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Lecturers Perceptions of Students' Information Literacy: Identifying their roles in Supporting Students' Information Literacy

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Abstract

Information literacy is defined as a constellation of skills related to the use of information, it is considered important aspect to ensure students success in heir learning process. Lecturers' perspection of students' information literacy may influence they way they help students enhancing students' information literacy. This research aims to reveal lecturers' experiences and expectations of students within their teaching programs. A qualitative approach was employed with semi-structured interviews involving 18 lecturers from 6 faculties that were recruited by using convenience sampling. The data collected were then analyzed by using thematic analysis. The findings reveal that how lecturers understand information literacy and what teaching strategies they employed for helping students enhancing their information literacy. Some lecturers have defined their ways of helping students to become more critical and independent learners. However, most of the faculties agree that it was through academic reading and writing that students would be able to help themselves to become information literate. The findings of this study benefit the librarian and faculty collaborations in designing an information literacy program that can be either taught as an information literacy program or it is integrated into a curriculum.

Keywords: information literacy; higher education; Academic staff;

Introduction

Information literacy is seen as a vital aspect of student learning activities. In the context of higher education, information literacy is placed as the foundation of students learning process as it consists of students critical thinking, competencies on using various forms of information sources, and the ability of finding, selecting and using information ethically. Information literacy has been recognized globally as supporting student academic success (Clark 2017; Saunders 2018). This statement reinforces that students need to be supported to improve their information literacy competencies to ensure the students' learning experience meaningful.

The responsibility for increasing information literacy competencies often lies with the library. Previous research has shown that librarians are often the main actors and agents to improve student information literacy (Goates, Nelson, and Frost 2017; Kelly 2017; Matlin and Lantzy 2017; Gorman

and Staley 2018), that through this role, librarians design and implement information literacy instruction based on face to face, online, or a combination of both. However, considering that students relying much on their lecturers for their scholarly information need (Heriyanto and Hariyati 2020), and the amount of times they engage with lecturers during their study, lecturers hold important role in the development of students' information literacy.

Lecturers perceptions of information literacy have been investigated by several studies, including Boon, Johnston, & Webber (2007) that interviewed 80 English academics conception of information literacy and compare those conceptions with librarian-generated information literacy standards. Stebbing, Shelley, Warnes, & McMaster (2019) have also investigated how academics view information literacy and use the findings to improve librarian's understanding of how academics perceptions and expectations of information literacy within different disciplines.

While previous studies have seen that lecturers are integral part for the development of information literacy in the university, much of those studies were intended to support university librarians in developing information literacy programs (Bury, 2016; Cope & Sanabria, 2014b; DaCosta, 2010). This recent study instead investigating the perceptions of lecturers in the Diponegoro University and the lecturers' experience about how they help students enhancing their information literacy.

Diponegoro University Library does not provide information literacy program for students. The related information seeking strategies was introduced by several faculty libraries for new students. Hence, students experience great challenges in finding and selecting relevant scholarly information during their study (Heriyanto, Prasetyawan, and Rohmiyati 2020). Lecturers awareness about students' information literacy is seen as a critical issue here in this university regarding supporting students improving their information literacy skills. This study investigating lecturers perceptions of information literacy and the ways they support students on improving students' information literacy skills. The findings added knowledge that involve theoretical understanding of lecturers understanding of students' information literacy. The findings also contributed to the practical aspect; that is Indonesian universities could utilise this study findings to guide the collaboration between the university library and the faculties regarding the information literacy education for undergraduate students and ensure that the curriculum meet the information literacy needs of this group of students.

Literature Review

The student learning center is a learning method chosen by the Diponegoro University. The consequence of this learning method requires students to become independent learners who are critical of any information they found. To become independent learners, a special competency is needed,

which is popularly known as information literacy (Bruce, 2008). Information literacy is described as a constellation of skills related to the use of information, including knowing when information is needed, being able to identify and articulate the information needed, knowing where and how to find the information needed, and being able to interpret and use information effectively and pay attention to the ethics of information use (Association of College and Research Libraries 2016). Information literacy has been recognized globally as supporting student academic success (Clark 2017; Saunders 2018). This statement strengthens that to make the application of the Student learning center learning method successful, students need to be equipped with information literacy competencies.

The importance of raising lecturers' awareness or perceptions regarding the importance of information literacy education may have an impact on the ways of lecturers teach and interact with students (Dawes 2017). Previous studies have shown that lecturers who understand the benefits and importance of information literacy for students have designed their teaching methods with research-based assignments (Miller 2010; Saines et al. 2019; Wishkoski, Lundstrom, and Davis 2019), which can be useful in improving students' critical thinking and problem solutions skills (Watkins and Morrison 2015; Saines et al. 2019; Wishkoski, Lundstrom, and Davis 2019). More importantly, those studies have shown that lecturers have shown their awareness of students' information literacy skills, but few studies have explore how these group of lecturers have done during their day-to-day teaching activities, and also what they expect to their students regarding student information literacy competencies. This is the gap this study fills.

Method

This study uses qualitative methods to explore the views, perceptions, and experiences of the participants. Researchers conducted semi-structured interviews with 18 lecturers from 8 faculties of Diponegoro University. The interview was intended to reveal lecturers' role in improving student information literacy competencies.

Recruitment of participants is carried out using a convenient sampling technique to make it easier for researchers to reach participants and the efficiency of time in recruitment activities (Etikan 2016). Each participant was interviewed for 30-40 minutes and recorded and transcribed for later analysis. Researchers manually performed data analysis using thematic analysis methodology, as exemplified by Braun and Clarke (Braun and Clarke 2006). In the practice of analyzing data, researchers follow the method used by Sayyad Abdi, Partridge, Bruce, & Watson (Sayyad Abdi et al. 2019), which states that thematic analysis is very suitable to be adopted as an approach to analyzing qualitative data. This approach can be captured from faculties and students' interaction experience in teaching and learning activities, especially to support students' information literacy skills. Researchers read each transcript

to determine the code. These activities were carried out both individually and collaboratively. Any code that appears is documented and discussed during the data analysis process. Of the 18 interview transcripts analyzed, 160 codes were generated. Each code that appeared was a mosaic description of a phenomenon that needed to be assembled and compiled into potential themes. Themes refer to patterns in data that explain and organize the aspects of the phenomenon derived from the data. The codes generated in the previous phase were reviewed and examined multiple times against the main research question, how lecturers' understanding students' information literacy? And how they design their teaching methods in order to empowering students' information literacy? The identified themes are explained in the following section.

Findings

The eighteen interviewed participants were lecturers from 8 different faculties in Diponegoro University. The interview findings arranged thematically below, illustrate the perspective of lecturers about students' information literacy and the ways the lecturers empowering students' information literacy.

Understanding Information Literacy

Students are required to develop logical and argumentative mindset as a provision to express academic ideas in a written scientific narration. It is not an instant process for students to build logical and argumentative reasoning. It takes habituation and ability to interpret textual and scientific references as basic skill. Most of the lecturers commented that these habits and abilities must be honed since the first year of study.

In achieving learning objectives, students are expected not to rely only on resources and materials presented by their lecturer. But, more to that, the majority of participants expected students to find more readings so that they able to understand deeper about the subjects they have been discussed during the lecturers. Most participants expected that students develop their information literacy skill and assess the ability to compile proper scientific paper. The foundation for having both abilities is the student's competence in searching for relevant and quality references. Students are required to be able to properly identify the need of information for them to gain relevant information. Besides, college students shall be able to recognize quality and credible journals to be used as reference. It is revealed by the following quote,

“The task given, first, must be compiled based on a proper scientific study. So, find accurate reference, browse proper journal. So, for example, in (terms of) nutrition (study), (look for) journals (of nutrition). It means, for example, student should immediately search for Scopus index journals, not the predatory references.”

As most of the participants believe that students have sufficient skills on locating and finding scholarly information, however, some participants have realised that their students have challenges in evaluating information they found. Hence, some participants have provided direction and instruction to students to sort out study references. It shows that some participants adequately understand the knowledge gap of their students. The lecturers may have familiar with scholarly journals, but their students may not have the same experience as the lecturers in term of using scholarly journals. Undergraduate students they mentor are not. As illustrated in the following excerpt,

“The young are sophisticated, they can do it themselves; we only direct them.”

“Maybe they can search (for something on the internet), get the articles, but we have to provide searching methods and teach them, right?”

“Well, it is true that sometimes there are journals which contents are not relevant; so one must also be pay attention (to the content) because it is related to the quality of the journal and articles submitted. That's it. Overall, they are looking for it individually. We just taught them how to search, maybe because their insights are not as deep as ours, right?”

Most of the participants believe that students' weakness in evaluating information is influenced by several factors, one of which is the student's inability to read and understand information content. Information in the form of international scientific journals in foreign language often becomes an obstacle for students in understanding the contents. Foreign language and new terms of scientific manuscripts are the cause of students misunderstanding of the information content presented.

“First is due to language barrier, because maybe international journals is difficult to understand since they use English terms, right?”

“There are still misperceptions; some (students) are not good in translating international journals (to be used as reference) in their writings; some interpret them wrong, thus their perception is distorted.”

Apparently, misinterpretation is caused not only by inadequate language skill, but also time allocation given by the lecturer for students to compile assignment. Busy time schedule and time limitation has caused students to have rough understanding on the content of scientific journals. Sometimes due to limited time for finishing task, students rely on machine translation to interpret the contents of international scientific journal. Unfortunately, machine translation often gives a different meaning than it should be, so that students are still trapped in a misunderstanding. This problem commented by one participant,

“Sometimes because of the rush, students tend to cut off time by using Google Translate. But in fact, it gives different perceptions than those actually described in the journal.”

“Then the second is reading interest; reading interest is related to time, maybe because they have so many assignments.”

These constraints indicate the lack of scientific articles as academic reference to support the completion of assignments. Most participants agreed that they encouraged students to refer to scientific journals in compiling college assignment. This is conveyed by one participant in the following excerpt,

“When you ask why the reference and citation to international journals is low, is not that students are lazy. Yet, because the practicum report must be submitted as soon as possible, so practicum report should be submitted otherwise student can't take part in the next practicum, so it's like there is no time for reading many journals, that's why they only read 1 article only and cite it in their practicum report.”

Lack of knowledge to scientific journals is another reason why this primary literature source is seldom used by students. Moreover, reputable scientific journal databases are unfamiliar to college students. Therefore, most participants stated that students really need to be taught on how to access information sources, so that they know where to get quality information to support completion of their assignments.

Some study programs require students to publish scientific papers at the end of their study on scientific journal. Therefore, it is not surprising that most lectures encourage students to be accustomed to searching for credible information and citing scientific journals.

Learning activities for information literacy experience

Related to the learning method used in this higher education institutions, the participants revealed several learning methods they implement in class. Some revealed that the methods they often use in teaching are Problem Based Learning (PBL), interactive skill session and seven jumps. All three methods position students as active subject who are required to construct their own knowledge independently and understanding learning outcomes. In PBL learning method, the lecturers supervise students actively. The lecturer act as a supervisor, as a consultant, and as a facilitator. Generally, all learning methods used in this university is based on student learning centers, i.e. learning activity that allow students to construct knowledge independently under the guidance of lecturer by utilizing information and communication technology as a means of information searching.

Team teaching is also quite common in several study programs. The purpose of this method is to present qualified lecturer in each subject, in order to increase the comprehensive ratio on learning achievement. One participant shared her experience in team teaching, especially when giving assignments. Each lecturer who is part of the teaching team assigns task to students. Yet to emphasize that each material presented by different faculties is regarded as unity and interrelated, a comprehensive assignment is given. It includes elements of each competency tested on every subject of the course. The output of such assignment is a scientific paper.

In order to realize learning objectives, it is also necessary to compile structured and systematic lecture assignments. Each study program in the university is designed to affect the form of assignments. Some study programs only focus on theoretical and conceptual understanding; while others do not only emphasize on theoretical and conceptual understanding, but also practical things.

In addition to the characteristics of study programs which form the implementation of coursework, characteristics of courses and learning objectives also determine how assignments are given and submitted. One participant explained the assignments in Agricultural Technology Program at the Faculty of Animal and Agricultural Sciences. There are two types of subjects, namely regular and practicum. Almost all of the practicum course is held in the laboratory. While regular subjects are learnt in class dominantly, eventhough there also are conducted in laboratory or on field. Ochi gave an example of regular course assignment. The participants commented that, although regular subjects are mostly delivered in class, there is a structured task that require students to analyze and explore local commodity crops in their place of origin or residence. Through these exploration activities, students are asked to compile scientific papers.

Through lecture-students interaction in learning and teaching activities, students practice to fulfill their information needs independently under lecturer's guidance. Through teaching method and

lecture assignment, lecturer give students stimulus to practice identifying, searching and evaluating their information needs, as well as to utilize information properly and appropriately.

Teaching information retrieval strategies

Student scientific writing is influenced by their information literacy skills, and they need support from the academics as well as librarians to enhance their information literacy. The University actually has the biggest potential to overcome student weakness in terms of this competency. Libraries need to provide information and reference services that support student teaching and learning activities. Several libraries in this university have provided such services, namely writing skill program. Through this service, students are taught where and how to search for valid information, as well as how to cite articles by using a reference manager tool.

However, it is unfortunate that the program has not been implemented evenly by all libraries in this university. Library, on the other hand, need assistance for the results to be optimal. Libraries have to collaborate with the academics who interact intensively with students, e.g. lecturers. In practice, each of these elements works separately, they are not yet integrated. For example, one of the study programs which is History Study Program considers the ability to search for information as part of the learning outcomes. Through this assumption, the study program prepares a curriculum that supports information retrieval competency by providing archival and library science courses. In these courses, students are given theoretical and practical knowledge on how to gather information to support lecture activities.

This information retrieval competence is expected to support students in developing their ability to compile scientific articles. Besides, the study program also prepares students to have skill in scientific writing by providing courses based on research methods and scientific writing. The course is offered at the beginning of the semester. Based on these findings, it is evident that study program has facilitated and prepared students to be able to properly complete their study on time. If there are students who are unable to complete their studies properly, it means these students have failed to take advantage of the study process. This is expressed by one participant in the following interview excerpt,

“There are really excellent (students), good in browsing (scientific journal), good in writing criticism, but they are not many. Besides, some are very weak, as a proof, they are those who find it difficult to graduate. It's actually because of failure to take advantage of learning process. The design of course and lecturer service are actually, in my view, has been maximum.”

University libraries generally educate new students through the provision of students guidebook, but something unique is offered by the Nutrition Science Study Program. During campus orientation, the study program offer information access training new students. Through this activity, new students are equipped with several necessities, including where to locate information and how to retrieve it, besides where to find credible journal recommendations in the field of nutrition. These routine activity is delivered by a group of lecturers, as illustrated by following quote,

“First and foremost is how to browse journals as credible reference. So, for example, in terms of nutrition, students are suggested to browse this website and this, for example, there are 10 recommended websites on nutrition journals, now that's this one. Like that. Then (students are also taught on) how to search based on keywords, for example, what the keywords are, how are they used. So (they are taught to) look for credible journals, based on certain topic, and to sort out predator journals. If I'm not mistaken, (students are shown that) this was once a predatory journal, this journal is not predatory, etc., as once said by Mr. Adrian”.

It is essential for lecturers to facilitate and develop student's information literacy. However, the function of study program is limited only to provide the grand design. The executors are the lecturers who directly interact with students during teaching and learning activities. Surely lecturer's support is influential in improving information literacy of students. An example is shown by one participant who is a lecturer in Agricultural Technology Study Program. In her class, this participant always introduces the latest development in the field of study or the course material he teaches. The approach she uses is to show and explain development of the latest research results. It is not enough for her to just show and explain, she also let students engage with literatures. Students are taught about anyt source of information and how to obtain it through keyword formulations, as explained by one participant,

“In every lecture that our team teaches, usually using Power Point teaching materials, yes, we must update it by including references on the latest knowledge and we must include it. We try to make it the most updated by year related to that knowledge. Then yes, we display the data, we display the references, we also display the journals, we take screenshots. So we take this data from this journal, what the title is, who the author is, what the browser is. So sometimes we also teach it to students, yes, when teaching, the way to find this journal, you can find it here, you know, open the browser, for example, go to Science Direct then type this, type the keyword, then it will appear, select the open access, you will open it later. So, it seems that in our course, almost every subject we teach is like that.”

The participant also encourages her students to improve their information literacy; she always asks her students to access database of journals subscribed by the university library. On several occasions in the middle of her teaching hours, it is not uncommon for the participant to inform the location of journal database to her students and ask them to access it. She provides illustration on how to formulate keywords to initiate the search. In addition, she also guides her students to select and evaluate findings from journal databases. According to her, on every assignments she asks students to refer their writing into reputable journals only. However, during the process of searching and collecting literature she always acts as a supervisor who helps evaluate the relevance and credibility of journals/articles selected by students.

Information Literacy as Preparation for Workplace

Participants from the Health Faculty believe that locating, tracking, and using quality information from scientific journals will be useful in student's future career. They highlight the importance of information literacy for students as a provision to enter workplace. These participants agree that health science is one of the fastest growing sciences. Sometimes certain medical action that in the past has become a reference, nowadays turns into a prohibition, or vice versa. These changes occur due to the results of recent research as published in reputable scientific journals. Thus, participants from this faculty encouraged the students need to stay update with relevant references and exercise information seeking competency, especially when they work in accordance with their field.

Discussion

The participant of this study seen information literacy as a skill required to access and evaluate information. This finding is not surprising as most of academics have less engagement with the concept of information literacy. Understanding information literacy as set of skills is the traditional view of information literacy as it was first use in 1974 by Paul Zurkowski, in a proposal submitted to the United States National Commission of Libraries and Information Science. Over time, the concept of information literacy has changed in numerous way with many different attempts at a definition (Welsh and Wright 2010). The findings revealed that some of the academics have different understanding about information literacy, they understand that it beyond the skills of finding and locating information but it consists of critical thinking skills that will help students to determine the decision they have with the information in hand. Articulating information literacy as a concept that focus on lifelong learning, critical thinking, and using information in all aspect of life was introduced by Bruce (1997), that

information literacy should focus on the various ways people relate to information and using it in their everyday life.

In relation to that, providing reading materials for students can be important things to do by the lecturers. Most of lecturers participated in this study confirmed that they have selectively provide books and journal articles for their students with the aims their students can have better understanding about the subjects been taught, but also to improve students' reading comprehension. This way, this group of academics see the Information literacy as the ability to read and understand better about the texts for which they engage with. Cope & Sanabria (2014) and Dubicki (2013) in their studies have suggested that students need to be supported by providing readings especially journal articles to help them improve their academic reading, which will also influence students on performing their academic writing. Faculty support for providing journal articles and recommend students to get used to with journal articles is needed as scientific journal articles have a high level of difficulty to be understood by students in general (Stebbing et al. 2019).

Research-based assignments was developed and delivered by the lecturers with the hope that students could learn their subject not only from the readings, but also through their own writing. Students writing is seen by the lecturers as the reflection of students understanding about the assignments. More to that, it is seen as an assessment tool by the lecturers to measure students' understanding about particular topic within the subjects. This way information literacy is understood as the ability of students to write a reflective writing as it consists of some other skills, such as reading comprehension and academic writing. Information literacy is perceived as fundamentally intertwined with academic literacies, e.g. academic writing and academic reading, and these literacies collectively are seen as important for students to achieved (Bury 2016).

However, academic writing can be very challenging for students as they found difficulties in reading academic literature in English. But most lecturers do not rely on books and journal articles published in Indonesian language. The lecturers recommend students to widen their reading by accessing academic databases subscribed by the university library. As the academic databases mostly provide books and journals in English, students found that understanding English is not an easy task. Somehow, the inadequate of English fluency have impacted on the quality of students work as it was expected by the lecturers. Students have difficulties to understand English and sometimes end up with misinterpreting the new terms of scientific manuscripts and cause of students misunderstanding of the information content presented. This way, information literacy is understood as reading comprehension (Bruce and Hughes 2010), students expected to understand text in books or journal articles even though they are written in English and to reveal relevant information for their studies.

Conclusion

Lecturers understand students' information literacy as two folds. First, seeing information literacy is set of skills that students required to have. These skills consist of finding and evaluating information. Lecturers have identified these skills are vital to students as it related to the comprehension of students in completing academic works. Second, lecturers seen information literacy as students' cognitive ability that is intertwined with academic literacies such as reading comprehension and conducting academic writing. Lecturers empowering students by designing student-centred learning as well as research-base assignments , and that is important for students' learning process to help students enhancing their information literacy.

The findings of this study is useful for university library to develop their information literacy program for students. It is also for lecturers to understand the information literacy of undergraduate students in order to support them during their learning process. Lecturers may collaborate with librarian to develop information literacy program that can be taught for undergraduate students program, or it can be embedded with curriculum. This research however focusing on the one state university in Central Java, Indonesia, future research investigating lecturers role on empowering students' information literacy will be useful to provide different insights for the information literacy discourse in the higher education setting.

Disclosure statement

No potential conflict of interest was reported by the authors.

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