Project Based Blended Learning Model To Improve Students' Creativity In Designing Bahasa Indonesia Learning Devices For Primary School

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Abstract. This research is aimed at seeing the effectiveness of project based blended learning model to improve PGSD students' creativity in constructing Bahasa Indonesia learning devices. Blended learning is a learning model in face-to-face and online meeting. This current research used experimental method of Single-One Group Pretest-Posttest Design. The instruments were portfolio assessment, and questionnaire. The effectiveness was analyzed by n-gain. The research subject was Elementary student teacher of Universitas Muhammadiyah Cirebon. The conclusion of this research was the improvement of Elementary student teacher's creativity in constructing learning devices. It is proved on the significant improvement from 2,33 (the category of creative enough) become 3,80 (the category of creative) and it is supported by the high result of n-gain, it is 0,86. The data is supported with the result of students' questionnaire toward the learning, it is 83,7%, it is showed that project based blended learning model gives a great respond toward learning. The outcome of this research was learning devices such as the lesson plan on curriculum 2013, learning media, and students' worksheet.

Keywords: Blended Learning Project Based, Elementary student teacher's creativity

1   Introduction

Constructing learning devices is teacher's responsibility in order to make learning become meaningful, dynamic, and effective. As the rules on National Education Law System No. 20 of 2003, article 40 paragraph 2 states that teacher's responsibility in the classroom is to create meaningful learning, creative, dynamic, and dialogic and commit to improve the quality of education professionally [1]. According to the statement, so it is clear that the teacher should have professional attitude to create effective, creative and dynamic classroom to increase the quality of education. If it reflects to the teacher so that he/she has professional competence. The teacher who has professional competence if she has a skill to manage learning process based on students' activation and their characteristic. Involving students actively in the learning process, teacher should start it by preparing learning devices creatively, innovatively and effectively based on their characters. Teacher should create a good learning process, based on national minister of education and culture regulations No.103 of 2014 about learning [2]. One of the rules is about learning in article 2 and 3 are learning is conducted based on the activity and characteristic, and it used an approach, strategy, model, and method that is focus on characteristics [2].

According researchers' observation, that in fact when the teachers plan to teach, they do not prepare to make learning devices which is appropriate to the needs and students' characteristics. So that when they deliver the material, it does not match to the objectives that will be achieved. These problems, due to their limited ability in making learning devices that fit the needs and students' characteristics based on curriculum 2013. In order to avoid similar

things, the researchers will equip students to be creative in preparing learning devices based on the characteristics of elementary school students.

One alternative that can be done to improve the creativity of elementary school student teacher at the Teacher Training Institute Universitas Muhammadiyah Cirebon in designing Bahasa Indonesia learning devices for elementary schools is by implementing a Project-Based Blended Learning Model (PBBL). Learning model is a model that combines face-to-face and online meeting. According to Idris Husni (2011) learning through blended learning is done by combining face-to-face learning, print technology, audio, audio visual, computer, and mobile learning technology [3]. Project-based learning is one alternative learning model that supports the improvement of 21st century learners' skills, one of them is its creative power. With the implementation of blended learning model, students will be better in understanding IT-based learning process. Liu (2016) explains that online learning with technology (blended learning), provides several advantages including unlimited number of students, unlimited time, and students can learn material according to their needs [4].

Project-based blended learning model can facilitate online and face-to-face learning. Online learning is conducted for the students to find materials and learning resources of Bahasa Indonesia learning devices for elementary school and video simulation, animations or tutorials from many sources so that they enrich students' insights with diverse learning resources. This learning concept will blend the concept of face-to-face learning based on projects. So project-based learning is wrapped in the form of face-to-face and online learning (blended learning). It is hoped that this learning will provide opportunities for students accustomed to think creatively with from many sources, and to produce creative modified new works, especially in designing Bahasa Indonesia learning devices for elementary school. In addition, project-based blended learning will provide opportunities for students to produce several kinds of new and unique alternative works for a learning topic. This condition is ultimately able to meet the indicators of creative thinking namely flexibility, novelty and elaboration (Johan Subur, 2014) [5]. Not just a lot of alternative new ideas but students are able to associate with other material contests and even other lessons so that it becomes an integrated learning that provides holistic experience and knowledge for elementary school students.

Project-based learning (PjBL) is one alternative learning model that supports the improvement of 21st century learners' skills, one of them is its creative power. In PjBL, students determine their own collaborative learning processes, and create creative projects from activities that reflect the knowledge they have. This can be done through an introduction to various knowledge and skills through technology. Then Bell, Stephanie explained that through PjBL students can dig their skills in communication and problem solving [6].

Susilawati, et al (2018) stated that by applying PjBL model, there was an improvement of elementary students' teacher writing skill in constructing Science teaching materials. This is evidenced from the results of the assessment which increased significantly from 2.71 (the category of fairly skilled) to 3.83 (the category of skilled) and supported by the high result of n-Gain 0.87 [7]. Furthermore, research conducted by Wahyudi, et al (2018) the development of a project-based blended learning model can support student creativity in designing mathematics learning in elementary school [8].

Based on the results of the research explained above, it is necessary to conduct research to see the effectiveness of the PjBL in enhancing the creativity of Elementary student teacher in designing Bahasa Indonesia learning devices.

2 Methodology

This research was quantitative of quasi-experimental approach. The design used was single-one group pretest-posttest design. The research design can be illustrated in Figure 1.

01 X 02

Fig. 1. Experimental design of *single-one group pretest-posttest* (Sugiyono) [9]

Note:
X = the implementation model of project-based Blended Learning
01= pre test of students' creativity
02= post test of students' creativity

This research was conducted in Universitas Muhammadiyah Cirebon. The population of this research was all elementary student teacher who have taken "Bahasa Indonesia for elementary school" courses at the fourth semester and have been involved in the online class, Elementary School Teacher Education Study Program. The sampling technique used was non-probability sampling with the type of saturated sampling of 25 students. Saturated sampling is a sampling technique when all members of the population are used as samples [9]. According to Arikunto if the population is less than 100 people, then the total sample is taken, but if the population is greater than 100 people, then it can be taken 10-15% or 20-25% of the total population [10].

Assessment of elementary school student teacher's creativity in developing Bahasa Indonesia learning devices based on various criteria, they are flexibility, novelty and elaboration. This criterion is taken from the indicators of creative thinking; flexibility, novelty and elaboration [11].

Furthermore, the creativity data of elementary school student teacher was categorized quantitatively based on the formula:

$$X = \frac{\sum X}{N}$$

Notes
X   = Average Score
$\sum X$ = total score
N   = total indicators of students' creativity in writing Bahasa Indonesia learning devices for elementary school
(Arikunto, S (2012) [12]

The assessment criteria for the results of processing scores of elementary school student teacher creativity in constructing Bahasa indonesia learning devices were shown in Table 1 below:

Table 1. Assessment criteria of elementary school students' teacher creativity

No.	Range Score	Criteria
1	$3,01 < skor \leq 4,00$	Creative
2	$2,01 < skor \leq 3,00$	Fairly creative
3	$1,01 < skor \leq 2,00$	Less creative
4	$0 < skor \leq 1,00$	Not creative

Furthermore, the assessment data were analyzed using N-Gain, to find out the improvement of elementary school student teacher creativity in developing the Bahasa Indonesia Learning devices. Below is the N-Gain formula:

$$<g> \frac{<s\ post> - <s\ pre>}{<s\ max> - <s\ pre>}$$

Source: Meltzer (2002) [13]

notes:
$<g>$	= normalized gain
$<S\ post>$	= post-test score
$<S\ pre>$	= pre-test score
$<S\ max>$	= total score

Success criteria based on the N-Gain test can be determined with indicators such as Table 2.

Table 2. Criteria normalized gain

Heading level	Example
$0,7 \leq g$	High
$0,3 \leq g < 0,7$	Medium
$g < 0,3$	Low

Analysis of the results of student responses to learning using a Likert scale. Sugiyono argues that the Likert scale is used to measure the attitudes, opinions, and perceptions of a person or group of people about social phenomena [14]. The ordinal scale according to Sugiyono "The ordinal scale is a measurement scale that not only states the category, but also states the construct rating measured [15]. There are five scoring categories on the Likert scale as follows:

Table 3. Likert scale questionnaire score

No	Notes	Score
1	Strongly Agree (SA)	5
2	Agree (A)	4
3	Neither Agree or Disagree (NAD)	3
4	Disagree (D)	2
5	Strongly Disagree (SD)	1

Based on Table 3 above, a questionnaire scoring instrument of Likert scale was explained. The score will be used to determine the interpretation obtained from each aspect measured. According to Riduwan, the questionnaire interpretation was as follows: Table 4 [16]:

Table 4. Interpretation of questionnaire scale

No	Precentage	Interpretation
1	0% - 20%	Strongly Weak
2	20% - 40%	Weak
3	40% - 60%	Moderate
4	60% - 80%	Strong
5	80% - 100%	Strongly Strong

3 Results and Discussion

3.1 The result of Pre-Test before implementing Project Based Blended Learning

The pretest was held at the beginning of learning, it was on Thursday 09 May 2019 and Wednesday 16 May 2019. The assessment guidelines refer to the indicators of creative thinkin; flexibility, novelty and elaboration [17]. From the results of the pre-test, the average value of the indicator on flexibility was 2.72, the average value of the indicator on novelty was2.60 and the average indicator on elaboration was 2.53. Thus the average score of elementary school student teacher creativity in developing Bahasa Indonesia learning devices was at a score of 2.62 (quite creative). For more details, see Figure 1.
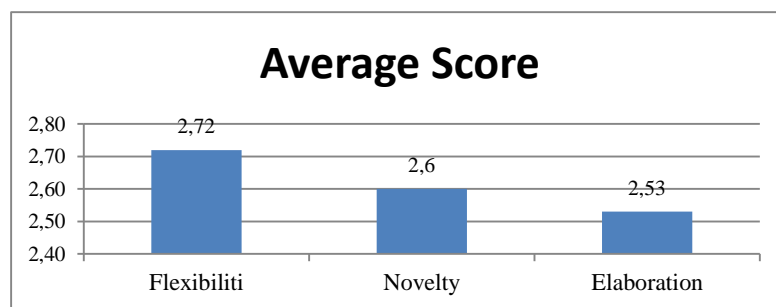

Fig. 1. The average score of pre-test in constructing bahasa Indonesia learning devices

Based on Figure 1, it can be seen that the flexibility indicator got an average value of 2.72, indicating that most students who were elementary school teacher candidates are creative enough. At the time of writing the lesson plan, students understood the components in accordance with the rules of Curriculum 2013 revision edition of 2017. Most students have not been able to compile teaching materials and learning evaluation contextually and according to the theme. Learning media are neatly made but most students cannot make it according to the problem.

The new category has an average score of 2.6, which means students are quite creative in preparing teaching materials and learning evaluation but still have to learn to modify teaching materials and evaluation questions according to their new ideas. Teaching and Learning Activities are modified with 4 stages, they are pre-learning, initial activities, core activities, and final activities. This learning procedure, they refer to the learning strategy book at Universitas Terbuka Elementary School, Anitah Sri (2011) [18]. In addition, in developing learning media, students have not been able to make innovative products using household waste.

The elaboration category got an average value of 2.53, which means students have been fairly creative in constructing Bahasa Indonesia teaching materials according to the theme, but they still cannot integrate Bahasa Indonesia teaching materials with other subjects that are in line with the 2013 curriculum's wishes. In making evaluations and learning media, students do not have the ability to integrate it with other subjects. When they construct evaluation, they did not relate it to their daily lives and did not refer to their skills.

3.2 Post Test Result of Students creativity in constructing Learning Devices

The post test was carried out after the treatment of Project Based Blended Learning model, namely on Wednesday, July 18, 2019 and July 25, 2019. The results of the posttest

were seen from each indicator of creative thinking, they are flexibility, novelty and elaboration. The results of the average value of the flexibility indicator was 3.87 (creative category), the novelty indicator was 3.79 (creative category) and the average value of the elaboration indicator was 3.75 (creative category).

Based on the results of the average post-test values, it showed the improvement of each indicator, The flexibility increased by 1.28, the novelty of the language increased by 1.23 and elaborative increased by 1.12. A more significant improvement was seen in the flexibility indicator. Obtaining the results of the pre-test and post-test creativity of elementary school student teachers in constructing Bahasa Indonesia learning devices for elementary students can be seen in Figure 2.
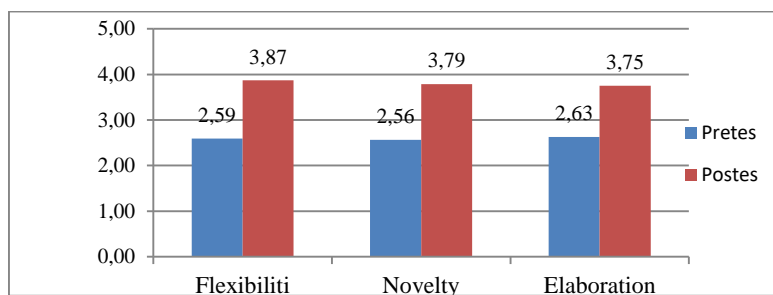

Fig. 2. The improvement of pre-test and post-test average score in constructing bahasa Indonesia learning devices at elementary school

The improvement in the content of eligibility category was due to the learning devices made through this posttest. They were more relevant to the 2013 curriculum and to the needs and characteristics of elementary school students. The lesson plans that were prepared in accordance with the revised edition of the 2013 curriculum, In making teaching and evaluation material, it has been contextual and in accordance with the learning objectives to be achieved. Learning media were made according to the characteristics and needs of elementary school students.

Calculating N-Gain in this study was used Microsoft Excel 2010 to adjust the N-Gain formula. After calculating, it can be seen the value of N-Gain on each indicator of creativity constructing Bahasa Indonesia learning devices on Table 5.

Table. 5 The result of N-Gain of creativity indicator in constructing bahasa Indonesia

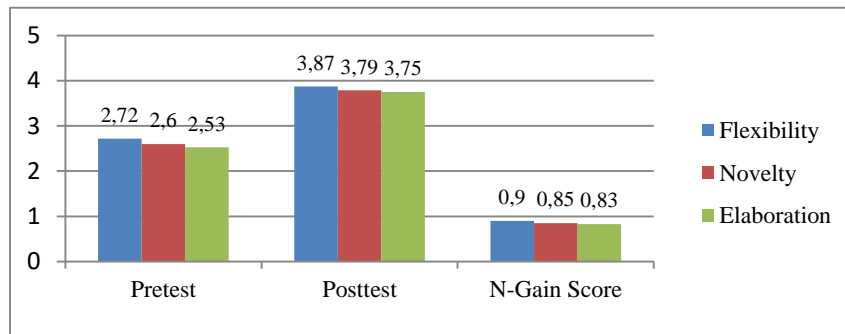| Indicator	Pretest	Posttest	N-Gain Score	Category
Flexibility	2,72	3,87	0,9	High
Novelty	2,6	3,79	0,85	High
Elaboration	2,53	3,75	0,83	High
The Average of N-Gain	2,62	3,80	0,86	High

Fig 3. The result of N gain elementary students teacher in constructing learning devices for elementary students.

Based on Table 5 and Figure 3, it can be concluded that gain score of each indicator of creativity in constructing Bahasa Indonesia Learning Devices for elementary students was high with the score on the content feasibility was 0.90, the language feasibility was 0.85 and presentation feasibility was 0.83.

The score of n gain proved that Project-Based Blended Learning Model can increase elementary students teacher creativity in constructing Bahasa Indoneaia learning devices. Project based learning facilitates the students to develop their creativity. In line with Abidin statement that PjBL is as one of a great in improving many basic skills which should be owned by the students, such as the skill to make decision, creativity skill and problem solving skill [19]. In line with Abdidin, kurtus explains that "*blended learning* is a mixture of the various *learning* strategies and delivery methods that will optimize the *learning* experience of the user [20]. So it is clear that project based blended learning model can improve students creativity in constructing Bahasa Indonesia learninh devices in elementary school.

3.3 Student Responses Analysis Result to the Acceptance of the Project-Based Blended Learning Model

To get better understanding of students' responses to the acceptance of project-based blended learning models, the researchers distributed attitude scale questionnaires through Likert attitude scale guidelines. Based on the analysis, there was a percentage in positive statements of the students who choose agrees and strongly agree was 83.7% which meant very strong.

4 Conclusions

The conclusion of the research was that Project-Based Blended Learning Model can be used effectively to improve students' creativity in constructing Bahasa Indonesia learning devices for elementary school student. This was evidenced by the results of the assessment which increased significantly from 2.33 (fairly creative) to 3.80 (creative) and supported by high n-Gain results, it was 0.86. In addition, the results of the study were strengthened by the results of the attitude scale questionnaire that was the percentage in positive statements of the students who choose agrees and strongly agree was 83.7% which meant very strong.

References

[1] U. RI, *Undang-undag Nomor 20 Tahun 2003*. 2003.

[2] Kemendikbud, "Peraturan Menteri Pendidikan Dan Kebudayaan Republik Indonesia Nomor 103 Tahun 2014 Tentang Pembelajaran Pada Pendidikan Dasar Dan Pendidikan Menengah," *Pedoman Eval. Kurikulum*, no. 13, pp. 1–5, 2014.

[3] H. Idris, "Pembelajaran Model Blended Learning," *J. Iqra'*, vol. 5, no. 1, pp. 61–73, 2011.

[4] P. Liu, "Technology integration in elementary classrooms: Teaching practices of student teachers," *Aust. J. Teach. Educ.*, vol. 41, no. 3, pp. 87–104, 2016.

[5] J. Subur, "ANALISIS KREATIVITAS SISWA DALAM MEMECAHKAN MASALAH MATEMATIKA BERDASARKAN TINGKAT KEMAMPUAN MATEMATIKA DI KELAS Johan Subur," 2001.

[6] S. Bell, "Stephanie Bell 2010 Project Based Learning for the 21st Century: Skills for the Future," in *The Clearing House*, 2010, pp. 83: 39–43.

[7] Susilawati, W. N. Jannah, and Dianasari, "Efektivitas Project Based Learning Terhadap Keterampilan Menulis Bahan Ajar Ipa Calon Guru Sd," *EduHumaniora | J. Pendidik. Dasar Kampus Cibiru*, vol. 10, no. 1, p. 38, 2018.

[8] W. Wahyudi, I. Anugraheni, and A. Winanto, "Pengembangan Model Blended Learning Berbasis Proyek Untuk Menunjang Kreatifitas Mahasiswa Merancang Pembelajaran Matematika Sekolah Dasar," *JIPM (Jurnal Ilm. Pendidik. Mat.*, vol. 6, no. 2, p. 68, 2018.

[9] Sugiyono, *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R&D.* 2014.

[10] S. Arikunto, *Prosedur Penelitian: Suatu Pendekatan Praktik.* 2013.

[11] M. Zainudin, "Efektivitas Pembelajaran Berbasis Projek (Pbp) Terhadap Kreativitas Mahasiswa Pada Matakuliah Metodologi Penelitian," *JIPM (Jurnal Ilm. Pendidik. Mat.*, vol. 2, no. 2, p. 15, 2014.

[12] S. Arikunto, *Dasar-dasar Evaluasi Pembelajaran*, 2nd ed. Jakarta: Bumi Aksara, 2012.

[13] D. E. Meltzer, "The relationship between mathematics preparation and conceptual learning gains in physics: A possible 'hidden variable' in diagnostic pretest scores," *Am. J. Phys.*, vol. 70, no. 12, pp. 1259–1268, 2002.

[14] Sugiyono, "Metode Penelitian Kuantitatif, Kualitatif, R&D," in *Metode Penelitian Kuantitatif, Kualitatif, R&D*, 25th ed., Bandung: Alfabeta, 2017, p. 380.

[15] Sugiyono, *Metode Penelitian Administrasi*, Edisi Revi. Alfabeta, 2009.

[16] Riduwan, *Dasar-dasar Statistika*. Bandung: Alfabeta, 2008.

[17] M. Zaenudin, "Efektivitas Pembelajaran Berbasis Projek (PBP) terhadap Kreativitas Mahasiswa pada Matakuliah Metodologi Penelitian," *J. Ilm. Pendidik. Mat.*, vol. 2, no. 2, pp. 1–7, 2014.

[18] S. A. W, *Strategi Pembelajaran di SD*, 1st ed. Jakarta, 2011.

[19] Y. Abidin, *Desain sistem pembelajaran dalam konteks Kurikulum 2013*. Bandung: PT. Refika Aditama, 2014.

[20] J. Gavriel and M. Keynes, "Teaching tips," *Educ. Prim. Care*, 2014.