# Analyzing a project-based blended learning model for citizenship education to foster humanity literacy

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Abstract
The study aims to develop a Project-Based Learning (PBL) blended learning strategy to enhance the human literacy skills of students taking Citizenship Education in higher education. The research uses the Research & Development (R&D) method combined with the ASSURE model, which involves six stages: analyzing students, expressing goals, selecting methods, media, and materials, using media and materials, requiring student participation, and evaluating and revising. The study uses expert validation, questionnaires, interviews, and a pretest-posttest design to evaluate the effectiveness of the PBL-based blended learning approach. The results indicate that the PBL-based blended learning approach effectively develops humane literacy among Citizenship Education students. The article discusses the importance of human literacy as a 21st-century skill and the development of a blended learning model using the ASSURE model to foster human literacy.
Keywords: blended learning; humanity literacy; project-based learning

## Introduction

Developing students' abilities to become individuals who have human literacy, namely literacy that bridges between data literacy and technology literacy, so that they are more valuable and competitive in the era of the industrial revolution 4.0 or, in other words to become creative human beings, is one of Indonesia's education goals (Septikasari & Frasandy, 2018).

Literacy humanity or often referred to as human literacy. Human literacy is a term that refers to a range of competencies and skills that are necessary for individuals to navigate and succeed in the modern world. The definition of human literacy can vary depending on the context in which it is used. One study defined human literacy as encompassing four main points: humanizing humans, technology literacy, character formation, and support from significant institutions (Wismanto et al., 2021). Developing human literacy is one of the objectives of the 2013 curriculum, which replaces the national curriculum in Indonesia. One of the critical elements of education in the twenty-first century is creativity (Sopiansyah et al., 2021). As a result, the modern curriculum prioritizes helping students develop their creative thinking capacities (Keefe & Copeland, 2011; Mursid et al., 2021). The ability for creative thinking in human literacy will produce creativity that combines elements of flexibility, novelty, and elaboration of data and technology which leads to the acquisition of new insights, approaches, points of view, or ways of understanding a problem for a nobler and more civilized purpose of life (Ali et al., 2020; McKee et al., 2023).

Citizenship Education must be able to build human literacy, which is one of the student's creative abilities. Meanwhile, a person's capacity to integrate into society makes it a person's capital for the glory of life (Sari et al., 2020). According to a study by Dyer et al. (2009), school accounts for 2/3 of a person's creative talent, with heredity contributing the remaining 1/3. On the other hand, only 1/3 of intelligence comes from education, and another 2/3 comes from heredity (Mendenhall, 2020). This shows that although there are many choices to increase one's creativity, there is not much we can do to improve one's intelligence (Wahyudi & Winanto, 2018).

To answer these needs, creative and imaginative education is needed in managing and utilizing data and technology. Not only have teaching skills but also can design learning through the latest models, strategies, and methodologies to provide opportunities for students to develop their human literacy and produce innovative products, including them. Citizenship Education courses in tertiary institutions must be well prepared, not only in cognitive abilities but also in thinking creatively when developing learning materials because learning that can encourage human literacy can boost student creativity and intelligence in their subjects, including Citizenship Education (Keraf & Komalasari, 2019; Osanloo, 2009).

Information and technology advances provide opportunities to progress and ease in developing competencies. For this reason, a learning model is needed that can accommodate these needs, namely the blended learning model. Of course, learning now doesn't just sit in the classroom. The world of education has undergone significant changes in the last few years. It's not just information technology that is developing rapidly, and the Covid 19 pandemic has also contributed to changes in teaching and learning conditions. One of them is applying learning methods and learning activities developed over the past few years is learning to use blended learning methods. The application of blended learning is innovative learning to increase students' success in training (Bhowmik et al., 2019).

The benefit of using e-learning and blended learning in education today is that e-learning provides flexibility in choosing the time and place to access lessons. Students do not need to travel to the four lectures delivered, and e-learning can be done from anywhere, whether they have Internet access. E-learning provides opportunities for learners to control the success of learning independently. Learners can determine when to start and finish and which part of a module they want to study first. If, after repeating, there are still things he doesn't understand, the learner can contact the instructor or resource persons via email, chat, or participate in interactive dialogues at certain times. You can also read the discussion results on the message board available on the LMS (Learning Management System). The benefits of blended learning add more convenience than just e-learning because mixed methods make it easier for students (Abunadi, 2018).

Based on this background, the author will discuss how the learning design of the project-based learning blended learning model of civic education can foster human literacy. This article

also discusses humanity literacy as new 21st-century literacy, humanity literacy based on project-based learning, fundamentals of humanity literacy based on project-based learning, implementation of constructivism theory in blended learning, and development of the blended learning model using the aSSURE model to grow human literacy.

## Method

This research uses the ASSURE Development model and is an R&D research. The design approach is made in six stages, starting with "analyzing students", "stating goals", "choosing methods, technology, media, and materials", "using media and materials", "demanding student involvement", and "assessing and revise" (Pribadi, 2011; Wismawan et al., 2019) The ASSURE model is an instructional design model that can be used to plan, identify, determine goals, choose media and material methods, and evaluate courses (Prihatmi et al., 2021). It is widely used as a reference for educators in teaching and has been planned and arranged systematically by integrating technology and media so that learning can run more effectively (Prihatmi et al., 2021)

Finished items will be evaluated for validity (feasibility), usefulness, and effectiveness. Product validity is carried out by expert assessment. Learning experts, educational media, and learning resources are all included in the expert assessment. Comparison of the results of the Civics Education learning design before and after shows the effectiveness of Data Collection Instruments and Techniques. The strategy is implemented by assigning students to create innovative lesson plans using specified subjects. The final product will be evaluated for its feasibility and usability (Creswell, 2014; Creswell & Poth, 2018).

Data Collection Instruments and Techniques using data analysis If the average percentage reaches at least the high category (61%) based on the percentage categories above, the project-based blended learning approach can be considered practical to test. Examining the responses of co-workers and students during a limited model application test served as a practicality test. The one class with one group pretest-posttest design is used to test the effectiveness, including evaluating the results of the Citizenship Education learning design before and after using the model, using creative criteria with flexibility, originality, and elaboration. The final score is then calculated based on the results of the three criteria. Finally, the Paired-Samples T-Test was used with SPSS 23 to compare scores obtained before and after the model was applied (Wahyudi et al., 2018).

## Results and Discussion

Students are essentially 21st-century learners who are human resources who are literate in data and technology and can use them for a more dignified life, so human literacy is the end of data and technology literacy. A tech-savvy and data-literate person can demonstrate leadership, teamwork, and cultural understanding and do harmful things.

Communication skills are essential in the digital convergence and transition era that we live in today. Communication is not only considered an activity that involves direct interaction between the sender and receiver of information but also includes digital media. Millennials cannot be denied that they use more social media sites such as YouTube, Instagram, Facebook, WhatsApp, Twitter, LinkedIn, Line, and others. However, there are still young people in this digital era who only have average communication skills. The inability to digest information, difficulty articulating and expressing thoughts and words, difficulty adapting to new situations, and difficulty understanding human problems that tend to be heterogeneous are undoubtedly influenced by this low capacity and communication skills (Sari et al., 2019). Lack of communication skills will cause new problems considering how fast technology develops in many aspects of human life. It is vital to encourage a communicative approach to overcome this lack of communication skills. Mastering human literacy is one way to do it. The ability to master human literacy involves more than just reading and writing; it also consists of the ability to master, understand, and use knowledge to solve other human problems (Suyatmini et al., 2021)

Why does human literacy contribute to our capacity to engage and communicate with others? Human literacy is essential for survival in the digital age so that people can understand relationships with others and succeed in that context. Individuals' capacity to communicate with others is enhanced through human literacy due to the promotion of critical thinking skills (Mrisho & Dominic, 2023). Such skills enable individuals to make autonomous choices, evaluate various sources and channels of information, and decipher news and information disseminated through these channels. In the modern era of information abundance and confusion, acquiring literacy skills, such as media, data, and mathematical, has become indispensable (Domina, 2020; Fan et al., 2022; Jakovljević, 2021; Mrisho & Dominic, 2023). These proficiencies aid individuals in accessing, analyzing, and evaluating all media messages, including complex pandemic data visualizations intended for public consumption. The interpretation of data holds the potential to influence human behavior; thus, it is crucial to design communication approaches that ensure the dissemination of accurate messages through data. In conclusion, possessing literacy skills is fundamental for effective engagement and communication with others amidst the contemporary era of information overload (Domina, 2020). Understanding of human literacy must be supported by superior human resource skills and competencies as a complement to communication skills.

## Humanity Literacy Based on Project-Based Learning

This concept aims to foster human literacy by utilizing psycho-pedagogical strategies to reach the heart. In the context of this model, the behavior of the characters who represent data literacy, technology, and humanity is not even just polite. If someone is claimed to be literate in data, technology, and humanity, then his positive attitude and behavior are an expression from the bottom of his heart. The following substantive and psycho-pedagogical characteristics apply to this model, (1) using scientific problem-solving to communicate with the government to exercise their rights, obligations, and responsibilities as Indonesian citizens. (2) Applying a portfolio-based learning model is also known as a "learning model based on the overall student learning experience" and portfolio-assisted assessment is also known as an "assessment supported by overall student learning outcomes". (3) Modification of scientific learning steps is used in the basic pedagogic operational framework, which includes the steps: problem identification, problem selection, data and information collection, class portfolio development, class portfolio presentation (showcase), and learning experience reflection (French, 2016; Jolls, 2015)

The character often equated with morals, decency, and even morality is related to the human conscience, which is a manifestation of human literacy. If someone is said to have human literacy, his attitude and behavior will reflect this. Gestures, phrases, facial expressions, and other body language are sure to radiate sincerity. Students who have human literacy eventually become the basis for achieving national education goals.

Educational institutions must plan various character education programs to fulfill their duties as character institutions. One of the suggested activities is the Human Literacy Project, a paradigm for developing student literacy as true learners through learning to think, feel, train the heart and exercise. Students are accustomed to learning through human literacy projects to master knowledge, form positive attitudes and behaviors, and not just study to pass exams.

## Basic Humanity Literacy Based on Project-Based Learning

What is meant by "Project Based Learning" (PBL) refers to project learning that combines concepts or information with a scientific approach to solving problems. Project-based learning comes from John Dewey's "Learning by doing" concept. This form of learning is Dewey's rejection of preschool institutions that are often passive, lazy to work, and unproductive. Learning with the principle of "learning by doing" provides many opportunities for children to be active, work, and be productive to find various knowledge. The implementation of project-based learning is that the field of study/development is presented separately (partially) between one area of study and another. Each lot of study has its learning sequence, as if it does not show a relationship between one and the other. This is not the case with the learning

proposed by Dewey, so everything is interrelated. Apart from that, there is also Dewey thought that democratic classes mean that students are divided into small groups to complete interesting projects and the students' own choices (Chikwe, 2012; Suyato & Arpannudin, 2022).

In general, many issues that demand the implementation of public policies are selected as models. This strategy aims to prepare students to assess potential solutions to problems and then, as future citizens, offer suggestions for public policies that affect their communities. The desired result is the quality of young people who can be described as true learners.

## Implementation of Constructivism Theory in Blended Learning

Constructivism theory asserts that knowledge can only exist in the human mind, and that theory does not have to match real-world realities. Students will constantly try to derive their mental models of the real world from their perceptions of that world. As they experience each new experience, students will continue to update their mental models to reflect the new information, and therefore, will build their interpretations of reality and gives freedom to humans who want to learn or look for their needs with the ability to find their desires or needs with the help of other people's facilitation so that this theory gives activity to humans to learn to find their competencies, knowledge, or technology and other things needed to develop themselves. Included in its implementation in blended learning. The idea of blended learning combines traditional classroom learning with online learning, which is carried out independently and cooperatively using information and communication technology infrastructure. Blended learning combines various learning resources (technology, activities) to create the best learning program for certain students. Blended learning refers to traditional classroom instruction supported by online learning tools (Bryan & Volchenkova, 2016; Cronjé, 2022; Khlaisang & Koraneekij, 2019).

Introduction and understanding of subjects are the first steps in learning. These subjects are studied independently by reading texts, mind maps, PowerPoint slides, and/or watching videos available on the LMS or other websites on the internet. After that, still using the LMS, conversations and feedback exchanges between students and lecturers and between lecturers and students occur in small groups or in front of the whole class. Each student is prepared to study, solve situations, or produce projects in groups and then present them in face-to-face meetings, thanks to the concepts they already have. The learning process can then be complemented by evaluation by taking quizzes at the LMS (Bhowmik et al., 2019).

There are six stages in implementing blended learning, that is (1) determine the types and materials of teaching materials, (2) determine the design of the blended learning used, (3) Set the online learning format, (4) Test the design that is made, (5) organizing blended learning well, and (6) prepare criteria for conducting evaluation (Albiladi & Alshareef, 2019; Khlaisang & Koraneekij, 2019).

## Citizenship Education as a General Subject

Citizenship Education is an educational program with the core of political democracy expanded with other sources of knowledge, and positive influences from school education, society, and parents, all of which are processed to train students to think critically, be analytical, behave, and act democratically, in preparing for a democratic life based on Pancasila and the 1945 Constitution. Historically, Civics in Indonesia has always experienced changes in terms and substance following developments in legislation, science and technology, societal changes, and global challenges. Sociologically, Indonesian Civics naturally experience changes following the changes that occur in society. Politically, Indonesian Civics will continue to experience changes in line with state administration and government systems, especially changes to the constitution.

Product development using the ASSURE model is carried out in 6 stages of development 1) analyze learners, 2) state objectives, 3) select strategies, technology, media, and materials, 4) utilize media and materials, 5) require learner participation, 6) evaluate and revise (Smaldino et al., 2019).

## 1. Analyze learners (analyze student characteristics)

The first step that needs to be taken in applying this model is identifying the characteristics of students who will carry out learning activities. Who are the students who will carry out the learning process? A good understanding of student characteristics will greatly assist lecturers in their efforts to facilitate students in achieving learning goals (Keller, 2010). Analysis of student characteristics includes several important aspects, namely: (1) general characteristics; (2) specific competencies previously possessed by students; (3) student learning style or learning style; and (4) motivation.

General characteristics describe the conditions of students such as age, class, occupation, and gender. While competence and initial abilities describe the knowledge and skills that have and have not been possessed by someone before participating in a learning program. Learning style describes a person's tendency to respond to a stimulus. In simple terms, learning styles can be interpreted as tendencies and preferences possessed by individuals in carrying out learning activities.

Simple analysis conducted by the teacher or instructor before starting a learning program often has a positive impact. Observation, interviews, and pre-tests are a simple way to find out the characteristics of students. This method has proven effective for knowing the profile of students who will take the learning program. For example, informal talks, observations, and pre-tests can be used to obtain information about the characteristics of students or training program participants. Information that can be obtained from the method used above is ethnicity and individual cultural background; socio-economic; attitude towards subject matter; and also the age of the student or trainee. Suppose the results of a simple analysis reveal that students have an apathetic attitude towards the program and learning content. In that case, the teacher or instructor can use appropriate media and learning methods to motivate and interest students to be involved in learning activities. Young students tend to have a concrete thinking level. For this reason, teachers or instructors need to utilize methods and media to provide students with real learning experiences. To deal with a class with very varied students, the teacher or instructor can carry out general learning activities that all students in the class can accept.

## 2. State objectives (setting learning objectives)

After conducting an initial ability analysis, the next step is determining competency, making descriptions, and formulating lecture objectives. The following is a description and competence to be achieved in the Citizenship Education course. Subjects and students' initial ability data are then formulated as learning objectives for each face-to-face and online lecture meeting. The formulation of lecture objectives is based on the competencies to be achieved and the course descriptions that have been set. Determining the competencies or learning goals students need is the main step in designing a learning program. Learning objectives formulated from the results of the needs analysis process will assist lecturers in determining the next steps. These steps are choosing methods, learning media, and subject matter, as well as evaluating appropriate learning outcomes that can be used to assist student learning processes. Five types of abilities can be used as a reference in formulating competencies or learning objectives that students need to have after participating in a learning program, namely: verbal information; motor skills (psychomotor skills); attitude (attitude); intellectual skills (intellectual skills); cognitive strategy (cognitive strategy).

## 3. Select methods, media, and materials

The third step in this development process is selecting the techniques, media, and teaching materials to be used for face-to-face and online learning. Two types of methods, media, and face-to-face and online teaching materials are used to categorize findings. Face-to-face learning is carried out through group work, discussion, and group investigations using powerpoint presentations containing project objectives and required tasks. Assignments are packaged as group investigations with online class activities and instructions for online lectures.

## 4. Utilize media and materials

The design made in step 3 is then compiled into a learning plan for face-to-face and online lectures. The tools needed include the Learning Implementation Plan (RPP), Student Worksheets, and Media (powerpoint, video, audio, images, and materials in online classes). The devices prepared before being used are tested by experts first, including learning experts, media experts, and teaching materials/materials experts.

Based on the feasibility criteria of the developed model seen from the Learning Design (face-to-face and online), if the media and teaching materials developed are in the very high and high categories (percentage value ≥ 61%), then the model is feasible to use. The next step is to implement the model on a limited scale to see the practicality of the model. The limited test was conducted on one lecturer with eight students.

Based on the results of the assessment and implementation of the model by colleagues, the value of the learning design (face-to-face and online) if the media and teaching materials developed are in the very high and high categories (AP value ≥ 61%), then the practical model is used.

## 5. Require learner participation

The next step is to involve one class of students in learning. Students must actively engage in learning to see the model's effectiveness developed and achieve learning objectives. Because the design used is project-based blended learning, students are required to be independent. The learning process is carried out according to a predetermined face-to-face and online design. Learning is carried out in 16 meetings, one pure face-to-face meeting, and other meetings are carried out in Blended learning (face-to-face and online).

Apart from participating in online lectures and doing assignments and making products for each assignment, students are also required to make weekly journals to see the implementation of lectures and assignments and material to see student progress every week. To provide a lot of insight and comparison on how learning can be well designed and creative and encourage students to think creatively to produce creativity, online lecture activities ask students to see learning in developed countries. In addition, students are also allowed to learn activities in non-formal schools (natural schools) so that their minds are open and learning can be done anywhere and in any responsible way.

To see the model's effectiveness, a trial was carried out for 1 class according to the sequence of activities and the principles of project-based blended learning. The product that is assessed and compared is the Citizenship Education plan in the form of a Semester Lecture Plan which students in fostering human literacy will use. These results were then assessed by creativity criteria, namely flexibility, novelty, and elaboration, recapitulated to be compared with the values obtained before the application of the model. Based on expert assessments, limited and broad implementation results for one class, and input from colleagues and student responses, the final step in developing this model is to evaluate and revise it to produce the result (final model) for widespread use.

## 6. Evaluated and revise

Based on the results of expert assessment and implementation of learning several online facilities must be repaired, then they must be repaired immediately according to input. In the introductory part of online lectures, it is hoped that there will be not only text but videos about the demands of contemporary learning, namely the 21st century, and the competencies that will be achieved from learning. There need to be detailed instructions for each online activity to reduce the number of questions when students study independently. There needs to be a real video in Citizenship education from several implementations of online activities that are carried out as an incentive for students to be inspired and able to foster student human literacy.

Based on the study's results, the project-based blended learning model can increase student creativity in fostering human literacy. This happens because students have adequate

facilities as learning resources that can be accessed anytime and anywhere according to their needs. In addition, this model allows students to see creative learning both at home and abroad, inspiring them to imitate and even add new works. This follows the principle that human literacy arises because of opportunity. There are 3N activities (Niteni, Nerokke, Nambahi) taught by Ki Hajar Dewentara. This concept fosters the idea that human literacy will emerge if students are given the opportunity. Humanity literacy that appears is still at a level that must see an example first. The results of the interviews support this statement; students at the initial level tend to imitate so that they come up with ideas to think of other creative works. This follows the theory of constructivism. So if you want to produce creative students, lecturers must be creative first in designing and implementing learning. This is in line with the opinion a good teacher must be creative to be an example for his students to be more creative. In addition to Morais & Azevedo (2011)creativity, something that can be exemplified, teacher creativity is also one of teachers' best creative thinking habits and is always developing and developing (Suparlan, 2015; Wahyudi et al., 2018).

The concept of learning is also following the principles of a teacher according to Ki Hajar Dewatara, namely, ing ngarso sung tulodo, ing madyo mbangun karst, tut wuri handayani. Teachers must be able to be role models for their students, be able to build the enthusiasm of students, and also must provide the widest possible opportunity for students to learn further by exploring learning resources, and elaborating so that students become independent people. Learning is self-willed, so learning does not have to wait to be given, but learning to seek and find (Marzuki & Khanifah, 2016).

The success of this model increases student human literacy, also because students must produce good work according to the designs and targets that have been prepared. Not only guiding but providing facilities and even concrete examples to be used as models. Students are given a wide opportunity to discuss with their team, find sufficient information and data, and are not limited by time and place as well as the role of the lecturer directly. This follows the opinion of Boelens & Heij (2017), learning must be able to stimulate student interaction, facilitate their learning process, and encourage an affective learning climate. Each of their learning activities has been designed and prepared from the start and explained to students the product targets that must be produced and how they can meet these targets. So that they in the team will try to meet predetermined targets. A learning environment fostering creativity among students also supports student creativity in fostering human literacy (Tascı, 2015). There is an opportunity for each group to present results in face-to-face classes, thereby encouraging other groups to produce better and even better work. This very positive learning environment triggers students and their teams to continuously improve their products. Lecturers in the form of learning simulations by lecturers, videos, and films also provide a positive learning environment.

In addition, the success of this study must be supported by the results of increasing scores from the pretest to the posttest so that there are significant differences before and after the application of the project-based blended learning model. These results corroborate the results of other research of Ergül & Kargın (2014), Han et al. (2015), and Zouganeli et al. (2014), project-based learning can increase student learning success, including their learning outcomes.

## Conclusion

lecturers must develop strategies that challenge their students to find alternative problem-solving approaches and engage with the more challenging subject matter. Blended learning, which combines face-to-face and online teaching, can effectively provide students with the tools and resources they need to develop their creativity and improve their learning outcomes. To implement this approach successfully, lecturers must have the necessary skills and infrastructure. At the same time, students need to be equipped with the resources and guidance to navigate the learning process effectively. Ultimately, the goal of this approach is to

foster human literacy by providing students with the opportunity to develop their creativity and explore new areas of knowledge.

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