

**BE-04**

**STUDENTS INFORMATION LITERACY PROFILE IN INVERTEBRATES  
SYSTEMATIC SUBJECT**

**(Preliminary Study in 3<sup>rd</sup> Semester Students of Biology Education Department  
Universitas Muhammadiyah Surakarta in Academic Year of 2014/2015)**

**Putri Agustina, Nandhika Wahyu Sahputra, Tengku Qoirulia**

*Biology Education Department Faculty of Teacher Training and Education Universitas  
Muhammadiyah Surakarta*

\*Corresponding email address: putri.agustina@ums.ac.id

**Abstract**

This research has a purpose to describe the preliminary profile of students' information literacy before attending the lecture course of invertebrates systematic. This is a descriptive research. Population of this research are the 3<sup>rd</sup> semester students of Biology Education Department Universitas Muhammadiyah Surakarta in Academic Year of 2014/2015. Samples were taken at random sampling to 78 students from two parallel classes. Data collected by using information literacy questionnaires based on information literacy standard by Association of College and Research (ACRL).

Result of this research shows that the preliminary profile of students' information literacy in the beginning of Invertebrates systematic course as follows: before attending the lecture course of invertebrates systematic, the provision of 75% students' prior knowledge about animals systematic still quite low; approximately 75% students have low awareness of students to learn the lecture material before the start of the learning proces, and students' opinion about the criteria of a good reference are quite diverse but, most of students have good knowledge about good reference criterion.

**Key words:** information literacy, assessment, invertebrates systematic

**INTRODUCTION**

Invertebrates systematic is one of compulsory subject for 3<sup>rd</sup> semester students in Biology Education Department. Invertebrates systematic has been intensively studied and developed starting in the 1700s. Taxonomy development start from the beginning until now always been influenced by the development of science and technology. Therefore, taxonomy has developed very rapidly and always advancing and perfecting. With the basic characteristics stated before, students is required to always be sensitive to changes in the classification system of invertebrates in accordance with the development of existing knowledge.

Based on the characteristics of the study subjects of invertebrates systematic, then the student is required to always be sensitive to changes in the classification system of invertebrates in accordance with the development of existing knowledge. One way that students can follow the development of the course study is to access a variety of information from various sources on the development of animal taxonomy. By reading and following the latest developments

taxonomy of animals, especially invertebrates, it is expected that students have a broad knowledge of this course so that hopes to increase student learning outcomes.

Student in the learning process is user information residing in the academic environment. Information needs of different students with professional or other information users. Students are required to have a late Ability to process prior knowledge and utilize the knowledge that the information is not only useful for the present but also useful for later life. Students are also required to be independent in carrying out the process of learning and finish the job.

One way that students can follow the development of invertebrates systematic is by developing their information literacy. Information literacy, as a topic of educational concern, is relatively new. Information literacy according to Probert (2009) is a broad concept that embraces information skills, ICT skills, and library skills along with problem solving and cognitive skills, and the attitudes and values, that enable learners to function effectively in the information landscape. American Library Association (1998), state that to be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information. Information literate people are those who have learned how to learn.

Information literacy skills according to Iman (2013) is considered very important in the learning process so that it becomes an integral part of education programs, ranging from basic education to higher education. Especially for higher education institutions that have implemented Competency-Based-Curriculum, mastery of information literacy into the competencies important to have every student. In all situations, there is a need for education that allows our children to think for themselves and have the capacity for life-long learning. Also, students should be able to increase their ability to solve problems, collaborate, and be independent learners. Such condition according to Chang et al (2012) forced educators to look for new ways to educate such as resource-based learning, authentic learning, and problem based learning.

This research has a purpose to describe the preliminary profile of students' information literacy before attending the lecture course of invertebrates systematic. Information from this preliminary research is important to determine how to develop an information literacy based learning model and information literacy assessment.

## **RESEARCH METHOD**

This research took the form of an exploratory descriptive method approach, using both qualitative and quantitative data. Descriptive research according to Sugiyono (2006) is a study that was conducted to determine the value of an independent variable, either one or more variables (independent) without comparing or connect with other variables. In this study, only presented data obtained from the respondents (students) through a questionnaire for further interpretation.

Population of this research were the 3<sup>rd</sup> semester students of Biology Education Department Universitas Muhammadiyah Surakarta in Academic Year of 2014/2015. Samples were taken at random sampling to 78 students from two parallel classes. Data collected by using information literacy questionnaires based on information literacy standard by Association of College and Research (ACRL), and literature review and documents from books, journals, and others. The data obtained in this study were the description of students' information literacy skills before attending lectures invertebrate systematics.

Data obtained from the questionnaire were analyzed with descriptive methods. Data tabulated by compiling into a systematic table percentages are calculated for further analysis and interpretation. Data analysis was calculated using the following formula.

$$P = F/n$$

(Hadi, 1981)

Specification:

P : percentage (%)

F : number of responses obtained

n : number of respondents

To interpret the percentage obtained from the tabulation of data, use the method according to Supardi (1979), namely:

1-25% : little/fraction

26-49% : almost half

50% : half

51-75% : most

76-99% : majority

100% : whole

## **RESULT AND DISCUSSION**

Early questionnaire of invertebrates systematic course given at the first meeting of invertebrates systematic course in the academic year of 2014/2015. Lecture given initial questionnaire in order to determine the characteristics of the respondents in this study is in this case is the third semester students of Biology Education Department in academic year 2014/2015. This questionnaire consist of 3 parts: (1) the first part aims to determine the student prior knowledge about animal systematic and especially invertebrates, (2) the second part aims to determine the initial profile information literacy of students, and (3) the third part which aims to determine the student opinion about the best learning process in invertebrates systematic course. The results of this early questionnaire will described below.

The first question is "write the reference that you ever read about animals systematic". The results show that the student answers the majority of students (over 75%) have never read a reference on animals systematic while  $\pm 25\%$  of students answered that they have read references about animals systematic from highschool textbook. This suggests that before attending the lecture course of invertebrates systematic, the provision of such students' prior knowledge about animals systematic still quite low. Awareness of students to learn the lecture material learning process is still lacking. This result indicates that students' have low ability of the first standard of information literacy. American Library Association (ALA) and Association for Educational Communications and Technology (AECT) stated that this ability related to the first standard of information literacy namely accesses information literacy efficiently and effectively. The student who is information literate recognizes that having good information is central to meeting the opportunities and challenges of day-to-day living. That student knows when to seek information beyond his or her personal knowledge, how to frame questions that will lead to the appropriate information, and where to seek that information. The student knows how to structure a search across a variety of sources and formats to locate the best information to meet a particular need. Indicator of this aspect are: (1) recognizes the need for information; (2) recognizes that accurate and comprehensive information is the basis for intelligent decision making; (3) formulates questions based on information needs; (4) identifies a variety of potential source information; and (5) develops and uses successful strategies for locating information.

The second question is "How do you think the criteria of a good reference?". Answer this question quite diverse expressed by students. Some students think that arise with regard to the criteria of a good reference namely good reference comes from the book / print literature

published by a publisher that has credibility, research journals, and websites that can be magnified accounted for scientific truth. Opinion of the students demonstrated the theoretical, the student has understood the criteria of good references. However, there is still a small proportion of students ( $\pm 15\%$ ) who do not understand the criteria of good references. Several criteria reference material / good references according to the Ohio Library Council (2014) among others: (1) written by authors who are competent in the field of which he wrote; (2) published (either print or online) by publishers who have a good reputation in the world of publishing and edited by the editor; (3) the scope of the referral source is written in the title in accordance with the contents; and (4) is written in a format that meets the rules of systematic and scientific writing. This question indicates the second standard of information literacy namely "evaluates information critically and competently. The students who are information literate weighs information carefully and wisely to determine its quality. That student understands traditional and emerging principles for assessing the accuracy, validity, relevance, completeness, and impartiality of information. The student applies these principles insightfully across information sources and formats and uses logic and informed judgment to accept, reject, or replace information to meet a particular need.

The third question is "How often do you visit the reading room Prodi P. Biology FKIP UMS?" Based on the student answer is known that in general ( $> 80\%$ ) answered the students have never and do not know the reading room owned by Prodi P. Biology FKIP UMS. While  $\pm 20\%$  of students answered already been visited, but the intensity is very rare. This could be due to the location of a separate reading room with a lecture building is located in the biology laboratory building and not well communicated to students. The fourth question is "How often do you visit the library of the University?". Most students (60%) answered frequently visit the university library, while a small proportion of students (25%) answered always visit the university libraries and the rest (15%) answered never revisiting the university library. This is according to students because many tasks are given in lectures and practicum in the department of Biology P. FKIP UMS student demands to actively look for a reference one of them in the university library. It is supported by a collection of books in the university library which students complete enough to support the tasks given both practical and theory. Library is one of facilities that have important role for developing students information literacy. Nayda and Elaine (2014) stated that the successful development of students' information literacy skills lies in recognising that not all students enter tertiary studies with knowledge of computers and how they assist in searching for information. An assumption that students already have these skills is likely to result in an uncoordinated and reactionary approach which can significantly disadvantage students. Students' information literacy success depends on collaboration between relevant university staff such as academics, library staff and student services, and the provision of and access to adequate facilities.

The fifth question is "From some of the following references, select by circling the letter that you think is a good reference to be used as a reference. You may choose more than one kind of reference". Of several alternative options available answers obtained results that there are four sources of reference chosen by the majority of students ( $\pm 75\%$ ) subjects, namely textbooks published by the university publishers, book publishers are reliable publications, national journals, international journals, and scientific websites reliable. While some are elected by a small portion of students that personal blog lecturers (15%), general personal blog (5%), and e-learning from other universities (10%). Based on these answers, it can be seen that in general the students have to know the sources of reference that can serve as a good reference. Wales (2006) states that some reliable reference source that can be used include: (1) the scientific journal that has been published; (2) the final project work, thesis and dissertations that have been tested and maintained magnified in front of an expert; (3) scientific articles that have been tested by experts in the field (4) book published by a trusted publisher and edited by the editor;

(5) books published by publishers who are less reliable but has been edited by the editor; (6) regular scientific work that is accompanied by clear and complete reference; (7) magazine of science / science; (8) tabloid science / science; and (9) an article written on the internet with a clear reference.

## **CONCLUSION AND SUGGESTION**

According to the result and analysis of early questionnaire of invertebrates systematic course given at the first meeting of invertebrates systematic course in the academic year of 2014/2015 as stated above, we know that:

1. The majority of students (over 75%) have never read a reference on animals systematic while  $\pm 25\%$  of students answered that they have read references about animals systematic from highschool textbook. This suggests that before attending the lecture course of invertebrates systematic, the provision of such students' prior knowledge about animals systematic still quite low.
2. Students' opinion about the criteria of a good reference are quite diverse. Some students think that arise with regard to the criteria of a good reference namely good reference comes from the book / print literature published by a publisher that has credibility, research journals, and websites that can be magnified accounted for scientific truth. Opinion of the students demonstrated the theoretical, the student has understood the criteria of good references. However, there is still a small proportion of students ( $\pm 15\%$ ) who do not understand the criteria of good references.
3. In general ( $> 80\%$ ) answered the students have never and do not know the reading room owned by Biology education department of FKIP UMS. While  $\pm 20\%$  of students answered already been visited, but the intensity is very rare.
4. Most students (60%) answered frequently visit the university library, while a small proportion of students (25%) answered always visit the university libraries and the rest (15%) answered never revisiting the university library.
5. Generally, the students have to know the sources of reference that can serve as a good reference. Of several alternative options available answers obtained results that there are four sources of reference chosen by the majority of students ( $\pm 75\%$ ) subjects, namely textbooks published by the university publishers, book publishers are reliable publications, national journals, international journals, and scientific websites reliable. While some are elected by a small portion of students that personal blog lecturers (15%), general personal blog (5%), and e-learning from other universities (10%).

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