Profile of soft skill and habits of mind prospective biology teacher

I Y N Hizqiyyah\textsuperscript{1,2}, A Widodo\textsuperscript{1}, Riandi\textsuperscript{1}, and S Sriyati\textsuperscript{1}

\textsuperscript{1}Sekolah Pascasarjana, Universitas Pendidikan Indonesia, Bandung, Indonesia
\textsuperscript{2}Departemen Pendidikan Biologi, Universitas Pasundan, Bandung, Indonesia

\textsuperscript{*}iynh\_biokipas@yahoo.com

Abstract. Soft skill and habits of mind is an ability that must be possessed by biology teacher candidates especially in solving problems. This study aims to describe the profile of soft skill and habits of mind of biology teacher candidate of FKIP Pasundan University. This research used survey method with qualitative descriptive technique. The results of the research obtained information that there are 12 subjects are dislike by the students of Biology Education Program of Unpas University, thoose are: Genetics, Physiology and Entomology, Criptogamae Botany, Phanerogamae, Statistics, Nutrition Science, Animal Physiology, Sundanese Culture, Chemistry, and Physics. The ability of students thinking skill of Biology Education Study Program of FKIP Unpas in problem solving especiailly in solve a problem as a whole has bad category.

1. Introduction

The quality of education in fact equal to the quality of learning [1]. The quality of the learning process is influenced by various factors, including the quality of students, the quality of teachers, quality of teaching, curriculum, facilities, infrastructure, cost and so on. However, among the various components of the teacher plays a very important and strategic. Without a good quality teachers, all the components of the learning process becomes meaningless, the low quality of the learning process that ultimately result in a lower quality of learning outcomes. Thus not surprising that the problem of low quality of education the teacher is the most rapidly hit oblique accusations as cause. Education grade is education that can perform quality learners maturation process developed by freeing learners dar ignorance, incompetence, powerlessness, untruth , dishonesty, and of bad character and quality of faith.

Along with the times, the essence of life is a problem-solving situation. As'ari, in conference xand Workshop [2], cites the opinion of NCREL (2003) that basically the 21st century is characterized by the following characteristics: (1) a digital world, (2) requires inventive thinking, (3) require effective communication, and (4) require high productivity. So it is very important to introduce and familiarize students hone the problem-solving skills, good problem routine and problems. non-routine. Most of the problems in this world is problems non-routine that are structurally disorganized (ill-structured problem) and the solution allowed to use algorithm. Unfamiliar examples of problems non-routine with settlement irregular (ill-structured problem)as quoted by [3] of TIMMS 2011 is as follows. School math learning aims to make the students have the ability to solve problems that include the ability to understand the problem, devised a mathematical model, solve the model and interpret the obtained solution. However it is still a contradiction with the facts shown by the TIMSS 2011 [3] and PISA 2009 [4].

In general, the nature of real life when someone is no longer able to respond to issues related to life, and no longer able to how to deal with the necessary intelligent attitude to mealakukan oriented action
on resolving the issue, in this case said Habit of Mind. Someone who has a habit of mind can be said to be reflected soft in his skills. Relation to graduates who already reflected habits of his mind, when faced with the problem on someone, he not only face it but also at once by action or thinking how to solve it. Krulik and Rudnick [5] define the problem-solving as a way that a person using the knowledge, skills and understanding to meet the demands of the situation is not routine. The problems presented should ask a problem in a comprehensive, application, analysis and synthesis. Learners must choose the necessary knowledge, learn it, and connect it to a given problem [6]. [7] states that the syntax of problem-based learning consists of five phases; directing students on the issue, organizing students to learn, help independent inquiry and groups, develop and present artifacts and exhibits and to analyze and evaluate the work.

The purpose of research is to determine the profile of education in general in Biology Education Studies Program FKIP Unpas, student response to the lectures resolve the problem, Softskill (thinking habits: habits of mind) students students in solving problems. Observations in this case study is intended to determine the learning process that lasts for student teachers of Biology in Biology Study Program, FKIP Unpas. The results of observations expected to be useful to be used as a basis in determining the development strategy of learning programs for the sake of the implementation process of quality learning that ensures the success of student teachers in achieving their academic achievement, become teachers of biology that has the ability through experience, that are expected to produce graduates who have competitiveness one of thempower that is capable of learning practice problem solving and more away again have the experience or ability to practice solving the problems in his life.

2. Method
The method used is survey research to profile the learning process, skills resolve problems and soft skills/habits of mind students at the Faculty of Biology Education courses Teacher Training and Education (Guidance and Counseling) Pasundan University (Unpas) Bandung. reviewers do not provide treatment or treatment of research subjects, but only trying to uncover the data is. From these data are then compared or linked using the assessment results with the questionnaire perception results about student and faculty interviews. The study was conducted at the Department of Biology, Faculty of Education Teacher Training and Education. As described in Chapter I, the study is restricted to students of the seventh semester (odd), assuming that the student has signed almost all of the subjects in the S-I in Biology Education courses FKIP Unpas Bandung. Study done for 1 month which begins in early May to early June 2017. The main activities include the assessment of the preparation phase (pre survey), execution and reporting of the study results. Event execution and reporting results of the study which includes the development of research instruments, instrument validation test, surveys and field observations, data analysis, report writing. Participants engage students 7th semester (odd) as many as three classes. (class A = 40, B = 43, B = 41). More specifically, the study used a sample of students from class C is numbered as many as 41 the number of students consists of men and women. Subsequently the samples obtained minimal10% of the population, ie as much as 12.4 or rounded to 14mahasiswa. In this study used all students from class C totaling 41 students. Data necessary in this field of study, have been obtained by means of; Direct field observation, the acquisition of formal data, the use of questionnaires, interviews and document research. The data analysis technique used is planned to be used qualitative descriptive analysis. The results of the analysis in the form of presentation of data in tables and graphs.

3. Result and Discussion
11. Profile of learning problem solving skills of student
Based on the calculation of the percentage, tests the ability of problem-solving skills of students in solving problems of the settlement of the problem as a whole has a category is not good, this is indicated by the percentage points below the minimum that is in order: (1) the ability to clarify the term concept is not yet clear to the percentage 11 , 9%; (2) the ability to formulate and analyze problems percentage of 13, 7%; (3) the ability to seek additional information and other resources with the percentage of 16%;
This means that the ability to solve problems in formulating the problem and analyze the smallest problem is the skills possessed by students in solving the problems associated with everyday life, especially the included studies Ecology, Environment and Entomology. The following chart is presented Table 1 and Figure 1 as supporting data.

**Table 1.** Assessment tests students for solving skills measure

<table>
<thead>
<tr>
<th>No</th>
<th>Problem criteria</th>
<th>Average</th>
<th>Percentage (%)</th>
<th>Criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ability to define problems and analyze problems</td>
<td>1:37</td>
<td>13.7</td>
<td>Not Good</td>
</tr>
<tr>
<td>2</td>
<td>Able to clarify the term concept is unclear</td>
<td>11.88</td>
<td>11.9</td>
<td>Not Good</td>
</tr>
<tr>
<td>3</td>
<td>Ability to define problems and analyze issues</td>
<td>1.7</td>
<td>17</td>
<td>Neither</td>
</tr>
<tr>
<td>4</td>
<td>Able to seek additional information and another source</td>
<td>1.6</td>
<td>16</td>
<td>Good</td>
</tr>
<tr>
<td>5</td>
<td>Being able to seek additional information from other sources</td>
<td>2:12</td>
<td>21</td>
<td>Good</td>
</tr>
<tr>
<td>6</td>
<td>Capable of clarifying the term concept unclear</td>
<td>2.2</td>
<td></td>
<td>Good22</td>
</tr>
<tr>
<td></td>
<td><strong>total</strong></td>
<td><strong>20.87</strong></td>
<td><strong>100</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 1.** Assessment tests students for measuring skills troubleshooting

1.2. Softskills/habits of mind of students

Based on the recap observation of the student, in addition to the ability hardskill students targeted lecturers each end of the lesson is also professor of applying softskill contained in the Student Education courses Biology FKIP Unpas, among which is responsible, working together, to respect others, to work optimally, think smart (habits of mind), critical thinking, creative thinking, and thinking of innovative (as presented in Table 2 and Figure 2 below). The softskill minimum value is think smart with the percentage of 2, 44% compared to the others. While the highest value of softskill is innovative thinking with a percentage of 19.51%. Sequentially from high to low are: (1) critical thinking; (2) to think creatively and responsibly; (3) work optimally; (4) critical thinking; (5) respect for others; (6) work together; (7) think smart.
3.3. Relations of Student’s softskills and habits of mind

Based on the observation of ratings soft skills / habits of mind (have not been observed) in the lecture by 3 observers on the target subject to a number of students, obtained information that highest value of soft skills obtained on the courses Sundanese Culture and Religious Education. Achievement smallest value of Student softskill in the subject of the target was observed that subjects Entomology and Animal Physiology and Zoology Invertebrates. This may imply the relationship between subjects unpopular with the students soft skill in general. And if it is associated with problem-solving skills of students at one of the subjects, it can be that when students do not like the course this is possible because the faculty in implementing the learning using a method that does not require students to work in groups to provide opportunities for the emergence soft skills of students through the learning process.

Over time last four years the sheer number of new students of Biology Education Studies Program, FKIP UNPAS, shows a rapid increase over the previous year as described. Various reasons for prospective students settled on Biology Education Studies Program, FKIP UNPAS, collected through a questionnaire that was distributed to a number of student representatives semesters 5 and 7. As many as 60% of them expressed reasons for wanting to become a teacher of Biology, which consists of 44.29%
wanted become a biology teacher without the so called college and 15.71% wanted to be a teacher of Biology educational outcomes Biology Education Studies Program, FKIP UNPAS. In addition, 37.14% of students chose Biology Education Studies Program, FKIP UNPAS, because it did not pass the entrance examination at other universities and 2.85% want higher education regardless of their field of study. Although the new students of Biology Education Studies Program has increased from year to year but the level is still low selectivity. Comparison between the number of students who enroll for the amount received is not tight. Percentage of stringency screening prospective students ranged from 5.72% to 11.26%.

This time faculty Study Program Biology numbered 31 people, made up of 21 permanent academic staff originating from the Department of Biology Education and other study programs in environmental FKIP Unpas and 3orang faculty are not fixed / extraordinary coming from other universities in Bandung. Viewed from the side of educational qualifications, lecturer in Biology Education Studies Program, FKIP UNPAS sufficient. Some 10 people educated teaching staff last S1 (33.33%), 15 people educated S2(50%) and 5 educated S1 (16.66%). The entire staff were educated S1 is currently studying S2. In addition, four people remain educated staff S3 is continuing his studies at levels of S1. The table in the appendix also shows most of the faculty have academic position Associate Professor, that is 15 people (50%). Position Associate Professor is owned by six lecturers (20%) and Playground Young 6 lecturers (20%). But there are still two lecturers who had the post of assistant expert (6.66%), while the post of Professor of solely owned by one lecturer only (3:33%). Profile Biology Education Studies Program students are very diverse. This diversity includes socioeconomic background and region of origin student families. Biology Education Studies Program in demand by prospective students, especially those from West Java and Banten as well as enthusiasts of Central Java and some areas outside of Java such as South Sumatra, Bangka and Belitung. Although the amount received is not tight. Percentage of stringency screening prospective students ranged from 5.72% to 11.26%.

Questionnaire regarding students' perceptions of learning in general showed 81.43% of the students found the lecturers generally mastered the course material subject well, but the way of delivery is not good so elusive material. A total of 15.71% of the students found the material master lecturers and teaching good way so that the material is more easily understood. Only 1:42% of students rate the teachers do not master the material well. Contrary to the assertions, 35.71% of the students found learning methods are presented lecturers are very helpful understanding of the subject matter. 21:43% whereas in general the students found learning methods are presented lecturer does not help understanding of the subject matter. 31.43% more students argue that most professors give lectures with a lecture and do not provide the opportunity to discuss. There is also (8.57%) of students showed that most professors give independent learning tasks without starting debriefing. Criticism and suggestions for improvement of the learning process derived from the 90.90% of the students. Some of the students criticized the lecturer exemplary problem in terms of discipline. Students found there are still some lecturers who are often not even present late according to the schedule set. While in terms of learning, most students want a more varied learning methods and not only lectures, better teaching materials, as well as the media that further facilitate the understanding of students to the concepts that are abstract. According to interviews with professors argued that the support duties that often changed the course lecturers focus resulted in deep subject matter. However, lecturers maximum effort to master the material. Various strategies pursued to help students understand the subject of lecture material. To obtain a more detailed picture of the learning process is carried out observations focused on the subject Physiology as one of the subjects is accompanied practicum with sustainable management, the courses Genetics accompanied lab but is managed separately and Embryology as a lab course that is not accompanied practicum.
4. Conclusion
Based on the analysis and findings of the research shows that the ability thinking skills of students of Biology Education FKIP Unpas in solving problems of students in solving problems overall problem resolution has category no good. The existence of a relationship between subjects who do not like the student with softskill students in general. And if it is associated with problem solving skills of students at one of the subjects, it can be that when students do not like the course this is possible because the faculty in implementing the learning using a method that does not require students to work in groups to provide opportunities for the emergence soft skills of students through the learning process.

5. Acknowledgments
We would like to thank the parties involved in this research.

6. References
[1] Satori D 2016 Pengawasan dan Penjaminan Mutu Pendidikan (Bandung: Alfabet)