

THE IMPLEMENTATION OF 2013 CURRICULUM FOR THE PARTICIPANTS OF BIOLOGY SUBJECT TEACHER TRAINING AT SMA IMPLEMENTING GOALS IN JAYAPURA CITY

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Abstract: The implementation of curriculum will be effective if the teacher understands the lesson planning, learning implementation, assessment planning, assessment implementation, follow-up of the assessment, processing and reporting of assessment results. This study aimed to describe the implementation of 2013 Curriculum for the participants of the biology subject teacher training at SMA implementing goals in Jayapura. The research used descriptive qualitative approach. The data collection techniques included Focus Group Discussions, interviews, and document analysis. The results showed: (1) lesson plan according to the guidance; but some of the syntax of learning did not fit the learning model; and some the competence indicator had not complied with the basic competence demands; (2) the implementation of learning sufficient in accordance with the guidelines: used the scientific approach; not consistently applied the learning model; character education and literacy through habituation had not been effective; Collaboration, Critical thinking, Creativity, and Communication (4C) and Higher Order Thinking skills (HOTS) were integrated in learning; books and practice materials were very limited; (3) the assessment planning in accordance with the guidelines; begins with establishing IPK; the grid problem was only used for the final assessment of the semester; but assessment instruments were made through adoption and adaptation; (4) the implementation of the assessment in accordance with the guidelines; attitude assessment through observation; assessment of knowledge through written tests and assignments; skills assessment through performance and project tests; but self-assessment, peer assessment, and the portfolio had not been done; (5) follow-up assessments were less in line with the guidelines; remedial through retest and assignment without remedial learning; enrichment not done; (6) the processing and reporting of the assessment was in conformity with the guidelines; using e-rapor application. It was recommended that intensive training; mentoring and group discussions were done to improve teacher competence and the provision of books in the implementation of Curriculum 2013.

Keywords: Implementation, Curriculum 2013, Biology Subject.

1. INTRODUCTION

Law of the Republic of Indonesia Number 20 Year 2003 regarding National Education System states that curriculum development is done by referring to the national standard of education to realize the goals of national education. The curriculum is developed with the principle of diversification in accordance with educational units, potential areas, and potential learners. The curriculum is structured according to the level of education within the framework of the Unitary State of the Republic of Indonesia.

The Government implements the Curriculum 2013 in a limited and gradual manner. Implementation of Curriculum 2013 supported by regulation include: Regulation of the Minister of Education and Culture (Permendikbud) No. 20 of 2016 on Graduate Competency Standard, Number 21 of 2016 on Content Standard (SI), Number 22 Year 2016 on Standard

Process, Number 23 of 2016 on Standard Assessment, Number 24 on Core Competence (KI) and Basic Competence (KD), Number 23 of 2015 on the Cultivation of Character, and Presidential Regulation Number 79 Year 2017 on Strengthening Character Education (KDP). Directorate General of Primary and Secondary Education (Dikdasmen) Kemdikbud also develops supporting texts for the implementation of the Curriculum 2013 in the form of training modules, guides, guides, and models.

The learning process in the Curriculum 2013 integrates 21st century capabilities: Collaboration, Critical thinking, Creativity, Communication (4C), Higher Order Thinking Skill (HOTS), literacy, and character education. Learning activities use various approaches and models of learning, including scientific approach and learning model (discovery learning, inquiry learning, project-based learning, problem-based learning), and others that are not based on lectures or memorization (Permendikbud No 22 Year 2016).

Assessment in Curriculum 2013 uses an authentic assessment that measures significantly the learning outcomes of learners for aspects of attitude, knowledge, and skills. Assessment of attitude aspects through observation and other relevant assessment techniques. Assessment of aspects of knowledge through written tests, oral tests, and assignments in accordance with assessed competencies. Assessment of skills aspects through practice, products, projects, portfolios, and / or other techniques in accordance with the assessed competencies (Permendikbud No. 23 of 2016).

Research from Suharno (2014) and Aqdwirida (2016) states that the implementation of the 2013 curriculum has been running in accordance with the objectives, obstacles encountered are: teacher mindset, teacher age, packaging of learning, media and learning resources, and assessment of learning outcomes. Lessons often use lecture and discussion methods (Ariadi, 2014). Preparation of teaching and learning process implemented quite effectively (Kapiyani, 2016)

SMA target of implementing Curriculum 2013 in Jayapura City until 2017 as many as 23 schools. 15 schools were funded by Kemdikbud and 8 independent schools. The subject teachers from the school have attended the 2013 Curriculum implementation curriculum. Target schools are provided with government grants to carry out mentoring programs through the In-On-In system.

This study aims to describe the implementation of Curriculum 2013 for the participants of the Biology Subject Teachers at the targeted high schools in Jayapura City, including: learning planning, implementation of learning, assessment planning, assessment implementation, assessment follow-up, processing and reporting of assessment results.

2. RESEARCH METHODS

This research uses descriptive qualitative approach with case study method to describe the implementation of Curriculum 2013 for the participants of Biology subject matter training after attending the Curriculum training of 2013 at the target high school in Jayapura City.

The research population is the subject teachers Biology alumni training Curriculum 2013 conducted LPMP Papua and learners who are taught by alumni teacher training Curriculum 2013. Sample determination with purposive sampling consists of 12 teachers Biology, 24 students, 2 principals, and 2 school supervisor.

Data collection techniques consist of Focus Group Discussions (FGDs), interviews, and document analysis of teachers' learning and assessment tools. The research instruments include FGD guides, interview guides, and document analysis sheets.

Data is processed through data reduction stage, data presentation, conclusion, and verification. Data were analyzed interpretatively during the study. The results of the analysis are then categorized according to the following criteria of conformity according to Table 1.

Table 1: Criteria of Conformity Level of Curriculum Implementation 2013

No	Tingkat keterlaksanaan (%)	Kriteria kesesuaian
1	81-100	Sangat sesuai
2	61-80	Sesuai
3	41-60	Cukup sesuai
4	21-40	Kurang sesuai
5	0-20	Sangat kurang sesuai

Source: Arikunto (2010)

3. RESEARCH RESULT

Learning Planning:

Learning Planning The 2013 curriculum is guided by the Process Standards and guidelines for the development of the Lesson Plans (RPP) published by the Directorate General of Primary and Secondary Education. Learning planning in the participants of the Biology subject matter teachers is in accordance with the guidelines but there are still some deficiencies. Implementation of learning planning is presented in Table 2 below.

Table 2: Learning Planning According to the Curriculum 2013 and its Implementation

No	Curriculum 2013	Implementation and Findings	Conformity
1	Learning planning includes syllabus and RPP	Syllabus and RPP are equipped with annual program and semester program	Very appropriate
2	The syllabus component: identity, KI, KD, subject matter, learning, assessment, time allocation, and learning resources.	Most of the syllabus components contain only KD, materials, and learning activities	Less appropriate
3	RPP components: identity, KI, KD, GPA, objectives, materials, methods, media, learning resources, learning steps, and assessment	RPP components: identity, KI, KD, GPA, objectives, materials, methods, media, learning resources, learning steps, and assessment	Very appropriate
4	The RPP content includes:		
a	Couples KI-3 and KI-4. Each KD contains a minimum GPA of the equivalent dimension of thinking on KD	KD includes KD pair KI-3 and KI-4, there is still the formulation of GPA has not match the dimension of thinking on KD	Appropriate
b	Learning methods include approaches, models, and learning methods selected according to the characteristics of the material and the learner	Some have not set a learning model according to the characteristics of the material and the learner	Quite appropriate
c	Learning resources include books, printed and electronic media and the environment	Learning resources are adjusted for school conditions	Appropriate
d	Learning media, in the form of tools to deliver the subject matter	Learning media adjusted school conditions	Appropriate
e	The learning steps include the introduction, core and cover by integrating the 4C and HOTS skills, literacy and KDP	The learning steps are not partly synonymous with the learning model and have not integrated the 4C, HOTS, KDP and literacy	Quite appropriate
f	The assessment of learning outcomes includes assessment type, assessment techniques, instrument samples are attached	Some do not attach instruments and instruments are incompatible with GPA and techniques selected	Quite appropriate

Implementation of Learning:

The implementation of the 2013 Curriculum lesson is guided by the Process Standards and study guides issued by the Directorate General of Primary and Secondary Education. Implementation of learning in the participants of the Biology Subjects training course is sufficient in accordance with the guidelines with some deficiencies. Implementation of learning implementation is presented in Table 3 below.

Table 3: Implementation of Learning in accordance with the Curriculum 2013 and its Implementation

No	Curriculum 2013	Implementation and Findings	Conformity
1	Preliminary activities: preparing physically and psychologically, motivating, linking knowledge, explaining learning objectives, and delivering material coverage	Preliminary activities: greeting, checking attendance, reminding past assignments, communicating topics and learning processes, and communicating learning objectives	Appropriate
2	The core activities of teachers use approaches, models, methods, media, and learning resources according to the characteristics of learners and subject matter.	Some use approaches and models of learning according to the characteristics of the material and learners, the limited resources and learning media	Quite appropriate
3	The integration of KDP includes 5 main	The integration of KDP is conducted	Quite

No	Curriculum 2013	Implementation and Findings	Conformity
	values of religious, nationalist, independent, mutual cooperation, and integrity	conditional because there is no written program through habituation	appropriate
4	Integration of literacy includes reading and writing, numeracy, science, information and communication technology, finance, and culture and citizenship	Integration of literacy is carried out in the learning process but is constrained due to limited facilities and sources of reading	Quite appropriate
5	4C integration includes collaboration skills, critical thinking, creative, and communicative	The 4C integration is constrained due to the time available while the material has to be delivered a lot	Quite appropriate
6	Integration of HOTS includes analytical thinking, evaluation, and inventiveness	Integration of HOTS constrained the ability of learners, especially those coming from the border or inland	Less appropriate
7	Closing activity: reflection to evaluate all activities including learning benefits, feedback, follow-up, and further learning information	Closing activities guide the teacher to make conclusions, check ability, review, give tests, assignments or information for the next meeting	Very appropriate

Assessment Planning:

Planning of the learning outcomes assessment Curriculum 2013 is guided by assessment standards and assessment guidance issued by Ditjen Dikdasmen. Assessment planning for the participants of the Biology subject matter teachers are in accordance with the guidelines but there are still some shortcomings. Implementation of learning result assessment planning is presented in Table 4 below.

Table 4: Assessment Planning Appropriate to the Curriculum 2013 and its implementation

No	Curriculum 2013	Implementation and Findings	Conformity
1	Determination of KKM subjects based on the analysis of the complexity, carrying capacity, and intake of learners at each KD	KKM subjects are set based on the analysis of the complexity, carrying capacity, and intake of learners on each KD	Very appropriate
2	Preparation of latticework based on Urgency, Continuity, Relevance, and Usage (UKRK)	The lattice grid problem is prepared only for the final assessment of the semester, there is a formulation of indicators about not reaching the KD demands, especially the HOTS	Appropriate
3	Preparation of instruments according to material, construction, and language, and has evidence of empirical validity for final judgment	Most adopt, self-assessment and assessment among learners have not been made. Final assessment has no empirical validity	Less appropriate
4	Instrument review includes material, construction, and language aspects	The instrument review does not use the guidance of the study so that there are still errors in material, construction, or language aspects	Quite appropriate

Follow-up Assessment:

Follow-up assessment of curriculum 2013 learning outcomes is guided by the assessment standards and assessment guidelines issued by the Directorate General of Primary and Secondary Education. Follow-up assessment of the participants of the Biology Subjects training students is still not in accordance with the guidelines. Follow-up assessment of learning outcomes and their implementation is presented in Table 5 below.

Table 5: Follow-up Assessment According to Curriculum 2013 and Implementation

No	Curriculum 2013	Implementation and Findings	Conformity
1	Analyze learning outcomes to establish a learning outcomes based on indicators on the achievements of KD	Analyzing achievement based on KD is not based on indicator	Less appropriate
2	Remedial activities are carried out through guidance, re-learning, assignment, or peer tutors and all end with retesting	Remedial activities through assignment or retest without prior guidance or re-learning	Less appropriate

No	Curriculum 2013	Implementation and Findings	Conformity
3	Enrichment activities are conducted for learners who have achieved complete learning through group learning or independent tasks	Have not done enrichment activities for learners who have achieved learning mastery	Very appropriate

Processing and Reporting Assessment:

Processing and Reporting of curriculum assessment outcome of 2013 is guided by assessment standards and assessment guidance issued by Ditjen Dikdasmen. Processing and reporting of assessments on the participants of the Biology subject matter teachers are very much in line with the guidelines. Processing and reporting on learning outcomes and implementation are presented in Table 6 below.

Table 6: Processing and Reporting Learning Outcomes Curriculum 2013 and Implementation

No	Curriculum 2013	Implementation and Findings	Conformity
1	Processing of attitude value based on student behavior journal for one semester summarized and concluded by homeroom. Reporting in the form of predicate and attitude description	Processing value through e-raport application. The behavior of learners during one semester is summarized and summarized by the homeroom. In the form of predicate and description of attitude	Very appropriate
2	Processing the value of knowledge by averaging the achievement of KD from KI-3. Reporting in the form of numbers, predicates, and descriptions of the best and lowest ability in KD	Processing value through e-raport application. Value is the average of KD achievement outcomes from KI-3. The value of the best and lowest KD numbers, predicates, and descriptions of KD	Very appropriate
3	Processing skill values based on the optimal value if the assessment with the same technique on the same KD. The final value is averaging the value of KD in KI-4. Reporting in the form of numbers, predicates, and capacity descriptions	Processing value through e-raport application. The final score of the skill is the averaging of all KD values in KI-4. The value of the best and lowest KD numbers, predicates, and descriptions of KD	Very appropriate

4. DISCUSSION

Learning Planning:

Learning planning plays an important role to guide learning according to KD demands. The 2013 Curriculum RPP is designed on the basis of integration of 21st century skills according to KD characteristics including 4C, HOTS, literacy, and character (Kemdikbud, 2017). The skills are developed through various activity-based learning models. Lesson planning for HOTS include teachers designing open questions on each lesson and learners think of seeking and reproducing information (Brookhart, 2016). The emphasis of 21st century skills is critical and creative thinking, digital technology, communication, the ability to acquire and apply knowledge (Marope, 2014). The challenge for teachers is to design interesting and meaningful learning, expand beyond classroom boundaries, and interact with the environment through various methodological forms (Daryanto & Karim, 2017).

Biology teachers have RPP, RPP components are in accordance with process standards, but teachers are not skilled in preparing RPP. During this time teachers are less creative because they adopt and do not know the shortcomings of RPP because the guidelines for the preparation of RPP is not well studied. There is a tendency that the RPP is an administrative fulfillment. This obstacle can be overcome if the teacher is willing to change, from the understanding of RPP as the fulfillment of administration to RPP as a professional obligation. A teacher should have a positive attitude toward innovation, feel the need for self-study, and adopt student-centered instruction (Prasetyo, 2017).

Preparation of non-standard RPPs can have an impact on the learning process, namely: (1) GPAs that do not reach the demands of KD cause low ability of learners because of minimal competence is not met; (2) the learning steps do not match the characteristics of the subject matter causing the learners the difficulty of achieving competence because the path to achieve competence through an inappropriate path; (3) characterization of unplanned characters and literacy causes improper implementation because there are no signs; (4) and instruments not complying with the GPA cause the instrument to be invalid.

Implementation of Learning:

Based on the Process Standards, the learning implementation consists of preliminary, core, and closing activities. In the core activities, teachers use models, methods, learning media, and learning resources according to the characteristics of learners and subject matter. Opening and closing the lessons done professionally will have a positive impact on the learning activities (Mulyasa, 2006)

Implementation of learning by Biology teachers has integrated character values even though they are not yet programmed because they are not designed in the RPP. The integration of character values should be done through a program directed to reinforce the value of nationalist, religious, mutual, self-reliant, integrity that has recently declined. The role of teachers in learning not only teaches, but also educates and trains in applying character values. Teachers should be able to be a model or a good example for learners.

The integration of literacy in learning has not been effective due to the limited book and learning resources, teachers need to make sure that literacy can be carried out despite limited conditions to catch up on reading ability. The 2015 Student for International Student Assessment (PISA) program demonstrates students' reading ability with a score of 397, an average score of 493 out of 70 countries (OECD, 2016).

Teachers' understanding of approaches and learning models is essential to implement learning by integrating the skills of 4C and HOTS, moreover most of the KDs of Biology subjects contain the thinking dimensions of analyzing and evaluating those demanding critical and creative thinking skills. Critical thinking is the ability to think logically, reflectively, systematically, and productively to judge and make decisions (Susiani, 2018). Creative thinking requires exploratory, investigative, flexible, and idea-based methods, but it also involves the process of synthesis and construction of ideas (Kusuma, 2010). The key to HOTS learning is to create fun learning situations through satisfying, challenging, friendly, and voting in decision-making (de Potter, 2000).

Obstacles to the implementation of the 2013 Curriculum learning include: (1) aspects of facilities and infrastructure: most laboratories are used as classrooms, limited practice materials, and books of students are less; (2) learner aspect: inactivity, low initial capability especially coming from inland or border, and economic ability; and (3) teacher aspect: limited ability and mindset that has not changed, the training materials are not implemented and developed in place of duty.

Assessment Planning:

The design of the assessment begins when analyzing the KD to formulate the GPA and formulate the question indicator to make an assessment instrument outlined in the grid. The basic components of the lattice are the specifications of the cognitive process and the content descriptions to be tested on the test (Thorndike, 2005), therefore the formulation of the indicator must match the demands of KD. Indicators about the problem about the artificial lattice teachers still measure the ability of LOTs because the average learner has a low ability. Appropriate KD demands, should be designed about HOTS as it can encourage learners to think broadly and deeply about the subject matter (Widana, 2017). The problem of HOTS is complex, many solutions, interpretations, decision-making, and is effortful because when solving the problem requires more thought and depth (Arifin, 2017).

Many teacher-made assessment instruments have not yet met from the aspects of substance, construction, and language. Instrument review is very important to know the possibility of error. The study should be done by others who master the subject matter, measurement, and language.

It is important for teachers to have the skills to make an assessment instrument. Setting up a good test is a challenge for teachers. A good test does not just happen, developing a test is more of an art, this "art" can be upgraded through systematic teaching and practice as well as giving feedback.

Implementation of Assessment:

Assessment of attitudes made by teachers only in the form of observation. Self-assessment and assessment among learners has not been implemented, should self-assessment and assessment among learners at least once in one semester (Kemdikbud, 2017). Self-assessment can have a positive impact on personal development. Assessment among learners

can provide information based on the results of his friend's assessment. Teachers can analyze the assessment results as a coaching material. Learners who show many positive behaviors are appreciated while learners who show negative behavior are given coaching so as not to repeat again and can get used to behave well (positive).

Knowledge assessment has not been accustomed to using HOTs because of the low ability of learners which resulted in the difficulty of achieving KKM. This poses a major challenge for teachers, as the high demand of KD on content standards while support to achieve has not been facilitated. About 20% of the National Examination questions are about HOTs. Learning by using critical and creative thinking will make it easier for learners to solve the problems of HOTs.

Skill aspect assessment more often uses performance appraisal and project appraisal. Assessment is done in groups due to the condition of infrastructure. Assessment with portfolio techniques has not been done, whereas this technique is excellent for forming complex capabilities gradually. Portfolio is a continuous assessment based on a collection of information that is reflective-integrative (Kemdikbud, 2017), to evaluate the success and development of a process in achieving the goals set (Surapranata, 2006). This assessment can be done between subjects, such as making a report (Biology with Indonesian), making product duties (Biology with Art Culture), so as not to burden the learners.

Follow-up Assessment:

The 2013 Curriculum Assessment uses the criterion reference that is the result of the assessment is not compared with the results of other learners but compared with the competency control (KKM). Students who have not reached the KKM will be remedial and for learners who have reached or exceeded the learning completeness given enrichment (Kemdikbud, 2017).

Teachers provide remedial through assignment or retest without prior guidance. Teachers should conduct guidance or re-learning, then re-test the indicators that have not been completed. For teachers who do not perform the analysis, remedial activities are not based on KD achievement indicators. This procedure makes it difficult for students to achieve KKM scores. The implementation of remedial can be done several times according to the academic guidelines that each school has.

Teachers have not implemented enrichment for learners who have reached or exceeded the learning mastery. The enrichment program can actually be done through group work or independently solving problems, creating projects, or scientific research. Through enrichment programs guided by teachers can enhance the mastery of learners against solving critical problems or create scientific work that can be utilized in teen scientific research competitions.

Processing and Reporting Assessment:

All SMA implementers of Curriculum 2013 in Jayapura City have used e-rapor application for processing and reporting learners' learning outcomes. The principal appoints an admin to manage the e-rapor application. Subject teachers and counseling teachers as users enter data assessment results, the system in the application process the assessment results. The e-rapor application is very helpful for teachers in processing and reporting values that have been complained by most teachers.

Reporting of assessment results is the responsibility of the homeroom teacher. Value reports contain numbers, predicates, and descriptions of competency achievements. The report also includes extracurricular attendance and activities. The value of learners is used for classroom and graduation requirements. The value of the learner is delivered in the teacher board meeting before it is established and signed by the homeroom.

5. CONCLUSIONS AND RECOMMENDATIONS

Implementation of Curriculum 2013 for teachers of Biology Subjects participants at high schools of implementing targets in Jayapura City are mostly in accordance with the guidelines. Teachers have syllabus and lesson plans, implementing learning with a scientific approach, integrating 4C skills, although there are still shortcomings in the implementation of character education, literacy, HOTs, and learning models. Teachers plan, implement, process, and report assessment of learning outcomes, although there are still deficiencies in formulating instruments, conducting assessments of attitudes and skills and implementing follow-up assessments. It is suggested that teachers improve competence through intensive training, mentoring, and group discussions as well as implementing schools providing learning facilities in particular the provision of student books, practice materials, and laboratory space.

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