

Analysis of the Use of Problem Based Learning Models in Independent Curriculum Learning

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Article Info	ABSTRACT
<p>Keywords: <i>Problem Based Learning, Independent Curriculum</i></p>	<p>This investigate points to depict how the Issue Based Learning learning demonstrate is utilized in free educational modules learning. To what degree is the utilize of PBL actualized within the learning prepare and what affect is delivered when utilizing the PBL show? This investigate strategy employments subjective inquire about strategies with a writing survey approach based on diaries. The inquire about stages were carried out beginning from article collection, article decrease, article show, dialog and conclusions related to the Issue Based Learning learning demonstrate and the free educational modules. The research data source is within the shape of diary articles taken from databases such as SINTA, Google Researcher, Measurements and other significant diary destinations. The comes about of the inquire about appear that the use of the Issue Based Learning learning show encompasses a critical affect with the normal increment in understudy learning results being over the KKM esteem. Problem-based learning coordinated at understudies is able to make strides basic considering abilities that can illuminate issues, so that it has an affect on expanding problem-solving capacities that make understudies able to fathom related issues. This is often in line with the goals of the autonomous educational programs.</p>

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INTRODUCTION

One effort to build the nation is by preparing education that has the same goals as the goals of nation building. This is in line with opinion (Miller & Northern, 2011). Instruction is an imperative angle of life and includes human assets which are the trust of national and state life. Through instructive exercises, it is trusted that it can deliver human assets (HR) who have great communication and collaboration aptitudes, specialists in utilizing innovation, imaginative and inventive considering aptitudes and the capacity to unravel issues. The Indonesian educational modules has experienced a few alterations and changes since it was presented in 1947. After being renamed the Competency-Based Educational modules in 2004 and the Instructive Unit Level Educational programs (KTSP) in 2006, it at that point got to be the 2013 Thirteen Educational modules (Kurtilas) in 2013, The government's Service of National Instruction changed it in 2022 to the Autonomous Educational modules (Ulinniam et al., 2021). A partitioned think about program is as of now beneath improvement, with a center on executing school mobilization. Subsequently, instruction in Indonesia is additionally right now attempting to move forward the quality of instruction. As expressed by Sibuea (2017), "the government appears a solid commitment through financial commitment for advance upgrading the instruction framework to attain the national objective of raising human capital to be globally competitive. This arrange will be executed between 2020 and 2024". In line with this expression, improving the quality of instruction in Indonesia is presently being

balanced to suit the wants of the 21st century which can be done from all angles. Typically since the educational programs is planned not as it were to supply subject matter that understudies must learn, but moreover points to supply learning encounters and create students' life abilities (Larson & Miller, 2011).

To form a solid and imaginative era, a educational programs is required that can energize understudies to think fundamentally, collaborate and be creative in tackling issues. This can be the foundation to endeavors to execute the Autonomous Educational programs within the Indonesian instruction framework. The Merdeka Educational modules not as it were points to improve students' understanding of different concepts, but moreover cultivates higher considering abilities and creates their inventiveness within the setting of science. Understudies will normally have the opportunity to proceed to develop concurring to their potential, interface and capacities since the Free Educational programs emphasizes adjusting the learning prepare to suit wants and characteristics of each understudy. Instruction program capabilities and competencies can be laid out within the educational programs, and schools can plan methodologies to assist understudies accomplish these abilities.

The part of instructors in actualizing the educational modules is exceptionally critical. Separated from actualizing and planning the educational modules, as well as having the capacity to form a unused educational modules, the teacher's obligation is to utilize the existing educational programs. Agreeing to Agnew (2001), by executing Issue Based Learning (PBL), understudies will learn in profundity to get it concepts and create abilities, understudies take part and persuade each other in learning. Issue Based Learning not only has an affect within the shape of benefits in completing one lesson but moreover on other lessons as well as being valuable for sharpening "Life Long Instruction" (Sari et al., 2022). According to Farida, Hasanudin, & Suryadinata,(2019), students obtain information and problem solving skills by using the Problem Based Learning model which is a kind of learning paradigm. Students develop the skills of recognizing problems, establishing relationships between variables, and applying relevant ideas using the Problem Based Learning methodology (Rais & Suswanto, 2017). Students carry out this process by discussing in groups to voice their points of view and ideas (Wa Malmia et al., 2019).

The point of learning utilizing Issue Based Learning is to assist understudies create adaptable and compelling information in fathoming issues, autonomous learning and collaboration in student-centered learning. PBL prioritizes understudy movement since exercises in PBL incorporate watching issues, defining theories, arranging inquire about through to its usage, and getting a conclusion from the reply to the issue given (Frikson Jony Purba, 2015).

Consequent investigate appeared that the utilize of a problem-based learning worldview altogether progressed students' learning results and communication abilities (Wulandari et al., 2018). Based on this articulation, we will conclude that problem-based learning makes a difference educators' work by moving forward understudy learning results. Considering the huge number of papers and field comes about that utilize the problem-based learning demonstrate within the autonomous educational programs, analysts conducted a writing survey with respect to the effect of the problem-based learning demonstrate in autonomous educational programs learning on understudy learning results. Next goal: First, the researcher reviews other research conducted by other people regarding the current research topic. Researchers understand knowledge about the research topic being conducted. Literature searches show readers that the researcher has mastered the research topic he is working on. The better and more complete the literature review written, the more respected the researcher will be as the author of the research (Heru Kurnianto Tjahjono, 2015).

Second, the literature review will connect the study that the researcher will conduct with the broad discourse in the literature on the topic. Researchers will cover the gap that exists between the

research project the researcher is working on and the world of literature in general, researchers can even expand previous studies. Researchers understand the flow of previous research on this topic. With this knowledge, the researcher will design a new research project that the researcher will carry out next.

Third, it shows the researcher's ability to integrate and summarize what other people already know about the field of study being researched. One review summarizes the overall results of the research, which things have been agreed upon, which are still under debate, and which are still under investigation, and in what direction this research topic will develop in the future.

Fourth, by learning from other people researchers can generate new thoughts. A good literature review is to identify aspects that are still dark and provide new insights and hypotheses for further research (Marzali, 2017).

RESEARCH METHOD

The strategy utilized in this investigate is writing survey. Writing audit is the primary step in planning a research plan. Literature ponder could be a look and investigate of the writing by perusing different books, diaries, expositions, theses and other distributions related to the investigate theme, to create a bit of composing with respect to a specific theme or issue (Marzali, 2016). Within the writing audit, analysts carried out encourage activities by analyzing logical articles taken from research information sources within the frame of diary articles taken from databases such as SINTA, Google Researcher, Measurements and other pertinent diary locales. The stages used within the writing survey can be seen within the taking after picture:

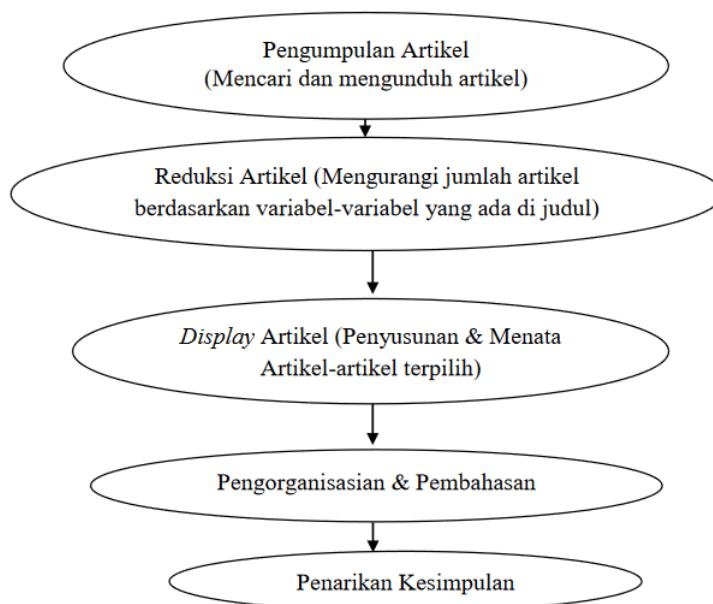


Figure 1: Stages of literature review
(Source: (Marzali, 2016))

1. Article Collection

The article collection organize is carried out by looking and downloading articles through Google Researcher by writing in key words related to the subject or title of the inquire about. In this case, the key words are "Issue Based Learning" and "Autonomous Educational modules Learning".

2. Article Diminishment

Article reduction means summarizing, choosing the most focuses, centering on the imperative things, based on topics and designs and evacuating what isn't fundamental. In this way, the diminished article will provide a clear picture and make it simpler for analysts to gather assist information and look for it in the event that vital.

3. Article Show

Showing or displaying articles. This article is displayed in account shape by clarifying each relationship between factors.

4. Organizing and Dialog

Organization and dialog based on the sort of literature audit utilized. In this case, the literature study chosen is within the frame of a hypothetical ponder. This sort of writing think about within the frame of a hypothetical think about could be a uncommon ponder in which the creator clarifies a few hypotheses or concepts centered on a specific point and compares these speculations or concepts on the premise of suspicions, coherent consistency, and scope of clarification.

5. Drawing Conclusions

Conclusions are drawn based on the comes about of the organization and talks that have been carried out previously.

RESULTS AND DISCUSSION

The beginning arrange is collecting articles based on the factors contained within the title. Of the 20 articles, 7 articles were found that coordinated the title theme. At the article decrease organize, there were 13 articles that had to be disposed of since there was one variable that did not coordinate the title theme. For case, there are articles that as it were talk about the Issue Based Learning learning show, but not the free educational programs. From the 7 articles, organizing and organizing will be carried out which is able be a dialog of the impact of the Issue Based Learning demonstrate in learning the Autonomous Educational programs.

Problem Based Learning

Problem Based Learning are accepted to create an dynamic commitment to the learning handle, particularly within the free curriculum. Using issue tackling strategies is more imperative than the ultimate item in this learning worldview. PBL comes with a learning handle that employments real-world issues to assist understudies learn fabric and progress explanatory and problem-solving aptitudes (Anwar & Jurotun, 2019). Collaborative real-world issue tackling is the pith of Issue Based Learning. In PBL, understudies begin working on issues from the starting of the learning prepare, and the teachers acts as a facilitator all through the learning handle (Dewi Yanwari Madyaratri & Wardono, 2022).

Problem Based Learningis student-centered learning. Understudies learn key considering and space information. The objective of PBL is to assist understudies create adaptable information, successful issue tackling aptitudes, autonomous learning, collaboration abilities and inherent inspiration. Problem-based learning is an dynamic learning fashion of working in bunches, understudies recognize what they already know, what they have to be know, and how and where to get to unused data that can lead to issue understanding. The PBL learning demonstrate is an viable learning show connected in learning since understudies effectively maximize their considering capacities through efficient bunch or group work exercises, so that understudies can enable, support, test and create their considering capacities on an continuous premise (Yuliasari, 2017).Apart from

that, PBL also has a number of advantages, as stated by Aziz et al., (2016). This includes: 1. Students participate actively in all learning activities, thereby helping them absorb information better; 2. Students practice collaborating with classmates; and 3. Students can take lessons from various sources to increase their knowledge.

Independent Curriculum

The development of the Merdeka Curriculum in Indonesia has occurred in stages since it was introduced in 2020. This curriculum is the government's effort to catch up or learning loss after the Covid-19 pandemic. This policy has received significant encouragement from various parties, including academics, educational practitioners and other stakeholders. In its development process, the Merdeka Curriculum has involved various reforms in the curriculum context, such as an emphasis on active, project-based and learner-centered learning (Ananta & Sumintono, 2020). The Merdeka Curriculum bases its approach on an educational paradigm that is more contextual, inclusive and learner-centered (Agustina in Harfiani & Desstya, 2023). This approach emphasizes learning that accommodates students' individual needs and potential, as well as providing space for students' creativity and active participation in the learning process.

The Autonomous Educational modules is an instructive approach that points to supply opportunity to schools and instructors in creating a educational modules that suits understudy needs and the nearby setting. According to Novak, (2020), The Merdeka Educational programs emphasizes a responsive, comprehensive and student-centered learning approach. This curriculum is planned to assist understudies create 21st century competencies such as issue fathoming, imagination, communication and collaboration. Usage of the Autonomous Educational programs includes different interrelated components. Agreeing to Haryanto in (Hidayat & Putro, 2024) The successful implementation of the Independent Curriculum is very dependent on the active role of teachers as learning facilitators who are able to facilitate students in developing skills, knowledge and attitudes. Freedom in learning will result in gaining new knowledge and new experiences. The independence curriculum is upheld. students' interests and talents, so that there is hope that children can develop optimally and according to expectations (Rizka & Pamungkas, 2023). The main thing that is assumed in independent learning is giving confidence to educators so that they feel free in the learning process and create more comfortable learning conditions, educators and students can discuss relaxedly, the learning process can be carried out outside the classroom, forming an independent, civilized character, politeness, and not relying on the ranking system in the classroom.

The Influence of Problem Based Learning in the Independent Curriculum

Problem Based Learning have an impact on student learning outcomes. Findings Shafa Rahma Cyrilla et al., A strong belief in the effectiveness of the PBL model was demonstrated, with 82% of participants believing that PBL is a learning approach that is capable of producing effective results. In the context of achieving learning objectives, 82% of participants also expressed a positive view that the PBL model was able to realize the learning objectives that had been set. Student participation in learning seen from the participant's perspective shows that 82% of them believe that the implementation of PBL has a positive impact in increasing student participation. However, there were 18% of other participants who were neutral regarding the potential for increasing student participation through this approach. Furthermore, as many as 82% of participants felt an improvement in this aspect due to the implementation of PBL, while the remaining 18% showed a neutral response or were less responsive to this effect. The results of this data show that the application of PBL in learning has a significant impact in increasing student participation and

stimulating the development of creativity.

The improvement felt by students after learning using the Problem Based Learning model is based on an appropriate implementation process. Research conducted by Hartatic, The characteristics of PBL learning include: 1. Asking questions/problems. 2. Focuses on the interrelationships between disciplines. 3. Authentic inquiry. 4. Produce products and exhibit them. 5. Collaboration. After conducting the research, it was found that inhibiting factors in implementing the PBL method which had been adapted to the Independent Curriculum included: (a) Lack of experience of teachers and researchers in implementing the PBL method in the classroom; (b) Selection of inappropriate problems (cases) to be presented in front of students; (c) Inappropriate distribution of the number of group members; and (d) PBL implementation scenarios that are not implemented well. Meanwhile, supporting factors for implementing this PBL learning model include: (a) Evaluation and reflection at each meeting; (b) Good communication in evaluating each meeting, so that there is improvement at each meeting; (c) Allocation of good time during the process of implementing the PBL learning model; (d) Mastery of the PBL learning model by the implementer; (e) Packaging the problem into an interesting problem for students, thereby generating more curiosity; and (f) Determining appropriate groups for students.

Research and implementation of Problem Based Learning (PBL) in the context of the Independent Curriculum shows great potential in improving the quality of learning. Applying PBL to a more open curriculum gives students the freedom to explore, collaborate, and develop higher-order thinking skills. Steps such as problem definition, project planning, collaboration, information search, solution implementation, monitoring, evaluation, presentation, and reflection can create a holistic learning experience. The application of PBL in developing teaching skills also provides opportunities for educators to continuously improve their approach according to student needs.

CONCLUSION

Issue Based Learning provide impact in learning the Free Educational modules. Progressed learning results, expanded understudy movement, and expanded understudy inspiration. Issue Based Learning is one way for an autonomous educational programs to attain its objectives. Usually since Problem Based Learning includes a learning prepare that's in understanding with desires of the Free Educational modules. The challenges confronted by understudies in lifestyle are what are utilized within the Issue Based Learning worldview. Problem-solving capacities and a learning handle that prioritizes students' wishes without any weight can accomplish the objective of actualizing an autonomous curriculum, namely making more significant and viable learning. The Issue Based Learning academic approach will lead understudies to find unused thoughts in different logical disciplines. Understudies carry out this method by talking about in bunches to voice their focuses of see and concepts, at that point in learning understudies will have a sense of certainty to take part in learning which is taken after by expanded communication aptitudes and learning inspiration.

REFERENCES

- Ananta, T., & Sumintono, B. (2020). The Implementation of the Merdeka Curriculum in Indonesian Primary Schools. *Journal of Education: Theory, Research, and Development*, 5(5), 673–679. <https://doi.org/10.33394/j-ps.v11i4.8079>
- Anwar, K., & Jurotun, J. (2019). Increasing High School Students' Activities and Learning Outcomes in the Three Dimensions Through the PBL Learning Model Assisted by Teaching Aids. *Kreano*,

- Journal of Creative-Innovative Mathematics, 10(1), 94–104.
<https://doi.org/10.15294/kreano.v10i1.19366>
- Aziz, A., Ahyar, S., & Fauzi, LM (2016). Implementation of the Problem Based Learning (PBL) Model in Improving Students' Critical Thinking Ability through Lesson Study. *Elements Journal*, 2(1), 83–91.
<https://doi.org/10.29408/jel.v2i1.179>
- Cyrilla, SR, et al. (2023). Physics Problem Based Learning Model as Implementation of the Independent Curriculum. *Proceedings of the 2023 National Community Service Seminar*, 4, 36–48. <https://journal.unj.ac.id/unj/index.php/snppm/article/view/39354>
- Farida, N., Hasanudin, H., & Suryadinata, N. (2019). Problem Based Learning (PBL) – QR-Code in Improving Students' Mathematics Learning Outcomes. *AKSIOMA: Journal of the Mathematics Education Study Program*, 8(1). <https://doi.org/10.24127/ajpm.v8i1.1894>
- Harfiani, RD, & Desstya, A. (2023). Mapping Science Learning in the 2013 Curriculum and Merdeka Belajar Curriculum. *Elementary School Science Journal*, 7(2), 384–395.
<https://doi.org/10.23887/jisd.v7i2.58291>
- Hartatik, S. (2023). Application of Problem Based Learning in Increasing Student Motivation and Learning Outcomes According to the Independent Curriculum. *VOCATIONAL: Journal of Vocational Education Innovation*, 2(4), 335–346. <https://doi.org/10.51878/vocational.v2i4.1868>
- Hidayat, W., & Putro, KZ (2024). Implementation of the Independent Curriculum in Pancasila Education in Elementary Schools: Student Profiles as National Assets. *Journal of Nusantara Education*, 3(2), 79–90. <https://doi.org/10.57176/jn.v3i2.102>
- Larson, L. C., & Miller, T. N. (2011). 21st Century Skills: Prepare Students for the future. *Kappa Delta Pi Record*, 47(3), 121–123.
- Madyaratri, D. Y & Wardono, K. (2022). Mathematics Literacy Skill Seen from Learning Style in Discovery Learning Model with Realistic Approach Assisted by Schoology. *Unnes Journal of Mathematics Education Research*, 11(1), 48–54.
<https://journal.unnes.ac.id/sju/ujmer/article/view/38061>
- Malmia, W., et al. (2019). Problem-Based Learning As An Effort To Improve Student Learning Outcomes. *International Journal of Scientific & Technological Research*, 8(9), 1140–1143.
<https://www.ijstr.org/final-print/sep2019/Problem-based-Learning-As-An-Effort-To-Improve-Student-Learning-Outcomes.pdf>
- Marzali, A. (2017). Writing a Literature Review. *ETNOSIA: Indonesian Journal of Ethnography*, 1(2), 27.
<https://doi.org/10.31947/etnosia.v1i2.1613>
- Miller, L. C., & Northern, T. (2011). 21st Century skills: prepare students for the future (pp. 121–123). *Kappa Delta Pi Records*.
- Novak, J.D. (2020). *Learning, creating, and using knowledge: Concept maps as facilitative tools in schools and corporations* (2nd ed.). Routledge.
- Purba, F.J. (2015). The Influence of the Problem Based Learning (PBL) Model with Initial Concept Understanding on High School Students' Science Process Skills (KPS). *Journal of Physics Education*, 4(2), 8–13. <https://media.neliti.com/media/publications/119947-ID-influence-model-problem-based-learning-p.pdf>
- Rais, AA, & Suswanto, H. (2017). Comparison of the Implementation of Problem Based Learning and Direct Instruction Models in Increasing Student Motivation and Learning Outcomes in Class X Basic Network Subjects. *Journal of Education: Theory, Research and Development*, 2(8).
<https://doi.org/10.17977/jptpp.v2i8.9787>
- Rizka, ADM, & Pamungkas, J. (2023). Analysis of the Implementation of Independent Learning in the Independent Curriculum in Kindergarten. *Journal of Obsession: Journal of Early Childhood*

- Education, 7(2), 1381–1390. <https://doi.org/10.31004/obsesi.v7i2.3429>
- Sari, LP, Amran, M. , & Hasin, BP (2022). Application of the Problem Based Learning Model Can Improve the Learning Outcomes of Class VI Students at SDN 014 Sialang Kayu Batu. *Pinisi Journal PGSD*, 2(1), 273–282. <https://ojs.unm.ac.id/pjp/article/view/30666>
- Tjahjono, H.K. (2015). Literature Study of the Effect of Distributive Justice and Procedural Justice on Consequences Using Meta Analysis Techniques. *Journal of Psychology*, 35(1), 21–40. <https://jurnal.ugm.ac.id/jpsi/article/view/7097>
- Ulinniam, et al. (2021). Implementation of the 2013 Revised Curriculum during the Pandemic at IBS Tathmainul Quluub Vocational School Indramayu. *Indonesian Education Journal*, 2(1), 118–126. <https://japendi.publikasiindonesia.id/index.php/japendi/article/view/74>
- Wulandari, NI, Wijayanti, A., & Budhi, W. (2018). The Effectiveness of the Problem Based Learning Model on Science Learning Outcomes Judging from Students' Communication Ability. *Pijar Mipa Journal*, 13(1), 51–55. <https://doi.org/10.29303/jpm.v13i1.538>
- Yuliasari, E. (2017). Experimentation of the PBL Model and GDL Model on Mathematical Problem Solving Ability in View of Learning Independence. *JIPM (Scientific Journal of Mathematics Education)*, 6(1), 1. <https://doi.org/10.25273/jipm.v6i1.1336>