 + 0.43x_7$

The discriminant function was applied to test whether the sample respondents are classified into awareness on information literacy and unawareness of information literacy correctly or not. The results of application of discriminate function are furnished in the following Table 3.

Table 3 Classification of Respondents into Awareness of Information Literacy Group and Unawareness of Information Literacy Group by Using Discriminant Function

Respondents	Actual Number of Respondents in the Category	No. of Respondents in the Category as Placed by Discriminant Function	No. of Respondents Wrongly Classified	Percentage of Wrongly Classified Respondents
Awareness of Information Literacy Group	386	279	107	27.72
Unawareness of Information Literacy Group	64	39	25	39.06
Total	450	318	132	29.33

The Table 3 shows that out of 450 samples, 132 samples were wrongly classified. The percentage of respondents classified correctly out of total sample of 450 respondents was 70.7%. Out of 386 respondents under awareness information literacy group 107 respondents were wrongly classified and out of 64 respondents under unawareness of information literacy group 25 respondents were wrongly classified. The percentage of wrongly classified respondents under awareness information literacy group was 28%. The percentage of wrongly classified respondents under unawareness of information literacy group was 39%. Hence, the null hypothesis which stated that the factors of Information Literacy and Library Information Services which do not discriminate the respondents into awareness and unawareness groups of Information Literacy is being rejected. It indicated that socio-economic variables and factors of Information Literacy and Library Information Services discriminate the respondents sufficiently is accepted.

8. FINDINGS AND POLICY IMPLICATIONS

It is found that the percentage of respondents classified correctly out of total sample of 450 respondents is 70.7%. The percentage for wrongly classified respondents under awareness on Information Literacy group is 28%. The percentage for wrongly classified respondents under unawareness on Information Literacy group is 39%.

1. The awareness programmes on information literacy have to be arranged to improve the knowledge of information literacy of library users in different colleges of Tamil Nadu Agricultural University.
2. Library services have not been fully utilized at the optimum level. Hence, the awareness should be created among the library users in Tamil Nadu Agricultural University to use the library resources at the optimum level.

3. The awareness on e-journals should be created among the researchers at Tamil Nadu Agricultural University to improve the quality of research and knowledge in the field of interest.

4. The librarians at Tamil Nadu Agricultural University should take the initiative to prepare a list of websites for various disciplines like agriculture, horticulture, forestry, agricultural engineering, sericulture, home science, biotechnology etc, that are useful to the research workers and the students.

5. The awareness of e-resources should be created through seminars and conferences to improve the knowledge about Information Literacy of the library users at Tamil Nadu Agricultural University.

9. CONCLUSION

The various factors of information literacy and library information services discriminate the total respondents into awareness group and unawareness group on information literacy. The percentage contribution of the above variables in discriminating the total respondents into two groups is very useful to formulate the policies for libraries of Tamil Nadu Agricultural University.

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