

## **UTILIZATION OF E-RESOURCES BY THE FACULTY MEMBERS OF MEDICAL COLLEGES IN TAMIL NADU AND PUDUCHERRY : A STUDY**

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### **INTRODUCTION**

Information is one of the basic needs of human existence. It is undoubtedly and increasingly being recognized that information is a vital resource. Information is an indispensable raw material for right decision-making from the governmental and institutional level to the personal level. It is in fact a vital ingredient for the social development of any nation especially developing countries like India. It is a well-accepted generalization that a country, which is rich in information, is rich in the socio-economic spheres.

### **INFORMATION AND COMMUNICATION TECHNOLOGY**

Information and Communication Technology (ICT) is the scientific, technological and Engineering disciplines and the management Technologies used in the handling of information, Processing and application related to computers. It is also concerned with the interactions with man and machines; and associated socio-economic and cultural matters (UNESCO in Osuagun, 2001)

### **OBJECTIVES**

To study the respondents' information sharing and communication Technology in the selected Medical Colleges in Tamilnadu and Puducherry.

### **RESULTS AND DISCUSSION**

A study of data in table 1 indicates Medical College wise respondents' extent of information needs. It could be noted that out of the total 839 respondents, 17.25 percent of them highly require review of literature information and 18.25 percent of them frequently require review of literature information. Of the total 839 respondents 21.00 percent of them occasionally require review of literature information and 16.75 percent of them rarely require review of literature information. Moreover, 26.75 percent of them never require review of literature information.

Out of the total 839 respondents, 17.25 percent of them highly require theoretical background information and 18.25 percent of them frequently require theoretical background information. Of the total 839 respondents 15.75 percent of them occasionally require theoretical background information and 23.25 percent of them rarely require theoretical background information. Moreover, 25.50 percent of them never require theoretical background information.

In this study that out of the total 839 respondents, 16.00 percent of them highly require method process and procedure information and 19.75 percent of them frequently require method process and procedure information. Of the total 839 respondents 16.75 percent of them occasionally require method process and procedure information and 29.25 percent of them rarely require method process and procedure information. Moreover, 18.25 percent of them never require method process and procedure information.

It is seen from the table that out of the total 839 respondents, 18.00 percent of them highly require experimental design result and application oriented information and 25.50 percent of them frequently require experimental design result and application oriented information. Of the total 839 respondents 19.25 percent of them occasionally require experimental design result and application oriented information and 17.00 percent of them rarely require experimental design result and application oriented information. Moreover, 20.25 percent of them never require experimental design result and application oriented information.

**Table 1 Medical College wise distributions of respondents according to their information usage**

Colleges	Review of literature					Theoretical background					Method, process and procedures				
	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required
MMMC & GH	8 (18.18)	12 (27.27)	13 (22.73)	4 (9.09)	10 (22.73)	16 (36.36)	6 (13.64)	12 (27.27)	8 (18.18)	2 (4.55)	8 (18.18)	6 (13.64)	2 (4.55)	8 (18.18)	20 (45.45)
Chengalpattu Medical College	30 (35.14)	4 (5.14)	8 (10.81)	28 (37.84)	8 (10.81)	12 (16.22)	32 (43.24)	6 (8.11)	8 (10.81)	16 (21.62)	8 (10.81)	16 (21.62)	16 (21.62)	28 (37.84)	6 (8.11)
Madurai Medical College & Hospital	70 (37.65)	25 (11.76)	12 (7.06)	18 (10.59)	56 (32.94)	16 (9.41)	68 (37.65)	12 (7.06)	42 (24.71)	36 (21.18)	42 (24.71)	64 (37.65)	36 (21.18)	16 (9.41)	12 (7.06)
Kilpauk Medical College	52 (23.81)	34 (21.43)	42 (26.19)	46 (19.05)	26 (9.52)	38 (19.05)	2 (2.38)	52 (30.95)	40 (23.81)	42 (23.81)	40 (23.81)	42 (19.05)	34 (14.29)	42 (16.67)	38 (26.19)
Stanley Medical College	16 (18.60)	22 (23.26)	31 (30.23)	10 (11.63)	14 (16.28)	32 (37.21)	42 (18.60)	14 (16.28)	14 (16.28)	10 (11.63)	14 (16.28)	36 (41.86)	10 (11.63)	15 (13.95)	16 (16.28)
Tanjore Medical College	12 (27.27)	10 (22.73)	6 (13.64)	20 (31.82)	2 (4.55)	17 (27.27)	6 (13.64)	4 (4.55)	12 (22.73)	16 (31.82)	15 (22.73)	8 (13.64)	15 (31.82)	15 (27.27)	2 (4.55)
Thirunelveli Medical College	6 (12.00)	8 (16.00)	20 (40.00)	11 (20.00)	6 (12.00)	16 (32.00)	10 (16.00)	12 (24.00)	6 (12.00)	13 (16.00)	8 (12.00)	23 (36.00)	10 (16.00)	7 (12.00)	14 (24.00)
Coimbatore Medical College	20 (25.00)	10 (12.50)	32 (40.00)	8 (10.00)	17 (12.50)	33 (35.00)	25 (27.50)	10 (12.50)	17 (15.00)	8 (10.00)	12 (15.00)	30 (35.00)	10 (10.00)	20 (25.00)	14 (15.00)
Jipmer	10 (19.23)	16 (30.77)	12 (23.08)	8 (15.38)	6 (11.54)	34 (65.38)	4 (7.69)	10 (11.54)	6 (11.54)	2 (3.85)	6 (11.54)	20 (34.62)	8 (11.54)	15 (19.23)	12 (23.08)
Total	224 (26.75)	141 (16.75)	176 (21.00)	153 (18.25)	145 (17.25)	214 (25.50)	195 (23.25)	132 (15.75)	153 (18.25)	145 (17.25)	153 (18.25)	245 (29.25)	141 (16.75)	166 (19.75)	134 (16.00)

Colleges	Experimental design and application					Information about previous work done					Information about current development				
	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required
MMMC & GH	6 (13.64)	4 (9.09)	16 (36.36)	8 (18.18)	10 (22.73)	2 (4.55)	6 (13.64)	12 (27.27)	8 (18.18)	16 (36.36)	8 (18.18)	8 (18.18)	2 (4.55)	6 (13.64)	20 (45.45)
Chengalpattu Medical College	8 (10.81)	26 (35.14)	12 (16.22)	24 (32.43)	4 (5.14)	16 (21.62)	32 (43.24)	6 (8.11)	8 (10.81)	12 (16.22)	8 (10.81)	28 (37.84)	16 (21.62)	16 (21.62)	6 (8.11)
Madurai Medical College	32 (18.82)	18 (10.59)	23 (9.41)	64 (37.65)	40 (23.53)	36 (21.18)	76 (38.82)	10 (5.88)	52 (24.71)	16 (9.41)	48 (22.35)	36 (11.76)	46 (21.18)	80 (37.65)	20 (7.06)
Kilpauk Medical College	32 (23.81)	42 (16.67)	28 (19.05)	32 (19.05)	34 (21.43)	32 (23.81)	26 (7.14)	42 (26.19)	34 (23.81)	26 (19.05)	28 (21.43)	26 (19.05)	24 (14.29)	32 (19.05)	30 (26.19)
Stanley Medical College	26 25.58	15 (11.63)	28 (27.91)	32 (18.60)	20 (16.28)	20 (11.63)	23 (20.93)	12 (13.95)	16 (16.28)	44 (37.21)	19 (16.28)	25 (23.26)	12 (11.63)	23 (20.93)	27 (27.91)
Tanjore Medical College	6 (13.64)	12 (22.73)	10 (13.64)	18 (27.27)	10 (22.73)	14 (31.82)	6 (13.64)	2 (4.55)	15 (22.73)	17 (27.27)	12 (22.73)	8 (13.64)	16 (31.82)	8 (13.64)	12 (18.18)
Thirunelveli Medical College	24 (40.00)	10 (20.00)	9 (12.00)	10 (12.00)	8 (16.00)	8 (16.00)	13 (16.00)	10 (16.00)	6 (12.00)	25 (40.00)	6 (12.00)	12 (20.00)	10 (16.00)	17 (28.00)	12 (24.00)
Coimbatore Medical College	20 (25.00)	8 (10.00)	24 (30.00)	18 (22.50)	10 (12.50)	13 (10.00)	22 (27.50)	13 (12.50)	12 (15.00)	28 (35.00)	12 (15.00)	28 (35.00)	8 (10.00)	20 (25.00)	12 (15.00)
Jipmer	16 (23.08)	8 (11.54)	12 (23.08)	8 (15.38)	14 (26.92)	4 (3.85)	4 (7.69)	6 (11.54)	6 (11.54)	34 (65.38)	6 (11.54)	16 (30.77)	6 (11.54)	14 (26.92)	10 (19.23)
Total	170 (20.25)	143 (17.00)	162 (19.25)	214 (25.50)	150 (18.00)	145 (17.25)	206 (24.50)	113 (13.50)	151 (18.75)	218 (26.00)	147 (17.50)	187 (22.25)	140 (16.75)	216 (25.75)	149 (17.75)

Colleges	Computer programme and model building information					Management information					Standard and patent				
	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required
MMMC & GH	20 (45.45)	6 (13.64)	8 (18.18)	4 (9.09)	6 (13.64)	6 (13.64)	14 (31.82)	10 (22.73)	8 (18.18)	6 (13.64)	2 (4.55)	6 (13.64)	8 (18.18)	8 (18.18)	20 (45.45)
Chengalpattu Medical College	40 (54.05)	18 (24.32)	6 (8.11)	4 (5.14)	6 (8.11)	16 (21.62)	14 (18.92)	4 (5.14)	24 (32.43)	16 (21.62)	26 (21.62)	28 (21.62)	34 (37.84)	13 (10.81)	6 (8.11)
Madras Medical College	16 (9.41)	60 (29.41)	20 (5.88)	88 (45.88)	26 (9.41)	46 (21.18)	38 (16.47)	62 (24.71)	60 (31.76)	18 (5.88)	48 (21.18)	84 (37.65)	40 (11.76)	43 (22.35)	18 (7.06)
Kilpauk Medical College	38 (26.19)	6 (7.14)	32 (26.19)	26 (21.43)	28 (19.05)	44 (38.10)	14 (7.14)	28 (21.43)	22 (19.05)	32 (14.29)	12 (14.29)	20 (19.05)	20 (19.05)	18 (21.43)	30 (26.19)
Stanley Medical College	36 (18.60)	26 (20.93)	12 (13.95)	14 (16.28)	26 (30.23)	19 (18.60)	18 (20.93)	26 (23.26)	21 (18.60)	18 (18.60)	12 (11.63)	20 (20.93)	25 (23.26)	16 (16.28)	26 (27.91)
Tanjore Medical College	19 (31.82)	8 (13.64)	2 (4.55)	15 (22.73)	14 (27.27)	15 (22.73)	9 (13.64)	15 (22.73)	10 (18.18)	12 (22.73)	16 (31.82)	10 (13.64)	6 (13.64)	15 (22.73)	10 (18.18)
Thirunelveli Medical College	8 (16.00)	17 (28.00)	12 (16.00)	8 (12.00)	19 (28.00)	12 (24.00)	18 (28.00)	10 (16.00)	10 (16.00)	10 (16.00)	10 (16.00)	14 (28.00)	10 (20.00)	6 (12.00)	16 (24.00)
Coimbatore Medical College	19 (15.00)	21 (22.50)	12 (12.50)	13 (15.00)	28 (35.00)	14 (17.50)	18 (22.50)	16 (17.50)	30 (37.50)	4 (5.00)	8 (10.00)	20 (25.00)	28 (35.00)	12 (15.00)	13 (15.00)
JIPMER	18 (34.62)	10 (19.23)	6 (11.54)	6 (11.54)	12 (23.08)	6 (11.54)	10 (19.23)	14 (26.92)	16 (30.77)	6 (11.54)	6 (11.54)	14 (26.92)	16 (30.77)	16 (11.54)	10 (19.23)
Total	214 (25.50)	172 (20.50)	110 (13.00)	178 (21.25)	165 (19.75)	178 (21.25)	153 (18.25)	185 (22.00)	201 (24.00)	122 (14.50)	140 (16.75)	216 (25.75)	187 (22.25)	147 (17.50)	149 (17.75)

Colleges	Statistical data					Information about lab procedure					Scientific and technical news				
	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required
MMMC & GH	4 (9.09)	4 (9.09)	22 (50.00)	4 (9.09)	10 (22.73)	18 (40.91)	10 (22.73)	4 (9.09)	4 (9.09)	8 (18.18)	4 (9.09)	10 (22.73)	6 (13.64)	18 (22.73)	14 (31.82)
Chengalpattu Medical College	12 (16.22)	17 (18.92)	36 (48.65)	6 (8.11)	6 (8.11)	14 (18.92)	18 (24.32)	14 (18.92)	6 (8.11)	30 (29.73)	14 (18.92)	18 (16.22)	8 (10.81)	26 (24.32)	22 (29.73)
Madurai Medical College	26 (9.41)	30 (12.94)	80 (37.65)	16 (9.41)	62 (30.59)	18 (7.06)	84 (44.71)	10 (5.88)	26 (9.41)	66 (32.94)	18 (5.88)	48 (21.18)	20 (5.88)	66 (38.82)	56 (28.24)
Kilpauk Medical College	24 (14.29)	20 (11.90)	62 (50.00)	10 (7.14)	24 (16.67)	24 (16.67)	36 (30.95)	16 (9.52)	44 (33.33)	18 (9.52)	18 (9.52)	37 (40.48)	16 (14.29)	28 (26.19)	18 (9.52)
Stanley Medical College	15 (11.63)	17 (16.28)	53 (53.49)	16 (6.98)	13 (11.63)	26 (18.60)	24 (23.26)	24 (16.28)	28 (30.23)	10 (11.63)	19 (16.28)	23 (23.26)	44 (27.91)	21 (20.93)	20 (11.63)
Tanjore Medical College	10 (22.73)	9 (13.64)	21 (36.36)	4 (9.09)	10 (18.18)	10 (18.18)	10 (18.18)	8 (13.64)	16 (31.82)	12 (18.18)	6 (13.64)	8 (18.18)	4 (9.09)	27 (54.55)	2 (4.55)
Thirunelveli Medical College	6 (12.00)	5 (16.00)	29 (48.00)	6 (12.00)	6 (12.00)	17 (28.00)	30 (48.00)	2 (4.00)	4 (8.00)	8 (12.00)	6 (12.00)	17 (28.00)	10 (16.00)	16 (32.00)	9 (12.00)
Coimbatore Medical College	8 (10.00)	16 (20.00)	32 (40.00)	8 (10.00)	18 (20.00)	22 (25.00)	18 (22.50)	10 (10.00)	21 (22.50)	19 (20.00)	8 (10.00)	18 (22.50)	6 (5.00)	36 (42.50)	21 (20.00)
JIPMER	6 (11.54)	10 (19.23)	26 (50.00)	10 (11.54)	4 (7.69)	12 (23.08)	20 (38.46)	10 (19.23)	6 (11.54)	4 (7.69)	10 (19.23)	14 (26.92)	8 (11.54)	18 (34.62)	4 (7.69)
<b>Total</b>	<b>111</b> (13.25)	<b>128</b> (15.25)	<b>361</b> (43.00)	<b>86</b> (10.25)	<b>153</b> (18.25)	<b>161</b> (19.25)	<b>250</b> (29.75)	<b>98</b> (11.75)	<b>155</b> (18.50)	<b>175</b> (20.75)	<b>103</b> (12.25)	<b>193</b> (23.00)	<b>122</b> (14.50)	<b>256</b> (30.50)	<b>166</b> (19.75)

Colleges	Health information					Information about Government decision on science and technology				
	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required
MMMC & GH	16 (36.36)	20 (31.82)	2 (4.55)	6 (13.64)	12 (13.64)	8 (18.18)	14 (31.82)	2 (4.55)	14 (31.82)	6 (13.64)
Chengalpattu Medical College	28 (24.32)	24 (24.32)	16 (21.62)	32 (21.62)	12 (8.11)	22 (16.22)	10 (13.51)	16 (21.62)	36 (24.32)	32 (24.32)
Madurai Medical College	32 (12.94)	92 (47.06)	54 (24.71)	4 (2.35)	28 (12.94)	20 (10.59)	80 (41.18)	42 (18.82)	36 (16.47)	32 (12.94)
Kilpauk Medical College	20 (21.43)	18 (19.05)	22 (14.29)	32 (19.05)	25 (26.19)	20 (21.43)	26 (19.05)	12 (14.29)	30 (23.81)	28 (21.43)
Stanley Medical College	16 (16.28)	15 (23.26)	12 (11.63)	20 (20.93)	28 (27.91)	18 (18.60)	30 (23.26)	12 (11.63)	24 (23.26)	24 (23.26)
Tanjore Medical College	10 (18.18)	16 (36.36)	10 (18.18)	8 (13.64)	6 (13.64)	4 (9.09)	17 (31.82)	11 (18.18)	10 (22.73)	8 (18.18)
Thirunelveli Medical College	18 (32.00)	6 (12.00)	10 (16.00)	12 (20.00)	10 (20.00)	16 (32.00)	8 (12.00)	8 (16.00)	6 (12.00)	18 (28.00)
Coimbatore Medical College	12 (15.00)	43 (47.50)	8 (10.00)	10 (12.50)	12 (15.00)	12 (15.00)	36 (37.50)	8 (10.00)	25 (25.00)	10 (12.50)
Jipmer	8 (15.38)	16 (30.77)	6 (11.54)	4 (7.69)	18 (34.62)	8 (15.38)	16 (30.77)	4 (7.69)	16 (30.77)	8 (15.38)
Total	160 (19.00)	260 (31.00)	140 (16.75)	128 (15.25)	151 (18.00)	128 (15.25)	237 (28.25)	115 (13.75)	197 (23.50)	162 (19.25)

Source computed Figures in parentheses denote percentages

ANOVA					
Source of Variation	SS	df	MS	F	F crit
Rows	1344.207	9	149.3563	8.84753	1.960817
Columns	147.1214	13	11.31703	0.670395	1.804693
Error	1975.093	117	16.88114		
Total	3466.421	139			

It is significant to observe that out of the total 839 respondents, 26.00 percent of them highly require information about previous work done in their area and 18.75 percent of them frequently require information about previous work done in their area. Of the total 839 respondents 13.50 percent of them occasionally require information about previous work done in their area and 24.50 percent of them rarely require information about previous work done in their area. Moreover, 17.25 percent of them never require information about previous work done in their area.

It is clear from the table data that out of the total 839 respondents, 17.75 percent of them highly require information about current development in their field and 25.75 percent of them frequently require information about current development in their field. Of the total 839 respondents 16.75 percent of them occasionally require information about current development in their field and 22.25 percent of them rarely require information about current development in their field. Moreover, 17.50 percent of them never require information about current development in their field.

A keen observation of data in table reveals that out of the total 839 respondents, 19.75 percent of them highly require computer programme and model building information and 21.25 percent of them frequently require computer programme and model building information. Of the total 839 respondents 13.00 percent of them occasionally require computer programme and model building information and 20.50 percent of them rarely require computer programme and model building information. Moreover, 25.50 percent of them never computer programme and model building information.

Out of the total 839 respondents, 14.50 percent of them highly require management information and 24.00 percent of them frequently require management information. Of the total 839 respondents 22.00 percent of them occasionally require management information and



18.25 percent of them rarely require management information. Moreover, 21.25 percent of them never require management information.

It is observed that out of the total 839 respondents, 17.75 percent of them highly require standard and patented information and 17.50 percent of them frequently require standard and patented information. Of the total 839 respondents 22.25 percent of them occasionally require standard and patented information and 25.75 percent of them rarely require standard and patented information. Moreover, 16.75 percent of them never require standard and patented information.

A keen observation of data in table reveals that out of the total 839 respondents, 18.25 percent of them highly require statistical data information and 10.25 percent of them frequently require statistical data information. Of the total 839 respondents 43.00 percent of them occasionally require statistical data information and 15.25 percent of them rarely require statistical data information. Moreover, 13.25 percent of them never require statistical data information.

It is seen from the table that out of the total 839 respondents, 20.75 percent of them highly require information about lab procedure and 18.50 percent of them frequently require information about lab procedure. Of the total 839 respondents 11.75 percent of them occasionally require information about lab procedure and 29.75 percent of them rarely require information about lab procedure. Moreover, 19.25 percent of them never require information about lab procedure.

Out of the total 839 respondents, 19.75 percent of them highly require scientific and technical news information and 30.50 percent of them frequently require scientific and technical news information. Of the total 839 respondents 14.50 percent of them occasionally require scientific and technical news information and 23.00 percent of them rarely require scientific and technical news information. Moreover, 12.25 percent of them never require scientific and technical news information.

It is observed that out of the total 839 respondents, 18.00 percent of them highly require health information and 15.25 percent of them frequently require health information. Of the total 839 respondents 16.75 percent of them occasionally require health information and 31.00 percent of them rarely require health information. Moreover, 19.00 percent of them never require health information.

It is significant to note that out of the total 839 respondents, 19.25 percent of them highly require information on government's decision on science and technology and 23.50 percent of them frequently require information on government's decision on science and technology. Of the total 839 respondents 13.75 percent of them occasionally require

information on government's decision on science and technology and 28.25 percent of them rarely require information on government's decision on science and technology. Moreover, 15.25 percent of them never require information on government's decision on science and technology.

The Medical College wise analysis reveals the following facts. The respondents of Madurai Medical College occupy the first position with respect to high requirement of review of literature information (32.94%) and to statistical data information (30.59%), information about lab procedure (32.94%) and scientific and technical news information (28.24%). The respondents of Thootukudi Medical College constitute more number with respect to high requirement of experimental design result and application oriented information (26.92%), information about previous work done in their area (65.38%) and health information (34.62%) than those of others. The respondents of Kilpauk Medical College constitute more number with respect to high requirement of theoretical background information (23.81%) and information about current development in their field (26.19%). The respondents of MMMC & GH Medical College constitute more number with respect to high requirement of method process and procedure information (45.45%), information about current development in their area (45.45%) and standard and patented information (45.45%). The respondents of Thirunelveli Medical College occupy the first position with respect to high requirement of information about government's decision on science and technology (28.00%). The respondents of Coimbatore Medical College (35%) constitute more number with respect to high requirement of computer programme and model building information.

The ANOVA two way model is applied for further discussion. At one point, the computed ANOVA value is 8.84, which is greater than its tabulated value at 5 percent level of significance. Hence, there is a significant variation among the chosen components of information needs with respect to views of respondents of different Medical Colleges. From another point of view, the computed ANOVA value is 0.67, which is lesser than its tabulated value at 5 percent level of significance. Hence, variation among the chosen Medical Colleges is statistically identified as insignificant with respect to information needs of faculty members.

It could be seen clearly from the above discussion that respondents rated first order priority to high requirement of information about previous work done in their area followed by information about lab procedure, information on government's decision on science and technology, scientific and technical news information and statistical data information. In general, respondents give less importance to review of literature information, theoretical background information, and health information.

A study of data in table 2 indicates education wise respondents' extent of information needs. The education wise analysis reveals the following facts. The respondents of MS level

educated respondents occupy the first position with respect to high requirement of review of literature information (38.67%) theoretical background information (34.67%), method process and procedure information (28%), scientific and technical news information (40%) and information on government's decision on science and technology (34.67%). The M.B.B.S. level educated respondents constitute more number with respect to high requirement of experimental design result and application oriented information (23.33%), standard and patent information (27.78%) and health information (27.78%).

The MD degree level educated respondents occupy the first with respect to high requirement of information about previous work done in their area (37.78%), information about current development in their field (24.77%), statistical data information (25.23%), information about lab procedure (25.23%) and scientific and technical information (40%).

It could be seen clearly from the above discussion that MS and MD level educated respondents highly require various types of information than M.B.B.S. with Diploma level and M.B.B.S. degree level educated respondents.

**Table 2 Education wise distributions of respondents according to their information needs**

Education	Review of literature					Theoretical background					Method, process and procedures				
	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required
M.B.B.S.	60 (33.33)	20 (11.11)	30 (16.67)	50 (27.78)	22 (11.11)	42 (23.33)	56 (31.11)	26 (14.44)	40 (23.33)	14 (7.78)	42 (23.33)	56 (31.11)	26 (14.44)	42 (23.33)	14 (7.78)
M.B.B.S with Diploma	12 (28.57)	8 (19.05)	14 (33.33)	4 (9.52)	4 (9.52)	17 (28.57)	8 (19.05)	17 (33.33)	4 (9.52)	4 (9.52)	4 (9.52)	22 (52.38)	8 (19.05)	4 (9.52)	4 (9.52)
M.D	116 (27.10)	89 (20.09)	111 (25.23)	69 (14.49)	61 (13.08)	129 (28.97)	87 (19.16)	70 (16.36)	89 (19.63)	70 (15.89)	84 (19.63)	128 (27.57)	71 (14.95)	100 (21.96)	68 (15.89)
M.S	36 (17.33)	24 (13.33)	21 (10.67)	30 (20.00)	58 (38.67)	26 (17.33)	44 (26.67)	19 (10.67)	20 (10.67)	57 (34.67)	23 (10.67)	39 (25.33)	36 (24.00)	20 (12.00)	48 (28.00)
Total	224 (26.75)	141 (16.75)	176 (21.00)	153 (18.25)	145 (17.25)	214 (25.50)	195 (23.25)	132 (15.75)	153 (18.25)	145 (17.25)	153 (18.25)	245 (29.25)	141 (16.75)	166 (19.75)	134 (16.00)

Education	Experimental design and application					Information about previous work done					Information about current development				
	Not required	Rarely required	Occasionally required	Frequently required	Higher sought after	Not required	Rarely required	Occasionally required	Frequently required	Higher sought after	Not required	Rarely required	Occasionally required	Frequently required	Higher sought after
M.B.B.S.	44 (24.44)	38 (21.11)	22 (12.22)	34 (18.89)	42 (23.33)	40 (22.22)	64 (35.56)	22 (12.22)	34 (18.89)	20 (11.11)	38 (21.11)	54 (30.00)	26 (14.44)	46 (25.56)	16 (8.89)
M.B.B.S with Diploma	10 (23.81)	16 (42.86)	6 (14.29)	4 (9.52)	4 (9.52)	16 (38.10)	12 (28.57)	6 (14.29)	4 (9.52)	4 (9.52)	8 (19.05)	10 (23.81)	8 (19.05)	12 (28.57)	4 (9.52)
M.D	80 (18.69)	68 (14.95)	76 (17.76)	128 (29.91)	85 (18.69)	62 (14.49)	81 (19.16)	55 (11.68)	74 (17.29)	170 (37.38)	70 (15.42)	94 (21.96)	72 (16.82)	100 (21.03)	106 (24.77)
M.S	36 (18.67)	21 (10.67)	57 (33.33)	48 (25.33)	20 (12.00)	27 (13.33)	48 (25.33)	30 (20.00)	46 (25.33)	24 (16.00)	31 (18.67)	29 (13.33)	34 (18.67)	58 (38.67)	23 (10.67)
Total	170 (20.25)	143 (17.00)	161 (19.25)	214 (25.50)	151 (18.00)	145 (17.25)	205 (24.50)	113 (13.50)	158 (18.75)	218 (26.00)	147 (17.50)	187 (22.25)	140 (16.75)	216 (25.75)	149 (17.75)

Education	Computer programme model building information					Management information					Standard and patent				
	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required
M.B.B.S.	46 (25.56)	48 (26.67)	22 (12.22)	38 (21.11)	26 (14.44)	38 (21.11)	21 (23.33)	26 (14.44)	42 (23.33)	32 (17.78)	20 (11.11)	44 (24.44)	28 (15.56)	38 (21.11)	50 (27.78)
M.B.B.S with Diploma	8 (19.05)	10 (23.81)	8 (19.05)	12 (28.57)	4 (9.52)	12 (28.57)	5 (23.81)	6 (9.52)	12 (28.57)	4 (9.52)	8 (19.05)	10 (23.81)	8 (19.05)	12 (28.57)	4 (9.52)
M.D	132 (28.50)	96 (20.09)	57 (12.15)	70 (14.49)	109 (24.77)	70 (14.49)	37 (17.29)	16 (27.10)	110 (23.36)	80 (17.76)	48 (11.21)	128 (27.57)	120 (25.70)	75 (16.36)	82 (19.16)
M.S	28 (18.67)	20 (13.33)	22 (14.67)	58 (38.67)	27 (14.67)	58 (38.67)	10 (13.33)	36 (20.00)	38 (25.33)	6 (2.67)	64 (38.67)	34 (22.67)	32 (21.33)	20 (13.33)	14 (4.00)
Total	214 (25.50)	172 (20.50)	109 (13.00)	178 (21.25)	166 (19.75)	178 (21.25)	153 (18.25)	184 (22.00)	202 (24.00)	122 (14.50)	140 (16.75)	216 (25.75)	188 (22.25)	145 (17.50)	150 (17.75)

Education	Statistical data					Information about lab procedure					Scientific and technical news				
	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required
M.B.B.S.	16 (8.89)	36 (20.00)	90 (50.00)	20 (11.11)	18 (10.00)	20 (11.11)	64 (35.56)	24 (13.33)	40 (22.22)	32 (17.78)	24 (13.33)	56 (31.11)	28 (15.56)	40 (22.22)	32 (17.78)
M.B.B.S with Diploma	10 (23.81)	8 (19.05)	12 (28.57)	8 (19.05)	4 (9.52)	10 (23.81)	12 (28.57)	4 (9.52)	8 (19.05)	8 (19.05)	8 (19.05)	8 (19.05)	4 (9.52)	12 (28.57)	10 (23.81)
M.D	32 (7.48)	48 (9.81)	217 (49.07)	40 (8.41)	115 (25.23)	110 (23.83)	138 (29.44)	54 (11.68)	49 (9.81)	116 (25.23)	52 (11.21)	87 (19.16)	76 (16.36)	182 (40.19)	60 (13.08)

M.S	53 (32.00)	36 (24.00)	42 (21.33)	18 (12.00)	16 (10.67)	22 (14.67)	36 (24.00)	16 (10.67)	58 (38.67)	18 (12.00)	18 (12.00)	42 (25.33)	14 (9.33)	22 (13.33)	64 (40.00)
Total	111 (13.25)	128 (15.25)	361 (43.00)	86 (10.25)	153 (18.25)	162 (19.25)	250 (29.75)	98 (11.75)	155 (18.50)	174 (20.75)	102 (12.25)	193 (23.00)	122 (14.50)	256 (30.50)	166 (19.75)

Education	Health information					Information about government's decision on science and technology					Total
	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required	
M.B.B.S.	30 (17.78)	56 (22.22)	13 (10.00)	40 (22.22)	50 (27.78)	39 (20.00)	50 (26.67)	18 (10.00)	40 (22.22)	34 (21.11)	<b>181</b>
M.B.B.S with Diploma	48 (28.57)	62 (23.81)	22 (19.05)	10 (14.29)	21 (14.29)	11 (19.05)	17 (28.57)	10 (19.05)	12 (14.29)	15 (19.05)	<b>65</b>
M.D	19 (11.68)	104 (41.12)	69 (17.29)	60 (14.02)	62 (15.89)	58 (13.55)	145 (33.64)	52 (11.68)	122 (28.04)	58 (13.08)	<b>435</b>
M.S	62 (38.67)	38 (14.67)	36 (22.67)	18 (10.67)	19 (13.33)	20 (13.33)	25 (14.67)	35 (22.67)	23 (14.67)	55 (34.67)	<b>158</b>
Total	159 (19.00)	260 (31.00)	140 (16.75)	128 (15.25)	152 (18.00)	128 (15.25)	237 (28.25)	115 (13.75)	197 (23.50)	162 (19.25)	<b>839</b>

Source computed  
 Figures in parentheses denote percentages

**Table 3 Designation wise distributions of respondents according to their information needs**

Designation	Review of literature					Theoretical background					Method, process and procedures				
	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required
Tutor	62 (27.19)	32 (14.04)	38 (16.67)	36 (15.79)	60 26.32	56 (24.56)	62 (27.19)	34 (14.91)	36 (15.79)	40 (17.54)	36 (15.79)	82 (35.96)	34 (14.91)	42 (18.42)	34 (14.91)
Assistant Professor	48 (27.91)	38 (22.09)	48 (27.91)	26 (15.12)	12 (6.98)	42 (24.42)	38 (22.09)	46 (26.74)	26 (15.12)	20 (11.63)	26 (15.12)	38 (22.09)	38 (20.93)	24 (13.95)	48 (27.91)
Associate Professor	74 (27.83)	42 (15.65)	54 (20.00)	67 (26.09)	24 (10.43)	78 (29.57)	36 (15.65)	28 (9.57)	60 (26.09)	47 (19.13)	64 (26.09)	70 (27.83)	29 (10.43)	64 (26.09)	28 (9.57)
Professor	40 (23.53)	30 (16.47)	36 (21.18)	24 (14.12)	49 (24.71)	38 (22.35)	59 (29.41)	24 (14.12)	31 (14.12)	39 (20.00)	27 (14.12)	55 (29.41)	40 (23.53)	36 (18.82)	24 (14.12)
Total	224 (26.75)	142 (16.75)	176 (21.00)	153 (18.25)	145 (17.25)	214 (25.50)	195 (23.25)	132 (15.75)	153 (18.25)	145 (17.25)	153 (18.25)	245 (29.25)	141 (16.75)	166 (19.75)	134 (16.00)

Designation	Experimental design result and application					Information about previous work done in your field					Information about current development in your field				
	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required
Tutor	42 (18.42)	34 (14.91)	42 (18.42)	66 (28.95)	44 (19.30)	34 (14.91)	38 (16.67)	28 (12.28)	58 (25.44)	70 (30.70)	36 (15.79)	56 (24.56)	46 (20.18)	68 (29.82)	22 (9.65)
Assistant Professor	26 (15.12)	36 (20.93)	24 (13.95)	52 (24.42)	48 25.58	36 (20.93)	56 (32.56)	18 (10.47)	20 (11.63)	42 (24.42)	34 (19.77)	38 (22.09)	41 (22.09)	47 (24.42)	20 (11.63)
Associate Professor	67 (26.09)	30 (11.30)	60 (24.35)	60 (26.09)	32 12.17	30 (11.30)	66 (26.96)	47 (18.26)	45 (17.39)	70 (26.09)	47 (18.26)	49 (19.13)	37 (14.78)	65 (26.09)	55 (21.74)
Professor	34 (20.00)	43 (23.53)	35 (18.82)	36 (21.18)	28 (16.47)	45 (24.71)	46 (23.53)	20 (11.76)	34 (18.82)	36 (21.18)	30 (16.47)	44 (23.53)	16 (9.41)	36 (21.18)	52 (29.41)
Total	169 (20.25)	143 (17.00)	161 (19.25)	214 (25.50)	152 (18.00)	145 (17.25)	206 (24.50)	113 (13.50)	157 (18.75)	218 (26.00)	147 (17.50)	187 (22.25)	140 (16.75)	216 (25.75)	149 (17.75)

Designation	Computer programme model building information					Management information					Standard and patent				
	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required
Tutor	68 (29.82)	54 (23.68)	26 (11.40)	48 (21.05)	32 (14.04)	48 (21.05)	44 (19.30)	54 (23.68)	56 (23.68)	28 (12.28)	34 (14.91)	54 (23.68)	48 (21.05)	36 (15.79)	56 (24.56)
Assistant Professor	47 (24.42)	40 (20.93)	37 (18.60)	45 (24.42)	24 (11.63)	26 (15.12)	34 (18.60)	42 (20.93)	64 (36.05)	16 (9.30)	26 (15.12)	62 (36.05)	39 (20.93)	32 (18.60)	19 (9.30)
Associate Professor	63 (25.22)	48 (19.13)	30 (13.04)	55 (21.74)	52 (20.87)	49 (20.00)	45 (17.39)	56 (23.48)	55 (21.74)	46 (17.39)	34 (13.04)	60 (21.74)	62 (24.35)	52 (20.00)	52 (20.87)
Professor	36 (21.18)	30 (17.65)	16 (9.41)	30 (17.65)	58 (34.1552)	55 (29.41)	30 (17.65)	32 (18.82)	26 (15.29)	32 (18.82)	47 (25.88)	40 (23.53)	38 (22.35)	27 (15.29)	22 (12.94)
Total	214 (25.50)	172 (20.50)	109 (13.00)	178 (21.25)	166 (19.75)	178 (21.25)	153 (18.25)	184 (22.00)	201 (24.00)	122 (14.50)	141 (16.75)	216 (25.75)	187 (22.25)	147 (17.50)	149 (17.75)

Designation	Statistical data					Information about lab procedure					Scientific and technical news				
	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required
Tutor	30 (13.16)	48 (21.05)	78 (34.21)	16 (7.02)	56 (24.56)	60 (26.32)	68 (29.82)	20 (8.77)	36 (15.79)	44 (19.30)	18 (7.89)	40 (17.54)	24 (10.53)	102 (44.74)	44 (19.30)
Assistant Professor	23 (10.47)	16 (8.14)	118 (62.79)	12 (6.98)	20 (11.63)	20 (10.47)	76 (40.70)	21 (9.30)	32 (18.60)	40 (20.93)	24 (11.63)	55 (29.07)	38 (18.60)	40 (19.77)	40 (20.93)
Associate Professor	22 (9.57)	42 (16.52)	100 (43.48)	26 (9.57)	53 (20.87)	53 (20.87)	64 (25.22)	22 (9.57)	57 (21.74)	56 (22.61)	26 (11.30)	74 (30.43)	22 (9.57)	74 (29.57)	48 (19.13)
Professor	36 (21.18)	22 (12.94)	65 (34.12)	32 (18.82)	24 (12.94)	28 (16.47)	42 (24.71)	36 (21.18)	30 (17.65)	34 (20.00)	34 (20.00)	24 (14.12)	38 (22.35)	40 (23.53)	34 (20.00)
Total	111 (13.25)	128 (15.25)	361 (43.00)	86 (10.25)	153 (18.25)	161 (19.25)	250 (29.75)	99 (11.75)	155 (18.50)	174 (20.75)	102 (12.25)	193 (23.00)	122 (14.50)	256 (30.50)	166 (19.75)



Designation	Health information					Information about government's decision on science and technology					Total
	Not required	Rarely required	Occasionally required	Frequently required	Highly required	Not required	Rarely required	Occasionally required	Frequently required	Highly required	
Tutor	31 (18.42)	102 (44.74)	36 (15.79)	4 (1.75)	44 (19.30)	4 (1.75)	76 (33.33)	40 (17.54)	46 (20.18)	62 (27.19)	<b>228</b>
Assistant Professor	39 (20.93)	38 (22.09)	34 (19.77)	28 (16.28)	36 (20.93)	28 (16.28)	46 (23.26)	35 (17.44)	56 (30.23)	22 (12.79)	<b>187</b>
Associate Professor	54 (19.13)	78 (29.57)	31 (10.43)	50 (21.74)	49 (19.13)	56 (21.74)	73 (29.57)	16 (6.96)	55 (21.74)	50 (20.00)	<b>250</b>
Professor	35 (17.65)	42 (23.53)	40 (23.53)	46 (23.53)	22 (11.76)	40 (23.53)	42 (24.71)	24 (14.12)	40 (23.53)	28 (14.12)	<b>174</b>
Total	159 (19.00)	260 (31.00)	141 (16.75)	128 (15.25)	151 (18.00)	128 (15.25)	237 (28.25)	115 (13.75)	197 (23.50)	162 (19.25)	<b>839</b>

Source computed

Figures in parentheses denote percentages

A study of data in table 3 indicates designation wise respondents' extent of information needs. The designation wise analysis reveals the following facts. The Professor respondents occupy the first position with respect to high requirement of review of literature information (24.71%) theoretical background information (20%), information about current development in their field (29.41%), computer programme and model building information (34.12%) and management information (18.82%). The Assistant Professor respondents constitute more number with respect to high requirement of experimental design result and application oriented information (25.58%), method process and procedure information (27.91%), scientific and technical news information (20.93%) and health information (20.93%) than those of others.

The Tutor respondents occupy the first with respect to high requirement of information about previous work done in their area (30.70%), standard and patent information (24.56%), statistical data information (24.56%) and information on government's decision on science and technology (27.19%).

It could be seen clearly from the above discussion that Professor respondents highly require various types of information than those of others.

## **FINDINGS**

The findings of respondents' extent of information needs indicate the following facts. The respondents rated first order priority to high requirement of information about previous work done in their area followed by information about lab procedure, information on government's decision on science and technology, scientific and technical information and statistical data information. In general, respondents give less importance to review of literature information, theoretical background information, and health and safety information. The result of education wise analysis reveals the following facts. The MS and MD level educated respondents highly require various types of information than M.B.B.S. with Diploma level and M.B.B.S. degree level educated respondents. The result of designation wise analysis reveals the following facts. The Professor respondents highly require various types of information than those of others.

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