

**INFORMATION LITERACY COMPETENCY  
OF LIBRARY AND INFORMATION SCIENCE STUDENTS  
AT THE FACULTY OF HUMANITIES UNIVERSITY OF INDONESIA**

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**Introduction.** The study is conducted to identify the information literacy of the information science students at Department of Information and Library Science, Faculty of Humanities, University of Indonesia, and to identify the difficulties experienced by them when implicating information literacy in their academic activities.

**Method.** This is a descriptive case study and uses qualitative approaches, aimed to gain an illustration about the information literacy of students in writing their thesis. The subject is information science students who are composing thesis, whereas the object is the information literacy of students. The population was twenty students enrollment in year 1999 and 2000. Samples were taken by using purposive sampling methods. Based on the population criteria above, only five students met the criteria. Data was collected using interviews techniques.

**Results.** The study shows that students were mostly categorized as competent on information literacy according to ACRL Standards. Knowledge given in the department have been useful for writing their thesis, such as Information sources and services, Bibliographic services, Law Aspects in information, Information in Social context, Information organization.

**Conclusion.** In general, the information literacy of students is grouped as 'good'. Almost from all the competencies, students are categorized as competent. In stating the need of information, synthesizing the main idea and revising the development of their thesis, students are in the developing level. Students have indicated that they have good understanding about information literacy and how to implicate it. Even though they experience many difficulties during the implication, they know the problems they are facing, identifying the cause and also the possible solutions. Students stated that their abilities were mainly gained not from the lecture; learn and trying by themselves; and learning from seniors and alumni. During writing their thesis it's indicated that the role of their supervisor is very important in supporting them.

## **Background**

The ability to search, evaluate and use information effectively or more commonly known as Information Literacy is not a new type of skill that arises as a demand of the information era. The need to master this ability has arisen since many years ago; the only real change is the quantity and format of the information that is provided. Fifty years ago, information was served in formats such as books, newspapers, radio, journals and governmental documents. But now, information has many new faces, such as television, CD ROM, databases, internet and many others. Even though the need to find, evaluate and use information hasn't changed through the years, but the ability that is required in this process is developing and becoming more complex due to the improvement of era. This is indicated with the rapid development of technology information that makes capability information literacy more and more essential. Technology information has made information easier to access and use, but the effectiveness and speed of gaining the information can only be achieved if the 'information seeker' is information literate.

The importance of information literacy capability has been early known by the Department of Library and Information Science in University of Indonesia (shortened as PSIP FIB UI). As an educational institution that must be responsive with the dynamic changes in its environment then it is their obligation to equip their students with information literacy competency. In PSIP FIB UI information literacy is not only intended to make their students information literates, who are able to complete their assignments well but also can provide themselves with thorough understanding of information literacy. Since they will introduce and implicate this competence in their future working

environment. By ensuring those students are able to find, evaluate and use information that they effectively need, then it can be said that PSIP FIB UI has provided their student with basics that can be independently developed.

### **Problematical issue**

The information literacy capability of the students at PSIP FIB UI is an interesting topic to study because during their studies in this major, they gain many subjects that is related to finding, evaluating and using information that is needed. Students' ability of information literacy is shown when they are composing their thesis. The main reason of this is because, in this time, students need lots of literature to support their researches and this will also involve finding, evaluating and using the right information to get it.

This research is aimed to:

1. Identify the information literacy capability of PSIP FIB UI students in determining the behavior and scope of information needed; accessing that information effectively and efficiently; critically evaluating the information and its sources; using the information to complete a certain goal or target; and also to understand the economic, legal and social aspects that is related with the use of information.
2. Identify the difficulties that are experienced by the PSIP FIB UI when implicating information literacy in their academic activities.

### **Literature Studies**

#### ***Information Literacy***

The concept of information literacy has been defined in many ways since the early 70's. Terms such as study skills, research skills and library skills tend to be used in an educational context. Terms such as information competencies and information proficiencies are generally used in the working environment. Although whatever the term, they all refer to the same ability of finding, evaluating and using information effectively. According to ALA, information literacy is a series of skills to know when information is needed and has the ability to find, evaluate and use the information effectively.

Information literacy forms a basic life time lesson. It is valid generally for any branch of knowledge, every learning environment and for all the levels of education. With information literacy, students can understand and master the content of the materials and expand their researches, directing themselves and also have bigger control over their own learning process.

According to California State University (2000), the benefits of information literacy competency in the education world are:

1. Providing an approved method that can guide students to various developing sources of information.
2. Supporting the nation's attempt to increase the quality of education. Providing extra facilities and tools to strengthen university studies.
3. Increasing the life learning lesson

### ***Information Literacy Standards for Higher Education***

Information Literacy Standards for Higher Education (ALA, 2000) provides a framework to identify individuals with information literacy competency. In this competency, there are five standards and twenty performance indicators. The standards focus on the needs of college students in their university. In the information literacy standards from ACRL, one is considerably information literate if:

1. Determining the characteristic and scope of information needed
  - a. Defining the need for information
  - b. Identifying the variety and formats of potential sources of information
  - c. Considering the financial aspects and use of searching information.
  - d. Re-evaluating the characteristics and scope of the information needed
2. Effectively and efficiently accessing the information needed
  - a. Selecting the right search methods or information retrieval systems
  - b. Creating and implicating an effective searching strategy
  - c. Retrieving information on line or privately by using various methods
  - d. Changing the searching strategy if needed
  - e. Quoting, noting and processing information and its sources
3. Evaluating information and its sources critically and synthesizing the chosen information into the basics of knowledge and value system
  - a. Summarize the main idea that can be taken from the compiled information.
  - b. Produce and use early criteria to evaluate information and its sources.
  - c. Gathering main ideas to build a new concept
  - d. Comparing new knowledge with old ones to determine the added value, contradiction or other unique characteristics from information.
  - e. Determining whether new knowledge has an influence on one's value system and also determine the method to synthesize differences.
  - f. Proving the truth of understanding and interpreting information through discussions with other people, experts and/or partitions.
  - g. Determining the revision of the first query
4. Effectively using information as an individual or as a member of a group to fulfill a certain goal.
  - a. Using new and old information for planning and creating special results or performance
  - b. Revising the developing process for results or performance
  - c. Effectively communicating results or performance to others
5. Understanding economic and law issues and social economy aspects surrounding the use and access of information ethically and legally.
  - a. Understanding economic and law issues and social economy aspects about information and also about information technology.
  - b. Obeying regulations and institution policies and ethics that are related to accessing and using sources of information.
  - c. Respecting the use of information sources in communicating products or performance.

### ***Researches about information literacy in higher education***

Researches about information literacy have been done by the California State University in 2000 and 2001. This research provides detailed data about students' behavioral tendency of patterns. The facts show that students enter California State University without possessing information literacy, the ability to think critically, decision making and independent learning. The multidimensional qualitative research also figures out that students tend to believe in sources of information that originate from the web and other sources that are found by using search engines, this is the opposite of the use of other sources for example, information in library catalogs and subscribed databases. Besides that, students also tend to use keywords rather than terms in a controlled vocabulary. Searching by using keywords gather together information that comes from anywhere, whereas searching by using controlled vocabulary with subject terms (thesaurus) will make the retrieval more relevant. As a result, they usually miss the important sources of information. They can not make the difference between a popular or scientific work, and they tend to use the World Wide Web rather than traditional libraries because they feel that the flexibility and access to new information is bigger. Due to this situation, students will experience a risk in accepting any kind of information that is displayed by search engines and will give bigger credit to the newest source of information rather than to the comprehensive discussion that can be found in books (*California State University Information Competence Assessment, 2002*)

Another research about information literacy from various aspects is one that was completed by Mandy (2001) onto forty five college students in a Hong Kong university. This assessment was aimed to identify the perception and competency of the University of Hong Kong students in gaining, using and evaluating information in their academic studies. From this research, it identified that the respondents used various ways to find information (internet, library and social networks); there was a difference between perception and performance; the importance of having an analyzing ability; the importance of knowledge about copy right; and a problem in using language.

Another assessment that discussed about students' ability limitation in information literacy capability was one completed by Mark Hepworth (1999) at Nanyang Technological University (NTU) in Singapore. In general this research determines that many college students had limited ability in information literacy. Some main problems faced by the students were; problem defining, determining where to find the information, developing a searching strategy, finding the materials in the library, building a detailed meaning and estimation.

### ***Library and Information Science***

Library and Information Science is a major under the Faculty of Humanities, University of Indonesia. This major is aimed to:

1. Develop professionals that can form, manage and carry out user orientated services
2. Develop students' abilities to gain experiences suitable with their competence.
3. Occurring an innovative capacity that will increase the use in professional practices
4. Develop a curriculum that is designed so graduates can become trainers and teachers in the library and information science field in the upcoming future (*Library and Information Science Syllabus, 2003*)

The curriculum that was designed for PSIP FIB UI divides the subjects in six different competencies; introduction competency, management competency, processing competency, information services competency, information technology competency and knowledge competency. The Library and Information Science Department has been aware of the importance of information literacy capability, by teaching various subjects that relates to information literacy competency such as;

information sources and services, bibliographic mediums, index and abstracts, user education, introduction to information organization, and many others. In this major, information literacy isn't only to make individual students information literates who can complete their academic assignments well, but also to provide them with a deep understanding of information literacy, because they are people who will distribute this competency in their working environment.

One of the advantages of information literacy capability will be felt during the writing of thesis. Thesis is a scientific work that is written by college students during their last semester of their academic studies, besides that by writing a thesis the student will gain their academic title. In writing thesis, college students need lots of information relating to their chosen topic. And for that reason, they have to be able to find and compile all the sources of information needed and relevant with their research title. Those types of information are usually compiles in various journals, indexes, research abstracts, proceedings and other media.

### Research methodology

This research is descriptive case study and uses qualitative approaches that are aimed to gain an illustration about the information literacy competency of PSIP FIB UI students that are writing their thesis. The approach used is qualitative approach. The subjects are PSIP FIB UI students that composing thesis, whereas the object is the information literacy capability of students.

The population was twenty PSIP FIB UI students, enrollment in year 1999 and 2000. The reason was that thesis had to be written in their last stages of college to gain a bachelor degree.

Samples were taken by using purposive sampling methods. This technique was chosen because it had many advantages; cheap, fast, easy and relevant with the aim of the research (Danim, 1997: 59). With the considerations above, some sampling criteria were determined;

1. Registered as a Library and Information Science FIB UI college student
2. Actively/fully involved in writing their thesis
3. Thesis that are in progress minimally have done literature studies
4. Willing to participate in the research as a respondent

Based on criteria above, only five from twenty students met o the requirements needed. Data collecting technique that will be used is interview.

### Research results

#### 1. Information literacy capability of PSIP FIB UI students in writing thesis

##### I. Stating information needs

No	Ability	Result	Difficulties	Category
1	Determining the need for information	Stating the need for information by identifying the concepts or keywords that represent the information needed, translating topics into more specific terms, and brainstorming the topic of the research.	- Not accurate in determining the information needed - Not quite understanding the subject of the research so it becomes difficult to find the right information.	<b>Development</b> Informant isn't able to determine the information need independently. This is indicated in the implication.
2	Identifying the various sources of information	- Selecting sources of information based on the uses that will be gained. - Using various sources of information. Selection of the information is done objectively.		<b>Competent</b> The informant is able to choose from various sources of information with a certain consideration and has no difficulty in implicating it.

3	Considering financial aspects and use of information	<ul style="list-style-type: none"> <li>- The informant is able to make considerations about financial aspects and the purpose during the search.</li> <li>- Knows when to place purpose or finance first so the research can be done effectively and efficiently.</li> </ul>		<b>Competent</b> The informant is able to consider financial aspects and purpose during the process of finding information and has no difficulties in implicating it.
4	Re-evaluating the need for information	The informant is able to re-evaluate by reading, understanding and comparing the needs for information with the construction of knowledge that was used before; connecting terms that represent their needs of information with the selected topic to know the terms that are to be used during internet browsing		<b>Competent</b> The informant is able to re-evaluate the need for information and has no difficulties in implicating it.

### II. Effectively and efficiently accessing the information needed

No	Ability	Result	Difficulties	Category
1	Selecting the right retrieval aids	<ul style="list-style-type: none"> <li>- Able to determine the right retrieval aid.</li> <li>- Able to use OPAC and other search engines to help the searching process.</li> <li>- Printed indexes are rarely used if the titles of the journals are inputted into an OPAC.</li> <li>- Able to use various ways to find printed information such as with search engines. Search engines that can be used are Google, Yahoo, Hot Boat, AltaVista and Mountain Blue. Besides search engines, informants use educational electronic journals such as Proquest to find the right information.</li> </ul>	- Synthesizing self-created concepts with concepts used in the system may end in not finding the information needed. Non-technical difficulties such as financial difficulties, internet errors, passwords, the books needed are not available, not owning a floppy disc.	<b>Competent</b> Informant is able to select the right retrieval aid. Even though there are few difficulties but the informant can find a solution.
2	Creating and implicating a searching strategy	Informant is able to create and implicate an affective searching strategy by determining a selected term to represent the need of information, the use of Boolean logic (and, or, not), quote signs, synonyms, asterisks, reading the web site's help feature and following the provided links.		<b>Competent</b> Informant is able to create and implicate a searching strategy without any difficulties.
3	Changing searching strategies	<ul style="list-style-type: none"> <li>- Informant is able to know when a searching strategy has to be changed</li> <li>- If the information gained is irrelevant, then the informant will change their searching strategies. Informants don't have any problem with the quantity of information as long as its relevant.</li> </ul>		<b>Competent</b> Informants can determine when to change a searching strategy and has no difficulties in implicating it.
4	Storing information	<ul style="list-style-type: none"> <li>- Informants organize information that they have gained in order to make in more systematic.</li> <li>- The technology that is used to store information gained on the internet is by saving it directly to the computer or by using a disc, download, using a word processor program, printing and copy paste methods.</li> <li>- For printed information, informants use photocopiers, scanners so it is noted directly if there is only information</li> </ul>		<b>Competent</b> An informant is able to store information well and has no difficulties in the implication.

### III. Critically evaluating information and its sources

No	Ability	Result	Difficulties	Category
1	Gaining the main idea	Informants know that the easiest way to identify the main idea of a paragraph, is to read the information thoroughly to get a detailed understanding of the context and then continuing to find the main idea in the beginning, middle or end of the paragraph		<b>Competent</b> Informants know how to gain the main idea and has no difficulties in implicating it
2	Criteria of evaluating information and its sources	<ul style="list-style-type: none"> <li>- The considerations in evaluating sources of information; author or creator, currency, originality, language and access.</li> <li>- To know whether the information gained is relevant or irrelevant with the need of</li> </ul>	Language problems. If the information gained is in another language, then it will take time to understand it because it	<b>Competent</b> Informant knows about the criteria of evaluating information and its sources. Even though there are few difficulties but the

		information, the informant compares his/her understanding with other information. - Before viewing the context of their source of information, informants first look at the title, cover, list of contents, introduction, preface, sub titles and bibliography. Whereas with articles, informants first view the abstract. This indicates that informants don't only value the suitability of their sources of information on one side, but they value it from various points of view	has to be read a few times.	informant can find a solution.
3	Synthesizing the main idea	- Able to explain the steps to synthesize the main idea - In the implication, informants have difficulties in synthesizing the main idea	Does not possess adequate understanding about the specified terms. This difficulty is caused because informants are writing about a new topic that they never knew about before.	<b>Development</b> Informants find it hard to synthesize the main idea by themselves, this is indicated with the difficulties that they face
4	Comparing old and new knowledge	Informants compare the new and old knowledge that they have. The reason of this activity varies with each informant, but they have the same purpose and that is to make their writing more strong, detailed and accurate.		<b>Competent</b> Informants compare the new and old knowledge and have no difficulties in implicating them
5	When new knowledge has effect towards the value system	Each informant's acceptance of information is different. According to informants, a certain piece of information will affect their value system when their logics find ways to receive it, if the information is suitable with their needs and if the source is reliable.		<b>Competent</b> Informants are able to identify when new knowledge has effect on their value system and has no difficulties in the implication.
6	The methods used to check the suitability information	To prove the reliability of verbal information, then informants will directly ask it to the source. - For printed information, informants will verify the sources, view the original source or other related sources and read the author's profile, so that informants are sure of the information gained. - Methods used for electronic and verbal information tend to be the same which is by re-searching the website where the information was gained to prove the accuracy.		<b>Competent</b> Informants know how to check the suitability of the gained information and have no difficulties in implicating it.
7	When their needs of information are fulfilled.	- Informants feel that their needs for information have been fulfilled when their anxiety has disappeared, when curiosity has been achieved and when the academic guider feels that there is adequate information		<b>Competent</b> Informants are able to determine when their needs of information have been fulfilled and have no difficulties in the implication.

IV. Using the information to complete a certain goal

No	Ability	Result	Difficulties	Category
1	Use of current and recent information	Informants use recent information as their start to their writings and use their new information to develop it, to compare and use it to change searching strategies	- What is written isn't relevant with the actual topic - Wrong positioning of information	<b>Development</b> Informants are unable to use current and recent information this is indicated by the difficulties experienced during the implication
2	Revising the development of writing	Informants consider that if the development of their thesis has difficulties, then they have to identify that problem so it can be solved. If the problem is located in their thesis, then they will revise it themselves. But if the problem is with their academic guider that may have different construction of knowledge, then they will try to give understanding. Besides that, informants will also revise their thesis by reading related		<b>Competent</b> Informants are able to determine when to revise the development of their writing and has no difficulties in the implication

		literatures, not only to enrich their knowledge but also as a protection towards their academic guider. Before revising their writing, informants will also have discussions with others such as friends, lecturers/academic guiders and also librarians from their research location to get a deeper comprehension.		
3	Communicating information	Informants will obey the regulations of communicating their thesis that has been decided by their faculties. All informants are aware of the effective way to communicate information that is contained in their thesis.		<b>Competent</b> Informants are able to effectively communicate their information and have no difficulties in implicating it.

V. Understanding economic and law issues and social economy aspects surrounding the use and access of information ethically and legally

No	Ability	Result	Difficulties	Category
1	Understanding the economy, law and social aspects	<p>Social aspect: Informants have enough understanding about the positive and negative effects related to the development of information technology</p> <p>Economic aspect: Informants have the same objective point of view about the category of information that needs charges to gain and information that should be released. Informants have a good understanding about which information needs charges and which are free of cost.</p> <p><u>Law aspects:</u> - Informants are able to define plagiarism and its limits - Informants are able to define copy rights and how to implicate it.</p>	<p>- Regulation problems, informants are now aware of the limits and aspects related to downloading information.</p> <p>- How legal methods in accessing information needs passwords, copyrights and limits between free and charged information. This problem is caused by inexplicit regulations.</p>	<b>Competent</b> Informants understand the economy, law and social aspects related to accessing information. But during the implication, they are often doubtful about their legality of their methods.
2	Obeying rules, regulations and ethics in accessing information	Obeying regulations, the law and ethics that are valid in accessing information.		<b>Competent</b> Informants obey rules, regulations and ethics in accessing and using information and has no difficulties in implicating it
3	Respecting the use of sources information	Always notes the source of every part of information that is used because by doing that then they have respected others' work.		<b>Competent</b> Informants respect the use of sources of information and have no difficulties in implicating it.

Department of Library and Information Science

1. Relating to what has been learnt in PSIP, all informants have answered that the knowledge that they have gained has been useful for their thesis. The knowledge has given them adequate background and basic understanding.
2. Not all the knowledge that was gained during college is implicated. Knowledge is implicated when it is proved useful in handling problems, searching information and knowledge that is related with research work and needs. So, knowledge is implicated suitably with the informants needs.
3. During study in PSIP FIB UI, the subjects that have the biggest effect in increasing their information literacy capability are Information Sources and Services, Bibliographic Services, Law Aspects in Information, Information in Social Culture Context, Introduction to Information Organization, Thesaurus, Bibliographic Description, Non-book Materials, Library



Information Introduction, Research Methodology, Classification, Database Management and Subject Terms.

4. Knowledge that is needed for information literacy capability that was not obtained during the students study in PSIP FIB UI are education on ethics, knowledge about IT based information, special aspects about networks, information network sources, how to access an electronic journal, how to subscribe an electronic journal, how to access electronic journals that need fees, how to become a member and digital library concepts.
5. The weakness located within PSIP FIB UI is the teaching method, students are supposed to be educated and not taught; teachers who are comfortable with their construction of knowledge have negative impacts on how they teach; the use and supply of facilities that aren't optimal; the knowledge taught in classes are not relevant with the real field condition; and teaching materials that aren't current and up to date.

## **Research conclusion and proposition**

### ***Conclusion***

In general, the information literacy of PSIP students is grouped as 'good'. Almost all of the competencies, students are categorized as competent. However, in stating the need of information, synthesizing the main idea and revising the development of their thesis that they are in the developing level. Students have indicated that they have good understanding about information literacy and how to implicate it. Even though they experience many difficulties during the process of implication, but they know the problems they are facing, identifying the cause and also the possible solutions. Students confess that their abilities were mainly gained from outside the class, trying by themselves, and learning from seniors and alumni. During the writing of their thesis it's indicated that the role of their supervisor is very important in supporting them. The supervisor is the solution for every problem that is faced during the composing of the students' thesis. The point of information literacy is students have the capability to be critical of all actions that have been done.

### ***Propositions***

1. Students have to obtain an adequate amount of learning material about information literacy. Therefore, a tutorial material has to be designed as a supplement of their information literacy capability.
2. Difficulties that are experienced by students in information literacy capability have to be handled by giving enough understanding and wide chances for them to implicate it. If possible, there should be a new lecture about information literacy.
3. The facilities that are provided in PSIP should be more complete. Information searching facilities such as computer labs can be used optimally by repairing the internet network and release students from any charge of the service.

## **Current issue**

Based on the results of this research (completed in 2005), in this present time, there have been some adjustments according to research suggestions:

1. The subject of Information Literacy has been included in the PSIP curriculum since 2007.

2. Hot spot facilities are provided in various areas at the FIB UI campus and allow students to search information without being charged any fees.

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