Information Literacy Skills Assessment of Undergraduate Engineering Students

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Aims and Objectives

What is the level of undergraduate engineering students' various information literacy skills?

What is the difference in these students' information literacy skills based on gender and program of study?

Hypotheses

H1: Most of the students don’t have enough information skills to become good information users.

H2: There is no statistically significant difference between IL skills of students based on their gender.

H3: There is no statistically significant difference between IL skills of students based on their program of study.

Methods

Population-475 UG engineering students of 2nd semester at Air University, Islamabad, Pakistan

Sample-cluster sampling approach; 151 (31 %)

Data Collection Method-questionnaire based survey method

Instrument-modified version of Mittermeyer's instrument

Validity & Reliability of instrument-pilot study

Time duration to complete questionnaire-20 min

Gender Wise Frequency Distribution of Participants

Variable	Frequency	%
Male	111	73.5
Female	40	26.5

Program Wise Frequency Distribution of Participants

Variable	Frequency	%
Bachelor of Computer Engineering	34	22.5
Bachelor of Electrical Engineering	40	26.5
Bachelor of Mechatronics Engineering	37	24.5
Bachelor of Mechanical Engineering	40	26.5

Frequency Distribution of IL Related Questions

Rank	Question	Theme	Correct Ans. Freq.	%
1	Search indexes	Search strategy	111	73.5
2	Translation into keywords	Search strategy	105	69.5
3	Significant words	Concept identification	89	58.9
4	Significant words	Concept identification	68	45.0
5	Meta search engines	Search tools	64	42.4
6	Encyclopedias	Document type	62	41.1

Frequency Distribution of IL Related Questions

Rank	Question	Theme	Correct Ans. Freq.	%
7	Significant words	Concept identification	57	37.7
8	Reading citations	Use of results	56	37.1
9	Bibliographies	Use of results	51	33.8
10	Periodicals	Document type	46	30.5

Frequency Distribution of IL Related Questions

Rank	Question	Theme	Correct Ans. Freq.	%
15	Scholarly journals	Document type	21	13.9
15	Library catalogs	Search tools	21	13.9
17	Controlled vocabulary	Search strategy	17	11.3
18	Evaluation of information on Internet	Use of results	16	10.6
19	Ethical use of information	Use of results	15	9.9

Results of Independent Samples t-test for Gender Based IL Skills of Students

Themes	Mean		t	Sig.
	Male	Female		
Concept identification	1.32	1.68	-1.90	.060
Search strategy	2.05	1.78	1.43	.155
Document type	0.86	0.83	0.27	.787
Search tools	1.07	0.88	1.46	.141
Use of results	0.88	1.00	-0.65	.519
Total	6.20	6.15	0.11	.910

Results of One-way ANOVA for Program Wise IL Skills of Students

Programs of study	Mean	SD	F	Sig.
Bachelor of Computer Engineering	6.79	1.82	2.199	.091
Bachelor of Electrical Engineering	5.48	2.09		
Bachelor of Mechatronic Engineering	6.19	2.21		
Bachelor of Mechanical Engineering	6.38	2.81		

Conclusion

- First-year students of UG engineering students lack:
  - good understanding of information resources.
  - a fair idea about methods and tools to be used to retrieve required information from these resources.

- It is required to provide them information literacy instructions, properly planned, designed and carried out in a consistent manner which is only possible to be done with the support of university management.

- A national level movement for ILI is warranted in Pakistan.

Thank You!