# Model Effectiveness Flipped Project Based Learning On Hair Cutting Courses

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**Abstract :** This research is motivated by the learning process of Hair Trimming which tends to be still teacher center oriented so that it becomes monotonous and boring. This causes the motivation and student learning outcomes to be not optimal. This study aims to develop a Flipped Project Based Learning (FPjBL) Learning Model in Hair Trimming Course in Vocational Education, D4 Study Program in Makeup and Beauty Education that is valid, practical, and effective. Procedure Development of this research using ADDIE (analyze, design, develop, implement and evaluate). This study resulted in the Flipped Project Based Learning (FPjBL) model having proven effectiveness so that it is suitable for use in Hair Trimming Courses. The eight syntaxes of the Flipped Project Based Learning (FPjBL) model produced are (1). Learning orientation, (2). Access Material-Based Multimedia, (3). Assigment Project, (4) Discuss to design project, (5) Implementation of the project, (6) Test of the results, (7) Improve project result, (8) Evaluation. Based on the findings, it can be concluded that a valid and effective FPjBL model can be an alternative recommendation to optimize face-to-face and online learning that can improve 4C competencies, soft skills, psychomotor and student learning outcomes.

## Introduction

The current implementation of the learning process emphasizes student-centered learning to create independent learning that does not depend on the Student Center Learning (SCL) instructor as well as the availability of extensive learning resources with the use of technology to facilitate learning, where learning does not only occur conventionally in the classroom. limited by the scheduled study time, but learning now can be in various places that are able to pass through distance, space and time which is done online. According to Nasir (2018), explaining that the content in the curriculum includes the use of new formats in the learning process, for example a blend of face-to-face with online (Blended), fully face-to-face, and fully online learning or e-learning.

The findings from Demuyakor's (2020) research show that implementing an online learning program is a very good idea because most students support this initiative, but there are gaps with the high cost of participating in online learning. Then another gap according to (Purwanto, 2020) regarding online learning during the Covid-19 period, students did not yet have a distance learning culture because so far the learning system was carried out face-to-face, students were used to being in school to interact, furthermore online learning facilities were needed. such as laptops, computers or cell phones. During the Covid-19 pandemic, learning at Padang State University was conducted online. During online learning, lecturers use e-learning, video conferencing and whatsapp. Teaching materials are given to students in the form of modules and handouts that are uploaded on e-leaning, while before the Covid-19 outbreak learning was carried out face-to-face in class. The effect of online learning has an impact on student learning outcomes in attending Hair Trimming lectures.

Value data obtained from several classes in the Hair Trimming Course from the 2017 to 2021 academic year in the D4 Makeup and Beauty Education Study Programit can be concluded that the value obtained by students both conventionally (face-to-face) and online learning has not received the maximum value. Conventional learning methods tend to make students passive and ultimately make the teaching and learning process unpleasant and

boring. According to Sukardi and Rozi (2019), slowly conventional learning methods are starting to be replaced with online learning methods. In online learning, students can learn independently following online instructions provided online tutorials, discussion forums, ebooks, chat and online tests.

According to Savitri (2019) explaining that there are some jobs that will disappear and appear, as well aswhichcan survive in the Industrial Revolution Era 4.0, one of the jobs that can survive is a job that requires competence and skills with special skills in the field of beauty, namely work as a SPA therapist and hairdresser, where in the process of working on hair trimming it cannot be replaced by machines but is supported by trimming tools. high-tech. For this reason, the learning method in the Hair Trimming Course needs to be adapted to the development of 21st Century education in the Industrial Revolution 4.0 Era.

Another problem with the Hair Trimming Course requires a lot of time in the implementation of learning that covers a wide variety of materials, and practicing various trimming techniques, but in fact the course which consists of 2 credits is not enough to fulfill all the material optimally by producing learning outcomes. competent and professional. The available time is limited, so it requires learning that is not limited by space and time which can occur anywhere and anytime flexibly. This shows that there is an indication of a problem that has occurred, so that the ability of human resources in the teaching and learning process in the Hair Trimming Course requires improvement efforts,

According to Nasir (2018), explaining that there are various vocational learning needs that encourage research and development of good learning models. One thing that is needed to face the Industrial Revolution Era 4.0 is Blended Learning.The Blended Learning model can be seen in the picture.
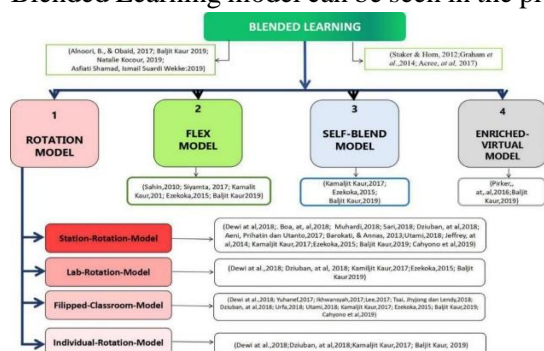


Blended learning models (Staker & Horn, 2012)
The Blended Learning Model is divided into several categories consisting of: Rotation Model, Flex Model, Self-Blend Model and Enriched-Virtual Model(Staker & Horn, 2012; Grahamet al.,2014; acree,et al,2017;Alnoori & Obaid, 2017; Baljit Kaur 2019; Natalie Kocour, 2019; Asfiati Shamad, Ismail Suardi Wekke, 2019).In the R . categoryotation Modelconsists of Station Rotation Model, Lab Rotation,Flipped Classroom and Individual Rotation Models. So to support the hair cutting lecture process in vocational education, it should not only be done conventionally but also done in a blended way.

Meanwhile, according to Bauk, Scepanovic, and Kopp (2014) explaining that mThe Blended Learning model includes a modern learning model that is popularly applied in universities that combines face-to-face and online environments, aiming to improve learning with the application of new web technologies. The reason for choosing the Blended Learning model is because it has the advantage of being able to create a learning system that focuses on Student Center Learning (SCL), so students construct their own knowledge with various sources such as textbooks, journals, CD ROMs, videos, television, websites, social media, blogs. , LMS, and others (Zainuddin and Halili, 2016). Thus, students can study in the Student Center so that they are able to shift their dependence on teachers and students can access various learning resources.

Apart from that Blended Learningalso supported byThree of the more popular learning theories are: behaviorism, cognitivism, and social constructivism (Picciano, 2017).constructivism learning theory, according to Driver and Bell (Jama 2021) his view of constructivism where students have goals, are involved in learning, are able to construct knowledge individually, learning is not only knowledge but also involves setting up classroom situations, besides that the curriculum contains learning tools, materials, and learning resources.

According to Farida et al., (2019) One of the latest innovative learning models based on video learning and is believed to be a solution to this problem is Flipped Learning. This learning model will guide

students to learn independently through learning videos before coming to class, while class activities are more focused on discussion activities. Flipped Learning or called reverse class is a learning model that integrates technology-based teaching methods. Flipped Learning provides opportunities for students to learn independently both in the classroom and outside the classroom (Julinar & Yusuf, 2019). Flipped Learning is included in the blended learning model which has advantages, among others, students can have discussions anytime,Meanwhile, according to Zou et al., (2020) explained that learning using Flipped Blended Learning is more effective than conventional learning. Likewise, according to Tang et al., (2020) at Chengdu University of Information Technology (CUIT) to engineering students, it was stated that students are generally dissatisfied with the learning effect of online, especially in communication and question and answer. Tang further explained that at the time of disruption, only relying on online learning could be empowered by integrating Flipped Blended Learning which showed a positive effect on learning, attention, and evaluation of student learning outcomes.

Apart from that, vocational education learning requires project-based learning (Project Based Learning). The definition of the Project Based Learning learning model according to Lucas, (2015) Project Based Learning (PjBL) is an investigation process that begins with basic questions and is suitable for collaborative projects. According to Sani RA, (2014) states that the Project Based Learning model can be defined as a learning model with long-term activities that involve students in designing, creating and displaying products to overcome world problems to achieve competence. Meanwhile, according to (Kosasih, 2014) Project Based Learning is a learning model that uses projects or activities as its goal. Meanwhile, according to Jalinus, Nabawi et al., 2017 implemented the Seven-step project-based learning model (PjBL) to improve students' productive competencies. The seven steps consist of: (1) The formulation the expected learning outcome, (2)Understanding the concept of teaching material, (3)Skills training, (4)Designing the project theme, (5)Marking the project proposal, (6)Executing the tasks of projects, (7 ) Presentation

of the project report. This study shows that the application of the seven steps (PjBL) in project-based learning is practical and effective to improve students' productive competence. Hair Trimming Course is a practical project course, for that researchers also adopt some of the syntax of the model and researchers add a new syntax that is adapted to the characteristics of the Hair Trimming Course.

The researcher tries to develop a learning model. This Flipped Project Based Learning model contains a syntax load that was adopted from previous research which consists of 8 syntaxes, namely: 1). Learning orientation, 2) Access content material to multimedia, 3). Assigment Project, 4) Discuss to design project, 5) Implementation of the project, 6) Test of the performent implementation, 7) Improve of product, 8) Evaluation. The development of the Flipped Project Based Learning model is an effort to improve student competence in the Hair Cutting Course in the D4 Makeup and Beauty Education Study Program that is relevant to 21st Century learning, which is valid, practical and effective to achieve competent learning outcomes.

## Method

Methods The research conducted in this study used research and development (R&D) methods. This development research itself adopts the ADDIE model through the steps of Analysis, Design, Development, Implementation, and Evaluation. According to (Branch, 2009) ADDIE development steps can be seen in the figure.
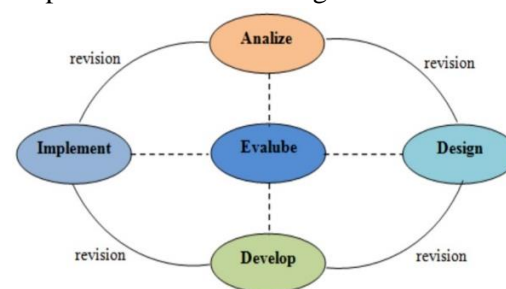


## ADDIE Concept
(Branch, 2009)

Based on the figure, it can be seen that the stages of developing the ADDIE model are starting from analyzing needs, designing, developing, implementing and evaluating stages. At this stage includes an unbroken cycle in which improvements

are made so as to achieve a maximum development that avoids errors.

The first stage is analysis, namely analyzing the needs of the Flipped Project Based Learning model, while the stages are as follows: validating data on education personnel, determining instructional goals, confirming, identifying resources, determining the desired system, drawing up a project processing plan. Furthermore, in the design stage at this stage, the design of teaching materials is carried out according to the context of competence and how the learning scenario will be carried out according to the flippded project-based learning model.

The development stage of this stage produces a flipped project based learning model that is ready to be tested on students. This model has prepared developments carried out on media and materials, so that a guide book for using the model is available for lecturers and students. After that, a trial was carried out on the expert regarding the product that had been developed. Then the implementation stage of the development of the model that has been made, is implemented on students and lecturers to see the effectiveness of its use. This effectiveness was measured through trials using questions in the control group and the experimental group to see a comparison of treatments. This effectiveness is seen using test questions to students who previously tested this question for the level of difficulty, discrimination, validity and reliability and analysis requirements in order to obtain questions that are worthy of being tested on students. The evaluation stage is to determine the standard criteria for learning resources and evaluate the models that have been developed if there are any that need to be improved.

## Results

Research and development processThe Flipped Project Based Learning model is implemented in the make-up department, in the hair styling course.The development model is oriented to the ADDIE development model which consists of five stages, namely analysis, design, development, implementation, and evaluation. The first stage that is carried out is the analysis stage. At this stage, the researcher started the activity by identifying problems in learning hair trimming.

This research developsFlipped Project Based Learning Model. The manufacturing process is carried out in accordance withplotADDIE development model which consists of 5 stages. At the analysis stage, the problems that occur are identified, namely the Modellearningapplied by lecturers still seem conventional. Learning is more centered on the lecturer. Students only act as recipients of information provided by the lecturer. Many students do not understand the lecturer's explanation, but these students feel reluctant and do not want to ask the lecturer because students are afraid or not interested in learning well. The achievement of student learning outcomes has not been maximized related to the subject matter. Many factors that cause these problems, such as students' low understanding of the concepts being studied, difficulties in practice and students' 4C abilities have never been assessed.

At the design stage, the planningThe Flipped Project Based Learning model is also equipped with model book products, lecturer guides, student guides and hair trimming modules. This newly developed model namedFlipped Project Based Learning Modelwhich is conceptualized into a new learning model formula, which is based on taking slices of the advantages of the Flipped Based Learning model and the PJBL model, and adding novelty to the gaps or limitations of the model, and equipped with arguments based on relevant research, so that it becomes a Blended model. better learning. The following is the position of the developed model:
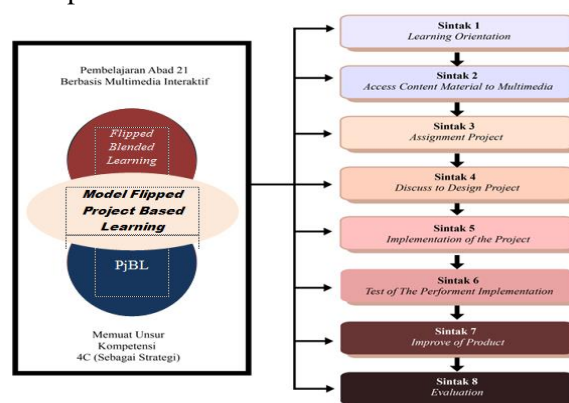


Position of Flipped Project Based Learning Model

At the evaluation stage, the measurement of effectiveness is carried outFlipped Project Based

Learning Model, whichcan be seen from the increase in the results of the pretest and posttest, and compare the resultsstudyin the applied experimental classFlipped Project Based Learning model with a control class applied by a conventional model.

EffectivenessIt can be seen from the average posttest results that are greater in the experimental class than the results in the control class. In the experimental class where the average posttest result is 78.72 and the average pretest result is 35.056, while in the control class the post-test average is 74.82 and the pretest average is 32.706.

In the affective assessment, to determine the attitude of the student's 4C competence, the ability to measure competence. The results of students' 4C abilities on student projects, where in the first project the Communication results were 65 and in the second project the results were 78, while for Creativity in the first project it was 83, and in the second project it was 85, for Collaboration results in project 1 it was 78, and in the second project it was 78. the second project is 84, and in Critical thinking in project 1 it is 72 and in project 2 it is 75. The results of 4C competence prove that creativity is superior. In the psychomotor aspect, he gave project 2 to students, which then accumulated the results, so there was an increase in the results of project 1 and project 2 after the implementation of the learning model.

## Conclusions

The conclusion from the research results on the development of the Flipped Project Based Learning model, it can be concluded as follows, the resulting Flipped Project Based Learning Modelhas 8 syntaxconsisting of a). Learning orientation, b). Access Material-Based Multimedia, c). Assignment Project, d). Discuss to design project, e). Implementation of the project, f). Test of the results, g). Improve project results, h). Evaluation.Flipped Project Based Learning Modelmis a learning that is carried out face-to-face and online (blended learning) based on a project with a ratio of 50% face-to-face and 50% online. The occurrence of flexibility to learn anywhere and anytime without being limited by distance, space and time. For online interaction using e-learning

facilities, video conferencing as well as whatsapp, chat and forums to explore elements of student 4C competencies through discussions and projects. Online teaching materials that are made as attractive as possible are supported by multimedia-based Flash for Android application learning media (text, images, animations, videos). The development of this model also produces products in the form of Flipped Project Based Learning model books, lecturer manuals, student manuals and hair trimming teaching modules. The effectiveness of the Flipped Project Based Learning model is proven to be effective,

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