Lesson plan profile of senior high school biology teachers in Subang

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Abstract. Lesson plan have important role for biology teachers in teaching and learning process. The aim of this study was intended to gain an overview of lesson plan of biology teachers’ at Senior High Schools in Subang which were the members of biology teachers association in Subang. The research method was descriptive method. Data was collected from 30 biology teachers. The result of study showed that lesson plan profile in terms of subject’s identity had good category with 83.33 % of average score. Analysis on basic competence in fair category with 74.45 % of average score. The compatibility of method/strategy was in fair category with average score 72.22 %. The compatibility of instrument, media, and learning resources in fair category with 71.11 % of average score. Learning scenario was in good category with 77.00 % of average score. The compatibility of evaluation was in low category with 56.39 % of average score. It can be concluded that biology teachers in Subang were good enough in making lesson plan, however in terms of the compatibility of evaluation needed to be fixed. Furthermore, teachers’ training for biology teachers’ association was recommended to increasing teachers’ skill to be professional teachers.

1. Introduction
The existence of teachers as educators cannot be separated from the process of enhancing the quality of education [1] stated that teachers play a very important role in education. Teachers become the key to increase the quality of education. Furthermore [2] said that school’s facilities and programs available will not give the best outcome if the teachers are not qualified. One of the qualified education requirement is the consistency of teachers’ performance [3]. Qualified teachers are hoped to assist students to construct their own knowledge and actively involved in the learning process. Nowadays, teachers are expected to have a good preparation to demonstrate their knowledge of related subject and pedagogic [4]. Teachers are expected to increase their professionalism. On this research [5] [6] stated that teachers’ quality was correlated with students’ achievement. Therefore, a good quality of learning process requires consistency and a professional teachers’ performance.

However, it is very ironic to see the quality of teachers in a present time. Based on the research of [7,8] mentioned that although many teachers received a higher educational background, their performances contributed less to the increase the quality of students’ achievement. [9,10] stated that low quality of teachers as a result of low knowledge acquisition and curriculum implementation by the teachers. Meanwhile [11-13] stated that to become professional teachers, you had to have skills and learning desire.
The curriculum which is always developing forces teachers as a centre of learning process to evolve. Curriculum 2013 is a curriculum that emphasizes on understanding, developing skill and characters building. This curriculum forces teachers to have many knowledges and be able to make students to be productive, creative, innovative, and effective. Teachers are supposed to make a good lesson plan before starting to teach. Nowadays in making lesson plan, teachers didn’t arrange it well [14]. Most teaching and learning process is based on the textbook, the lesson plan is just a complement.

A good lesson plan always reflects the real condition of a class. Based on regulation of the Indonesia ministry of education and culture no 22 year 2016, lesson plans are developed from syllabus to direct student’s activity to achieve basic competence. Each teacher in every school is obliged to make a thorough and systematic lesson plan in order to have an interactive, inspirational, fun, and challenging learning process, and also motivate students to actively engage and give an enough space for an innovative, creativity, and independence based on students’ talent, interest and their physical evelopment. [15-18]

Biology teaching has been adapted to the development of curriculum 2013 and it’s expected to make a teaching and learning process more meaningful. However, in reality there are many factors that hamper teachers to make a based curriculum lesson plan. Time allocation and efficiency in a learning process become teachers’ main problem in making a RPP (lesson plan) [19].

Based on the explanation above, the writer wants to get the lesson plan’s overview of biology teachers which are appropriate with a standardized lesson plan’s component from government [18, 20]. As it is hoped to create a biology teacher who can give a standardized learning process and become a professional teacher.

2. Methods
Method used in this research was descriptive. Data collected was analyzed and interpreted, then it was described to portray the subjects’ condition. The subject of the research was Biology teachers of public and private Senior high School in Subang who were the members of Biology teachers association (MGMP Biologi) in Subang regency. It involved 30 Biology teachers. Data collected was from the analysis of lesson plans (RPP). The analysis covered subject’s identity, basic competence, the compatibility of learning method/strategy, the compatibility of instruments, media and learning sources, learning scenario and the compatibility of assessment. Data was analyzed descriptively and presented in the form of diagram and table. Data was analyzed based on regulation of the Indonesia ministry of education and culture no 65 Year 2013. Scoring was used to analyze the data. Score 3 was for the perfect compatibility (maximum score), score 2 was for half compatibility, score 1 was for less compatibility, and score 0 was for no compatibility. The analysis went through these steps:

2.1. Counting percentage based on [21] formula:
1. Each indicator was given the score
2. Score was changed into percentage

\[ \text{NP} = \frac{R}{SM} \times 100\% \]  

NP : Percentage value
R : Raw score
SM : Maximum score
100 : Fixed number
2.2. *Making an interpretation based on the previous step:*

**Table 1.** Interpreting percentage into category.

| Percentage (%) | category  |
|----------------|-----------|
| 86-100         | Very good (A) |
| 76-85          | Good (B) |
| 60-75          | Fair (C) |
| 55-59          | Low (D)  |
| ≤54            | Very low (E) |

3. **Results and Discussion**

3.1. *Lesson plan’s profile of Senior High School Biology teachers*

Lesson plan was analyzed to get an overview of Biology teachers in planning their lesson plans. The result of lesson plan’s analysis can be seen in Figure 1.

![Figure 1. Lesson plan’s profile of Biology teacher.](image)

Figure 1 showed that Biology teachers had different skill in making lesson plan. From 30 Biology teachers, 4 teachers had very good category, 9 teachers were in good category, 6 teachers were in fair category, 7 teachers were in low category, and 4 teachers were in very low category. However, the average number of Biology teachers in making lesson plan was 70.07 with a fair category. It can be concluded that most Biology teachers had a good enough skill in making a lesson plan before conducting a learning process in the class.

3.2. *Data analysis of lesson plan’s components of Biology teachers*

3.2.1. *Subject’s identity.* Table 2 showed that biology teachers were in good category in formulating a subject’s identity in a lesson plan. Generally, Biology teachers had no difficulty in writing the subject’s identity in their lesson plan.
3.2.2. Basic competence analysis. The capability of Biology teachers in developing basic competence was in fair category. Based on table 3, it can be seen that for each subcomponent, the highest percentage was in formulating learning indicator. Meanwhile material description served the lowest percentage.

### Table 3. Data analysis of basic competence (KD)

| No | Analysis of KD | Biology teachers | % | Category |
|----|----------------|------------------|---|----------|
| 1  | Indicator is formulated based on basic competence | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 85.56 | B |
| 2  | Learning purpose is formulated based on basic competence | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 81.11 | B |
| 3  | The availability of material description | 1 | 3 | 2 | 2 | 2 | 1 | 2 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 65.56 | C |
| 4  | Material summary | 2 | 3 | 2 | 2 | 2 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 65.56 | C |
|    | Average | 74.55 | C |

3.2.3. The compatibility of learning method/strategy. Table 4 showed the competence of Biology teachers in adjusting method/strategy with the learning purpose was in fair category.

### Table 4. The compatibility of learning method/strategy

| No | The compatibility of learning method/strategy | Biology teachers | % | Category |
|----|---------------------------------------------|------------------|---|----------|
| 1  | Learning method is appropriate with learning purpose | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 72.22 | C |

3.2.4. The compatibility of instruments, media and learning sources. Table 5 showed that the teachers were in fair category in adjusting the instrument/media/learning sources used in the learning activity.

### Table 5. The compatibility of instruments, media and learning sources

| No | The compatibility of instruments, media and learning sources | Biology teachers | % | Category |
|----|-------------------------------------------------------------|------------------|---|----------|
| 1  | Learning media is in line with the learning purpose | 1 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 89.89 | C |
| 2  | Students’ involvement in using media | 1 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 73.33 | C |
|    | Average | 81.11 | C |

3.2.5. Learning scenario. Table 6 showed the teachers’ competence in formulating learning scenario which covered preliminary activity, main activity, and closing activity. It can be seen that the teachers had good performance.
3.2.6. **The compatibility of assessment.** The sixth component of a lesson plan is planning an assessment used in teaching and learning process. Table 7 showed the competence of the teachers in planning the assessment. It can be seen that the teachers were in a very low category. The teachers couldn’t be able to adjust the assessment with the learning purpose, material characteristic, and basic competence. Most of the teachers didn’t include technique, procedure, and instrument of assessment.

| Table 7. Data analysis of Assessment compatibility |
|-----------------------------------------------|

| No | Assessment compatibility | Biology teachers | %   | Category |
|----|--------------------------|-----------------|-----|----------|
| 1  | Technique, procedure, and instruments are available | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 | 67.78 | C       |
| 2  | Learning assessment | 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 | 55.56 | K       |
| 3  | Questions are formulated based on indicators | 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 | 55.56 | K       |
| 4  | Instruments are equipped with answer key-scoring | 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 | 46.67 | K       |

4. **Conclusion**

Based on the findings, the teacher’s performance in making a lesson plan was in fair category. However, the compatibility still needs to be improved especially on formulating the assessment which should cover authentic assessment for knowledge competence, attitude, and skill competence of students. We suggested that Biology teachers develop their own lesson plan so they can adjust with their classroom and students’ situation. In that way, a lesson plan can be used as a guidance to teach in the classroom. Moreover, the teachers should have a broader knowledge in Biology teaching and they should get more training.

5. **References**

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