

PAPER • OPEN ACCESS

## Design of Learning Modules Writing Narrative Text Based on Project Based Learning (PjBL) by Using Mobile Devices

To cite this article: Syahrul Ramadhan *et al* 2020 *J. Phys.: Conf. Ser.* **1471** 012029

View the [article online](#) for updates and enhancements.



**240th ECS Meeting** ORLANDO, FL  
Orange County Convention Center Oct 10-14, 2021



Abstract submission due: April 9

**SUBMIT NOW**

# Design of Learning Modules Writing Narrative Text Based on Project Based Learning (PjBL) by Using Mobile Devices

Syahrul Ramadhan<sup>1</sup>, Vivi Indriyani<sup>2</sup>, Yasnur Asri<sup>3</sup>, Elfia Sukma<sup>4</sup>

Universitas Negeri Padang, Padang, Indonesia

Email: syahrul\_r@fbs.unp.ac.id<sup>1</sup>, vivi.indriyani93@gmail.com<sup>2</sup>, yasnurasri@fbs.unp.ac.id<sup>3</sup>, elfiasukma@fip.unp.ac.id<sup>4</sup>

**Abstract.** Every aspect of education continues to experience innovation after the internet, digital tools and technological gadgets have been easily accessed everywhere marked by online reading, electronic books and audio books along with printed material. Based on that, this study aims to develop learning modules for learning to write narrative texts based on project based learning using mobile devices. This type of research is R&D (research & development). The development model used is a 4-D model (define, design, develop, and assess). The research instruments used were questionnaires, observation sheets, interview guides, and tests. In this paper, the results of the study are more focused on discussing the design of the developed learning modules. By understanding the design, readers can develop learning modules based on project based learning for types of narrative texts at various levels of education. The module design that was designed was validated by experts and concluded that the module was categorized as very valid and could be tested.

**Keywords:** learning module, project based learning, mobile device, writing skill, narrative text

## 1. Introduction

Language learning is the foundation on which other academic skills are built [1]. One of the language skills that students learn is writing skills. Writing skills are a fundamental process in language learning [2]. The initial efforts of students in writing provide important opportunities to build understanding and skills that are fundamental to learning to write [3].

Writing is a must [4]. Writing is an important skill in education and the workplace [5][6]. By writing, one can express information narratively or descriptively and change it argumentatively [7]. Writing skills are not naturally acquired skills, but are learned or transmitted culturally as a set of practices in formal instructional settings or other environments [7]. However, writing skills are skills that are harder to master than other language skills [8][9]. Writing is a complex cognitive activity that involves synchronous attention at various levels: thematic, paragraph, sentence, grammatical, and lexical [10]. In addition to understanding grammar, writing also involves creativity, knowledge about learning material, and the ability to organize oneself to be able to learn on their own [11][12].

Students' language literacy skills need to be improved [13][14]. The low score of students' writing ability is caused by the following things. First, lack of confidence or practical skills [15]. Second, lack



of understanding of the writing process [16]. Third, students do not receive effective writing instructions [2]. Fourth, students do not focus on managing the learning environment [17].

One type of text that secondary students learn is narrative text. Narration is a story where individuals share experiences, which reflect the way they see the world [18]. Narrative texts are a type of texts that accurately describe past activities or events, which show experiences to entertain and are often intended to provide moral lessons to the reader [19]. These texts can describe individual feelings in relation to life problems and present perspective in a critical manner [20]. This text was written to make the reader feel himself in a story [21]. Thus, understanding narrative texts is considered as a complex cognitive process in which certain texts are understood, interpreted and valued in the mind [22].

Based on this, one of the solutions is to develop teaching materials that can guide students to learn independently with teaching materials that have been developed by the teacher. The selection of teaching materials as a solution to the problem of learning to write is as follows. First, teaching materials can improve student learning outcomes [23]. Second, teaching materials can be developed in accordance with the characteristics of students and relevant to the learning objectives undertaken [24]. Third, teaching materials used can have a real effect on students, namely curiosity, interest, and student attention [25]. Fourth, the material contained in teaching materials can be presented in an interesting, new, and varied manner [23]. Teaching materials are all instruments used by teachers to teach [23]. Such teaching materials can include, photos, drawings, newspapers, props, and so on. The many types of teaching materials, making teachers must know the strengths and limitations of the types of teaching materials to be able to choose, discard, or combine these sets of teaching materials so that they function best in achieving learning objectives [23].

One type of teaching material that students can use in learning is the learning module. Learning modules are teaching materials developed by teachers so that students can study anywhere independently [26]. However, the teacher still acts as a facilitator, motivator and inspirator [27]. The learning module was chosen as teaching material that was developed because the learning module has included several things such as teaching materials, exercises, performance tests, examples of texts to be studied, and there are clear instructions for use.

The educational aspect is experiencing innovation after the internet, technological gadgets and digital tools have been easily accessed everywhere which is marked by the resulting online reading, electronic books and audio books along with printed material [28]. The use of teaching materials is currently facilitated by the development of mobile devices. This mobile device can make synchronized sound easier and cheaper than other online technologies, files such as audio and video can be downloaded automatically through the internet that can be used in the learning process [29].

The definition of mobile learning varies from time to time and is influenced by emerging technologies [30]. Mobile internet learning (M-learning) refers to the use of wireless communication technology, internet technology and mobile devices to learn anytime, anywhere [31]. Mobile devices aim to change the way of learning and teaching methods in an innovative manner [30] and make learning more flexible, helping students freely acquire knowledge and skills that interest them [32]. This learning increases student satisfaction which will have an impact on their achievement and motivation [33].

Learning using mobile devices cannot replace formal education but offers methods to support learning and bring benefits to different interactions [34]. With mobile learning, teachers can reach their students at any time and direct them by providing ideas or information on each learning topic [35]. This learning can also increase student interest and motivation and encourage students to participate in learning activities [30]. Based on these explanations, the narrative text writing learning module was developed and used with mobile devices. The developed product is used by students with teaching materials that can be opened via mobile devices.

The strengths of the learning modules that are developed are the steps of the activities carried out based on the learning model/method/approach [23][27][36]. The learning model that is the basis for the

development of this learning module is Project Based Learning (PjBL). Project-based learning is built on the ideas of John Dewey which states that learning is a direct experience directed by students and finally delivered in student relationships with teachers [37][38]. PjBL is one method for creating learning that means experience[39].

PjBL is defined as a systematic learning model that involves students in learning knowledge and skills through a structured and complex inquiry process to produce a product or assignment that is designed[37]. PjBL is based on challenging questions or problems that involve students in the design of problem solving, decision making, or investigative activities; gives students the opportunity to work independently for long periods of time and lead to realistic products or presentations [38][40].

The reasons for choosing the PjBL model as the basis for developing learning modules are as follows. First, many studies have shown that PjBL is effective in increasing knowledge, especially in science learning and social studies including language learning [41][42]. Second, effective tools for language learning, because they can help students reach an understanding of a topic [43][44][45]. Third, develop self-motivation, initiative, and teamwork [45][46][47]. Fourth, it involves students' sense of identity in generating knowledge [37]. Fifth, PjBL has been considered capable of involving students in developing 21st century skills [48]. These skills such as critical thinking, problem solving, communication skills, collaboration skills, and creativity[49][50]. Sixth, when the teacher implements the project, and the project is completed, students will feel proud of themselves which results in motivation for students to perform better on future projects[51]. Seventh, provide opportunities for students to solve community problems and survey future careers [52]. Eighth, can place students to become strong leaders and succeed quickly [52].

Based on this reality, it is important to develop teaching materials in the form of learning modules for writing narrative texts based on Project Based Learning (PjBL). With the presentation of material and structured activity steps, students are expected to get concepts faster and be able to write texts well. The learning module is expected to provide solutions for students who are difficult in learning to write. This module is also expected to develop students' creativity and innovation in learning. Based on the background stated, the purpose of this study is to explain the design of learning modules based on Project Based Learning. This paper focuses on the design of learning modules that aim to explain the learning steps presented in the module so that readers can understand and develop their own learning modules as a source of learning.

## **2. Methodology**

This type of research used in this research is development research. Research development is a research method used to produce certain products and test the effectiveness of these products [52]. Products that are developed can be software, or hardware such as books, modules, learning programs or learning aids [53]. Based on these explanations, this research produced a product in the form of a learning module for writing narrative texts based on Project Based Learning (PjBL) using a mobile device. The module development process is carried out following the 4-D model (define, design, develop, and disseminate)[54]. The type of data in this research is quantitative data and qualitative data. Data obtained through questionnaires, interviews, observation sheets, and tests. This module was developed using the iSpring application and Sigil application which can be used by students in learning through mobile devices. This module does not have a significant difference from the print module in terms of module structure and the base used. However, this module can be connected online via the edmodo application which is connected to the module via the attached link. For learning to write narrative texts with a project-based learning module, there is teacher monitoring that is linked through applications contained in the modules designed.

## **3. Result and Discussion**

The teacher must be able to design and produce teaching materials that are appropriate to the characteristics of students and relevant to the learning objectives to be carried out [24]. Based on this opinion, it is important to develop teaching materials made by teachers, one of which is a learning module using mobile devices. The learning module developed is a learning module based on narrative

text based on Project Based Learning (PjBL). PjBL is an instruction approach that teaches a curriculum concept that is supported by principles of student-centered teaching, student autonomy, collaborative learning, and learning through assignments [45]. The PjBL learning aims to make students able to produce projects in the form of certain products [40][38][52].

The learning module is designed based on the module structure which consists of three main parts namely introduction, learning activities and evaluation[26]. The learning module is developed based on the steps of the Project Based Learning model. Learning activities that are used as a basis for compiling this learning module are arranged in seven steps. The seven steps include determining the fundamental questions, determining the project, compiling project planning, preparing the project implementation schedule, implementing the project with teacher facilitation and monitoring, preparing reports and presentations, and evaluating the project's process and results [55][56][57]. An explanation of the steps of learning activities in the module for learning to write narrative texts is described as follows.

### **3.1 Determination of Basic Questions**

Determination of fundamental questions is an activity to build knowledge about the concept of learning undertaken. The concept can be done by providing illustrations and examples. In learning to write texts, for example biographical texts, the illustrations provided contain a description of the text that can be known easily for students. This section can also be presented in the form of illustrations in the form of images or stories. The illustration is better related to stories that have been heard before by students based on their experiences or figures that are well-known to students. In this section, students determine the basic questions, and answers to these questions are answered through PjBL activities. One of the principles of PjBL learning is to be motivated by questions and answered by students through the project and return when they discover new information and concepts [42]. This stage can also use problems to trigger inquiry activities where students ask questions, seek information, exchange ideas, design, and test alternative solutions [39]. This stage for language learning uses a project-based learning module for every text the same. However, not all texts can be studied using this PjBL model. Means that not all questions can be answered through a project.

### **3.2 Project Determination**

Project determination is to choose a project that is carried out from a number of options contained in the module. The project aims to produce products. In this activity students must obey the rules when doing project work, so students must define the project boundaries clearly [58]. PjBL is a model of expertise that requires commitment to do quality-driven work [37]. PjBL requires in-depth learning about issues and themes that are directly related to standards in various fields. Students choose projects that are personally relevant and learn to monitor themselves as they identify goals, resources, and time needed to complete their assignments[59]. In the module that is designed, there are several alternative products produced. These products include; making a collection of short story texts in book form from 15 selected stories; make a collection of short story texts in the form of books out of 30 students' entire work texts; making a video reading one of the saga texts with the help of puppets; or make a video reading one of the saga text with the help of a puppet. Based on some of these options students choose to put a check mark in the column provided. Projects are chosen based on the most votes. This stage for language learning uses a project-based learning module for every text the same. The product produced in the form of text written by students. The thing that can distinguish for projects in other texts is the final product that is produced. The products in this study, can be printed, audio, video, or other products that are useful for learning.

### **3.3 Develop Project Planning**

The preparation of project planning is based on the steps of writing narrative texts. These steps include; determining material for writing narrative texts; developing grooves; develop characters; developing setting; writing completion; and write text. In this section module only gives short commands as an introduction to further activities. These steps are explained in the material description section. Project-based learning is an approach that emphasizes learning that can come from long-term activities that are interdisciplinary, student-centered and integrated with real-world problems and practices [41]. So, by preparing an appropriate and mature plan, it can help students to carry out project activities according to

the plans set. This stage for language learning uses a project-based learning module for every text the same. However, the steps for writing a different text. In this study, the steps of writing based on the steps of writing narrative texts, while for other types of texts such as argumentative, descriptive, procedural, and other texts are different. So that the steps of the activities in project planning are different for different types of texts.

### **3.4 Schedule Arrangement**

Project scheduling is an important activity in using project-based learning modules. This activity is carried out by determining the time needed to complete the project. The steps taken in learning to use this module to determine the time for each step of the narrative text writing activities. So that students can complete activities on time, in the module must be given instructions how much time is determined for this learning activity. However, the completion time of each step of the activity, is determined by students with a total time equal to the time specified in the module. Project-based learning has complex work procedures and requires more time for implementation [52]. However, the learning process is flexible because it involves interaction and collaboration between students and between students and teachers. The duration of the project must be determined correctly. This is done so that the project completion target can be completed within the specified time[58]. This stage for language learning uses a project-based learning module for each different text. In this module, the duration of product completion is in minutes. The duration specified in the learning of each text can be adjusted to the given task and to the conditions of the students' needs. The time for project completion can be hours to weeks. For larger projects, it can be completed in a matter of months.

### **3.5 Project Implementation with Teacher Facilitation and Monitoring**

At this stage students carry out the steps of writing by reporting each activity to the teacher. Students are also facilitated with answers if there are questions about the project being carried out. The teacher has an important role in project-based learning. Teachers in project-based learning function as facilitators [42]. More broadly, in PjBL student-centered activities, it marked a shift in the role of teachers to become instructors, facilitators, resource persons and guides [59][60]. The learning module design was developed in this activity by displaying an activity table. The teacher fills the table with initials or check marks on monitoring activities. Monitoring conducted by the teacher is twofold, namely monitoring the time that aims to see the student's exact or inaccurate completing each activity and monitoring the activities aimed at seeing the student's activity completed or the need for revision. Because learning uses mobile devices, the monitoring is done online by the teacher. The developed module is connected to the edmodo application and the teacher provides feedback through the application. This stage is for learning to use a project-based learning module for every text the same. However, the design is adapted to the module writer. The design shown does not have to be in the form of a table, however, it can be in another form. Monitoring conducted can be adjusted to the needs of students or learning activities undertaken.

### **3.6 Report Preparation and Presentation**

In learning to write narrative texts, there is no report preparation. The activities carried out at this stage are to complete narrative texts based on the steps of the activities that have been carried out. The finished text is read in front of the class. The presentation was conducted by selected people. Project work provides opportunities for students to promote their achievements [61]. In the learning module developed. The design of this activity is in the form of an order regarding reporting or presentation activities.

### **3.7 Evaluation of Project Process and Results**

At this stage, students discuss what are the obstacles and what can make it easier for students to write narrative texts. At this stage, students' mastery of skills is measured through performance-based assessments including rubrics, self-evaluation, and reflection [47]. In the developed learning module design, this section is presented in the form of a table that contains the activities of the steps in writing the text carried out. Students judge themselves by filling the table with initials or checklist. This is useful as a reflection of knowledge or activities that have been mastered by students. This explains that the ultimate goal of learning is not just value, but meaningful learning. Obstacles in learning can be

discussed with class members and teachers. After the learning module has been designed, the module is then validated by an expert. The results of the module validation can be seen in the following table.

**Table 1.** Learning Module Validation Results

Rated Aspect	Validity Results (%)	Category
Content Feasibility	93.80	Very Valid
Linguistic	93.77	Very Valid
Presentation	94.00	Very Valid
Layout	92.54	Very Valid
<b>Average Value</b>	93.53	Very Valid

Based on the value of the validity it can be concluded that the learning modules developed are categorized as very valid with a validity value of 93.53%. Therefore, the developed modules can be tested in schools to find out the practicality and effectiveness of the learning modules developed.

#### 4. Conclusion

Based on the results of research and discussion it can be concluded that the learning module can be used as additional teaching material for language learning. The learning module can be developed by the teacher in accordance with the needs of students. By understanding the design of learning modules that have been described, the results of this study are expected to be a good reference for subject teachers, future researchers, and the education community, to be able to design their own learning modules needed for learning activities. Especially the Project Based Learning (PjBL) based learning modules are good for learning to write narrative texts, as well as other texts in language learning. The module designs described are only models, and can be adapted to the needs of later module designers.

#### Acknowledgment

Our sincere thanks to the expert validators who have assessed the modules designed. Researchers are also indebted to the Directorate General of Higher Education for the provision of research grants.

#### References

- [1] E. Y. Rahayu and H. Februariyanti, "Implementation of online reading assessments to encourage reading interests," *English Lang. Teach.*, vol. 8, no. 11, pp. 197–206, 2015.
- [2] N. N. Kalali, "Genre analysis and writing skill: Improving Iranian EFL learners writing performance through the tenets of genre analysis," *Adv. Lang. Lit. Stud.*, vol. 6, no. 6, pp. 119–130, 2015.
- [3] D. W. Rowe and S. J. Wilson, "The development of a descriptive measure of early childhood writing: Results from the write start! Writing assessment," *J. Lit. Res.*, vol. 47, no. 2, pp. 245–292, 2015.
- [4] J. Cameron, K. Naim, and J. Higgins, "Demystifying academic writing: Reflections on emotions, know-how and academic identity," *J. Geogr. High. Educ.*, vol. 33, no. 2, pp. 269–184, 2018.
- [5] A. Agélii and Å. Grönlund, "Improving literacy skills through learning reading by writing: The iWTR method presented and tested," *Comput. Educ.*, vol. 67, pp. 98–104, 2013.
- [6] K. R. Harris, S. Graha, B. Friedlander, and L. Laud, "Bring powerful writing strategies into your classroom! Why and how," *Read. Teache*, vol. 66, no. 7, pp. 538–542, 2013.
- [7] J. Myles, "Second language writing and research: The writing process and error analysis in student texts," *TESL-EJ*, vol. 6, no. 2, pp. 1–20, 2002.
- [8] B. Nurgiyantoro, *Penilaian dalam pengajaran bahasa dan sastra*. Yogyakarta: Tiara Wacana, 2001.
- [9] O. B. Sibarani, "Penerapan proses kognitif dan terapi cognitive blocking dalam peningkatan

- kualitas pembelajaran menulis,” *Diksi*, vol. 14, no. 2, pp. 132–142, 2007.
- [10] O. Buyukyavuz and I. Cakir, “Uncovering the motivating factors behind writing in english in an EFL context,” *Anthropologist*, vol. 18, no. 1, pp. 153–163, 2014.
- [11] S. Graham and K. R. Harris, “The role of self-regulation and transcription skills in writing and writing development,” *Educ. Psychol. ISSN*, vol. 35, no. 1, pp. 3–12, 2018.
- [12] R. Gholaminejad, A. Moinzadeh, M. Youhanaee, and H. Ghobadirad, “Writing attitudes of iranian EFL students : A qualitative study,” *J. Lang. Teach. Res.*, vol. 4, no. 5, pp. 1138–1145, 2013.
- [13] OECD, “PISA 2015 results in focus,” 2016. [Online]. Available: <http://www.oecd.org/pisa/pisa-2015-results-in-focus.pdf>.
- [14] PIRLS, *International Report. Performance at the PIRLS 2011*. Lynch School of Education, Boston College: International Benchmarks TIMSS & PIRLS Report International Study Center (IEA), 2011.
- [15] P. Rumney, J. Buttress, and I. Kuksa, “Seeing, doing, writing: The write here project,” *SAGE Open*, pp. 1–11, 2016.
- [16] E. S. Åberg, Y. Ståhle, I. Engdahl, and H. Knutes-Nyqvist, “Designing a website to support students’ academic writing process,” *Turkish Online J. Educ. Technol.*, vol. 15, no. 1, pp. 33–42, 2016.
- [17] Y. Karlen and M. Compagnoni, “Implicit theory of writing ability: Relationship to metacognitive strategy knowledge and strategy use in academic writing,” *Psychol. Laerning Teach.*, vol. 16, no. 1, pp. 47–63, 2017.
- [18] M. E. G. Moya, L. M. Ortiz, and A. M. N. Díaz, “Evidence of intercultural communication competence in tenth grader’s narrative texts,” *Gist Educ. Learn. Res. J.*, no. 13, pp. 111–130, 2016.
- [19] R. Purba, “Improving the achievement on writing narrative text through discussion starter story technique,” *Adv. Lang. Lit. Stud.*, vol. 9, no. 1, pp. 27–30, 2018.
- [20] L. Webster and P. Mertova, *Using narrative inquiry as a research method: An introduction to using critical event narrative analysis in research on learning and teaching*. London: Routledge, 2007.
- [21] S. Özdemir, “The effect of summarization strategies teaching on strategy usage and narrative text summarization success,” *Univers. J. Educ. Res.*, vol. 6, no. 10, pp. 2199–2209, 2018.
- [22] P. F. N. Castillo, R. F. C. Verde, W. S. F. Sotelo, J. N. Gamboa, and C. O. V. Orbegoso, “The harmonic mind map in the comprehension of narrative texts in university students,” *Univers. J. Educ. Res.*, vol. 6, no. 2, pp. 575–606, 2018.
- [23] J. To-im and A. Klunklueng, “A firefly learning module for environmental sustainable development in Samutsongkhram Province, Thailand,” *Int. Electron. J. Environ. Educ.*, vol. 2, no. 1, pp. 37–63, 2012.
- [24] O. A. Fidelia, “Material teaching aids: Enhancement tool for teaching essay writing in secondary schools,” *World J. Educ.*, vol. 5, no. 5, pp. 110–116, 2015.
- [25] Y. M. Harsono, “Developing learning materials for specific purposes,” *TEFLIN J.*, vol. 18, no. 2, pp. 169–179, 2007.
- [26] Daryanto and A. Dwicahyono, *Pengembangan perangkat pembelajaran (Silabus, RPP, PHB, bahan ajar)*. Yogyakarta: Gava Media, 2014.
- [27] R. Andayani, Y. Pratiwi, and E. T. Priyatni, “Pengembangan modul pembelajaran menulis cerpen bermuatan motivasi berprestasi untuk siswa kelas XI sma,” *Basindo*, vol. 1, no. 1, pp. 103–116, 2017.
- [28] S. Y. Öztürk, “Use of metacognitive online reading strategies by student teachers of english,” *Eur. J. Foreign Lang. Teach.*, vol. 3, no. 3, pp. 17–32, 2018.
- [29] J. Keengwe and M. Bhargava, “Mobile learning and integration of mobile technologies in education,” *Educ. Inf. Technol.*, vol. 19, no. 4, pp. 737–746, 2014.
- [30] K. Demir and E. Akpınar, “The effect of mobile learning applications on students’ academic achievement and attitudes toward mobile learning,” *Malaysian Online J. Educ. Technol.*, vol. 6, no. 2, pp. 48–59, 2018.



- [31] G. Dai, Y. Liu, and S. Cui, "A study on the mobile learning of English and American literature based on wechat public account," *English Lang. Teach.*, vol. 11, no. 6, pp. 47–66, 2018.
- [32] E. Alsadoon, "The impact of social presence on learners' satisfaction in mobile learning," *TOJET Turkish Online J. Educ. Technol.*, vol. 17, no. 1, pp. 226–233, 2018.
- [33] N. M. Martirosyan, D. P. Saxon, and R. Wanjohi, "Student satisfaction and academic performance in Armenian higher education," *Am. Int. J. Contemp. Res.*, vol. 4, no. 2, pp. 1–5, 2014.
- [34] G. Vavoula and M. Sharples, "Meeting the Challenges in evaluating mobile learning: A 3-level evaluation framework," *Int. J. Mob. Blended Learn.*, vol. 1, no. 2, pp. 54–75, 2009.
- [35] B. Muhammet and O. Sarigöz, "Determining the readiness levels of pre-service teachers towards mobile learning in classroom management," *Educ. Res. Rev.*, vol. 13, no. 10, pp. 382–390, 2018.
- [36] S. Ramadhan, Y. Asri, and V. Indriyani, "Learning Module Design Writing Argumentative Text Based Problem-Based Learning," in *Advances in Social Science, Education and Humanities Research*, 2018, vol. 263, pp. 194–200.
- [37] C. A. Maida, "Project-Based Learning : a critical pedagogy for the twenty-first century," *Policy Futur. Educ.*, vol. 9, no. 6, pp. 759–768, 2016.
- [38] S. Albritton and J. Stacks, "Implementing a project-based learning model in a pre-service leadership program," *NCPEA Int. J. Educ. Leadersh. Prep.*, vol. 11, no. 1, 2003.
- [39] Y. Ching and Y. Hsu, "Peer feedback to facilitate project-based learning in an online environment," *Int. Rev. Res. Open Distance Learn.*, vol. 14, no. 5, pp. 259–276, 2013.
- [40] W. Thomas, J. *A review of reseach on project-based learning*. California: The Autodesk Foundation, 2000.
- [41] B. G. Solomon, "Project based learning: A primer," *Technol. Learn.*, vol. 23, no. 6, 2008.
- [42] J. Quint and B. Condliffe, "Project-based learning: A promising approach to improving student outcomes," *Mdrc Build. Knowledge to Improv. Socal Policy*, no. January, pp. 1–2, 2018.
- [43] L. Miller, C. A. Hafner, and C. N. K. Fun, "Project-Based Learning in a Technologically Enhanced Learning Environment for Second Language Learners : students' perceptions," *E-Learning Digit. Media*, vol. 9, no. 2, pp. 183–195, 2012.
- [44] V. Muryanti, "Project-based assessment models for senior high school grade XI," *Indones. J. English Lang. Stud.*, vol. 1, no. 2, pp. 183–2066, 2015.
- [45] Y. C. G. Mali, "Project-based learning in Indonesian EFL classroom: From theory to practice," *Indones. J. English Educ.*, vol. 3, no. 1, pp. 89–105, 2016.
- [46] A. N. Meltzoff, P. K. Kuhl, J. Movellan, and T. J. Sejnowski, "Foundations for a new science of learning," *Science (80-. )*, vol. 325, no. 5938, pp. 284–288, 2009.
- [47] B. S., "Project-based learning for the 21th century: Skills for the future," *Clear. House*, vol. 83, pp. 39–43, 2010.
- [48] C. Lin, J. Ma, K. Y. Kuo, and C. C. Chou, "Examining the efficiency of project-based learning on cultivating the 21st century skills among high school students in global context," *I-manager's J. Sch. Educ. Technol.*, vol. 11, no. 1, pp. 1–9, 2015.
- [49] R. Donnelly and M. Fitzmaurice, "Collaborative Project-based Learning and Problem-based Learning in Higher Education : a Consideration of Tutor and Student Role in Learner-Focused Strategies," pp. 87–98, 2005.
- [50] N. Hixson, M. English, and J. Megendoller, "Using project based learning to teach 21 st century skills : Findings from a statewide initiative Jason Ravitz Buck Institute for Education," in *Paper presented at Annual Meetings of the American Education Research Assosiation*, 2012.
- [51] H. Jung, W. Jun, and L. Gruenwald, "A design and implementation of web-based project-based learning support systems," 2011. [Online]. Available: <http://www.cs.ou.edu/~database/documents/jjg01.pdf>.
- [52] T. Koparan and B. Güven, "The effect on the 8 th grade students' attitude towards statistics of project based learning," *Eur. J. Educ. Res.*, vol. 3, no. 2, pp. 73–85, 2012.
- [53] N. S. Sukadinata, *Metode penelitian pendidikan*. Bandung: Remaja Rosdakarya, 2008.
- [54] Trianto, *Mendesain model pembelajaran inovatif-progresif*. Jakarta: Kencana, 2012.

- [55] E. T. Priyatni, *Desain pembelajaran bahasa indonesia dalam kurikulum 2013*. Jakarta: Bumi Aksara, 2014.
- [56] Warsono and Hariyanto, *Pembelajaran aktif*. Bandung: Remaja Ros-dakarya Offset, 2012.
- [57] V. Indriyani and S. Ramadhan, “The development teaching of writing fable text module with project based learning (PjBL) containing characters,” in *Advances in Social Science, Education and Humanities Research*, 2017, vol. 104, pp. 16–21.
- [58] B. Akcay, “Problem-based learning in Science Education,” *Turkish Sci. Educ.*, vol. 6, no. 1, pp. 26–36, 2019.
- [59] K. Meyer and S. Wurdinger, “Students ’ Perceptions of Life Skill Development in Project-Based Learning Schools,” vol. 2, no. 1, pp. 91–114, 2016.
- [60] B. X. S. Ntombela, “Project Based Learning : In Pursuit of Androgogic Effectiveness,” vol. 8, no. 4, pp. 31–38, 2015.
- [61] G. Baş, “Invertigating the effects of project-based learning on students’ academic achievement and attitude towards english lesson,” *Online J. New Horizons Educ.*, vol. 1, no. 4, pp. 1–15, 2011.