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A Study on Information Literacy Skills Assessment of Engineering Students

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Abstract – Information Literacy (IL) skills, defined as a set of skills to recognise at the point when data is required and can find, assess, and utilize the data required successfully. The study participants were diploma-level engineering students who had spent at least three semesters at Chamarajanagar District Government College. Information was gathered utilizing a Mittermeyer-adjusted study instrument and located utilizing a reference examination of understudy book indices in a paper task. The findings of this study show that respondents seriously lacked the knowledge and skills needed to evaluate internet data, identify the most effective search strategy, use academic resources, and ethically use information. It is proposed to use a larger sample of students to be more representative of the population of engineering students.

Keywords – Information Literacy Skills, Assessment, Engineering Students

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INTRODUCTION

For all engineers who are developing and practising, technical writing is an essential skill for (1, 2). There has been an increasing awareness of the importance of information literacy and the challenges of students in achieving it with the onset of the information age (3-5). Information was gathered utilizing a (6-9) Mittermeyer-adjusted study instrument and located utilizing a reference examination of understudy book indices in a paper task. This process involves: carrying out literature reviews to find the information needed from suitable, reliable sources (10), such as electronic databases and libraries; crediting the work properly; and communicating solutions to problems effectively. In particular, learning to complete a search for literature is an important part of finding journal articles and technical papers that not only inform their research (11, 12), but also provide high-quality examples of different types of technical communication (13).

Data education (IL) abilities, characterized as a bunch of abilities to perceive (14) when data is required and can find, assess and utilize the essential data successfully, for the 21st century around the planet, fundamental abilities have arisen as. This is due to the rapid progress in ICT (Information and Communication Technologies) (15, 16). In their academic studies, students face diverse and abundant choices of information. This is on the grounds that there are unfiltered data organizes that bring up issues about their genuineness, legitimacy and dependability (17). The effective use of information by students has, therefore, become a necessity. Information has become a factor that allows students to achieve better results in their academic activities at all levels and even at work after graduation (18).

The aim of this study is to study the assessed information literacy (IL) skills of graduate engineering students who have completed at least three semesters at Government College in Chamarajanagar District.

METHODOLOGY:

The arbitrary example for the examination comprised of second and third-year designing understudies at the certificate level at a school. These understudies were picked as a result of the conviction that they should have just procured the important data capacities after at any rate three semesters of study. During the main seven day stretch of study at the school, these students were needed to go to an inductive library talk and partook in a two-hour library visit. Be that as it may, a few understudies have additionally deliberately gone to library ICT abilities courses during their investigation program to improve their data abilities.

It was encouraged to understudies that the test was intentional. Seventy bring home test papers were conveyed, 49 of which were returned. The test things were altered to make them explicitly pertinent to neighborhood designing understudies. A Malaysian expert in data education with over twenty years of involvement with the field assessed the substance of

the survey. The data proficiency abilities in the survey are sorted into five expansive subjects. Each theme consists of several specific questions concerning information skills. Based on these themes, the data obtained in this study was analysed. Second and third year student essays on current questions in mechanical engineering were selected for citation analysis. In a group of three or four, students worked to encourage ideas and resources to be shared. They had to include a bibliography of the resources that were used. The resource type was then classified by the instructor as either scholarly or non-scholarly. Also analysed was the format of resources.

RESULTS & DISCUSSION

Based on the questionnaire answers, the percentage of students who correctly answered every question in each information literacy subject was descriptively analysed using SPSS. Tabulated quotation analysis of the resource type, number, and format used in student essays.

Concept Identification

Figure 1 show the level of understudies who effectively responded to questions 4, 8, and 13 relating to idea ID. For question 4, which incorporates the three principle ideas of the subject, just 18.4 percent of the respondents picked the most appropriate answer. The non-significant term effect included 61.2% of respondents, reducing the number of search results obtained.

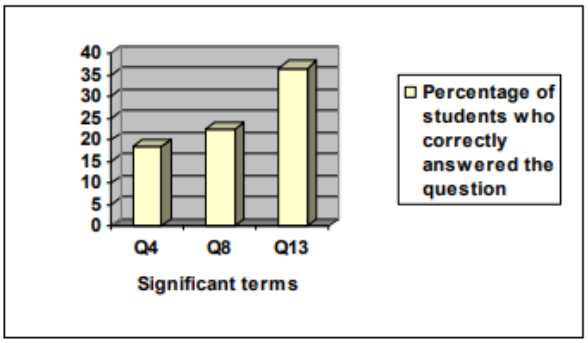


Figure 1: Consequence for acknowledgment of ideas

On account of inquiry 8, most respondents don't appear to have the option to separate among significant and non-huge words by utilizing prohibitive terms like impact and consumption. About 33% of the respondents picked the most fitting response to address 13. (36.7 percent). They appear to be able to recognise similarly meaningful words. Protective measures and damage reduction measures have the same meaning. However, most respondents (48.9%) do not appear to be able to distance themselves from the subject's original terms.

The answer to questions 4, 8 and 13 shows a common misconception that the more words used in a search will produce the best results for the search. To make the search too narrow, respondents need to know not to include the important terms in a search.

Search Strategy

The percentage of students who correctly answered questions 2, 9, 11, 12, and 16 pertaining to the search strategy is shown in Figure 2. For Question 2, the problem of using terms that do not correspond to those employed and preferred by the OPAC system seems to be recognised by 36.9 per cent of respondents. In any case, a portion of these respondents may have answered by barring choices that are probably not going to be substantial.

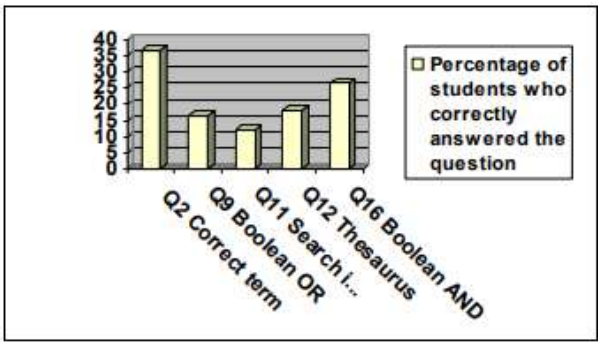


Figure 2: The inquiry technique result

Just 16.3 percent of respondents picked the right Boolean OR administrator for question 9 to get more query items. This demonstrates that the fundamental notion of OR in searching is not well understood.

By choosing C for question 11, only 12.2 percent responded correctly. The use of a thesaurus in searching for preferred terms for a specific database is not known to most respondents (81.8 percent). An important search strategy when using databases is to use controlled vocabulary.

The Boolean operator AND function to limit the number of search results is only known by 26.5 percent of respondents. Answers to questions 2, 9, 11, 12, and 16 shown that, by not knowing which Boolean administrators to utilize, not knowing the utilization of a data set thesaurus and not realizing which search file to use in an OPAC framework, most respondents come up short on the procedure to lead effective ventures.

Document Types

The percentage of students who correctly answered questions 3, 15, and 20 pertaining to document type is shown in Figure 3. Only 26.5% of respondents understand the usefulness of encyclopaedias in providing an overview or summary of a subject.

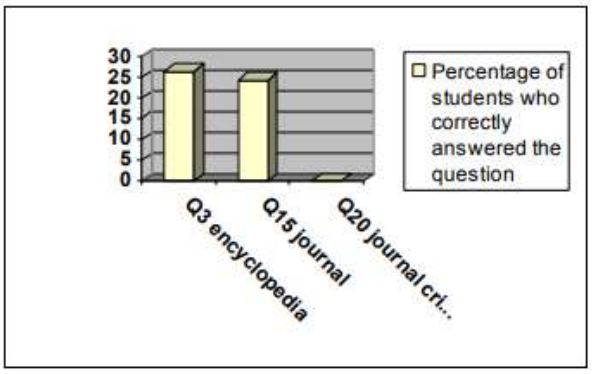


Figure 3: Result for document type

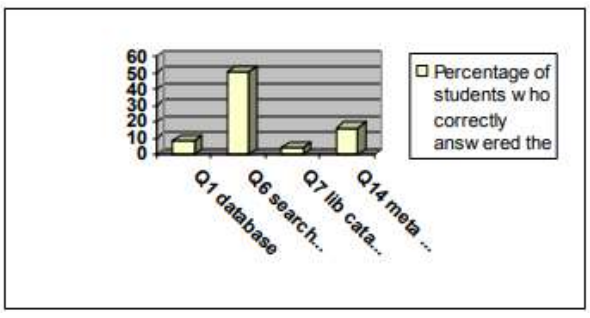
Only about a quarter (24.5 percent) of respondents acknowledges that a journal is the best type of document to obtain the latest information on a subject. Google for E was cited by a fairly high percentage as a way to get new data. These respondents are most likely not mindful, when contrasted with diaries, of the changing quality and dependability of data found on the web.

All the features of a scholarly journal were selected by none of the respondents. 30.6% of respondents were unable to identify any of the features of a journal. The characteristics are partially known to most respondents.

The answers to questions 3, 15 and 20 indicate that the majority of respondents lack the knowledge to define criteria for different types of documents and can therefore not choose the most suitable type of document to be used for different types of information.

Search Tools

The percentage of students who correctly answered questions 1, 6, 7 and 14 relating to search tools is shown in figure 4. Just 8.2% of respondents know that a database is the most effective search tool for finding journal articles. A majority of respondents (75.5%) chose Google, which can provide links to certain journals but requires more time to explore the web to get the articles.



About half (51 percent) of respondents acknowledge that books in the library cannot be located by a search engine. Very small percentages (4.1 percent) know that an article by author or article title, but only by journal title, cannot be accessed by a library catalogue. Not being able to correctly use the search indexes leads to a waste of search time. Many students gave incorrect answers or did not understand what a meta search engine does (83.7 percent). This lack of internet search engine knowledge can lead to inefficiency in locating information. Most students are only partially aware of what data can be found in the library catalogue.

Reactions to questions 1, 6 and 14 propose that while most respondents will in general utilize a web index to look for diary articles, they appear to be uninformed of what a meta web crawler can do. A low score for question 7 shows their absence of comprehension of how to utilize the pursuit file in the library of an OPAC framework or list.

Use of Results

The percentage of students who correctly answered questions 5, 10, 18, and 19 related to the use of information obtained is shown in Figure 5. Most respondents (85.7%) are unable to interpret a citation or acknowledge the corresponding type of document. This lack of knowledge hinders effective searching because respondents will not be able to measure a reference's relevance and currency and will not be able to choose the best way to search for information.

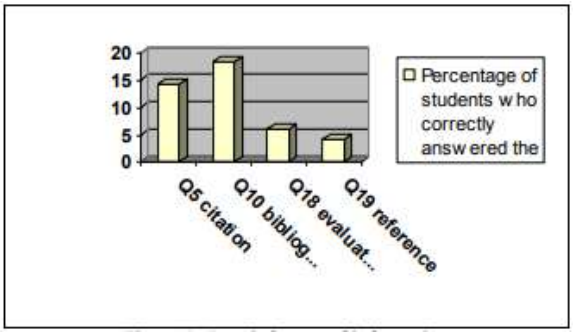


Figure 5: Result for use of information

Approximately (81.6 percent) do not seem to know what a bibliography is, and will not be able to use it to locate relevant documents afterwards. Despite becoming today's most popular search medium, a very small percentage of respondents (6.1 percent) know the criteria for evaluating an Internet site.

Just 4.1 percent of respondents realize when to incorporate a reference to an article they refer to, so without them knowing it, literary theft can be submitted.

The answers to questions 5, 10, 18, and 19 show that most respondents are seriously unaware of making a sound assessment of internet information, ethically

using information, or using a citation to search for more information on a subject.

The percentage of correct answers is especially low (less than 10%) with respect to:

- Knowing that a thesaurus should be used to obtain the most appropriate terminology in a particular database.
- Knowing the criteria of a scholarly journal
- Knowing the criteria used in the evaluation of the quality of a website.
- Knowing when a reference is to be included to avoid plagiarism.

Most respondents seem to be most familiar with using a search engine like Google in order to find information. As they belong to today's digital natives, this is not surprising. However, they seem to lack the search skills needed for academic research and need to be seriously aware of the ethics of data use.

Citation Analysis

Nineteen gathering paper tasks were inspected to locate the grade information. The references from the catalog were checked to decide if the assets were academic or non-insightful. To check the situation with diaries and meeting procedures, regardless of whether insightful or non-academic, Ulrichweb, an online adaptation of Ulrich's International Periodicals Directory, was utilized. The type and format of the resources used can be seen in Table 2. Each website is checked to determine the nature of content that may be academic or non-academic.

Table 2: Type of resources and format

Type	Format		Total
	Print	Electronic	
Scholarly			
Journal	9	0	9
Conference proceedings	3	4	7
Book	12	2	14
Government documents	2	0	2
Other (thesis, dissertation)	0	0	0
Total	26	6	32
Non-scholarly			
Websites (blogs)	0	27	27
Report	5	0	5
Handbook	3	0	3
Other (magazine, newsletter)	0	0	0
Total	8	27	35

48 percent, slightly lower than non-scholarly resources, is the percentage of scholarly resources. Books in print format, followed by journals and conference proceedings, are the majority of the scholarly resources used. The print format is more often used for scholarly resources (81 percent), while the electronic format is more commonly used for non-scholarly resources (77 percent). These findings agree with the main results of test scores that show a lack of student ability to search for and use electronic scholarly resources.

CONCLUSION

This research identifies the abilities of information literacy that students need to improve on. These include identifying the most effective search strategy, evaluating information and websites on the internet, as well as ethically using information. The use of electronic scholarly resources by students is very minimal in their course assignments. Examination of the bibliography shows that the correct citation format is not known to most students.

There are a few significant ramifications of this examination. In the first place, to distinguish all worried about fitting activities, the helpless test outcomes should start a test into the causes. It could be an outcome of the absence of mindfulness by understudies of the significance of growing great data capacities. Understudies ought to be urged to utilize all the more insightful assets in both print and electronic organizations. Another significant ramification of this examination is that the assessment of understudies' capacities in data proficiency is vital. Persistent assessment and useful endeavors to deliver an all around planned program and at last data educated designers should bring about a more incorporated educational program and participation among scholastics and data proficiency trained professionals.

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