Design Online Project-Base Learning for Learning to Write Scientific Works in Arts and Culture Education

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Abstract

The purpose of this study is to design a project-based learning model specifically for academic writing in the field of arts and culture in the Scientific Writing course. This research is in the form of learning design research. The design model adopted is a Backward Course Design, the model is designed by positioning the learning outcomes as the starting point for preparing the design. Data analysis was carried out by reviewing teaching material documents and learning model syntax. The design results obtained based on the phases are (1) the real form of learning outcomes in the form of articles in national scientific journals, (2) an evaluation method for assessing process performance and two forms of assessing project results, and (3) an instructional methodology that combines project-based learning syntax, syntax learning academic writing, and lecture syntax for 16 meetings. The resulting learning design is a best practice recommendation to support the teaching of cultural arts academic writing, especially for online learning.

Keywords: project-based learning, scientific writing, arts, culture education

Introduction

According to UNESCO, literacy skills such as reading, writing, and numeracy are the foundational skills that enable a person to function effectively in today's text-mediated scientific society, as well as make informed life choices in the future. For students, scientific writing is an important competency today. If you look at the national journal accreditation policy, it is stated that lecturers, researchers, and students are required to publish their work in the form of quality scientific work.(Beneroso & Robinson, 2022)

Academic writing is an important essence of developing student achievement, which is also evidenced by the existence of the Student Creativity Program in Scientific Articles (PKM-Al). Student achievement related to scientific writing can also encourage one of the college

assessment components. In the study program accreditation instrument (criterion 9) three indicator points are very relevant to scientific writing. Derived from the criteria of "Outcome and Achievement of the Tridharma", it is necessary to have (1) student scientific publications, (2) student scientific work articles, and (3) research outputs and community service produced by students.(Wan et al., 2022)

Several institutional contexts emphasize the need to equip students with a wide range of academic writing skills which are a prerequisite for successful careers in industry and academia, which has been demonstrated in recent curriculum requirements at various higher education institutions around the world.(Aranzabal et al., 2022)

Learning demands in Indonesian higher education today need to pay attention to the Independent Campus program and the outcome-based curriculum (OBE). The outcome is different from the output, outcome output emphasizes real results in the field. In the linguistics field, of course, academic writing is considered an important competency for lecturers and students, but this academic writing competence is not limited to linguistics students. Art education students are of course also required to be competent in this skill. Then the question arises, how to teach art education students so they can produce scientific papers as an outcome?(Umar & Ko, 2022)

On the one hand, there are various problems, such as students' scientific writing skills that are still low, writing that does not comply with the rules, and high plagiarism. Technically students are also still having difficulty compiling important components such as adjusting templates, backgrounds, objectives, and references, to presenting data. Art teacher students need to be prepared to become scientific writers in the future because the number of teachers in Indonesia is currently more than two million, but very few written works are produced by them. Based on the author's observations, many lecturers in Indonesia still apply scientific writing learning with an expository approach, still focusing on writing techniques, outputs in the form of papers, and evaluations carried out by the lecturers themselves. A teaching approach like this is certainly less than optimal if you look at current demands.(Domenici, 2022)

An outcome-Based curriculum is of course ideal if it is met with Project-Based learning. Project-based learning (PjBL) is a learning model that emphasizes learning participants to understand concepts, principles, investigations, decisions, and presenting products. PjBL is the practice of acquiring knowledge and skills through group settings with effective direction from instructors and student feedback in response to solving real-life problems.(Lopez-Gazpio, 2022)

This paper intends to provide recommendations for updating teaching practice by designing Project-Based Learning (PjBL) for academic writing. Based on research, among the benefits of PjBL is better learning outcomes. As an example, students who received PjBL training in the first semester had better learning outcomes in the following semesters, compared to students who did not study through PjBL. PjBL has of course been tested to improve the performance of engineering students, this certainly has similarities with the characteristics of performing arts students who tend to hone their artistic practice.(Mursid et al., 2022)

Project-based learning, of course, has often been carried out by art students in practical lecture competencies. So how does it apply to writing competence? From previous research reports, the implementation of PjBL in teaching writing was reported to be good. Projects invite students to solve real problems and answer them through written ideas. So that writing projects can develop critical thinking and meaningful experiences for students. PjBL is proven to help students write well.(Situmorang et al., 2022)

Previous research applied PjBL to determine the level of motivation, group involvement, and enjoyment of students in writing. PjBL for collaborative writing received positive responses from students because it affected skills in using technology, critical thinking, speaking English, and teamwork. Furthermore, PjBL can develop students' abilities and creativity in writing narrative texts.(Cummings & Yur-Austin, 2022)

Project learning design is a new thing in the realm of academic writing for performing arts education students, because in research reports or previous studies, project learning is carried out without the output of journal articles. Several previous research reports were found to still focus on the process and results of technical writing (output), not up to the publication of articles in journals (outcome).(Tanaka, 2022)

Literature Review

From the description above, the project-based learning model for scientific writing is the right way to choose. PjBL's various advantages are very suitable to support the real increase in learning writing outcomes as an outcome-based curriculum.(Guajardo-Cuéllar et al., 2022)

The analysis of this study encourages student learning outcomes in the form of real scientific publications in related fields of study. This is what differentiates it from several PjBL implementations for teaching writing on arts and culture before. This will result in novelty at the model (syntax) stage, new learning experiences, and new evaluations. This topic is different from previous research and studies, so this paper deserves to be recognized as a new concept. This study focuses on the theme of developing scientific arts-the topic of developing arts education.(Kiong et al., 2022)

The purpose of writing this study is to design a project-based learning model for academic writing courses in arts and culture. The design stems from the instructional design of online learning for a new course called Writing Scientific Papers.

Research methods

This research is a learning design research (Learning Design Research). The chosen design method is Backward Course Design. This is an inverse learning design study as it focuses on outcomes as a starting point. Because when the real outcomes of learning are known, content and processes can be made later.

The design stage consists of three phases: (1) identify the results to be achieved; (2) determining learning evaluation criteria, and (3) planning the instructional methodology. Each phase contains several measurements to guide the design process.

Phase 1. Identify the results to be achieved. In this case, the desired learning outcome is in the form of a scientific article to be submitted to an online journal. Level 6 cognitive taxonomy is a realm that will be achieved because students are required to be able to create scientific works in the form of journal articles.

Phase 2. Determine learning evaluation criteria. In this case, it will a project rubric instrument was developed as the basis for the formative evaluation unit. Evaluate with the rubric to view project progress reports (learning journal). The next unit of evaluation is, of course, the project results in the form of scientific articles. The value of the results of the participant's project is seen based on the status of the manuscript obtained from the journal where the submission was made. However, if the workmanship and/or quality of the article does not reach the online journal submission, then the facilitator will evaluate it himself.

Phase 3. Planning the instructional methodology and learning experience. The collaborative writing approach is applied to groups of participants/students. Participants will ask questions or hypothetical problems to be answered or explained in more depth in their articles. Participants as students are expected to be able to apply new knowledge to developing written arguments and practicing technical writing skills. Experience in writing will certainly provide a more lasting mastery of competence in memory.

The study was carried out at one of the Performing Arts Faculties at PTN and PTKIS (Sujono et al., 2022). The data source is the content of the subject matter itself. The instrument is the teacher/lecturer himself as the designer of the lecture program. Data analysis was carried out by reviewing teaching material documents, learning design models, and the syntax of the selected learning models. This research design does not use complex quantitative and qualitative data analysis, because the study objectives follow what is to be achieved in the learning objectives. The design of the tools and analysis in this study.

Results and Discussion

This scientific writing learning design generally reads previous best practices that have accommodated aspects of genre, steps, techniques, strategies, and assessment criteria in an article, the syntax for learning academic writing for students is compiled from modifications of previous research.(Serés et al., 2022)

. The order of the syntax is (1) introduction to academic writing concepts, (2) planning academic writing, (3) writing drafts of academic writing, (4) editing academic writing, and an additional step, namely (5) manuscript submission. The syntax is also integrated with the stages of online project-based learning from previous research. The following describes each phase of the stages achieved.(Navarro et al., 2022)

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The identification phase of the results is to be achieved. This design was created for the implementation of online learning in one-semester regular lectures. Data on students as initial participants reached three generations who took the Scientific Paper Writing course. This lecture contains 55 student participants who are divided into 14 groups, each group (4 students) will handle one scientific article that must be published on the topic of arts and culture. Article recommendations as project results that must be achieved are in the form of art study articles, literature studies, online surveys, bibliometric studies, art criticism, and similar writings that do not require searching data in the field.(Rajput, 2022)

The phase of determining learning evaluation criteria. This phase produces process assessment instruments and student learning outcomes. The initial step is to prepare a project rubric for formative evaluation (process assessment). Evaluate with the rubric to see project progress reports (learning journal) for each group at each meeting. Data related to learning journals provides an overview of the smooth running of the performance process for each group of writers. On the one hand, the evaluation of this process also generates interactive feedback.(Katsakhyan et al., 2022)

The second is the result of the project itself in the form of scientific journal articles, this is the most important source of learning outcomes data. In project-based learning and output-based curriculum design, of course, learning outcomes have the highest value, but without forgetting the process standards and student attendance as well. The value of student projects is seen based on the status of the manuscript obtained from the journal where the submission is made. However, if the workmanship and/or quality of the article does not reach the online journal submission, then the teacher will evaluate it himself.(Hampton et al., 2022)

Evaluation or review of the results of this project (results assessment) is carried out using two approaches. The first approach is through the assessment of supporting lecturers based on rubrics from previous researchers, project results in the form of scientific articles will be assessed based on three components of the synthesis rubric-(1) Reference integration, (2) organization & transition, and (3) argument development. This assessment is scored on a scale of five (5=Well above average - 1=Well below average). The adoption of this scoring rubric can be seen in Table 2. The second approach is with an actual outcome, if the group of writers succeeds in getting the article status "Accepted" and obtains a Letter of Acceptance in a national journal accredited SLNTA 5/6, then it is entitled to get the best score.(Mehta & Mukherjee, 2022)

Instructional methodology planning phase. This phase is passed by preparing new teaching materials, new learning models, and class management which will be contained in the semester lesson plan format. Next is integrating the syntax of learning academic writing into learning PjBL-based Scientific Writing courses. The integration of this scenario can be seen in Table 3. The following is a description of the integration results.

1. An introduction to the concept of academic writing was given at the first four meetings (Meeting 1: Scientific Thinking, Meetings 2-4: Written Grammar-EYD V).

2. Academic writing plans are given over three meetings (Meeting 5: Steps to write KTl, Meetings 6-7: Digital Reference-Garuda Portal, Gscholar, SLNTA, Publish or Perish).
3. The writing of academic writing drafts was carried out in two meetings (Meeting 8: Anatomy of a Scientific Article, Meeting 9: Scientific Notation Techniques-APA Style 7th Ed).
4. Editing of academic writing was carried out in two meetings (Meeting 10: Management
5. Reference Mendeley & Zotero, Chapter 11: Plagiarism Check-Turnitine).
6. Journal submissions were carried out at the 12th and 13th meetings, during which the writing project was also completed, confirmation of the journal to be addressed, and technical steps were taken to submit the article to online journal publishers accredited by SLNTA 5/6.
7. At the 14th to 16th meetings, lecturers and students interact through online conferences and review the progress of each group. Students ask questions and present the interim results of their projects over the past week and the lecturer provides evaluations and feedback.

Based on the results of the learning syllabus which was written earlier in Table 4. There are quite long subject matters that need to be carried out in more than one meeting, such as Written Grammar material (Meetings 2-4), Digital References (Meetings 6-7), and SLNTA Journal Submissions 5/6 (Meetings 12-13). Then, students work in groups to find problems, define them, formulate solutions, report work, and prepare article submissions. Guided reflection at the final stage is given by the lecturer for each of the results of an academic writing project. In PjBL the lecturer has more of a role as a facilitator and monitor of the project, the teacher has to be a writing consultant for each group. Because the feedback dialogue intervention in the context of academic writing is very helpful in many cases according to student perceptions, grade results, and text analysis.

Meanwhile, after the lesson ends, the facilitator begins to process the observations of the project performance process and prepares a report on the final results of the project for all groups as further assessment data. Process progress in PjBL is very important because according to research, among the main benefits identified when using PjBL are high student motivation and the development of natural soft skills.(Mana, 2022)

This stage of the academic writing project is different from some of the previous studies because the output targeted at the instructional design here is in the form of scientific publications in official journals. So that students have positioned themselves as scientific writers. Authentic experience as a writer who is obliged to publish his writings. Authentic learning experiences from PjBL assignments can give students the ability to manage challenges in the fields of innovation, digital technology, and project organization. This syntax, of course, also pays more attention to technical equipment in the form of applications, indexing sites, and online publications.(Zhang, 2022)

The Backward Course Design framework has the potential to be a more effective way to design new or re-design learning, whether in a lecture, discussion, or laboratory format.

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Backward Course Design places student outcomes at the center and offers flexibility to teachers to develop learning experiences and evaluation tools so that they match the content of the teaching materials.(Sovhira & Dushechkina, 2018)

The next research step is to carry out learning activities in courses for one full semester. PjBL implementation procedures in the Scientific Paper Writing course can be carried out for 16 full meetings. This project-based learning is used as an online teaching instructional design. The synthesis rubric evaluation model is a fairly concise example of an article grading guide, but more general scoring instruments that can be used for all writing projects are also available and ready for adoption. Moreover, few studies have investigated the effect of PjBL on learning in terms of cognitive (eg knowledge) or affective outcomes.(Liu & Wang, 2018)

.Learning face-to-face online at an advanced level also needs to implement visual learning support, such as infographics. The infographic can be used to explain the relationship between digital reference processing, the anatomy of scientific articles, and the workflow of the journal system for authors. As support for further learning facilities, it is also necessary to develop electronic modules as an alternative for performance support. After that, the measurement of student perceptions can be carried out when the entire lecture process is finished. So that individual action research can be future research.(Marteleto, 2020)

The PjBL model is learning that focuses on performance results either in the form of a product or a tangible appearance. Engineering and arts students are certainly no strangers to this way of learning. Performing arts education students tend to produce works in the form of drama, dance, and music which are shown live or packaged into videos. Maybe unconsciously, so far Sendratasik students are used to carrying out project-based learning. However, this study tries to unite PjBL with academic writing, which of course has very different learning areas.(Ningsih et al., 2020)

Conclusion

Based on a review of the results of each phase. The output identification phase has determined the learning outcomes in the form of scientific articles which will be submitted to online journals in the SLNTA 5/6 category. It is recommended that the article is in written form that does not require searching data in the field. The evaluation criteria determination phase has resulted in a project rubric for formative evaluation and a scientific article synthesis rubric for summative evaluation. It was reiterated that if the results of the article project get the status of an accepted manuscript for publication, then it will get the best value without teacher review. The planning phase of the instructional methodology and experiential learning has defined collaborative writing learning. The division of groups is carried out according to the proportion of the number of student participants taking related courses. The selection of group personnel is entirely left to the participants. Therefore, the results of this learning design require further implementation.

Based on the results and discussion, it can be concluded that the results of the Backward Course Design made are a combination of the syntax for learning academic writing, the syntax

for one-semester regular lectures, and the syntax for project-based learning. The results of this design can further be implemented in online academic writing learning. It is hoped that the results of this learning design research will provide answers to problems with academic writing learning models that are more relevant to the outcome-based curriculum and become recommendations for alternative teaching practices.

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