

Senior High School Physics Teachers' Ability to Apply the Learning Models of 2013 Curriculum

Rizky Febriyani Putri, Ellyna Hafizah, Syubhan Annur

Science Education Program
Universitas Lambung Mangkurat
Banjarmasin, Indonesia
febyonly@gmail.com

Jumadi

Postgraduate Study Program
Universitas Negeri Yogyakarta
Yogyakarta, Indonesia

Abstract—This research aims to describe the ability of Physics Teachers of Senior High Schools in Sleman in planning and applying lesson and material by using the models that have been provided in 2013 curriculum. This research was survey design and it was conducted by using descriptive quantitative approach. The result of this research showed that the ability of teachers in planning and applying or implementing the lesson and the material is on good category.

Keywords—Teachers' Ability, Instructional Planning, Implementation Of Learning, 2013 Curriculum

I. INTRODUCTION

The Government of the Republic of Indonesia through the Ministry of Education and Culture improves and renews the educational system in Indonesia in the form of curriculum renewal, teacher arrangement, improvement of education management, as well as the construction of educational facilities. This renewal is expected to improve the quality of education in Indonesia. The improved quality of education will be achieved if the teaching and learning activities in the classroom are conducted effectively. Teacher's role of paramount importance in achieving this improved quality of national education, attention and analysis also need to be directed to the teacher in implementing the learning task.

An educational component that will determine the implementation process with a good education is the teacher. In line with these opinions, in all systems of education the teacher's performance is one of the determining factors of school effectiveness and learning outcomes [1]. Not many teachers are able to carry out the role and function adequately. Problems faced coming out of the facility, the social culture of the local schools, and the educational system. Teachers are required to be able in managing the teaching and determining the strategy, planning and assessing. Ref. [2] states that teacher is a person who has the ability to design learning programs and be able to organize and manage the classroom so that students can learn. According to [3] teacher can be defined as a person whose job related to making national life in all of its aspects, both spiritual and emotional, intellectual, physical, and other aspects. From the above discussion, it can be concluded that teacher is a profession that is legally

formally or informally assigned life by his/her ability to design learning programs that are used to carry out the primary task of educating, teaching, guiding and evaluating students both in the classroom and outside the classroom.

Teachers are the first and foremost responsible in transferring knowledge to students. Teachers are the dominant determinant in education in general because they play a role in the learning process, where the learning process is the core of the educational process as a whole [4]. Success in achieving the goal of education is largely determined by the role of teachers [5].

In the theory of education production function, teachers, curriculum, and educational facilities are included in the category of instrumental input. Meanwhile, the students are included as raw input that will be processed using the input instrumental. Implementation of education production function theory in Indonesia is considered too concerned with instrumental input, and less focus on the problem of learning process in the classroom. The quality of education is still the concern because it is too oriented to instrumental input, and no or little concern for teachers designed the learning process in the classroom. The process of learning in the classroom is actually a black box that needs more serious attention from the teachers, without ignoring the instrumental input [3].

One of the factors that affects the learning objectives and education in schools is teacher competence. As for the kinds of competencies that must be owned by teachers, among others are pedagogical competence, personal competence, social competence, and professional competence. Pedagogical competence includes teachers' understanding of the learners, the design and the implementation of learning, evaluation of learning outcomes, and the development of learners to actualize various potentials [6].

In addition to competence, teachers are also deploying a variety of basic teaching skills. According to [7] there are seven teaching basic skills to master the teaching ability, namely: (1) the ability to ask; (2) skills provide reinforcement; (3) hold a variety of skills; (4) the skill to explain; (5) opening and closing skills lessons; (6) the skills to guide the discussion; and (7) classroom management skills. Teaching basic skills that have been outlined above is the provision of teachers as leaders in the classroom. In the context of the

classroom, a teacher as a leader or manager acts as the manager of learning. There are four components of classroom management skills, namely: (1) personal approach skill; (2) organizational skill; (3) guide and facilitate learning skill; and (4) plan and implement teaching and learning skill. In managing the learning process, the teachers ability is closely related to three managerial functions of planning, implementation, and evaluation. Some competencies, skills, and abilities of teachers who have been mentioned above, teachers ability in planning the lessons is the ability in designing the learning to understand the educational foundation. In designing the lesson plans, it includes: (a) identity of the school; (b) identity the subjects or themes / sub-themes; (c) identify the class / half; (d) identify the subject matter; (e) identify the time allocation; (f) identify the learning objectives formulated by basic competence; (g) identify the basic competencies and indicators of achievement of competencies; (h) identify teaching materials; (i) identify methods of learning; (j) identify a medium of learning; (k) identify the learning resources; (l) identify the measure of learning; and (m) identify the assessment of learning outcomes.

The ability of teachers in implementing the learning is the teachers ability to organize the background of the overall learning process of learning and competence planned formation including: (a) managing the space and learning facilities; (b) implementing the learning activities that include preliminary activities, core activities, and the activities of the cover; (c) managing classroom interaction; (d) demonstrating special skills in teaching subjects; and (e) carrying out an assessment in a scientific study.

Tools to achieve the goal of education are the curriculum. As we know, the Indonesian education system has set the Curriculum 2013 in July 2013 and, in the meantime the Regulation No. 159 of 2014 on Curriculum Evaluation of 2013 Curriculum, after three months of 2013 conducted throughout Indonesia, the Indonesian Minister of Education decided to suspend the implementation of 2013 Curriculum in school applying the new school semester and continue to implement 2013 Curriculum at schools that have implemented 2013 Curriculum for three semesters.

The implementation of 2013 Curriculum is something new for teachers including science teachers. Teachers must have knowledge of the curriculum and understand the process in which the curriculum could be developed [8]. The emergence of 2013 Curriculum requires an adjustment of teachers in the learning package in accordance with the curriculum set out in 2013. A number of teachers preparation should be done for preparing a lesson plan, learning resources and assessment instruments with appropriate implementation strategies. This is consistent with the opinion of [9] that if the decision is to engage in curriculum development or adaptation, they have to make sure that teachers have the content knowledge needed to translate reforms into specific and coherent ideas curriculum, and that they have a sample time to develop, test, and refine the curriculum materials. Therefore, based on that opinion when teachers are given the opportunity to develop and adopt

the curricula, the government or a team of curriculum developers must ensure that teachers have the knowledge needed to translate ideas into specific and coherent curriculum and give the opportunity to develop, test and refine curriculum materials. Therefore, teachers are required to have the ability to both conceptually and practically to carry out the steps in curriculum development.

The curriculum emphases must be in concert with local needs and reflective of students' attitudes and aspiration [10]. The curriculum must involve teachers and the community; curriculum emphasis should be in accordance with local needs and reflect the attitudes and aspirations of learners. Because of this importance, each of curriculums is evaluated and then adapted to the development of science and technological progress.

Any changes in the curriculum of course can bring its own characteristics; likewise, on the model of applied learning in the new curriculum. One of the major issues in the implementation of 2013 Curriculum is how the teacher is able to apply a scientific approach with a learner-centered and emphasize learning of active learners namely with the implementation of learning discovery learning model to strengthen the scientific approach and integrated thematic. To encourage students to produce creative work and contextual, either individually or in groups, it is advisable to produce work based problem-solving (project based learning).

The research conducted by [11] drew conclusion that (1) the cognitive abilities of primary school teachers in Medan pedagogical abilities in implementing 2013 Curriculum, the overall obtained indicator was an average value of 2.70 which was good. The results obtained by the ability of teachers to indicators of the ability to understand learners, develop a curriculum or syllabus, learn to design, implement and learn dialogical educate and develop students to actualize their potential is on both categories. The indicator of the ability to evaluate learning outcomes is on good enough category. While the indicators of the ability to utilize instructional technology is on less well classified category; (2) Primary School Teachers in Medan in practice has the average of relatively good pedagogical ability to implement the 2013 Curriculum. The results obtained on the indicator pedagogic ability of teachers to plan and implement programs and learning activities is on a good category. Meanwhile, the indicator to evaluate the learning ability is on good enough category.

All in all, this study aims to describe the ability of the Senior High School Physics teachers in Sleman in applying the models of 2013 Curriculum.

II. METHODS

This study was a survey research using descriptive quantitative approach. The research was conducted at Sleman Regency in the odd semester of Academic Year 2015/2016. The schools that were involved have been continued the 2013 Curriculum including SMA Negeri 1 Godean, SMA Negeri 1 Kalasan, SMA Negeri 1 Pakem, SMA Negeri 1 Prambanan, SMA Negeri 1 Seyegan, and SMA Negeri 1 Sleman.

The population of this study was physics teachers in senior high schools in Sleman implementing 2013 Curriculum in a number of 18 students. Sixteen teachers are certified and two teachers are noncertified. The sample selection was done by simple random sampling, the population was with a heterogeneous population members. It was obtained that 10 certified teachers and one uncertified teacher.

The research was conducted in several activities, namely: (1) pre-survey to the school to determine the number of teachers who studied; (2) the preparation of research instruments; (3) research data collection; (4) The data obtained are collected, compiled, analyzed, and interpreted; and (5) the preparation of the research reports.

The data of this study were observational data of teachers' ability to plan and implement the learning. The instruments used were teachers observation sheet to plan the teaching and teacher in implementing learning ability. The data collection techniques used were observation and documentation.

Validity and Reliability Instruments

In terms of the content validity, the expert validators have mentioned that the observation sheet and questionnaire were fit to use. In terms of the empirical validity, the Rasch model was used to see the validity of each instrument. The validity test of this instrument was done with QUEST program. The QUEST program decided an item is fit or not according to the Rasch model when the magnitude INFIT t has a value of < -2.0 or $> +2.0$.

Based on the results of the validity testing, the teachers observation sheet instrument in planning the physics learning showed that there was one invalid item among the 23 items that were tested. The invalid item was on number 20. On the results of the validity testing of the observation sheet instruments in implementing the learning ability, it showed that there were two invalid items among the 29 items that have been tested. They were on numbers 11 and 25. These invalid item were not used in the calculation of the data analysis.

The QUEST program also presented the results of the reliability test according to classical test theory namely in the form of internal consistency index (internal consistency). The value of the internal consistency data analysis used polittomus Alpha Cronbach index [12]. Based to the analysis by using the QUEST program, the obtained internal consistency observation sheets of teachers' ability to plan and implement individual learning of 0.93 and 0.89.

The data including the teachers' ability to plan and implement Physics learning in this study were analyzed. The data were obtained in the form of quantitative data. Therefore, the analysis of the data used descriptive quantitative. The quantitative analysis was done by determining the categorization ability of teachers to plan and implement the physics learning and provide answers to the research questions. Steps that need to be done are to determine the first idea mean (M_i), ideal standard deviation (SBI), the highest score and the ideal lowest score with each variable as the criterion. To describe the teachers' ability to plan and carry out physics learning to use the average score is ideal as a norm comparison with the five criteria as shown in Table I.

TABLE I. IDEAL ASSESSMENT CRITERIA

No	Score Criteria	Range
1	$X > X_i + 1.8 S_{Bi}$	Very Good
2	$X_i + 0.6 S_{Bi} < X \leq X_i + 1.8 S_{Bi}$	Good
3	$X_i - 0.6 S_{Bi} < X \leq X_i + 0.6 S_{Bi}$	Moderate
4	$X_i - 1.8 S_{Bi} < X \leq X_i - 0.6 S_{Bi}$	Poor
5	$X \leq X_i - 1.8 S_{Bi}$	Very Poor

On these measures, the assessment criteria obtained the teachers' ability to plan and implement physics learning are shown in Table II below:

TABLE II. CRITERIA FOR DATA OBSERVATION RATE CAPABILITY MASTER PLAN AND IMPLEMENT THE LEARNING PHYSICS ASSESSMENT

No	Score Criterion	Range
1	$X > 85$	Very Good
2	$70 < X \leq 85$	Good
3	$55 < X \leq 70$	Moderate
4	$40 < X \leq 55$	Poor
5	$X \leq 40$	Very Poor

Based on the observation data obtained by the teachers' ability to plan and implement the learning. Description of the teachers' ability to plan and implement the learning is shown in Table III and Table IV.

The percentage of the sub aspects is judged on the ability of teachers to plan learning has a value that varies. The teachers ability in planning lessons have a percentage of 82.99% in both categories. In sub-aspects of the lesson plan identity made by teachers have been already completed which included the identity of school, educational unit level, subject, class/semester, the subject matter and the allocation of time describing the lesson plan targets to be implemented. In sub aspects complement lesson plan identity is categorized very well with a percentage of 95.45%.

TABLE III. DESCRIPTION OF THE MASTER PLAN LEARNING ABILITY

No	Sub Aspects	Percentage (%)
1	Completing the lesson plan identity	95.45
2	Mapping the basic competence and indicator	72.73
3	Identifying, developing and organizing materials, instructional media and learning resources	85.00
4	Developing scenarios learning activities	75.00
5	Planning procedures, type and prepare an assessment tool	82.27
6	Displaying lesson plan document	87.50
Average of planning aspects		82.99

In addition, to equip the identity of the lesson plans, teachers map out the learning objectives. The learning objectives have been formulated in accordance with the basic competencies specified in the 2013 curriculum. The core competencies of spiritual attitudes, social attitudes, knowledge, and skills have been published in full, but the elaboration of indicators on the skills are still not appropriate, i.e. the operational verb used yet achieving specified on the basis of competence. On the map the sub aspects of basic competence and indicator are included in both categories with a percentage of 72.73%.

In identifying, developing, and organizing the materials, the instructional media and learning resources are good. Teachers identify and develop teaching materials, choose the media that match the characteristics of the material being taught, develop instructional media that use more than one medium, choose the learning sources as well and not just rely on one book or other resources. However, in substance teaching, all teachers have not done the preparation and development of teaching materials in accordance with the potential of learners and the development of science and technology relating to such materials. Teachers only include the name of the material in the lesson plan. In the sub aspect of identifying, the developed and organized materials, instructional media and learning resources was categorized in both categories with a percentage of 85.00%.

The learning activities organized by curriculum-based activity in 2013 should be implemented with emphasis on active learners and self-learners in accordance with the development of learners. Therefore, to achieve the expected learning activities, teachers should prepare the learning activities with a good scenario, but the teachers have not yet determined the existing learning model on the Curriculum 2013 (PPA, PBL, and Discovery Learning).

In the lesson, the teacher compose and design stages of learning that teachers planned from the beginning to the end of the preliminary study to show activities, core and closing activity, with the division of time for each activity. Teachers also have compiled learning steps in accordance to the scientific approach that consists of activities to observe, ask, gather information, associates, and communicate. Every step of the activities has been designed coherently. However, the teacher did not design the syntax of the learning model learning activities specified in the 2013 Curriculum. In the preliminary activities, most teachers prepare learners to design such as checking attendance, passing the competency to be achieved, outlining the material and activities, as well as the planning the motivation. However, no teacher planned to convey the scope and assessment techniques to be performed. In the closing activity, teachers plan a summary/concluding lesson, feedback, and submit a plan for the next lesson. However, teachers rarely plan to reflect or follow up such as the provision of remedial and enrichment tasks. In designing the learning steps, inquiries/orders preparation that delivers to students in learning should be prepared. Question/command that is planned by the teachers was mostly a question of analysis and/or synthesis. In a scenario of sub aspects of

learning was in the category of well with the percentage of 75.00%.

Assessment of learning outcomes by the teachers to monitor the process, the learning progress, and improvement of learning outcomes of students is on an ongoing basis. 2013 Curriculum requires the use of authentic assessment that includes competency attitude (spiritual and social), knowledge, and skills. In the sub-aspects of planning procedures, type and prepare an assessment tool, they categorized in both categories with a percentage of 82.27%, but the attitude of competency assessment document was incomplete and teachers rarely prepare remedial and learning enrichment.

The display of lesson plan document in general is very good. The writing can be read easily, look clean and quite interesting. However, there are some posts that were less consistent or not in accordance to the EYD, such as foreign language, which is not italicized, but in general the structure of sentence used the raw phrase. The sub aspect of lesson plan document was in the category of very well with the percentage of 87.50%.

TABLE IV. DESCRIPTION ON TEACHERS ABILITY IN IMPLEMENTING THE LESSON

No	Sub Aspects	Percentage (%)
1	Managing space and teaching facilities	79.92
2	Implementing learning activities	62.41
3	Managing classroom interaction	92.05
4	Being open and flexible and to help develop a positive attitude learners toward learning	76.52
5	Demonstrating special abilities in teaching subjects	62.50
6	Assessing the scientific learning	68.18
7	The general impression of the teacher performance	75.57
Average of implementation aspects		73.88

The percentage of the sub-aspects judged on the teachers ability to implement the learning has a value that varies as shown in Table IV. The ability of teachers implement instructional obtained the percentage of 73.88% in both categories.

The sub aspects of managing the learning space and facilities are good. It has a good category with a percentage of 79.92%. Before started the learning in classroom, teachers carried out daily tasks such as checking the attendance of learners, checking the availability of stationery, cleanliness and tidiness of the board, as well as checking the readiness of students follow the lessons. In preparing the learning resources that were utilized in the classroom, teachers are using more than one source.

In sub aspects of implementing the learning activities, the category was quite well with the percentage of 62.41%. This

sub-aspect consists of several observed indicators. At the beginning of the learning activity, the teacher motivated students by asking questions which were challenged or recount events in context and giving apperception or associating learning materials with the students experience. However, teachers rarely delivered the learning competencies that must be achieved and the benefits in daily life as well as outline the materials and activities to be implemented. These activities need to be done by teachers to prepare students physically and mentally. They also give an overview on the students competencies they need to optimally. The indicator of the teachers ability to start the learning was categorized good with a percentage of 75.00%.

In the ability to master the subject matter, teachers always adapt the competence to be achieved and link the material with other knowledge, science and technology development, as well as real life. They always present the material in a systematic from easy to difficult. The indicator of the teachers ability to master the subject matter included in very good category with a percentage of 87.50%.

In the 2013 curriculum, the teaching and learning approaches as already stated in Ministry of Educational and Culture Rules on Number 22 Year 2016 about the Standard Process of Primary and Secondary Education is using the scientific approach/process-based approach to science. To strengthen the scientific approach, it is integrated with the thematic and thematic disclosure needs to be applied based learning/research (discovery/inquiry learning). To encourage students ability to generate a contextual work either individually or in groups, they are strongly encouraged to use learning approaches that produce work based problem-solving (project based learning). In the previous discussion about teachers ability in planning the lessons, teachers have been preparing the learning steps in accordance with the scientific approach, but at the time of implementation, very few teachers used the scientific approach as stated in lesson plan designed by teachers.

Generally, teachers use the lecturing method and PowerPoint as a learning medium. Therefore, the learning is not interactive, inspiring, less motivating and less independent. In the observing activity, it is included in the category of less well with the percentage of 52.27%. In general, teachers present a learning device in the form of media such as video, images, miniature, impressions, or a real object, after which the teacher encourages students to make observations. Besides these activities, when they observed the students, they also described/wrote the results. However, it was rarely used by the teachers. Teachers then expressed their opinion in front of the class with the object of being observed, but it was rarely done by the teachers. At that time, there was only one group which was asked to come forward due to insufficient time. In that activity, the category was less well with the percentage of 53.41%. Teachers commonly asked and direct the students with questions so that students understand the material to achieve the competence. It is advisable on learning that students ask questions about the information that is not understood from what was observed. By asking the

students were expected to have opportunity to develop competence and curiosity to make the learning processes have a high significance. Teachers should be able to inspire students to be willing and able to ask, in this case, students found it was not easy to ask if they are not provided with an interesting medium. The information gathering activity was categorized on the category of less well with the percentage of 46.59%. There are some teachers who did not carry out these activities, and some other teachers who just opened wide opportunities for students to seek information through various sources such as books, internet, or practicum. However, teachers rarely divided the students into groups to facilitate the collection of information. This was due to only a few teachers conducting scientific approach to split the group. At the entrance to associate activities unfavorable category with the percentage of 47.73%, this part of learners prepare/organize the information they have gathered was limited both from the activities of collecting/experiment as well as the results of the activities to observe and collect information activities has been directed by teacher. At the activity to communicate the activities, it was categorized as the fair category with a percentage of 45.45%.

Teacher rarely use learning models in the 2013 curriculum such as PBL, PPA, and discovery learning. Teachers ability to use appropriate learning model in 2013 Curriculum was in the category of less well with the percentage of 42.05%. The observation showed that only two or three teachers who modeled appropriate learning curriculum with the problem based learning as the dominant model. As teachers apply the model of problem based learning in the classroom, the steps are in accordance with what was planned in the lesson plan. Teachers informed the learning objectives, motivated students, organized the students to learn, assisted in the investigation at the time the students in group discussion, helped students to plan and prepare the results of the investigation and then presented the results of each group, as well as helped and guided the students to reflect on what has been investigated. As the PBL was in progress, teachers acted as presenters, counselors and negotiators. The roles of the teachers have been done well. But teachers experienced problems when organizing the students due to the division of groups so that the number of groups would be many. The social system when PBL was going was well. The students were active in learning, but their performance was still less in expressing their opinions. The supporting systems used by teachers when implementing PBL were namely demonstration equipment, teaching materials and students worksheets.

The teachers ability to use instructional media, utilize instructional media, and close the learning was in the category of quite well with each percentage was 64.77%, 65.91% and 69.32%. The observation results showed that most teachers used the media and they were in accordance with the material as well as the students needs. In this case, the teachers used the LCD media display video or powerpoint presentation only. Teachers have shown the ability in using the learning resources and instructional media, but the media have not shown interesting message as well as teachers rarely engaged

the students in the use of instructional media. At the closing stage, teachers generally only carried out a follow-up activity to provide direction next activity. They seldom reflected or summarized and gave oral or written test. During the learning activities that took place, learning was not implemented according to the details of specified time, but teachers have started and closed the learning on time.

The sub aspect of teachers' ability to manage the classroom interaction was in the category of very well with a percentage of 92.05%. Teachers' ability to communicate with the students has been very good. The teachers talked fluently and understood by learners, the material was written on the board or other media can be read clearly, as well as gestures and body movements. During the interaction in the classroom, the teacher maintains students engagement well such as helping students to recall the experience or knowledge that has been gained, encouraging passive learners to participate, and asking questions that can dig reaction learners. However, there were only a few teachers who responded positively to the students who participated. In sub aspect to be open and flexible and to help develop a positive attitude toward learning, the students got both categories with the percentage of 76.52%. Each teacher showed a friendly attitude to students and appreciated any dissent. Teachers approached the students and paid attention to things that the students did and provided assistance to students in need. However, teachers rarely gave praise to students who were successful and gave encouragement to students who have not succeeded. Teachers rarely encouraged students to express their own opinions. During the observation, teachers have shown enthusiasm to teach well.

The sub aspect of demonstrating special skills in teaching of Physics was in the category of quite well with the percentage of 62.50%. When teachers delivering the Physics materials, teachers should not only give an example of the application of the concept of physics in everyday life, but teachers also encourage students to give examples of the application of these concepts. However, in reality, there were only a few teachers who gave the example of the application of the concept. In addition, the learning material must be controlled by the teachers. Physics subject includes the concepts, principles, theories, and laws. The observations showed that the teachers mastery of the materials physics has been very good.

The sub aspect of conducting the assessment in scientific learning was in the category of quite well with the percentage of 68.18%. In the process or skill assessment, there were teachers who simply asked questions or assigned tasks to students. There was also a judge mastery of students through the students performance. Assessment of this process or skill can be done through observation when students work in groups, individual work, discussion, and presentation by using the observation sheet work. In the product assessment, the observation results showed that most teachers did not give written tests/assignments at the end of the lesson. In the assessment of attitudes, teachers only see the attitude of the students but not logged. Assessment was done through

observation attitude when students worked in groups, individual work, discussion, and presentation using observation sheet attitude.

Sub aspect of the general impression of the performance of teachers was in the category well with the percentage of 75.57%. In managing the learning quite well, teachers are successful in controlling the learning so that learning takes place smoothly. The teachers ability in using the Indonesian language was good with a clear and easy to understand utterance. The results of the observations also showed that the overall appearance of teachers in managing learning (physical, teaching style, and firmness) has been excellent.

Based on the results of the research on the ability of science teachers of SMP in Banjarmasin in applying the learning models specified in 2013 Curriculum (1) the ability of Physics teacher of SMA Negeri in Sleman Regency in planning the learning with learning models specified in 2013 Curriculum into good category, (2) the ability of Physics teacher of SMA Negeri in Sleman Regency in implementing learning with the learning models specified in 2013 Curriculum in good category.

According to [13] result, teachers competency were the pillar for practical implementation of a safe and effective science experiment. Students' positive attitude and their motivation to learn and provide appropriate feedback to the learning activities is significantly depending on how teachers influenced them. On the other hand, teachers need to have a high capability and competencies in developing laboratory instructions, lesson planning, preparing and documenting laboratory equipment, implementing and translating the process in the form of continuous assessment throughout the teaching practice in laboratory.

III. CONCLUSION

Based on the research results on the ability of senior high school physics teachers in Sleman Regency in applying learning models specified in the 2013 Curriculum (1) the ability of the Senior High School Physics teachers in Sleman in the learning planning with learning models specified in the 2013 Curriculum was in the category of good; (2) the ability of the Senior High School Physics teachers in Sleman in implementing the learning with the learning models specified in the 2013 curriculum was in the category of good.

Based on the findings, it can be suggested (1) the physics learning plan with the models of learning specified in the 2013 Curriculum has been good, but it needs to be optimized on the planning and mapping the sub aspects of the basic competencies and indicators. The selection of instructional media and learning resources construct scenarios of learning activities and prepare an assessment tool. Given that to carry out the study with a well needed good planning; in addition, by performing authentic assessment, it was able to describe the attitudes, skills, and knowledge of what have or have not owned students; (2) the implementation of learning requires the teachers to create a program of learning activities which need to be optimized again in the implementation by using the models of learning specified in 2013 Curriculum.

REFERENCES

- [1] M. Nadeem, "Teacher's competencies and factors affecting the performance of female teachers in Bahawalpur (Southern Punjab) Pakistan", *International Journal of Business and Social Science*, 2 (19), 217-222, 2015.
- [2] H. B. Uno, "Profesi Kependidikan: Problema, solusi, dan reformasi pendidikan di Indonesia", Jakarta: Bumi Aksara, 2007.
- [3] Suparlan, "Menjadi Guru Efektif", Yogyakarta: Hikayat Publishing, 2008.
- [4] Rusman, "Model-Model Pembelajaran; Mengembangkan Profesionalisme Guru", Jakarta: PT. Raja Grafindo Persad, 2010.
- [5] A. Hasriani, dan I. Arty, "Kontribusi, motivasi, penguasaan informasi dan persepsi mahasiswa pendidikan kimia terhadap kesiapan implementasi kurikulum 2013", *Jurnal Inovasi Pendidikan IPA*, 1(2), 2015, pp. 115-125. Retrieved from <http://journal.uny.ac.id/index.php/jipi/article/view/7495/6490>.
- [6] I. Kurinasih, dan B. Sani, "Sukses Mengimplementasikan Kurikulum 2013", Surabaya: Kata Pena, 2014.
- [7] N. A. Wiyani, "Manajemen Kelas: Teori dan Aplikasi Untuk Menciptakan Kelas yang Kondusif", Yogyakarta: Ar-Ruzz Media, 2013.
- [8] A. Hussain, A. H. Dogar, M. Azeem, and A. Shakoor, "Evaluation of curriculum development process", *International Journal of Humanities and Social Science*, 1 (14), 2011, pp. 263-271R. Nicole, "Title of paper with only first word capitalized," J. Name Stand. Abbrev., in press.
- [9] S. Mundry, and S. Loucks-Horsley, "Designing professional development for science and mathematics teacher: Decision points and dilemmas", [Versi elektronik], *NISE Brief*, 3(1), 1999, pp. 1-8.
- [10] C. L. Cullen, "The education of japanese-americans, 1942-1946: The fate of democratic curriculum reform", [Versi Elektronik], *American Educational History Journal*, 38 (1), 2011, pp. 197-218.
- [11] U. S. Rezeki, and D. Setiawan, "Analisis kemampuan pedagogik guru sekolah dasar terhadap kurikulum 2013 di kecamatan Medan Area. Program Studi Pendidikan Dasar Program Pascasarjana Universitas Negeri Medan, 2 (17), 2015, pp. 302-317.
- [12] B. Subali, dan P. Suyata, "Panduan analisis data pengukuran pendidikan untuk memperoleh bukti empirik kesahihan menggunakan program QUEST", Yogyakarta: Lembaga Penelitian dan Pengabdian pada Masyarakat, Universitas Negeri Yogyakarta. 2011.