

The Effectiveness of the Implementation of School-Based Curricula and National Curriculum-Based Learning Processes in Primary Schools in Indonesia

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ABSTRACT

Curriculum renewal is one of the ways to build the quality of national education. Currently, there are two types of curriculum applied in Indonesia, namely school-based curriculum and national curriculum. This study aims to compare the effectiveness of both types of curriculum in terms of planning, implementation, evaluation, and learning outcomes achieved by students. This research was conducted in East Java, using survey research design. Two towns were taken as research samples, namely Pasuruan and Blitar, Indonesia. Moreover, 132 teachers of elementary schools were taken as samples. Questionnaires of numerical and open scale forms were as data collection techniques completed with interviews, and analyzed using descriptive statistics, variance analysis, and qualitative data analysis. The results showed that the school-based curriculum was more effective than the national curriculum. There are nine components that show differences, namely the preparation of learning plans, the formulation of learning objectives, the organization of learning materials, the determination of the procedures and types of assessment, the allocation and management of learning time, the assessment of learning process and final assessment, and the achievement of student cognitive learning outcomes. These findings were thoroughly discussed according to the theory and the results of the previous research.

Keywords: school-based curriculum, national curriculum, learning process, learning outcomes

1. INTRODUCTION

Improving the quality of education is the main factor in determining the success of nation building. The success of the development can only be achieved if it is supported by qualified human resources. Therefore, to achieve the successful development of the nation, the quality of education at all levels needs to be improved. One way that can be done to improve the quality of education is to hold a continuous renewal of the curriculum.

The curriculum is the learning experience provided for learners under the school's responsibility. Therefore, the development of learners' abilities is largely determined by the curriculum. An excellent curriculum has good content that is suitable with the needs and the development of the society. Hence, it will also become a good tool to produce high-quality learners who will

become competent human resources in developing this country. Therefore, every ten-year the government renews the curriculum. The latest curriculum being used is school-based curriculum and 2013 curriculum which is called national curriculum.

The implementation of school-based curriculum is the effort to improve the quality of education in accordance with the needs, conditions, and development of the society. The aim is to establish and empower educational units to participate actively in curriculum development. The policy, on the one hand, brings enormous benefits, but on the other hand, it also brings higher demands on schools. Moreover, schools have the authority to develop curriculum according to their needs and conditions.

Consequently, schools need to have qualified human resources, both internally and externally, in order to be able to develop good curriculum. Furthermore,

since 2014 the government has implemented new curriculum known as 2013 curriculum. The goal is to enhance school-based curriculum which emphasizes merely on knowledge but puts less emphasis on the character development. There have been pros and cons during the implementation of this curriculum. Some agree and the others disagree with various reasons.

Finally, the Minister of Education and Culture in Indonesia issued a policy regarding the implementation of the 2013 curriculum. It includes for schools which have applied it for more than one semester can still continue using the 2013 curriculum but for schools that have not applied it yet or have just applied it for one semester can change it into school-based curriculum. For that reason, there are two types of curriculum implemented in Indonesia namely school-based curriculum and 2013 curriculum or known as national curriculum.

1.1 The School-Based Curriculum

The school-based curriculum is the curriculum arranged and applied in each school. Generally, there are four characteristics of the school-based curriculum namely: (1) giving full autonomy for schools; (2) increasing the society and parents' participation; (3) providing a democratic and professional leadership; and (4) providing good team work. While to improve or implement the curriculum well, there are seven items needed to be considered; namely: (1) the conducive development climate; (2) the school autonomy and educational units; (3) the school obligations and educational units; (4) the democratic and professional leadership; (5) the revitalization of community participation and parents; (6) the improvement of activities in teacher work group or subject teacher meetings; and (7) the teacher independence [1].

The school-based curriculum is developed based on the situation in each education unit, the regional potential and characteristic, the culture of the local community, and the learners. In organizing the curriculum, schools should refer to the standards formulated by the National Education Standard Board including the Standard of Content and the Standard of Graduates' Competency. The standard of content includes the scope of materials and the level of graduates' competence at a certain level and type of education.

The standard of graduates' competency is a qualification of graduates' ability that includes attitude, knowledge, and skills. The schools and school committees develop the curriculum under the supervision of the district that is responsible for the education system. The curriculum components include: (1) the school competency standards; (2) the school vision and mission; (3) the school education objectives; (4) the curriculum structure; (5) the curriculum content; (6) the learning details (time allocation and number of hours); (7) the minimum scores criteria; (8) the criteria for moving up to the next grade; (9) the graduation criteria; and (10) the educational calendar.

Moreover, the school-based curriculum is a form of an educational reform that gives autonomy to schools to develop curriculum according to the potential, demands, and needs of each school [2]. Furthermore, there are a number of benefits achieved through the development of the school-based curriculum. First, schools are able to identify their strengths, weaknesses, opportunities and challenges so that the education components at schools can optimize the human resources.

Second, schools are more aware of the needs of their institutions, especially educational input that will be developed in accordance with the level of development and needs of the students. The third is improving the accuracy of school decision making. Increasing the involvement of school and society in curriculum development is the next benefit.

Then, schools are fully responsible for the quality of education to the government, parents, and community so that each educational component at schools will try optimally to achieve the goal. Fifth, schools can conduct fair competition to improve the quality of education through innovative efforts with the supports of parents, communities, and local government. Last but not least, schools can quickly respond to the aspiration of society and the rapidly changing environment, and accommodate them in the curriculum [3].

The process of curriculum development is carried out through the following stages: (1) identifying the standard of content and the standard of graduates' competency; (2) analysing the condition of schools; (3) analyzing the opportunities and challenges that exist in the community and environment; (4) preparing and drafting the curriculum; (5) reviewing and revising the curriculum draft; (6) preparing the final draft of the curriculum; and (7) conducting consolidation and assessment. Departing from the curriculum, the syllabus and lesson plans are then developed and implemented in the classroom [1].

1.2 The National Curriculum

The main characteristic of 2013 curriculum is the content of the curriculum which is the competency stated in the form of core competency then it is broken down in the basic competencies. The core competence is a definite picture of the competencies of attitude, knowledge, and skills that learners should learn and have in schools, classes, and subjects [3].

Furthermore, in the learning process, the national curriculum emphasizes the learning of active students through scientific approaches. The scientific approach is intended to raise learners' awareness in various materials; namely observing, asking, trying, reasoning, presenting, and creating. The evaluation process emphasizes the authentic judgment which is an assessment that reveals what students really know or can do in real-life situations.

The 2013 curriculum is a competency-based curriculum. An integrated competence of behavioral, knowledge, and skills are formulated in it and all those components must be mastered by learners. The process of learning and assessment required by learners to

achieve competence is clearly defined. The expected competence of school graduates is the ability to think and act productively and creatively in the realm of abstract and concrete. Moreover, the competence is achieved through discovery learning, project-based learning, and problem-solving based learning that includes the process of observing, asking, gathering information, associating, and communicating.

The achievement of integrated competency also requires an integrated thematic learning approach which covers all subjects in an integrated way through the themes of life found by everyday learners. Hence, learners are invited to participate in a transdisciplinary learning process that places the competency related to the context of learners and the environment. The materials of various subjects are linked to each other as a whole, forming multidisciplinary and interdisciplinary learning such that the materials being learned could effectively be absorbed by learners.

The implementation of learning uses multiple strategies and multimedia approaches, learning resources and adequate technology, and utilizes the environment as the source of learning. Everything happens in the community, the environment and the whole universe is the source of learning, example and role model. Moreover, a learning model is expected to be used as an insight to suit the condition of learners in each school. Consequently, learners need to be prepared both internally and externally and both in the classroom and outside the classroom.

The approaches used to integrate the basic competencies of different learning are intra-disciplinary, interdisciplinary, multidisciplinary, and trans disciplinary. The intra-disciplinary integration is done by integrating the dimensions of attitude, knowledge, and skills into a unified whole in every lesson. Then, the interdisciplinary integration is done by combining the basic competency of some subjects to connect each other in order to strengthen each other, avoid overlapping, and maintain learning alignment.

Next, the multidisciplinary integration is done without combining the basic competency of each course so that each subject still has its own basic competency. The last, the trans disciplinary integration is done by linking various existing lessons with the encountered problems around them so that learning becomes contextual. Thus, the learning provides a complete meaning to the learners as reflected in the various themes available.

1.3 The Aims of the Study

Based on the background mentioned, this research is conducted. This study aims to present how the comparison of the effectiveness of school-based curriculum and the national curriculum implementation observed from the planning, implementation, evaluation, and its success. So far, how effective the implementation of both curriculums is still a question. Therefore, it needs to be studied intensively so that it can be used as the

foundation for the improvement and development of the curriculum.

School-based curriculum was considered as a solution to various problems in schools [4]. School renewal strategies with a bottom-up approach fitted the needs of teachers so that they could make changes in classroom learning practices [5]. On the other hand, the results of [6] research on the implementation of school-based curriculum in Indonesia showed that the quality of curriculum development process on average was quite good. However, the involvement of school personnel in development was below what was expected.

The percentage of schools in applying the curriculum is 79.22% with the fulfillment rate criteria of 67.57%. The results of [7] also presented that 62% of teachers still did not apply school-based curriculum optimally, though they were involved in dissemination. It shows that the implementation of the new curriculum is not easy. For that reason, a thorough research needs to be done in-depth in order to be successful in implementing the curriculum. Thus, this research is very important as an input in developing and implementing it.

The aims of this study are: (1) describing the implementation of school-based curriculum and national curriculum in Indonesia; (2) comparing the effectiveness of school-based curriculum and the national curriculum in terms of planning, implementation, evaluation of learning, and students' learning achievement; and (3) describing the obstacles in the implementation of school-based curriculum and national curriculum as well as offering effective solutions.

2. METHODS

The main purpose of this study is to describe the implementation of school-based curriculum and national curriculum in East Java, and compare its effectiveness from planning to evaluation. This is based rationally because most schools in East Java have implemented both types of the curriculum. In accordance with the objectives, the research design used was survey research design with mixing methods approach.

The main frame of this research referred to quantitative research completed by qualitative research. The quantitative data were collected and processed by quantitative methods, and the qualitative data were collected and processed by qualitative methods.

Thus, comprehensive findings could be produced and could address all the research issues carefully. The target of this research was elementary schools in Blitar and Pasuruan Regency, Indonesia. The main population was teachers who implemented the learning process in schools. Moreover, samples were taken representatively in each region.

The numbers of samples taken were 111 teachers consisting of 63 teachers of school-based curriculum and 69 national curriculum users. The sampling technique used was area technique, cluster, quota, random sampling.

In order to obtain the data, three data collection techniques were used: (1) questionnaires used to collect data on planning, implementation, success, obstacles and positive impacts of school-based curriculum and national curriculum in improving school quality; (2) interviews used to complete the data obtained through questionnaires; and (3) documentation also used to complete the data obtained through questionnaires especially documentaries, such as documents of school characteristics, school resources, and so on.

The research instrument used in this research was developed based on the target/research object. The type of instrument developed was the rating scale called numerical scale type. To obtain the comprehensive data, an open questionnaire was applied. There are five alternative answers provided: very ineffective = 1, ineffective = 2, hesitant = 3, effective = 4, and very effective = 5.

The validity and reliability of the instrument were achieved in two ways. First, to conduct an in-depth study of the construction of the theory of variables studied, considering the situation and conditions existed in the field, as well as developing the grid of variables based on the study of existing theories carefully, so that a good level of content validity research instruments would be obtained.

The second is to collect data for empirical test of the instrument in the field. The trial subjects were taken from the research objectives that were not taken as the research sample of 40 people. The validity of the instrument was assessed by grain analysis, and the reliability of the instrument was estimated by Cronbach Alpha analysis.

The results of the experimental instrument test showed that the instrument items have good validity, the reliability index was above 0.7, and each instrument item had a loading factor > 0.3 . As a result, it can be concluded that the instrument used was quite valid and reliable for the data collection.

In accordance with the purpose of this study, three techniques of data analysis were used. First, descriptive statistics were used to describe data research results. Some descriptive analysis techniques used were average, standard deviation, frequency distribution and percentage. Second, variant analysis technique was used to compare the learning process and outcomes by implementing school-based curriculum and national curriculum.

Third, the qualitative data analysis technique was used to describe the qualitative data of the curriculum implementation process. Furthermore, the qualitative data analysis was done by reviewing, reducing, making categorization, interpreting the data, and providing meaningful result.

The process of data analysis was done in several stages, and continuous improvement was carried out since the researchers entered the field until they ended. Conclusions were made by searching for meaning, patterns, explanations, causal paths, and formulation of propositions.

3. RESULTS

3.1 *Scalar variables The Implementation of School-Based Curriculum and National Curriculum*

Based on the research design, the effectiveness of the implementation of the curriculum was observed from 25 learning components, namely: (1) the preparation of lesson planning; (2) the formulation of the purpose and indicators of learning; (3) the use of learning materials; (4) the organization of learning materials; (5) the selection of instructional media; (6) the determination of the types of learning activities; (7) the determination of learning steps; (8) the determination of procedures and types of assessment; (9) the allocation of learning time; (10) the application of learning implementation; (11) the application of students motivation; (12) the use of facilities and learning resources; (13) the application of student organizing methods; (14) the organization of the individual, group, and classical learning; (15) the management of learning time efficiently; (16) the development of relationships with students in harmony; (17) the growth of students' self-confidence; (18) the growth of students' willingness to explore; (19) the assessment during the learning process; (20) the end of year evaluation; (21) the students' cognitive learning achievement; (22) the students' psychomotor learning achievement; (23) the students' affective learning achievement; (24) the quality of students' learning process; and (25) the quality of students' learning outcomes. Based on the results of the analysis, the data descriptions which refer to both curriculums are presented in Table 1.

According to Table 1, it can be underlined that based on teachers' opinions; there are different scores in the implementation of school-based curriculum and national curriculum. In general, the value obtained in the school-based curriculum is 98.84, while the value obtained for the national curriculum is 92.17. If it is divided by 25 components, the mean value was 3.95 and 3.69.

Analyzing from the mean value, the school-based curriculum is more effective than the national curriculum. Furthermore, the standard deviation also shows that the effectiveness score of the school-based curriculum is more homogeneous than the national curriculum. It shows that teachers' view of the school-based curriculum is relatively similar to each other than the national curriculum. Whether there is a significant difference still needs to be tested using a variant analysis.

3.2 *The Differences in the Effectiveness of School-Based Curriculum and the National Curriculum Implementation*

In accordance with the research design, the working hypothesis tested in this study was that there is a difference in the effectiveness of school-based curriculum implementation with the national curriculum based on the teacher's opinion.

Table 1 The Average Score and the standard Deviation Components of School-Based Curriculum (SBC) and National Curriculum (CN)

Number	The Components of Curriculum Implementation	SBC		CN	
		Mean	Standard Deviation	Mean	Standard Deviation
1	The preparation of lesson planning	4.19	0.618	3.81	1.033
2	The formulation of the purpose and indicators of learning	4.17	0.685	3.84	0.901
3	The use of learning materials	4.10	0.615	3.99	0.849
4	The organization of learning materials	4.08	0.451	3.68	0.993
5	The selection of instructional media	4.08	0.517	4.04	0.674
6	The determination of the types of learning activities	4.03	0.507	3.87	0.662
7	The determination of learning steps	3.97	0.782	3.77	0.910
8	The determination of procedures and types of assessment	4.17	0.555	3.04	1.169
9	The allocation of learning time	4.22	0.580	3.67	1.024
10	The application of learning implementation	3.92	0.517	3.68	1.022
11	The application of student's motivation	3.98	0.458	4.12	0.654
12	The use of facilities and learning resources	4.03	0.538	4.09	0.781
13	The application of student organizing methods	3.83	0.773	3.80	0.994
14	The organization of the individual, group, and classical learning	3.89	0.698	3.84	0.980
15	The management of learning time efficiently	3.97	0.803	3.36	1.084
16	The development of relationships with students in harmony	3.97	0.782	4.03	0.923
17	The growth of students' self-confidence	3.89	0.785	4.04	0.977
18	The growth of students' willingness to explore	3.87	0.772	3.91	1.121
19	The assessment during the learning process	3.90	0.756	2.97	1.188
20	The end of year evaluation	4.11	0.743	3.10	1.262
21	The students' cognitive learning achievement	3.81	0.913	3.25	1.130
22	the students' psychomotor learning achievement	3.59	0.978	3.75	1.104
23	The students' affective learning achievement	3.51	1.045	3.51	1.066
24	The quality of students' learning process	3.71	0.923	3.61	1.032
25	The quality of students' learning outcomes	3.84	0.884	3.41	1.062

While the null hypothesis formulated was “There is no difference in the effectiveness of the school-based curriculum with the national curriculum implementation with $\alpha= 0.05$. The results of the overall variant analysis are presented in Table 2.

Table 2 The Average Score and The Standard Deviation Components of School-Based Curriculum (SBC) and National Curriculum (CN)

Y	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1463.939	1	1463.939	7.874	.006
Within Groups	24168.326	130	185.910		
Total	25632.265	131			

Based on Table 2, it can be seen that the F value obtained is 7.874 with p is < 0.05. Thus, it can be concluded that the null hypothesis is rejected and the alternative hypothesis is accepted, that is “there is a difference in the effectiveness of the school-based curriculum and the national curriculum implementation”. The school-based curriculum is proven more effective than the national curriculum. The result of variant analysis of each learning component, by looking at the F coefficients and p are presented in Table 3.

Based on the results presented in Table 3, it can be concluded that out of 25 components of curriculum implementation, 9 of them show differences statistically. They are the preparation of lesson planning, the formulation of the purpose and indicators of learning, the organization of learning materials, the determination of procedures and types of assessment, the allocation of learning time, the management of learning time efficiently, the assessment during the learning process,

the output evaluation, and the students' cognitive learning achievement. The differences of the mean value of each component's effectiveness are presented in Figure 1.

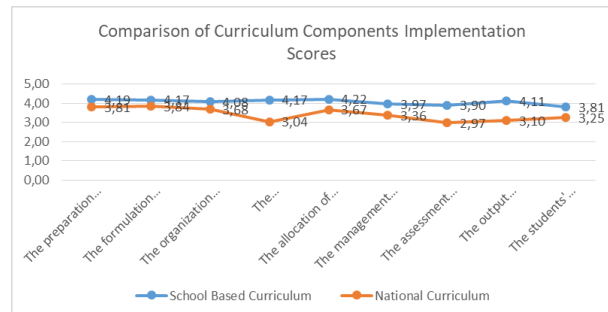


Figure 1 The Comparison of Effectiveness of School-Based Curriculum and National Curriculum

According to data presented in Figure 1, it can be concluded that all the 9 different components of school-based curriculum implementation show higher effectiveness values than the national curriculum. Therefore, based on teachers' opinions, the learning implementation of the school-based curriculum is more effective than the national curriculum. However, it is necessary to analyze the obstacles faced by teachers in applying both curriculum types and their alternative solutions during the implementation process.

3.3 The Obstacles and Solutions in Curriculum Implementation

According to the results of the sample open response analysis, both through questionnaires and interviews, there are generally 40 obstacles that teachers face in implementing school-based curriculum.

Table 3 The Average Score and The Standard Deviation Components of School-Based Curriculum (SBC) and National Curriculum (CN)

No	The Components of Curriculum Implementation	<i>F</i>	<i>p</i>
1	The preparation of lesson planning	6.384	0.013*
2	The formulation of the objectives and indicators of learning	5.664	0.019*
3	The use of learning materials	0.712	0.400
4	The organization of learning materials	8.529	0.004*
5	The selection of instructional media	0.116	0.734
6	The determination of the types of learning activities	2.461	0.119
7	The determination of learning steps	1.820	0.180
8	The determination of procedures and types of assessment	48.928	0.000*
9	The allocation of learning time	14.328	0.000*
10	The application of learning implementation	2.803	0.096
11	The application of student's motivation	1.769	0.186
12	The use of facilities and learning resources	0.220	0.640
13	The application of student organizing methods	0.033	0.856
14	The organization of the individual, group, and classical learning	0.105	0.747
15	The management of learning time efficiently	13.112	0.000*
16	The development of relationships with students in harmony	0.165	0.868
17	The growth of students' self-confidence	0.992	0.321
18	The growth of students' willingness to explore	0.056	0.813
19	The assessment during the learning process	28.413	0.000*
20	The output evaluation	30.624	0.000*
21	The students' cognitive learning achievement	9.801	0.002*
22	the students' psychomotor learning achievement	0.834	0.363
23	The students' affective learning achievement	0.000	0.997
24	The quality of students' learning process	0.381	0.538
25	The quality of students' learning outcomes	6.492	0.120

Note: * = $p < 0.05$

The dominant constraints are too many materials, learning motivation, learning interest, low student creativity, less active students, inadequate learning media especially related to the information and communication technology, less time allocation, less students' handbooks, teachers dominance in the learning process emphasizing only on cognitive orientation but less on affective and psychomotor, the difficulty of assessing affective and psychomotor skills, and teacher's difficulties in developing indicators in planning the lessons.

On the other hand, based on the result of the data analysis, 41 obstacles have been found that are faced by teachers in implementing the national curriculum. The most dominant obstacles are the difficulties in developing complex assessment procedures, the difficulties in assessing students' affective learning outcomes, too many materials used, less time allocation, low students' learning motivation and creativity, less exploration in learning, less learning media especially related to the information and technology, teachers are less innovative in developing the lessons, the difficulty of assessing affective and psychomotor skills, and less learning resources including students' handbooks.

In order to overcome those obstacles, there are 45 steps done by teachers in the implementation of school-based curriculum. The dominant steps are increasing the learning time, completing the learning infrastructure, developing teachers' skills through training, holding teacher work group meetings or other development techniques, revising the basic competencies achieved, reorganizing the materials, enabling students with group assignment in individual tasks, optimizing the use of school facilities, and using more effective learning

methods to increase motivation and students' interest in learning.

In contrast, there are 67 steps that teachers undertake to overcome obstacles in the implementation of the national curriculum. The dominant steps taken are to simplify the assessment system, to increase the learning time, to improve the affective and psychomotor aspects in the learning process, to complete the school facilities including media, to use learning methods that can enhance students' attitude, motivation, and interest in learning, to revise the basic competencies achieved, to re-organize learning materials, and to improve the ability of teachers through training, teacher work group meetings, or other development techniques.

4. DISCUSSION

Based on the results of the study, it can be concluded that there are significant differences in the effectiveness of the national curriculum and school-based curriculum. Some components that show the differences are the preparation of learning plans, the formulation of learning objectives, the organization of learning materials, the determination of procedures and types of assessment, the determination of learning time allocation, the efficient management of learning time, assessment during the learning process, the final assessment of learning, and cognitive learning achievement of students.

The results of this study agree with [8] research which shows that school based curriculum has a greater impact on students, like motivation, interest, and participation [9]. The results of this study are also in line with other research which shows that in the practice of learning in the classroom, the national curriculum has a

gab with needs in the classroom [10]. Some teachers have difficulty using standardized learning planning formats, lack of time and resources, less of support from principals, and lack of collaboration between teachers. The results of this study also support the research of [11] which shows that with a school-based curriculum, teachers have a positive attitude towards curricula, and teachers can develop their teaching techniques well.

The results study conducted in Hong Kong also showed that the central curriculum was not suitable with class needs [12]. For this reason, it reformed finally and carried out with three types of curriculum, namely national, local and school curricula. China also develops a school-based curriculum. Some of the obstacles experienced were lack of experts, lack of sources of curriculum development, inability of teachers to develop curriculum, and limited school management.

These results are in line with the findings of this study that there are several obstacles faced in developing and implementing a school-based curriculum, they are the lack of resources, limited support facilities, lack of support both internal and external to the organization, and lack of students' willingness and willingness. For that reason, alternative steps that can be taken to solve these obstacles are improving the ability of resources, complementing supporting facilities, simplifying the learning system including an assessment system, increasing learning time, implementing effective and varied learning strategies, and increasing student activity and learning outcomes.

It supports the results of Kim's study which suggests that school-based curriculum is part of school-based management [13]. In order to achieve the curriculum development and implementation, it is necessary to implement a school-based school resource development system, implement an evaluation system that can control the quality of the school-based curriculum, manage using a strategic management system, and form a school curriculum committee.

Reviewing from the results of their learning, the implementation of school-based curriculum has a level of cognitive learning achievement of students compared to the national curriculum. School-based curriculum uses constructive-based learning models. School-based curriculum also uses multi-source learning, multi-media, and multi-learning methods. School-based curriculum also uses multi evaluation techniques. Therefore, it has an impact on increasing student achievement.

The finding is in line with several previous studies. The study result of [14] showed that cooperative learning method is superior to traditional method in general science achievement of 9th grade students. In addition, the study results of [15] revealed that constructivist teaching practices demonstrated significant success in promoting student learning. The study of the [16] also revealed that demonstration method had significant effect on students achievement than taught with the conventional lecture method.

The study of [17] showed multimedia teaching significantly promoted achievement with respect to

knowledge, understanding, application, and total achievement in biology in comparison to conventional method as well. In other view, multimedia aided teaching was more effective than traditional one [18]. Students' attitude towards science improved more if multi-media aided teaching method was used as compared to traditional method of teaching. The implementation of problem based active learning model had positively affected students' academic achievement and their attitudes towards the science course [19].

The School-Based Curriculum also emphasized evaluation techniques of process and product. The teachers have also been carrying out a comprehensive evaluation, which included cognitive, affective and psychomotor. By the comprehensive and continuous evaluation would increase the students' achievement. The research results supported the study that found continuous and comprehensive evaluation and fixed interval schedule reinforcement had significant relationship with learning and academic achievements in the subject of English at secondary school level [20].

The research findings also supported that showed teachers had readiness to implement school based assessment in the curriculum [21]. In addition, teachers had very positive perspective towards school based assessment [22]. In line with the finding, the schools had implemented procedure and regulator and provided teachers with adequate support for the effective implementation of school based assessment [23]. In other view, students identified the importance of learning outside, in the open area and through direct experience [24]. Students valued the ongoing practice of personal reflection and inquiry.

Based on the studies, it could be concluded that the implementation of school-based curriculum did not only improve students' learning activeness, but ultimately also improve students' learning outcomes comprehensively. The top-down-bottom up implementation strategy contributed significantly to the estimated educational impact of curriculum process among the stakeholders [5]. In addition, the teacher was the main factor in school curriculum development [25].

5. CONCLUSION

Based on the results of data analysis, some conclusions are drawn. First, there is a significant difference in the quality of the process and the results of the school-based curriculum and the national curriculum implementation according to teachers' opinions. If it is analyzed from the mean value, the implementation of the school-based curriculum is more effective than the national curriculum. One main reason that causes the difference is because teachers still have not fully mastered the national curriculum.

Moreover, there are nine components that show significant differences, namely the preparation of lesson planning, the formulation of the purpose and indicators of learning, the organization of learning materials, the determination of procedures and types of assessment, the

allocation of learning time, the management of learning time efficiently, the assessment during the learning process, the end of year evaluation, and the students' cognitive learning achievement.

Whereas, the main obstacles faced by teachers during the implementation of the school-based curriculum include: the difficulties in developing complex assessment procedures, the difficulties in assessing students' affective learning outcomes, low student learning motivation, inadequate learning media especially technology-based media, low parents and society's participation, less time allocation, too many materials used, and less developing and the difficulty in assessing students' attitude and psychomotor skills. While the dominant barriers in the implementation of the national curriculum are the difficulties in developing complex assessment procedures, the difficulties in assessing students' affective learning outcomes, low students' learning motivation, inadequate learning media especially technology-based media, less time allocation, and the difficulty in assessing students' attitude and psychomotor skills.

Alternatively, some suggested solutions are offered to solve the problems in the application of school-based curriculum. They are shortening the materials in the learning process, increasing or optimizing the learning time, completing the learning media, revising and reducing basic competencies, increasing students' participation with group and individual tasks, and holding continuous training or teacher work group meetings to improve teachers' quality. While some recommended solutions to solve the problems in the implementation of the national curriculum include the assessment process of each student is carried out using a certain format, enhancing students' discussion in the learning process, simplifying the behavioral assessment in report cards, providing good quality of teaching media, and holding continuous teacher training.

Finally, in order to obtain more comprehensive findings, this research can be followed up. It is recommended for the next researcher to study more deeply about the impacts of school-based curriculum and the national curriculum implementation on comprehensive students' learning outcomes. For that reason, the scope of the study should be expanded not only in terms of process and output but also in terms of outcomes and impacts. The object of the research will also be better if it is expanded. Thus, more comprehensive findings could be obtained.

REFERENCES

- [1] Yustisia, "Panduan Lengkap KTSP (Kurikulum Tingkat Satuan Pendidikan)." Yogya arta: Pusta a Yustisia, 2008.
- [2] H. Khaeruddin and J. Mahfud, "Kurikulum Tingkat Satuan Pendidikan Konsep dan Implementasinya di Madrasah," *Semarang: Nuansa Aksara*, 2007.
- [3] K. P. dan Kebudayaan, "Materi pelatihan guru implementasi kurikulum 2013," *Jakarta Badan Pengemb. Sumberd. Mns. Pendidik. dan Kebud. dan Penjaminan Mutu Pendidik.*, 2013.
- [4] R. Bolstad, "School-based curriculum development: Redefining the term for New Zealand schools today and tomorrow," in *Paper presented at the New Zealand Association for Research in Education (NZARE) conference*, 2004, vol. 24, p. 26.
- [5] J. Pietarinen, K. Pyhältö, and T. Soini, "Large-scale curriculum reform in Finland—exploring the interrelation between implementation strategy, the function of the reform, and curriculum coherence," *Curric. J.*, vol. 28, no. 1, pp. 22–40, 2017.
- [6] B. Wiyono, B.B., & Arifin, *Implementasi Kurikulum Tingkat Satuan Pendidikan di Jawa Timur*. Malang: Fakultas Ilmu Pendidikan Universitas Negeri Malang, 2008.
- [7] C. D. Diem, Y. Yusufardiyah, B. Koniaturrohmah, and L. Lismalayani, "Implementation of school-based curriculum as perceived by secondary school teachers of English," *Indones. J. Appl. Linguist.*, vol. 5, no. 2, pp. 167–175, 2016.
- [8] J. N. Mulemwa, "School-Based Curriculum Development: A Proposal for Improving Girls' Performance in SMT.," 2002.
- [9] S. Gopinathan and Z. Deng, "Fostering School-Based Curriculum Development in the Context of New Educational Initiatives in Singapore.," *Plan. Chang.*, vol. 37, pp. 93–110, 2006.
- [10] A. Yildirim, "Instructional planning in a centralized school system: Lessons of a study among primary school teachers in Turkey," *Int. Rev. Educ.*, vol. 49, no. 5, pp. 525–543, 2003.
- [11] S. Yuen, H. Boulton, and T. Byrom, "School-based curriculum development as reflective practice: a case study in Hong Kong," *Curric. Perspect.*, vol. 38, no. 1, pp. 15–25, 2018.
- [12] H. Li, "School-based curriculum development: An interview study of Chinese kindergartens," *Early Child. Educ. J.*, vol. 33, no. 4, pp. 223–229, 2006.
- [13] S. N. Kim, "The developmental directions and tasks of the School Based Curriculum Management system in Korea," *Asia Pacific Educ. Rev.*, vol. 6, no. 1, pp. 41–49, 2005.
- [14] Q. Parveen and S. Batool, "Effect of Cooperative Learning on Achievement of Students in General Science at Secondary Level.," *Int. Educ. Stud.*, vol. 5, no. 2, pp. 154–158, 2012.
- [15] M. Gordon, "The misuses and effective uses of constructivist teaching," *Teach. Teach. Theory Pract.*, vol. 15, no. 6, pp. 737–746, 2009.
- [16] N. E. Daluba, "Effect of Demonstration Method of Teaching on Students' Achievement in Agricultural Science.," *World J. Educ.*, vol. 3, no. 6, pp. 1–7, 2013.
- [17] C. V Satyaprakasha and Y. Sudhanshu, "Effect of multi media teaching on achievement in Biology," *Int. J. Educ. Psychol. Res.*, vol. 3, no. 1, pp. 41–45, 2014.
- [18] I. Shah and M. Khan, "Impact of multimedia-aided teaching on students' academic achievement and attitude at elementary level," *US-China Educ. Rev. A*, vol. 5, no. 5, pp. 349–360, 2015.
- [19] R. O. Tandogan and A. Orhan, "The Effects of Problem-Based Active Learning in Science Education on Students' Academic Achievement, Attitude and Concept Learning.," *Online Submiss.*, vol. 3, no. 1, pp. 71–81, 2007.
- [20] G. R. Angadi and M. B. Akki, "Impact of Continuous and Comprehensive Evaluation (CCE) and Fixed Interval Schedule Reinforcement on Academic Achievements of Secondary School Students in English," in *National*

- Conference on Assessment Practices in Schools*, 2013.
- [21] I. Othman, N. M. Salleh, and N. A. M. Norani, "The implementation of school based assessment in primary school standard curriculum," *Int. J. Educ. Res.*, vol. 1, no. 7, pp. 1–10, 2013.
- [22] A. N. Mansor, O. H. Leng, M. S. Rasul, R. A. Raof, and N. Yusoff, "The benefits of school-based assessment," *Asian Soc. Sci.*, vol. 9, no. 8, p. 101, 2013.
- [23] S. Y. Barley, "Perspectives of School-Based Assessment in the NSS Curriculum through the Eyes of the Administrative and Teaching Stakeholders in Hongkong," *Unpubl. Pap.*, 2013.
- [24] C. McCaw, "Secondary School Students' Ideas of Learning and Schooling. A Case-Study of an Intensive, Experiential Middle-Years Program," *Curric. Perspect.*, vol. 37, no. 1, pp. 11–23, 2017.
- [25] L. Seehamat, U. Sarnrattana, A. Tungkasamit, and N. Srisawasdi, "Needs Assessment for School Curriculum Development about Water Resources Management: A Case Study of Nam Phong Basin," *Procedia-Social Behav. Sci.*, vol. 116, pp. 1763–1765, 2014.