

Implementation of Problem Based Learning (PBL) Model Containing the 21st Century Skills in Rhetoric Online Lecture

by Tommi Yuniawan

Submission date: 05-Jan-2023 11:01PM (UTC+0700)

Submission ID: 1988879148

File name: C.2.a.3_1.pdf (485.33K)

Word count: 3384

Character count: 18690

1 Implementation of Problem Based Learning (PBL) Model Containing the 21st Century Skills in Rhetoric Online Lecture

Tommi Yuniawan¹, Asep Purwo Yudi Utomo²

Department of Indonesian Language and Literature, Universitas Negeri Semarang

Email: tommiyuniawan@mail.unnes.ac.id¹, aseppyu@mail.unnes.ac.id²

Abstract. The purpose of this study is to describe the form of implementation of model-based learning containing 21st century skills in Rhetoric online lecture in the form of syntactic learning, activities, and learning products. The method used is descriptive of the research and development stages that had been carried out. The researcher describes the important findings from the stages of research development and its application. The research subjects were students of the Indonesian Literature study program, Universitas Negeri Semarang. The results of the study are divided into three findings. First, the syntactic of problem-based learning model containing 21st century skills in rhetoric online lecture. Syntactic development lies in the implementation of 21st century skills in the form of critical thinking, activity, communication skills, and collaboration in learning problem based learning models in Rhetoric online lecture. Second, activities in model-based learning that were carried out to improve 21st century skills in Rhetoric online lecture. Third, the products produced in the Rhetoric online lecture that implemented problem-based learning and 21st century skills. The main products are creative videos with various topics of speaking and rhetorical skills. The implication of this study is that the implementation of problem-based learning containing 21st century skills in Rhetoric online lecture can be an example of learning in other courses so that they have clear outputs in lectures.

1. Introduction

One of the learning models that have an impact on learning outcomes is the problem based learning (PBL) model. There are several research results that reveal its advantages, particularly in learning that requires scientific development. PBL development is also carried out to lead to integrated projects [1]. In several studies also experimented PBL in different classes and produced learning products. In addition to solving problems in learning, it also became effectively implemented in theoretical and practical learning [2][3]. However, the most important thing in choosing the PBL learning model is to improve learning outcomes [4]. Besides, PBL was proven to be able to improve critical thinking skills in the learning process [5].

The implementation of learning during the pandemic in Indonesia experienced a very significant change. The learning must be done online and there needs to be readiness from lecturers to maximize the learning. Online learning nowadays is strongly influenced by the readiness and attitude of students in learning because without readiness and high awareness, online learning will not succeed [6][7]. Particularly during the Covid-19 pandemic conditions, online learning is increasingly widespread and must be used to [8]. Therefore, there is a need of collaboration and development in the learning process [9] as well as periodic evaluations [10].

In the rhetoric course, students are expected to have the ability to think critically and quickly in deciding because speaking requires fast thinking time. In addition, other demands for self-development must also be considered. The 21st Century Skills is also part of the rhetoric course. We need to know the factors that

determine 21st century skills to be able to take the right learning stages [11]. In addition, the existence of a scale that can measure 21st century skills makes it easier for educators to provide behavior to students [12] supported by technology and other knowledge namely Technological Pedagogical Content Knowledge (TPACK) [13].

This study reveals how students have a role in a learning. In addition, it also relates to the things that are developed by students and lecturers to gain 21st Century skills in rhetorical course. In learning, critical thinking skills, creativity, communication skills, and collaboration skills can be implemented simultaneously [14]. This is for prospective educators as revealed in a study that develops the 21st century skills for prospective elementary school teachers [15]. Other examples also reveal the development of the 21st century skills in various fields of science, namely science education [16], arts education that integrates the 21st century skills [17], teacher development in general [18], and teachers preparation to face global challenges [19].

The findings obtained can be used as a model for other courses. The model implemented in online lecture, because in the future online lectures will be more popular. The popularity of online learning needs to be balanced with the mental readiness of students which includes attitudes and readiness to learn online [20][21]. Although initially online learning was caused by the COVID-19 pandemic [22] and was used as an alternative to learning [23], but in the future there will be long-term habituation for online learning.

2. Methodology

This article is a part of research and development (R & D) [24]. In the eighth and tenth stages, the researchers tested and implemented the learning model that had been developed. This means that there is a research adjustment in research and development (R & D) [25]. The researcher tried to describe the implementation of the model in three parts. Here are some description components in the implementation of the PBL Model and the 21st Century Skills in Rhetoric Course.

Table 1. The Implementation of the PBL Model and the 21st Century Skills in Rhetoric Course

PBL Syntactic	The 21 st Skills	Learning Products
1. Describing the learning stages implemented in the rhetoric course	1. Describing the learning activities that strengthen the 21 st century skills	1. Describing the learning products
2. Showing the differences and advantages of the learning	2. Describing the most important skills of the 21 st century among others	2. Revealing the reasons and the impacts of producing a learning product

The research subjects of this study were students of the 2020 Indonesian Literature study program at the Universitas Negeri Semarang. They have characteristics, (1) linguistic and literary students, (2) students with language skills demands, (3) the total was 70 students divided into two classes, (4) having varying abilities, diversity of competencies, and varied school origins: language, social sciences, natural sciences. This characteristic was taken because each class had different characteristics [26].

3. Results and Discussion

Syntactic Learning

Learning syntactic is the main stage taken by lecturers in the learning. There were several changes made in this learning according to the needs and learning objectives. In general, there had been many studies related to the learning stages with the PBL model, which in general there are 5 learning stages starting from introduction or orientation to problems, designing activities and organizing students, carrying out activities or guidance processes, developing work or analysis, and evaluating or discussing. [27][28][29].

The comparisons and changes in problem based learning and its development with the 21st century skills components in rhetoric online lecture are presented below.

Table 2. Development of the 21st Century Skills-Based PBL Model

PBL Syntactic	The 21st Century Skills	Development of the 21st Century Skills-Based PBL Model
1. Introduction	1. Critical thinking skills	1. Introduction and learn to formulate problems by using concept map
2. Designing an experience	2. Creativity	2. Designing an experience and work planning from outside of the learning
3. Tips for getting started	3. Communication Skills	3. Collaborating on Tips for getting started
4. Bears on a boat	4. Collaboration	4. Implementing the design in Bears on a boat
5. Evaluate a PBL experience [30]	Skills	5. Evaluating a PBL experience by developing communicative products

The development of the PBL Model containing the 21st Century Skills in rhetoric online lecture lies in strengthening each step of the learning carried out. The learning stages that were carried out inserted the 21st Century skills components with the suitability of the learning stages. However, in reality, learning stages will merge holistically with the 21st century skills, but they are more dominant in the components of each learning stages. The existence of the 21st century skills component in PBL learning models will make integrated learning with more directed stages to be able to improve critical thinking skills, creativity, communication skills, and collaboration skills. The results of these developments provide evidence that learning is always developing. There are many other developments that have been carried out, namely the development of learning games [31], it relates to the concept of leadership, improving social skills, or developing its evaluation. This will continue to grow because the learning aspect also continues to develop. For instance, from the point of view of learning media that was needed in the learning process. There was also development from the point of view of learning materials and learning enrichment materials. In addition, there were also developments in other aspects that were previously unthinkable.

The advantages of the PBL model and the 21st Century Skills in learning rhetoric online lecture including (1) students were able to have the initiative to develop critical thinking skills in the learning step, (2) students had the opportunity to deep their collaboration skills with online assignments and learning carried out individually, (3) learning that was carried out is not monotonous, has a good target, it was measured from the achievement of understanding and the achievement of the product produced by the creativity that arose from students, (4) students had the opportunity to practice their oral and online communication skills, it means that communication skills were carried out developed because it required a higher level of understanding due to the limited online lecture. The weaknesses of the PBL learning model and the 21st Century Skills in rhetoric online lecture including (1) this learning really required participation and learning awareness from students, so that if students were not active, this learning was not optimal, (2) it was limited by the communication media owned by students which was unequal.

The 21st Century Skills Improvement

Learning activities in rhetoric online lecture could be very varied and monotonous depending on many aspects. Lecturers, students, and other components had a balanced role in the learning process. In this case, the activities carried out in learning in the online rhetoric lecture had a big role. Here are some activities that had a role in developing the 21st Century skills with various supporting information.

Table 3. Learning Activities to Improve the 21st Century Skills

Critical thinking	Creativity	Communication Skills	Collaboration Skills
1. Focus group discussion	1. Processing the information obtained	1. Applying two-way communication	1. Dividing tasks evenly
2. Analyzing the problem	2. Developing the information obtained	2. Applying one-way communication	2. Doing the task according to the portion

9
Table 3 illustrates that each of the two main activities that are most prominent for improving the 21st century skills. In improving critical thinking skills, students were encouraged to carry out focus group discussions and conduct problem analysis. These two activities directly provided opportunities for students to play a role in processing critical thinking skills. The process they did is also very interesting, although at the beginning there were some students who were awkward to share ideas, opinions. In increasing creativity, students were encouraged to carry out activities in the form of processing information and developing it. These two activities could be carried out with various targets. In the online rhetoric lecture, students were asked to try to process information from the media to be developed into a product. For instance, students processed information from YouTube media to become one of the basic reinforcements for developing their products. This is one of the creative steps that students could take to be able to immediately complete the product they wanted to produce.

In improving communication skills, students were encouraged to carry out activities to implement one-way and two-way communication. They would be challenged that communication is not just talking but accepted it, through two-way and one-way communication. This habituation was carried out with regular discussions to strengthen two-way communication with light themes. While, one-way communication was carried out by making short writings which would be tested on how well the writing understood the readers.

Learning Products

Good learning will provide various outputs. Besides skills, knowledge becomes the main output. However, learning in rhetoric online lecture also produced products that were part of learning. Some of these products illustrated that the components of the 21st century skills could be found in students who were able to complete them.

The product is a creative video. The creative video themes vary widely. Some of them revealed about speaking theory, speaking practice, rhetoric, interviews, storytelling, speeches, profile videos, vlogs shared on Youtube, discussions, public speaking, or other types of speaking. Students designed videos with interesting and organized steps. Of course they needed a discussion process in teams to determine ideas in video product development. The creativity that was raised greatly affected the results of the videos produced.

From 69 Indonesian Literature Study Program students who attended rhetorical lecture, 23 groups were formed consisting of 3 members each and produced 20 products with very good grades and 3 products with good grades. The product was declared to be very good and good because it had at least 3 stages of review. The first and second stages of the product were reviewed by the students themselves. The third stage of the product was reviewed by the lecturer to get input and constructive criticism to improve the product produced.

4. Conclusion

Syntactic in rhetoric online lecture that implemented PBL and the 21st century skills provided opportunities for students to develop themselves during and outside of the learning. Students had many opportunities to enhance the 21st century skills component as needed. The activities contained in learning are also an important part of strengthening skills. The activities carried out were not only for assignment from lecturers, but also initiatives from students who had analyzed the learning process and learning development needs. Learning products are bonuses that were obtained because learning did not always produce products. This product was a reflection for lecturers and students that there was always an opportunity for creative learning.

References 2

- [1] S. C. Mcloone, B. J. Lawlor, and A. R. Meehan, "The Implementation and Evaluation of a Project-Oriented Problem-Based Learning Module in a First Year Engineering Programme," *J. Probl. Based Learn. High. Educ.*, vol. 4, no. 1, pp. 71–80, 2016, doi: 10.5278/ojs.jpblhe.v0i0.1243.
- [2] J. Davidsen, P. V. K. Andersen, and E. Christiansen, "Problem-Based Learning in a Box: Lessons

- Learned from an Educational Design Experiment.,” *J. Probl. Based Learn. High. Educ.*, vol. 7, no. 1, pp. 120–132, 2019, doi: 10.5278/ojs.jpblhe.v7i1.2375.
- [3] R. Bayrak and A. Gürses, “Teaching of the Subject of Solids Through Problem-Based Learning Approach,” *World J. Educ.*, vol. 10, no. 3, p. 47, 2020, doi: 10.5430/wje.v10n3p47.
- [4] B. Sugeng and A. W. Suryani, “Enhancing the learning performance of passive learners in a financial management class using problem-based learning,” *J. Univ. Teach. Learn. Pract.*, vol. 17, no. 1, 2019.
- [5] K. L. Thomdahl and D. Stentoft, “Thinking critically about critical thinking and problem-based learning in higher education: A scoping review,” *Interdiscip. J. Probl. Learn.*, vol. 14, no. 1, pp. 1–21, 2020, doi: 10.14434/ijpbl.v14i1.28773.
- [6] E. Chung, G. Subramaniam, and L. C. Dass, “ERIC - EJ1267359 - Online Learning Readiness among University Students in Malaysia amidst COVID-19, Asian Journal of University Education, 2020-Jul,” *Asian J. Univ. Educ.*, vol. 19, pp. 46–58, 2020, [Online]. Available: <https://eric.ed.gov/?id=EJ1267359>.
- [7] Y. Zhu, J. H. Zhang, W. Au, and G. Yates, *University students’ online learning attitudes and continuous intention to undertake online courses: a self-regulated learning perspective*, vol. 68, no. 3. Springer US, 2020.
- [8] M. A. Adarkwah, “An Outbreak of Online Learning in the COVID-19 Outbreak in Sub-Saharan Africa: Prospects and Challenges,” *Glob. J. Comput. Sci. Technol. H Inf. Technol.*, vol. 21, no. 2, 2021.
- [9] A. Kumi-Yeboah, “Designing a cross-cultural collaborative online learning framework for online instructors,” *Online Learn. J.*, vol. 22, no. 4, pp. 181–201, 2018, doi: 10.24059/olj.v22i4.1520.
- [10] J. C. Liu, “Evaluating online learning orientation design with a readiness scale,” *Online Learn. J.*, vol. 23, no. 4, pp. 42–61, 2019, doi: 10.24059/olj.v23i4.2078.
- [11] E. van Laar, A. J. A. M. van Deursen, J. A. G. M. van Dijk, and J. de Haan, “Determinants of 21st-Century Skills and 21st-Century Digital Skills for Workers: A Systematic Literature Review,” *SAGE Open*, vol. 10, no. 1, 2020, doi: 10.1177/2158244019900176.
- [12] M. Cevik and C. Senturk, “Multidimensional 21th century skills scale: Validity and reliability study,” *Cypriot J. Educ. Sci.*, vol. 14, no. 1, pp. 11–28, 2019.
- [13] H. Shafie, F. A. Majid, and I. S. Ismail, “Technological pedagogical content knowledge (TPACK) in teaching 21st century skills in the 21st century classroom,” *Asian J. Univ. Educ.*, vol. 15, no. 3, pp. 24–33, 2019, doi: 10.24191/ajue.v15i3.7818.
- [14] V. Jacobson-Lundeberg, “Pedagogical Implementation of 21st Century Skills,” *Educ. Leadersh. Adm. Teach. Progr. Dev.*, vol. 27, pp. 82–100, 2016.
- [15] F. M. Cigerci, “Primary School Teacher Candidates and 21st Century Skills,” *Int. J. Progress. Educ.*, vol. 16, no. 2, pp. 157–174, 2020, doi: 10.29329/ijpe.2020.241.11.
- [16] G. Gürsoy, “Digital storytelling: Developing 21st century skills in science education,” *Eur. J. Educ. Res.*, vol. 10, no. 1, pp. 97–113, 2021, doi: 10.12973/EU-JER.10.1.97.
- [17] C. M. Schulte *et al.*, “Arts Integration And 21st Century Skills: A Study of Learners and Teachers,” *Int. J. Educ. Arts*, vol. 22, no. 2, pp. 1–26, 2021.
- [18] J. İ. Orak, Suheyly Demirkol, “Teachers’ Awareness and Actual Practices of 21st Century Learning and Innovation Skills,” *Int. Online J. Educ. Teach.*, vol. 8, no. 2, pp. 976–997, 2021.
- [19] H. M. Alhothali, “Inclusion of 21st century skills in teacher preparation programs in the light of global expertise,” *Int. J. Educ. Pract.*, vol. 9, no. 1, pp. 105–127, 2021, doi: 10.18488/journal.61.2021.91.105.127.
- [20] G. Hergüner, S. Buğra SON, S. Hergüner Son, and A. Dönmez, “The effect of online learning attitudes of university Students on their Online Learning Readiness,” *TOJET Turkish Online J. Educ. Technol.*, vol. 19, no. 4, pp. 102–111, 2020.
- [21] G. Hergüner, Ç. Yaman, S. Ç. Sari, M. S. Yaman, and A. Dönmez, “The Effect of Online Learning Attitudes of Sports Sciences Students on their Learning Readiness to Learn Online in the Era of the New Coronavirus Pandemic (Covid-19),” *TOJET Turkish Online J. Educ. Technol.*, vol. 20, no. 1,

- pp. 68–77, 2021.
- [22] K. K. Naji, X. Du, F. Tarlochan, U. Ebead, M. A. Hasan, and A. K. Al-Ali, “Engineering students’ readiness to transition to emergency online learning in response to COVID-19: Case of Qatar,” *Eurasia J. Math. Sci. Technol. Educ.*, vol. 16, no. 10, 2020, doi: 10.29333/EJMSTE/8474.
- [23] S. P.-L. Sim, H. P.-K. Sim, and C.-S. Quah, “Online Learning: A Post Covid-19 Alternative Pedagogy For University Students,” *Asian J. Univ. Educ.*, vol. 16, no. 4, p. 137, 2021, doi: 10.24191/ajue.v16i4.11963.
- [24] Z. Jam Muhammad, I. Hussain, and M. Shakir, “Product Management of Research and Development Centers at Public Sector Universities in Pakistan,” *Bull. Educ. Res.*, vol. 39, no. 2, pp. 57–64, 2017, [Online]. Available: <https://search.proquest.com/docview/1984754702?accountid=149134>.
- [25] G. W. Ulferts, N. J. Cannon, and T. L. Howard, “The Changing Landscape for Funding Research and Development,” *Res. High. Educ. J.*, vol. 40, pp. 1–20, 2020.
- [26] M. Prilutskaya and R. Knoph, “Research on three L2 writing conditions: Students’ perceptions and use of background languages when writing in English,” *Cogent Educ.*, vol. 7, no. 1, 2020, doi: 10.1080/2331186X.2020.1832179.
- [27] E. Ceker and F. Ozdamli, “Features and characteristics of problem based learning,” *Cypriot J. Educ. Sci.*, vol. 11, no. 4, pp. 195–202, 2016, doi: 10.18844/cjes.v11i4.1296.
- [28] V. Servant-Miklos, “Problem-oriented project work and problem-based learning: ‘Mind the gap!’,” *Interdiscip. J. Probl. Learn.*, vol. 14, no. 1, pp. 1–17, 2020, doi: 10.14434/ijpbl.v14i1.28596.
- [29] A. P. Rehmat and K. Hartley, “Building engineering awareness: Problem-based learning approach for STEM integration,” *Interdiscip. J. Probl. Learn.*, vol. 14, no. 1, pp. 1–15, 2020, doi: 10.14434/ijpbl.v14i1.28636.
- [30] P. Rillero and Y.-C. Chen, “The Use of a Digital Problem-Based Learning Module in Science Methods Courses,” *J. Probl. Based Learn. High. Educ.*, vol. 7, no. 1, pp. 107–119, 2019, doi: 10.5278/ojs.jpblhe.v7i1.2349.
- [31] C. S. Chang, J. F. Chen, and F. L. Chen, “Development and design of problem based learning game-based courseware,” *Proc. Int. Conf. e-Learning 2015, E-LEARNING 2015 - Part Multi Conf. Comput. Sci. Inf. Syst. 2015*, pp. 217–219, 2015.

Implementation of Problem Based Learning (PBL) Model Containing the 21st Century Skills in Rhetoric Online Lecture

ORIGINALITY REPORT

15%

SIMILARITY INDEX

12%

INTERNET SOURCES

15%

PUBLICATIONS

4%

STUDENT PAPERS

PRIMARY SOURCES

1	"Table of Contents", Walter de Gruyter GmbH, 2022 Publication	2%
2	peer.asee.org Internet Source	2%
3	Asep Purwo Yudi Utomo, Dyah Prabaningrum, Didi Pramono, Zulfa Fahmy. "Implementation of the Online PjBL Learning Model in Writing Scientific Articles in Linguistics Courses", Walter de Gruyter GmbH, 2022 Publication	2%
4	online-journals.org Internet Source	1%
5	Dedi Prestiadi, Wildan Zulkarnain, Endra Ubaidillah, Fuad Maulana, Muhammad Rasyid Ridho. "Development of MOOC and SIPEJAR Learning Media through Animated Video Simulation of Instructional Supervision", 2022 8th International Conference on Education and Technology (ICET), 2022	1%

6	sumc.lt Internet Source	1 %
7	modules.sanfordinspire.org Internet Source	1 %
8	sistemasi.ftik.unisi.ac.id Internet Source	1 %
9	Ade Putri, Kartini Kartini, Putri Yuanita. "The Effectiveness of Learning Tools Based on Discovery Learning That Integrates 21st Century Skills to Mathematical Critical Thinking Ability in Trigonometric Materials in High School", Journal of Physics: Conference Series, 2020 Publication	1 %
10	Submitted to Universiti Teknologi MARA Student Paper	1 %
11	Hidayu Shafie, Faizah Abd Majid, Izaham Shah Ismail. "Technological Pedagogical Content Knowledge (TPACK) in Teaching 21st Century Skills in the 21st Century Classroom", Asian Journal of University Education, 2019 Publication	1 %
12	education.msu.edu Internet Source	1 %
13	journal.uii.ac.id Internet Source	

1 %

14

ddrn.dk
Internet Source

1 %

Exclude quotes On

Exclude matches < 1%

Exclude bibliography Off

Implementation of Problem Based Learning (PBL) Model Containing the 21st Century Skills in Rhetoric Online Lecture

GRADEMARK REPORT

FINAL GRADE

/0

GENERAL COMMENTS

Instructor

PAGE 1

PAGE 2

PAGE 3

PAGE 4

PAGE 5

PAGE 6
