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ABSTRAK

Model pembelajaran *Problem Based Learning* adalah model pembelajaran yang lebih menekankan kepada masalah-masalah yang nyata atau sangat berkaitan penelitian *Design One Group Pretest-Posttest*. Sampel penelitian dengan kehidupan sehari-hari yang dapat meningkatkan keterampilan berpikir kritis peserta didik. Tujuan penelitian ini adalah untuk mengetahui Pengaruh Model Pembelajaran *Problem Based Learning* Terhadap Hasil Belajar di SMA Negeri 2 Lahat. Jenis penelitian yang digunakan dalam penelitian kuantitatif dengan metode penelitian *Pre-experimental design*. Dengan rancangan ini menggunakan satu kelas yaitu XI IPA 1 sebagai kelas eksperimen. Analisis data dalam penelitian ini menggunakan uji validitas, uji reliabilitas, uji normalitas, uji homogenitas, dan uji Wilcoxon. Hasil yang diperoleh dari perhitungan uji Wilcoxon nilai sig 2-tailed sebesar 000(<0,05) maka H_0 ditolak dan H_a diterima. Artinya model *Problem Based Learning* dapat diterapkan dalam meningkatkan hasil belajar peserta didik pada kelas XI IPA pada materi struktur dan fungsi jaringan pada tumbuhan di SMA Negeri 2 Lahat.

Kata Kunci: Model Pembelajaran PBL (Problem Based Learning) dan

ABSTRACT

The Problem Based Learning learning model is a learning model that emphasizes real problems or is closely related to everyday life that can improve students' critical thinking skills. The purpose of this study was to determine the effect of the Problem Based Learning Learning Model on Learning Outcomes at SMA Negeri 2 Lahat. This type of research used in quantitative research with Pre-experimental design research methods. With the Design One Group Pretest-Posttest research design. The research sample used one class, namely XI IPA 1 as the experimental class. Data analysis in this study used the validity test, reliability test, normality test, homogeneity test, and Wilcoxon test. The results obtained from the Wilcoxon test calculation have a sig 2-tailed value of 000 (<0.05) then H_0 is rejected and H_a is accepted. This means that the Problem Based Learning model can be applied in improving student learning outcomes in class XI IPA on the material structure and function of plant tissues at SMA Negeri 2 Lahat.

Keywords: PBL (Problem Based Learning) Learning Model and Learning Outcomes

Pendidikan Sekolah Dasar merupakan pendidikan dasar yang memegang peran penting sebagai pembentuk kepribadian anak dan pola pikir anak. Di jenjang pendidikan Sekolah Dasar anak diajarkan berbagai ilmu sebagai pondasi anak untuk menjalani pendidikan dijenjang selanjutnya. Ilmu Pengetahuan Alam (IPA) merupakan mata pelajaran pokok yang diajarkan pada jenjang pendidikan Sekolah Dasar. Pada mata pelajaran Ilmu Pengetahuan Alam (IPA) siswa diajarkan berbagai konsep-konsep dan gejala-gejala yang berkaitan dengan alam sekitar. Siswa diajak untuk memahami konsep-konsep dan gejala-gejala alam melalui berbagai cara. Misalnya, dengan cara pengamatan, praktikum, mengukur, menganalisis, dll.

Penerapan IPA perlu dilakukan secara bijaksana agar tidak berdampak buruk pada lingkungan. Ditingkat SD/MI, diharapkan ada penekanan pembelajaran Salingtemas (Sains, lingkungan, teknologi, dan masyarakat) yang diarahkan pada pengalaman belajar untuk merancang dan membuat suatu karya melalui penerapan konsep IPA dan kompetensi bekerja ilmiah secara bijaksana. Dapat disimpulkan bahwa pembelajaran IPA di sekolah dasar harus dapat tercipta suasana belajar yang bermakna. Dengan tujuan agar para peserta didik dapat memahami materi IPA secara utuh dan bermakna. Sehingga dapat selalu dihubungkan dan diterapkan dalam kehidupan sehari-hari.

Ilmu Pengetahuan Alam (IPA) merupakan ilmu yang mempelajari tentang peristiwa dan gejala-gejala yang terjadi di alam ini. Dalam mempelajari ilmu tentang alam ini tidak hanya produknya yang diperhatikan namun segi proses, dan hasil pengembangan sikap juga diperhatikan. Menurut Sulistyorini (2007: 9) menyatakan bahwa pada hakikatnya, IPA dapat dipandang dari segi produk, proses dan dari segi pengembangan sikap. Artinya, belajar IPA memiliki dimensi proses, dimensi hasil (produk), dan dimensi pengembangan sikap ilmiah. Ketiga dimensi tersebut bersifat saling terkait. Ini berarti bahwa proses belajar mengajar IPA seharusnya mengandung ketiga dimensi IPA tersebut.

Sesuai dengan uraian di atas menunjukkan betapa penting dan kompleksnya mata pelajaran IPA. Pada jenjang sekolah dasar mata pelajaran ilmu pengetahuan alam ini memegang peran penting sebagai dasar siswa dalam mempelajari konsep-konsep IPA dasar dan gejala-gejala alam tertentu untuk dijadikan pengetahuan awal dalam mempelajari IPA dijenjang pendidikan selanjutnya. Guru juga diharapkan dapat merancang proses pembelajaran IPA di sekolah dasar menjadi lebih menyenangkan dan bermakna melalui kegiatan belajar yang melibatkan siswa secara aktif. Menurut Trianto (2008 : 3), menyatakan

bahwa masalah pokok dalam pembelajaran pada pendidikan formal (sekolah) dewasa ini adalah masih rendahnya daya serap peserta didik. Hal ini nampak rerata hasil belajar siswa yang senantiasa masih sangat memprihatinkan. Prestasi ini tentunya merupakan kondisi pembelajaran yang masih bersifat konvensional dan tidak menyentuh ranah dimensi peserta didik itu sendiri, yaitu bagaimana sebenarnya belajar itu (belajar untuk belajar).

Dari hasil analisis dengan menggunakan metode metaanalisis mengatakan bahwa, dalam proses pembelajaran yang dilakukan pendidik, materi yang disampaikan oleh pendidik masih terpusat pada buku paket panduan yang dimiliki siswa dan guru. Siswa mengerjakan tugas-tugas atau latihan soal dalam buku paket tersebut secara individu. Sehingga keseluruhan pembelajaran terpusat pada guru (teacher centered) dan buku paket. Keaktifan siswa tidak diperhatikan oleh guru. Dari kesenjangan tersebut, maka peneliti menyimpulkan upaya untuk meningkatkan hasil belajar siswa dalam mata pelajaran Ilmu Pengetahuan Alam (IPA) agar bisa mencapai nilai standar yang ditetapkan sekolah atau lebih. Upaya tindakan yang dilakukan yaitu mencari model pembelajaran yang sesuai dengan kondisi siswa dan pembelajaran IPA. Berdasarkan hal tersebut, peneliti memilih model pembelajaran CTL (Contextual Teaching and Learning) untuk diterapkan dalam proses pembelajaran di SDN Cimanggu II. Model pembelajaran CTL (Contextual Teaching and Learning) merupakan model pembelajaran yang membantu guru menghubungkan materi dengan kehidupan nyata.

Menurut Blanchard (dalam Trianto, 2008 : 10) menyatakan bahwa CTL merupakan suatu konsepsi yang membantu pendidik untuk menghubungkan konten materi ajar dengan situasi-situasi dunia nyata dan memotivasi peserta didik untuk membuat hubungan antara pengetahuan dan penerapannya ke dalam kehidupan mereka sebagai anggota keluarga, warga negara, dan tenaga kerja. Dari penelitian yang sudah dilakukan maka peneliti memperoleh hasil data tentang penerapan model pembelajaran CTL (Contextual Teaching and Learning) sebagai obat yang sesuai dengan permasalahan yang terjadi di SDN Cimanggu II. Keberhasilan penerapan model pembelajaran CTL untuk meningkatkan hasil belajar siswa juga didukung dengan penelitian tindakan kelas yang dilakukan oleh peneliti terdahulu.

Pembelajaran CTL melibatkan para siswa dalam aktivitas penting yang membantu siswa untuk mengaitkan pelajaran akademis dengan konteks kehidupan nyata yang mereka hadapi. Dengan mengaitkan keduanya, peserta didik melihat makna di dalam materi yang

dipelajari di sekolah. Peserta didik dapat menemukan makna dari materi pelajaran tersebut ketika mereka secara aktif memilih, menyusun, mengatur, menyentuh, merencanakan, menyelidiki, mencari informasi, dan menarik kesimpulan dari kegiatan yang mereka lakukan sendiri. Kegiatan yang dilakukan peserta didik salah satu contohnya adalah menanam bawang daun di dalam polibeg dan untuk satu orang siswa 1 buah polibeg.

Model pembelajaran CTL memiliki sintaks yang terdiri dari 6 tahap. Menurut Julianto, dkk (2011:77) sintaks model pembelajaran CTL yaitu: (1) Melaksanakan kegiatan inkuiri untuk semua topik; (2) Mengembangkan sikap ingin tahu; (3) Menciptakan masyarakat belajar; (4) Menghadirkan model; (5) Melakukan refleksi; (6) Melakukan penilaian yang sebenarnya. Dalam proses pembelajaran terdapat tujuan pembelajaran yang diharapkan dapat dicapai setiap siswa setelah mengikuti pembelajaran. Tercapainya tujuan pembelajaran dapat dilihat dari hasil belajar siswa. Menurut Aunurrahman (dalam Jihad dan Haris, 2013: 14) hasil belajar adalah kemampuan yang diperoleh anak setelah melalui kegiatan belajar. Belajar itu sendiri merupakan suatu proses dari seseorang yang berusaha untuk memperoleh suatu bentuk perubahan tingkah laku. Dalam kegiatan pembelajaran, guru menetapkan tujuan belajar yang harus dicapai siswa. Siswa yang berhasil dalam belajar adalah yang berhasil mencapai tujuan pembelajaran atau tujuan instruksional tersebut. Benyamin S. Bloom (dalam Jufri, 2014: 59) mengelompokkan hasil belajar kedalam tiga ranah atau domain yaitu: (1) kognitif, (2) afektif, dan (3) psikomotorik. Berdasarkan beberapa pendapat diatas mengenai karakteristik pembelajaran CTL, dapat disimpulkan bahwa pembelajaran CTL memiliki karakteristik tersendiri yang menjadi pembeda dengan istilah dalam pembelajaran yang lain. Model pembelajran CTL menekankan pada keaktifan siswa dalam mempelajari materi. Dalam prosesnya pembelajaran dilaksanakan secara aktif, kreatif, produktif, melalui kerjasama, pengalaman langsung siswa, konsep aplikasi dan dalam situasi yang menyenangkan.

METODE PENELITIAN

The type of research used in this study is development research using the modified Research and Development (R&D) method from Sugiyono (2018). This research is only up to the validation stage. These steps consist of a preliminary study, information gathering, product

design, product validation and product revision.

This research was conducted in the Limboto Lake area, Gorontalo Province. The instrument used in the study was a validation sheet. The supplementary book validation was carried out by two validators. The revision of the supplement book is carried out in accordance with the criticisms and suggestions given by the validator for the improvement of the supplement book made.

HASIL DAN PEMBAHASAN

The bird diversity supplement book is a research-based supplement that serves to add insight to the surrounding community and students to get to know the birds in the Limboto lake area, Gorontalo Province. The supplement book made is the result of research conducted by researchers in which there are 30 species of birds that were photographed directly using a canon camera. In this case, the supplement book also contains a description of the morphology and classification of each of these bird species. The supplement book contains an introduction, a table of contents, an overview of birds, a brief profile of Lake Limboto, types of birds in the Lake Limboto area, and references.

Table 1. Results of Supplement Book Validation Recapitulation

No	Rated aspect	V1	V2	Total Score	Presentation	Criteria
	A. Content Validation Content Coverage					
1.	Supplementary book material is flexible	3	5	80	80%	Valid
2.	The pictures and explanations presented in the supplement book are in accordance with the data obtained	4	5	90	90%	Very Valid
3.	Clarity and ease of understanding the contents of the supplement book	4	5	90	90%	Very Valid
4.	The presentation of the contents of the book is accompanied by up-to-date classifications and adequate descriptions	3	4	70	70%	Valid
5.	References or references used are complete	4	5	90	90%	Very Valid
	B. Construct Validation Language Usage					
1.	The supplement book already uses Indonesian which is standard/true	4	4	90	90%	Very Valid
2.	Books are informative	4	5	90	90%	Very Valid
3.	Short and simple words	4	4	80	80%	Valid
	Graphics					

1.	The cover design for the supplement book is interesting	3	4	70	70%	Valid
2.	The title of the supplement book presents the contents	5	5	100	100%	Very Valid
3.	The letters used are attractive and easy to read	3	5	80	80%	Valid
4.	The separation between paragraphs is clear	2	5	70	70%	Valid
5.	The layout of the supplement book is in accordance with the manufacture	3	5	80	80%	Valid
	AVERAGE				83,1%	Very Valid

Based on table 1 above, it is explained that the values obtained from each validator for the aspects assessed both in terms of content and constructs have an average range of 70-100%. This shows that the supplement book made by the researcher can be used. The role of this supplement book is as a reference/complementary book in learning to accompany existing books at school that can be used independently by students at home. The supplement book was developed with research and development steps using the modified Research and Development (R&D) method from Sugiyono (2018). Which consists of preliminary studies, information gathering, product design, product validation and product revision.

Preliminary studies

This study was inspired by a previous study entitled "Diversity of migratory birds in the Limboto lake area, Gorontalo province (Pratiwi, Tutin 2020)". in the area of Lake Limboto, so in this study the author saw all the birds observed in Lake Limboto, both migratory birds and local birds using binoculars and took pictures directly with a canon camera which later the photos of these birds will be included in the supplement book. Therefore, the research carried out has a clear position, namely as a source of inspiration to minimize failure in the research carried out.

Information gathering

At the stage of collecting information, the writer looks for information and references in the form of journals, theses, books, and previous studies related to the research that will be carried out by the author.

Product Design

The product produced in this research is a supplement book. This supplementary book that was made contains the types of birds that were photographed directly by the author in Lake Limboto using a canon camera. The supplementary book that is made is only a reference/complementary book that does not contain an evaluation. The content of the material in the supplement book is "Bird Diversity in the Lake Limboto Area, Gorontalo Province" in which there are various types of birds observed in Lake Limboto, equipped with descriptions and classifications of each species so that those who read this supplement book will more easily understand the contents. from the supplementary book made. and the presentation aspect on the appearance of the developed supplement book, namely B5 paper size, the supplement book material, namely the cover using buffalo paper and the inside using HVS paper. the writing on the supplement book uses the Comic Sans Ms font with size 11 with 1.0 spacing and the page order is located at the bottom.

Product Validation

Validation is knowing the extent to which this developed supplement book is feasible to use or not. The supplement book that has been designed is then validated by 2 validators. The supplement book developed refers to two presentation components, namely content and construct validation

Product Revision

The revision of the supplement book is carried out in accordance with the criticisms and suggestions given by the validator for the improvement of the supplement book made

Table 2. Validation Assessment

No	Observed aspects	Validation value	Category
1.	Content Coverage	84%	Very Valid
2.	Language Usage	86.6%	Very Valid
3.	Graphics	80%	Valid
	AVERAGE	83.1%	Very Valid

Table 2 shows the average results for the three assessment aspects with valid criteria, but based on suggestions and comments on the validation sheet, it still needs to be improved for the perfection of making supplement books.

Product validation can be carried out by several experts or experienced experts to assess the new product designed, so that further weaknesses and strengths can be identified (Sugiyono, 2007).

Based on the results of the validator analysis in (table 1), it is found that content validation is the scope of the content of the material which consists of 5 aspects that get a value of 84% with very valid criteria. This shows that the supplement book has presented flexible material, as well as pictures and explanations that are easy to understand. In accordance with research conducted by Reizal, et al. (2020) states that the development of supplement books that are close to students is packaged in an attractive manner and equipped with pictures and descriptions that can make it easier for students to understand the material, the use of pictures and explanations will help students visualize learning material, making it easier for students to accept and remember. In the supplement book developed, the material is presented in a concise and clear manner. The material includes a general description of birds, a brief profile of Lake Limboto and the types of birds observed in Lake Limboto accompanied by morphological descriptions and scientific classifications. Construct validation consists of, the use of language which consists of 3 aspects to get a value of 86.6% with very valid criteria. This proves that the supplementary book developed has met the criteria for good teaching materials based on the language aspect. Language is one of the important elements in the preparation of teaching materials. In accordance with research conducted by Wedyawati & Lisa (2018), it is stated that the preparation of textbooks must use simple language and in accordance with good and correct Indonesian language rules by paying attention to the preparation of clear sentences so that they are easy to understand. And the feasibility of the graphic consists of 5 aspects getting a score of 80% with a decent category. This shows that the graphic design in the supplementary book is in accordance with the standards for making books in general. Graphics are said to be valid if the designs developed are good and attractive and have images that match the material. In accordance with research conducted by Kantun et al (2015) the graphic aspect is the aspect that includes the size, format, cover design and content design of the book. Based on the data above, the supplement book is very feasible to use, but based on suggestions from the validator, it still needs to be revised again to improve the book. the validator's suggestions and comments are to review the scientific name and adjust the choice of font color and background and there are frequent repetitions of sentences in the supplement book. From the results of the presentation which includes content validation and construct validation for both validators, it can be concluded that the supplement book that has been developed is very feasible to use by obtaining an average value of 83.1% in the score range of 81-100%. This supplement book is general in nature so students or the general public can read the book because this book is a reference book or a flexible supplementary book. Prastowo (2016) mentions the advantages of supplement books compared to other types of teaching materials, namely that they are easy to use anytime and anywhere, readers can stop at any time and can continue.

Kesimpulan

Based on the results of the research and discussion presented regarding the validation of the developed supplement book which refers to two presentation components, namely content validation and construct validation, which obtained an average value of 83.1% in the score range of 80-100% with the "very feasible" criteria. Thus the supplementary book compiled is very feasible to use.

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