

Information Needs & Information Seeking Behaviour of Students in Universities of Pakistan

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Abstract: This study was undertaken to determine the information needs and information seeking behaviour of university students. It is a critical issue in developing countries. Study also identified impact of different factors involved in the general pattern of information gathering system by the students. Data was collected from 1000 respondents randomly selected from 9 famous universities of Pakistan through questionnaires. Correlation and regression tools were used for analysis, study identified that Awareness of resources, Surrounding environment, Student participation, Educational & cultural background, Ability to use tools, Self-evaluation, Intuition are having positive impact on students' information needs and seeking behaviour.

Key words: Information needs behaviour, Information seeking behaviour, Awareness of resources, Surrounding environment, Student participation, Educational & cultural background, Ability to use tools, Self-evaluation, Intuition.

INTRODUCTION

The study of Information Needs & Information Seeking Behaviour of university students especially in developing countries has been a significant and eventful issue from last few decades. The current ambit of information atmosphere is rich, characterized by an explosion of information sources and providers, a multiplicity of methods for accessing information, and a redundancy of content from multiple sources. International Encyclopedia of Information and Library Science defines Information-seeking behaviour as: "The complicated form of actions, which people slot in, when seeking information of whatever kind for whatever reason^[4]".

Purpose of this study is to determine information requirements of students, their awareness about resources, and their behaviour. The investigation of "information needs and information seeking behaviour in students" has been the subject of confusion. Therefore, to reduce this confusion we devoted attention to the definition of some concepts, which helped us to create an idea and give a thorough way to understand the phenomenon of students' behaviour. Information needs and information seeking behaviour of students especially in Pakistani universities is a very comprehensive topic and requires an inquiry in depth.

Many research studies evaluated the relation between students and their behaviour towards seeking knowledge. There are several factors, which have significant affect on students' behaviour. These factors might include, timeliness of information presented, awareness of the sources of information, ability to use information access tools, surrounding environment, cultural impact, self-evaluation and intuition. There is, however, a considerable dearth of reading material on this subject among the grown-up students in Pakistan.

Information needs and seeking behaviour change from culture to culture and country to country. Information needs and seeking behavior is also affected by the culture of universities and libraries. However, at present, information gaining style of Pakistani students has no more antique due to web environment. Students observably do not feel much comfortable with available resources, and this approach is a big hurdle in seeking knowledge^[2] and the students having such approach have no fame in practical life. Students want simple and common interfaces and they do not want to go to different databases with different search requirements and interfaces. Students simply want easy and simplest methods of use^[15].

Information seeking behaviour is considered a multifarious, dynamic, social human behaviour that needs a picture as rich as possible to truly understand

the phenomenon, and even then, there will remain many questions answered. In the light of various studies, an important question raises that there is a big gap between students and their information's behaviour regarding information seeking. According to Hancock-Beaulieu^[16], the spreading of research findings in information behaviour of students has traditionally been reached at the summit that there must be a bridge to recover the gap between students and their information's behaviour.

According to Wilson^[17], "Information behaviour may be defined as the more common field of investigation, particularly concerned with the variety of methods people employ to discover". However, different scholars give different philosophies regarding that concept but our research gives us an idea that the most important one is the education system, which has great effect, and captures almost 70% of the mental ability to absorb the things that leads towards student's behaviour.

In Pakistan, is the student's behaviour regarding information needs and seeking satisfactory or not? To analyze this, we want to use different approaches; e.g. Firstly, does information needs and seeking behaviour depend on the discipline of study or not? Secondly, could lack of awareness of available resources and services be a barrier to information access or not? Finally, does use of resources and interfaces depend upon the ability to apply information access tools or not?

Literature Review: An abundance of information is available on the topic of information needs and seeking behavior of students. An examination of the literature on Information needs and seeking behaviour begins in the 1970s. A summary of relevant work done earlier by Varlejs, who also examined the behaviour of students' regarding information, in the mid-1980s. Dervin indicated that linkages between information seekers and providers were hard to evaluate.

Regarding information seeking behaviour of students, especially in Pakistan, several factors can affect the student's behaviour. A significant body of literature exists on the behaviour of different students across disciplines and their levels among educational and cultural background. Intuition is also another important factor that is based on experience and personal judgment. Foss^[7] corroborates this by arguing that user education should be organized at different information levels to ensure that the needs of all students are met. This argument implies that training should be organized around levels of difficulty and user's educational background. In university, students have different background and culture. They previously studied in different disciplines and each student has

different level of perception and mental ability that causes a great effect on information seeking environment. Another big source of information is the communication among students but due to having different disciplines and levels, they cannot exchange information effectively.

According to distinguished philosophy, human beings are active, motivated, goal-oriented and willing to get information about themselves and the world. Their framework of activities is directed by intentions and expectations. This process of motivation and getting right attitude is concerned with the specifications of goals. When decade comes toward individual then every human being has common features but individual contents of goals. These individual contents create problems.

Lack of awareness of available resources is also another big cause that highly affects information needs and seeking behaviour of Pakistani students. Anwar^[11] study on the use of subject literature at the University of Punjab, India, concluded that often students do not succeed in achieving the basic goal of developing ability to use the access tools of information independently. Lack of knowledge due to different factors in this case can be seen as a barrier. It also may have different aspects

- Students may not have urge to gain knowledge
- Learning environment does not push students to gain knowledge from available resources

Now the important point is to make such an environment, which creates quest in students to gain knowledge. Learning occurs everywhere and at all levels of education. The role of information technology and information retrieval systems has been intensified. Learning is a combination of constructive, cumulative, structural, self-directed, strategic, goal-oriented, abstractive, co-operative, and individually different processing of knowledge. The theme of learning environment has prolonged from the place of the study, for instance, the university to include also those sources of information which can be used and followed by different media, and those events which students can take part outside the university virtually or directly^[11].

While considering the idea of student's behaviour we reach at point, which is closely connected, to their study subject and the number of years they have studied. It is difficult for students to estimate the quality of resources found on the internet^[8]. Students obviously do not feel much comfortable with formalized resources, as they tend to avoid such resources and often have difficulties in distinguishing between different databases and information tools.

From time to time they use formalized resources without any idea of the underlying such system^[6]. Students want simple and common interfaces and they do not want to go to different databases with different search requirements and interfaces. They want easy methods and adopt it without considering its benefits and drawbacks. The student's choice is based on a least effort principle. In connection with this, it is often found that students use a cut, paste culture, and make their assignments and projects^[12]. It is important to note that a massive variability exists among students depending on their study behaviour and probably also their psychological profile^[9].

Student's information seeking behaviour largely depends upon teacher's attitude. Students are interesting in good grades and they attempt to figure out what their instructors want in a research paper and just give attention on the number of pages and types of sources. There is often a gap between the instructors' definitions of "good resources" and the students' ability and tendency to find them^[14]. Students try their best to find information in a chaotic fashion, using the most familiar resources and focusing on speed and convenience, without giving attention to quality. When students are asked about their search strategies, they often have a hard time describing what resources they used and how they accessed them, because they have no logical reasons to explain it and followed methods taught by their teachers.

Research Methodology:

Purpose of the Research Study: Identification of student's behaviour towards seeking knowledge and their needs regarding information is a difficult task because students are not interested and do not pay full attention towards available resource. This expression has been so often repeated that it has now become a favorite habit of almost all universities. Despite this, a little number of universities goes to original fact and confesses that they have not enough resources to accomplish student's information needs. These statements need to be carefully tested because these statements are reciprocal to each other. Considering the importance of education and information for quick learning, objective of study is formulated which is to understand the information needs and seeking behaviour of students in Pakistani universities.

Following Are Main Objectives of the Study: To examine and realize the behaviour of students towards the information, to investigate the main sources of literature consulted by students, to determine students' awareness of the resources available to them, to establish whether students have had any instruction on use of resources or not.

Research Design:

Survey Methods:

(Mail, Interviews, Telephonic Interviews): Initially mail survey for data collection was selected. Through this method, 375 responses from students of different universities was collected. This technique was much better but few problems reduced the response rate efficacy e.g. students did not take this matter seriously therefore the data collection was slow. To tackle this challenge, one to one interviewing method was started, we went to the universities and the questionnaires were distributed to students during university timings, as a result, the response rate was getting quicker and yielding better quality. 335 students responded, but there were other problems like time consumption and traveling. Telephonic method was also used, this was comparatively more productive through this method, we also collected 44 responses were collected.

For the survey, questionnaires of 5 point likert scaling, 5 for strongly agree, 4 for agree, 3 for indifferent, 2 for disagree and 1 for strongly disagree, was developed.

Response Rate: The university students were approached to respond all questions to the best of their knowledge with reference to the information needs and information seeking behaviour towards studies.

Out of 12 universities, the students of 9 universities responded. (Table 1) is showing universities' response rate. University response rate is (75%) which is a good representative of the sample. After data collection, we coded it in Excel 2003 and SASS 10.0. For the purpose of calculation and interpretation of results, Regression analysis and Correlation are used.

Description of the Instruments in Questionnaire:

This study was conducted on a basic level therefore a simple 5-scale point questionnaire was developed to find out the behaviour of students. Questionnaire included students' behavioral characteristics as independent variables. Information needs and Information seeking behaviour are selected as dependent variables. Multiple Regression and Correlation are used for analysis.

Variables: Variables and coordination amongst dependent and independent variables is given in Figure A. In this research, 9 variables are considered for analysis. Out of these, 7 are independent variables and 2 are dependent variables. These 7 independent variables are affecting student's information needs & information seeking behaviour.

Moreover, our investigation shows that students' behavioural characteristics regarding information are interrelated with each other, where one gives rise to

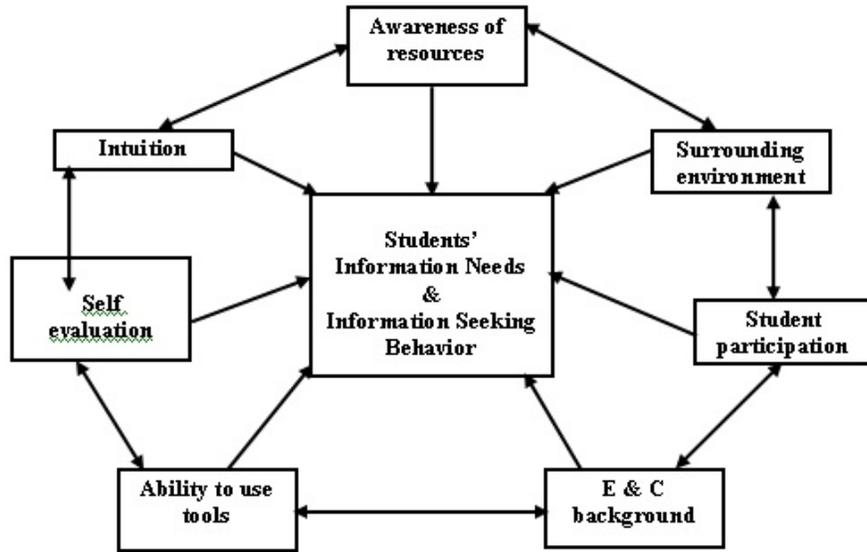


Fig. A:

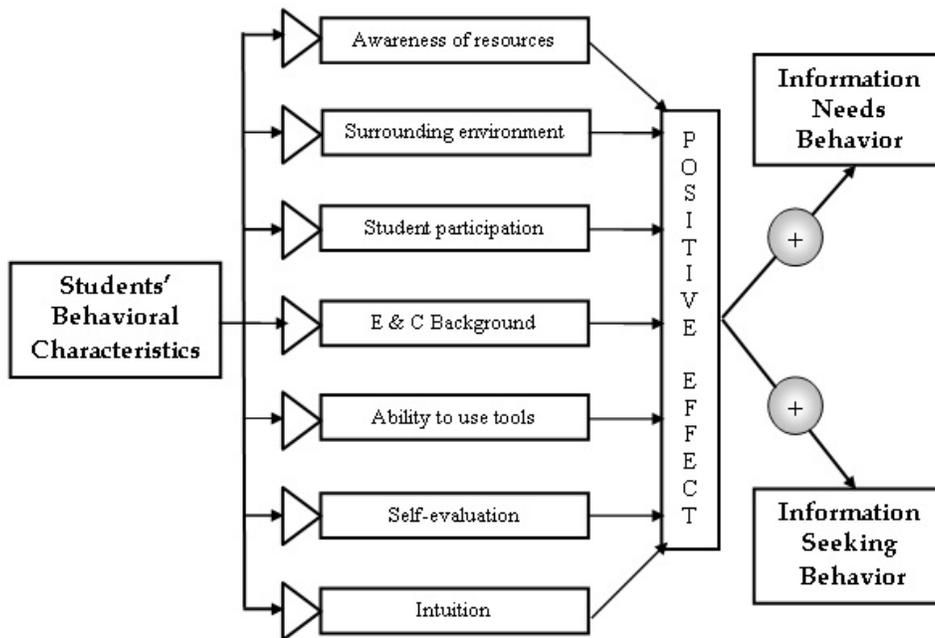


Fig. B: TMQ-Research Model for IN & ISB of Students:

other, makes a chain, and shows positive impact on students' behaviour. Even one is weaker then it will decrease the positive result of students' behaviour regarding information gathering. The Figure A gives a better idea about independent variables (students' behavioural characteristics) and their effects on students' behaviour.

Research Model: Awareness of resources, Surrounding environment, Student participation, Educational & cultural background, Ability to use tools, Self-evaluation, Intuition are considered as independent variables and information needs and information seeking behavior as dependent variables.

Table A: (University Response Rate)

University Name	Sample %	No of respondents
1 International Islamic University	20	200
2 Quaid-a-Azam University	17	170
3 Bahria University	10	100
4 Air University	12	120
5 M.A.J.U	13	130
6 N.U.M.L	14	140
7 Comsat University	8	80
8 Iqra University	3	30
9 Urdu University	3	30

Equation no. 01:

$$y = \alpha + \beta_1 (x_1) + \beta_2 (x_2) + \beta_3 (x_3) + \beta_4 (x_4) + \beta_5 (x_5) + \beta_6 (x_6) + \beta_7 (x_7) + \epsilon$$

$$INB = \alpha + \beta_1 (AR) + \beta_2(SE) + \beta_3(SP) + \beta_4(ECB) + \beta_5 (AUT) + \beta_6(SE) + \beta_7(I) + \epsilon$$

Equation no. 02

$$y_1 = \alpha + \beta_1 (x_1) + \beta_2 (x_2) + \beta_3 (x_3) + \beta_4 (x_4) + \beta_5 (x_5) + \beta_6 (x_6) + \beta_7 (x_7) + \epsilon$$

$$ISB = \alpha + \beta_1 (AR) + \beta_2(SE) + \beta_3(SP) + \beta_4(ECB) + \beta_5 (AUT) + \beta_6(SE) + \beta_7(I) + \epsilon$$

Where as:

- e = is common error
- α = is constant
- Y = is dependent variable
- X₁, X₂,, X₇ = independent variables

While

- X₁ = AR = Awareness of Resources
- X₂ = SE = Surrounding Environment
- X₃ = SP = Student Participation
- X₄ = ECB = Educational & Cultural Background
- X₅ = AUT = Ability to use tools
- X₆ = SE = Self Evaluation
- X₇ = I = Intuition
- Y = INB = Information Needs Behaviour (equation 1)
- Y₁ = ISB = Information Seeking Behaviour (equation 2)

Hypothesis: Based on literature review one main and seven supplementary hypotheses are developed for the study.

- H1: *There is a positive/significant relationship between the effective Student characteristics and the Information needs and Information seeking behaviour of student.*
- H₁(a): *Rich awareness of resources positively affects*

the Information needs and Information seeking behaviour of student.

- H₁(b): *Helping surrounding environment positively affects the Information needs and Information seeking behaviour of student.*
- H₁(c): *Effective student participation positively affects the Information needs and Information seeking behaviour of student.*
- H₁(d): *Strong educational & cultural background has positive impact on the Information needs and Information seeking behaviour of student.*
- H₁(e): *Intelligent ability to access and use tools has positive impact on the Information needs and Information seeking behaviour of student*
- H₁(f): *Transparent self evaluation has also positive impact on the Information needs and Information seeking behaviour of student.*
- H₁(g): *Sanctimonious intuition positively affects the Information needs and Information seeking behaviour of student*

Research Findings:

Data Analysis:

Pearson Correlation Coefficient: Pearson correlation coefficient is a measure of the correlation of two variables X and Y measured on the same object, that is a measure of the tendency of the variables to increase or decrease together. Table (B) is indicating correlations for independent and independent variables and Table (C) is of descriptive statistics comprised of standard deviations, means, median, mode, minimum, maximum and range values. There is strengthen correlation amongst the independent and dependent variables. Out of independent variables, highest correlation exists between Surrounding Environment and Awareness of Resources i.e. (0.58). Mean of the Surrounding Environment is (3.86), whereas standard deviation is (0.45). It indicates that if surrounding environment is helpful then it creates desired knowledge and curiosity towards awareness of resources, otherwise it will not create positive effects. (0.18) is a correlation between Surrounding Environment and Students Information Seeking Behaviour, which indicates that supporting surrounding environment is a helpful and beneficial tool for increasing positive direction on Information seeking behaviour. Student Participation with Awareness of Resources is showing (0.41) a correlation value, highlighting that when student participation increases awareness about resources are increased along with. Correlation (0.48) between Student Participation and Surrounding Environment indicates that student participation based on the surrounding environment If surrounding environment is educated and supported then student participation will automatically be

Table B: Correlations of Variables.

	INB	ISB	AR	SE	SP	ECB	AUT	SE	I
Information needs behaviour	1								
<i>Information seeking behaviour</i>	0.63	1							
<i>Awareness of resources</i>	0.30	0.03	1						
<i>Surrounding environment</i>	0.28	0.18	0.58	1					
<i>Student participation</i>	0.31	0.24	0.41	0.48	1				
<i>Edu. & cultural background</i>	0.35	0.24	0.29	0.39	0.44	1			
<i>Ability to usage tools</i>	0.31	0.04	0.36	0.55	0.43	0.48	1		
<i>Self evaluation</i>	0.15	0.08	0.32	0.39	0.37	0.47	0.33	1	
<i>Intuition</i>	0.29	0.03	0.59	0.42	0.57	0.51	0.49	0.47	1

Table C: Descriptive statistics mean standard deviation

	INB	ISB	AR	SE	SP	ECB	AUT	SE	Intuition
Mean	3.90	3.67	3.92	3.86	3.95	3.94	3.93	3.92	3.98
Median	4.00	3.60	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Mode	4.00	3.60	3.80	4.00	4.20	4.00	3.80	4.00	4.33
Standard Deviation	0.55	0.53	0.48	0.45	0.39	0.46	0.47	0.62	0.46
Sample Variance	0.30	0.28	0.23	0.20	0.15	0.21	0.23	0.38	0.21
Range	2.00	2.40	2.00	2.00	1.80	1.80	1.80	2.67	1.83
Minimum	3.00	2.20	2.80	2.83	2.80	2.80	3.00	2.33	2.83
Maximum	5.00	4.60	4.80	4.83	4.60	4.60	4.80	5.00	4.67
Count	754	754	754	754	754	754	754	754	754

enhanced. Educational & Cultural Background with Student Performance is showing (0.44) correlation. It means that if Educational & Cultural Background is literate and supportive, then student performance will be enhanced, and will give positive impact on information needs and seeking behaviour.

Educational & Cultural Background has the highest correlation amongst independent variables i.e. (0.35), indicating strong positive impact on students information needs and seeking behaviour. Moreover, Awareness of Resources, Surrounding Environment, Student Participation, Ability to Usage Tools and Intuition are falling between (0.28) to (0.31) which shows that these variables also have positive correlation with dependent variables.

Moreover, coefficient of correlation between Information Needs Behaviour & Information Seeking Behaviour is (0.63), which shows that Information Needs Behaviour & Information Seeking Behaviour is strongly interrelated with each other. Effective Educational & Cultural Background and participative Surrounding Environment encourage student

participation that ultimately increase the awareness about resources and encourage students' behavior regarding information needs and information seeking behavior for learning.

Significant association between Student Participation, Information Needs Behaviour & Information Seeking Behaviour is (0.31), (0.24) respectively and Educational & Cultural Background is (0.35), (0.24) respectively. This reflects aptitude of the Pakistani students showing that when these two independent variables are strongly connected with each other then there will be a positive impact on students' behaviour and students' performance towards information seeking.

Mean of Self-evaluation (3.92) and Standard Deviation is (0.62) is comparatively higher than the surrounding environment. Impact of Self-evaluation on Information Needs Behaviour & Information Seeking Behaviour is highlighting a positive relationship. (0.49) indicates that self-evaluation should be true and fair so that a student can truly judge his biased behaviour.

Table D: Information Needs Behaviour

Regression Statistics		
Adjusted R Square	0.46	
	Coefficients	P-value
Intercept	1.15	0.21
AR	0.38	0.03
SE	0.29	0.04
SP	0.46	0.02
ECB	0.53	0.01
AUT	0.44	0.02
SE	0.18	0.05
Intuition	0.35	0.03

Table E: Information Seeking Behaviour

Regression Statistics		
Adjusted R Square	0.52	
	Coefficients	P-value
Intercept	1.86	0.15
AR	0.09	0.02
SE	0.31	0.03
SP	0.51	0.01
ECB	0.49	0.02
AUT	0.33	0.03
SE	0.05	0.01
Intuition	0.31	0.03

The highest mean of selection (3.98) indicates that majority of the students think according to their nature, which lead to the students' behaviour. It may be positive or negative. Surrounding Environment shows lowest mean among independent variables that is (3.86), highlighting that if student is interested for changing himself.

Regression: The contribution of independent variable towards dependent variable is calculated through regression analysis. Table (D) & (E) exhibits the regression outcomes for selected Pakistani universities. Table (D) represents the regression table of Information Needs Behaviour and showing that increasing one unit of Awareness of Resources increase students' information needs behaviour by (0.38) units indicating that the variable is having positive impact on student information needs behaviour.

Increase in 1 unit of Educational & Cultural Background increase students' information needs behaviour by (0.53) this variable is having highest impact on student information needs behaviour among all other independent variables, significant at 1%. Moreover, Student Participation & Ability to Usage Tools have also important and increase of 1 in these variable will increase students' information needs behaviour by (0.46) & (0.44) respectively. The same pattern also has seen in the case of Information Seeking Behaviour. Table (E) shows that increasing one unit of Student Participation will increase students' information seeking behaviour by (0.51) indicate very high impact on student information seeking behaviour as compared to other variables, significant at 1%.

Educational & Cultural Background shows that increasing 1 unit in it will increase students' information seeking behaviour by (0.49), indicating high impact on student information seeking behaviour. Other variables Surrounding Environment, Ability to Use Tools and Intuition has also significant impact on information seeking behaviour. Increasing one unit of these variables will increase students' information seeking behaviour by (0.31), (0.33), (0.31) respectively. These results are significant at 3%. Similarly, Awareness of Resources and Surrounding Environment are also important and contribute towards students' information seeking behaviour, significant at 4% & 5% respectively. Regression results are showing that all independent variables have positive impact on student information needs and information seeking behaviour.

Conclusion: Main objective of the study was to determine Information Needs and Information Seeking Behaviour of most concern stakeholders (students) of Nine Pakistani universities. For the analysis statistical tools correlation and regression were used, study concluded that there are several factors that have significant effect on students' behaviour. Among these, the leading factors are Educational & Cultural Background, Surrounding Environment and Student Participation, which have high positive impact on Information Needs and Information Seeking Behaviour of students. If Surrounding Environment is helpful and Student Participation is active, then it will create culture that enhances the students' information gathering system. Moreover, the important one is to create a learning environment. Different research studies have stated that learning style can be changed according to situation; this malleability is not without limits as learning style also depends on personality that contains Intuition & Self Evaluation. So these two variables are involved in the beginning and if these are in right direction then other variables are participating effectively towards Information Needs and Information Seeking Behaviour.

Modern digital libraries, interfaces and web database sources are also important factors contributing a major role to develop students' behaviour. However, Pakistan is a developing country and due to the fact, our research shows that Student Participation and Surrounding Environment are major factors of Student Behaviour. This study can be helpful for students as well as for teachers and mentors. If universities keep a critical eye and encourage analyzed factors then there will be a positive result on Students' Information Needs & Seeking Behaviour.

Future research could be to finding students' performance, information need behavior and information seeking behavior by analyzing teachers'

expertise and learning facilities provided by university management. Furthermore, longitudinal study in public and private sector universities can be conducted to find out behavior of students towards information need and information seeking behaviour.

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