



# Hybrid Flip Book in Improving Student Engagement

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**Abstract.** Learning Criminology has a theoretical learning character, resulting in a lack of use of media which results in less than optimal student activities, especially student engagement. The right media used in increasing student activities is a hybrid flipbook. This media can be equipped with material, video, audio, and visuals. This research uses the Classroom Action Research method, with the stages of planning, implementing, observing, and reflecting. The research subjects were students of the PPKn FKIP Study Program, Universitas PGRI Yogyakarta. The exposure of the research was done by using a quantitative descriptive technique. The success indicator is set at 80% of the achievement indicators from student engagement. The indicators used are three aspects of student engagement, namely cognitive, emotional and behavioral aspects. Based on the results of research on increasing student engagement using flipbook hybrid media in the Criminology course, it can be concluded that: the implementation of classroom action research has increased student engagement competence in the application of hybrid-based media flipbooks. This can be seen from the condition of the results achieved in the initial pre-study, namely 59.29%, increased to 73.21% in the first cycle, and then increased again to 85% in the second cycle. The use of flipbook hybrid learning media can improve three main elements in student engagement, namely behavioral, emotional and cognitive factors. Based on the seventh-grade action research, six indicators of student engagement have been achieved with an indicator of 80% achievement. This research can be developed more maximally by increasing the attractiveness of learning media to increase student activity.

**Keywords:** Student engagement · hybrid flipbook

## 1 Background

The government's policy in the field of education regarding Independent Learning on an Independent Campus has the consequence of changing the learning paradigm. Students are currently allowed to develop applied competencies beyond the competencies learned on the main campus. In the policy learning process, the change in the learning approach method is more directed at case base learning and teams base projects [1]. The current assessment of educational success is also standardized with Key Performance Indicators that are more directed at the ability of students, lecturers, and institutions in output, as

well as the ability to cooperate in developing scientific knowledge between countries. In the learning process in the classroom, learning is directed to two relevant KPIs, namely KPI 7 on collaborative and participatory learning using case base learning and teams base projects to increase student engagement.

Based on the study of the policy direction, it is necessary to think about the application of learning methods that facilitate the use of learning technology in the era of the industrial revolution 4.0 as well as adopting the direction of case base learning-based education policies and teams base projects in various studies [2]. One of the policy implementation strategies will be classroom action research by analyzing the learning weaknesses that are currently happening in the PPKn FKIP Study Program, Universitas PGRI Yogyakarta. Learning that does not involve students in various learning activities, and also lacks emphasis on case-based learning processes and teams base projects, is the object of this research study.

The existence of post-covid-19 learning conditions that require educational institutions to use online techniques in learning has resulted in a decrease in student activity [3]. At that time, students did online learning at home and reduced learning activities. The thing that feels decreased in activity level is student engagement, which is related to cognitive activity, behavioral activity, and emotional activity. This condition is reduced due to the tendency of lack of interaction between students and lecturers as well as face-to-face learning. One strategy that is being tried to develop is to use a hybrid flipbook which is used to provide student activities with digital books equipped with visuals and videos that students can easily access. It is hoped that using Hybrid Flip Book-based technology by emphasizing efforts to increase student activity in learning will improve student engagement and provide problem solutions and in-depth studies on the application of learning methods.

Indicators of problems in this study include: (1) online learning reduces student interaction with learning; (2) control of online learning outcomes is not very accurate because the teacher does not deal directly with students; (3) online learning must be equipped with learning media that support the online learning system, to increase student activities; (4) lecturers have not maximally used media related to student activities to increase learning participation; and (5) online learning using boring lectures by students, especially with the limitations of student equipment. The problem that is the focus of this research is how to apply the Hybrid Flip Book media to increase student engagement in the Criminology course in the fourth semester of the PPKn FKIP Study Program, Universitas PGRI Yogyakarta?

Flip Book is a program designed to create digital books both online and offline. The digital book, which will be the learning media project, is a teaching material that utilizes technology so that when used it uses electronic means. The use of hybrid because it is more likely to be directed to the use of blended learning that combines text, audio, audiovisual, and evaluation. Digital books are very effective because they can be carried anywhere, do not require a lot of space, and are complete. The devices used can be smartphones or computers [4]. Flip Book is a form of a textbook. Textbooks are books that are compiled to complement the materials used so that students can better understand and repeat the material, and are published widely. Textbooks are made by authors who have expertise in their fields according to the learning objectives.

In general, textbooks have the benefits of (1) helping students to understand the learning material; (2) as a means for writers to express their ideas and opinions for publication; (3) as a means to increase student's motivation to study the material in a focused manner; and (4) as a means to provide material and evaluation in a structured study. Student engagement can be defined by the involvement of students in the learning process when students are engaged in academic activities or non-academic activities that can be seen through the behavior, emotions, and cognition of students in the school environment. Student engagement has three aspects, namely behavioral engagement, emotional engagement, and cognitive engagement [5] [6].

Student engagement, namely, the intensity of behavior, the quality of the delivery of emotions, and the activeness of students to actively understand everything related to learning. Student engagement is a part of action and effort, students' persistence in matters related to school assignments, and being able to emotionally engage in learning activities [7]. Student engagement in general, namely the active involvement of students in educational institutions can be seen through behavior, emotions that can be controlled properly, as well as delivery, understanding of emotions towards the school environment, and being able to think well to assist in acting during the learning process.

Student engagement is an indication of the quality of individuals to improve learning activities which consist of behavior, emotional side, and level of effort in their involvement in learning activities. Overall student engagement can be seen from four factors. The four factors are skill engagement, emotional engagement, participation/interaction engagement, and performance engagement [8]. Behavioral engagement comes from the idea of participation or involvement, emotional engagement includes positive and negative reactions to teachers, other students, and classroom and school activities and cognitive engagement include the desire to exert effort to understand complex ideas and master difficult skills.

Student engagement shows the level of attention, effort, persistence, positive emotions, and commitment of a student to the learning process. By involving the side of affection, cognition, and social interaction in the learning process, students will make more efforts to understand and master the material that has been taught. Students have good student engagement, so in the learning process, students will give full attention and participate in class discussions, and show interest and motivation during learning. Student engagement can also measure how well the student's learning process is and is also a reference for effective teaching. Understanding how well the learning and teaching processes are effective for students, teachers as teachers can provide evaluations and feedback on the achievements and shortcomings in the learning process they have done [9] [10].

Student engagement consists of three dimensions, namely behavioral engagement, emotional engagement, and cognitive engagement. Behavioral engagement is an act of participation that involves students in social academic activities [11] [12] [13]. This dimension describes the quality of student motivation displayed in learning activities in the classroom and outside the classroom that are academic to achieve academic success, including students having effort, intensity, perseverance, and determination in carrying out academic activities. Behavioral engagement can range from simple things like doing the assigned work, and obeying rules to actively participating in school organizations.

This dimension is considered very important in achieving positive academic results and preventing dropouts [14] [15].

Emotional engagement is a student's positive or negative reaction to teachers, friends, classmates, and academic and school activities. Emotional behavior includes students feeling enthusiastic, enjoying, happy, and satisfied with academic activities. Emotional engagement is considered important to foster a sense of attachment of students to their educational institutions and affect students' willingness to learn. The emotions displayed by students in emotional engagement can range from the desire to like to greatly appreciate or the occurrence of identification of the institution. Emotional engagement refers to students' affective reactions in the classroom including interest, boredom, pleasure, sadness, irritation, and anxiety [16] [17] [18].

Cognitive engagement is an investment that combines the attention and willingness of students to exert the effort needed to understand complex material and master a difficult skill. Cognitive engagement can range from memorizing what is taught in class to using self-regulated learning strategies to develop an understanding of the material being studied and difficult skills. A definition of cognitive engagement focuses on the psychological investment in learning, where students have a desire to be better beyond their existing requirements and preferences for challenges. The engagement of students with the learning process in the classroom shows that students are present not only in body but also in mind; including students paying attention, concentrating, focusing, absorbing, participating, and having a willingness to try to exceed their standards.

The public's perspective on the eruption of Mount Merapi, which seems contradictory to the opinion of volcanologists, certainly did not appear suddenly. In Javanese cosmology, especially in the Cangkringan area, Yogyakarta, the existence of Mount Merapi and the South Sea are two places that are considered to have contributed to the existence of the Yogyakarta palace in the midst of it. In this case, the people who live on Mount Merapi believe more in the customs handed down by their ancestors to ask for safety by performing the Labuhan ceremonial ritual. So people's lives are strongly influenced by existing local wisdom [7] [8] [9] [2].

Based on the perspective of cultural wisdom, natural behavior including the behavior of animals and plants by traditional communities is observed as a natural phenomenon that can be used as an indication of impending natural disasters [10] [5] [11]. Long stories and natural events become a source of inspiration and then generate responses in the form of behavior to overcome natural turmoil. Furthermore, it is told from generation to generation as knowledge in responding to nature and its changes.

Geographically, the Cangkringan area is very vulnerable to the threat of a Merapi eruption, but on the other hand, it has its cultural wisdom in dealing with the threat of a Merapi eruption, namely Waspodo's attitude towards disasters and *nrimo* if the area one day a disaster occurs. That is the value that is always planted in the community in the face of disasters. In this context, it can be said that the people who live in this area are people who are very prepared for disasters [12] [13].

Maintaining the harmony of Mount Merapi was also reflected in the 2010 eruption, whether it occurred in Kinahrejo, Pelemsari hamlet, Umbulharjo village, Purwobinangun village, Turgo hamlet, Kepulharjo village, and Kaliadem hamlet. The attitude of trust in the harmony of nature is seen when they do not want to leave their area, even though it has been destroyed by fire by hot clouds and made a forbidden area and unfit for habitation. This phenomenon can be understood as an attitude of life to always be modest with the environment and nature they inhabit. They think that this place is the homeland of blood so Mount Merapi with its natural processes (activities of Mount Merapi) that accompanies it is felt like something that has life and soul [10] [14] [15] [16].

The community's belief in local culture can be seen in some of the rituals performed. Rituals can be in the form of religious ceremonies, harbor ceremonies, and so on. All of these represent the most basic and profound values of wisdom education for the people of the slopes of Merapi to always protect nature, namely the values of togetherness, harmony, and respect for the environment. A place where people live together, to achieve inner and outer harmony.

## 2 Method

This research will be conducted at the PPKn FKIP Study Program, Universitas PGRI Yogyakarta, with the research subjects being Semester IV Students in the Criminology course. This research is planned to be carried out from February 2022 to May 2022 with a total of 35 students from the 2020 batch. The method used in this research is Classroom Action Research. Classroom Action Research uses four main steps, namely Planning, Implementation, Observation, and Reflection [19]. The four stages are carried out cyclically, in the sense that if in the first cycle the learning indicators cannot be exceeded, the next cycle is carried out by looking at the reflection as an evaluation of learning.

This study uses several research data collection techniques, namely observation, tests, questionnaires, documentation, and interviews. Data analysis in this study used a qualitative descriptive paradigm. Exposure to descriptive data analysis is used which is supported by quantitative data from the results of questionnaires both by interviews, test results, documentation, and observations.

Checking the validity of the data can be done by analyzing the level of confidence in the data. The technique commonly used is data triangulation. This method is used by comparing the data obtained with other equivalent data so that it can be used to check the validity of the research. The learning preparation process also involves media expert reviewers and material experts. In Classroom Action Research, the face-validity technique is also used to validate the instrument used by other parties who are considered experts in the research (Table 1).

The validation instrument in this Linkert scale consists of four quantitative choices. Each choice gets a score to assess the instrument. The number of instruments used is 7 instruments for measuring student engagement indicators, namely.

**Table 1.** Student Engagement Indicator

No	Element	Indicator
1	Behavioral engagement	Compliance with rules
		Learning engagement
		Ability to ask
2	Emotional engagement	Attitude towards learning
		Interest in value
		Affective reaction to
3	Cognitive engagement	Efforts to master the material

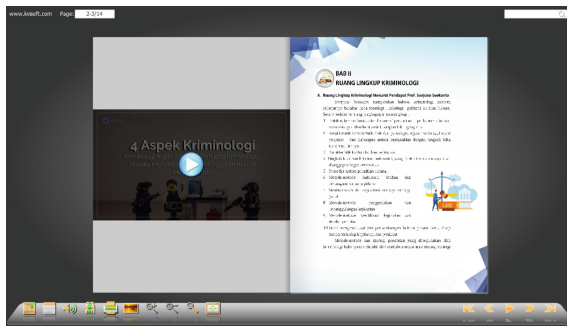
(Fredricks JA & McColskey W, 2012)

### 3 Result and Discussion

This research was conducted at the PPKn FKIP Study Program, Universitas PGRI Yogyakarta. The subject used is criminology involving 35 students. In this study, the use of Hybrid Flipbook-based media was applied to increase student engagement. The study began with preliminary observations made at the beginning of learning. This observation is done by analyzing the tendency of students when online learning is not optimal. In learning during research, there is a policy that learning is carried out in a face-to-face manner 50%. The system used is for students to carry out online learning for two weeks and then 2 weeks later, offline learning is carried out. This learning method is a post-pandemic policy.

Based on the results of discussions with collaborators, it was decided to increase student engagement by using the Hybrid Flipbook media. This media is considered effective for online and offline learning as a strategy to increase student activity during lectures. The first stage in this research is to create an instrument that should be used as an indicator to measure student engagement. This classroom action research is focused on developing the Hybrid Flipbook media to increase student engagement in the PPKn FKIP Study Program, Universitas PGRI Yogyakarta. The implementation of this research was carried out on 35 4th semester students who took the Criminology course. Based on preliminary observations and based on the results of documentation from learning, several things need to be observed, namely: (1) Students do not do many activities in learning; (2) Students during blended learning between online and offline based learning, need media that can facilitate both types of learning; (3) Lack of student motivation in participating in learning because of the absence of applied media; (4) Less maximal use of varied media in learning to support student understanding in learning Criminology.

Based on several studies with collaborators, it was agreed to use the Hybrid Flipbook media. The consideration of using this media is because the media can run offline, so it can reduce the student quota. Hybrid Flipbook can also store media in the form of video, visual, and audio so that it will attract the attention of students who use it. After determining the form of media that will be applied to improve student competencies,



**Fig. 1.** Hybrid Flipbook

then the competencies to be developed will be re-analyzed. Based on the results of discussions with collaborators, it was agreed to increase student activities, namely student engagement. The taking of this competency is based on various considerations, one of which is the condition of students when observed, it is necessary to increase student engagement, another reason is when the implementation of Merdeka Learning Merdeka Campus student engagement becomes one of the superior competency alternatives.

Based on the results of the preliminary observations, it was analyzed that students got a score of 2.37. Based on the results of this study, the results of the measurement of student engagement only reached 59.29%. Based on discussions with collaborators, the indicator for the success of classroom action research is set at 80% of the average score for the student engagement indicator. In the first cycle, classroom action research was carried out using the steps of planning, implementing, observing, and reflecting. In the early stages of planning the collaborators and researchers determine the material to be taught in semester 4, then collaborate to rearrange textbooks, media, and learning strategies to increase student engagement (Fig. 1).

In the implementation step, students are given a hybrid flipbook as a medium for student learning during the transition from online to offline. The media is given to students to increase student activity in learning. The Hybrid Flipbook learning media is equipped with scripts and visuals. The lecturer explains the learning materials online, then the students study the Hybrid Flipbook to increase student activity in learning. At the next meeting, observations were held to fill out a questionnaire related to the learning of Criminology being taught. The third step is observation. This stage is carried out by observing the existing instruments to measure students' abilities, especially in learning criminology. Observations are based on instruments that have been prepared to measure student involvement in the Hybrid Flipbook.

Based on the observation data, it was found that students got an average score of 3.1 for the implementation of the Hybrid Flipbook in strengthening student engagement, it can be analyzed that there is an increase in the results of the learning process. The percentage of the implementation of cycle 1 got a score of 73.21%, which means that there are still a few more targets for the research success indicator, which is 80% of the student engagement indicator score. At the end of the first cycle, a reflection was held by collaborators and researchers. The results of the reflection produce data that the

second cycle of research needs to be carried out considering the results of the percentage of less than 80% of the target for success in strengthening competencies with student engagement indicators. Some other notes from the application of the Flipbook hybrid are the need for additional videos in media creation. The implementation of learning is also given case studies on the internet so that students are more active in exploring examples of learning criminology.

Based on the results of these reflections, preparations were made for the implementation of Cycle II. Phase II cycle begins with planning. Collaborators and researchers begin with lesson plans that reinforce prior learning. The use of hybrid flipbook media is still used by adding reinforcement in videos and strengthening assignments on the internet about cases related to criminology. The learning implementation process still uses the same technique, namely online and offline learning systems. The learning media made for the next material have been prepared and equipped with video reinforcement and assignments. The use of a hybrid flipbook remains a learning alternative because it can be operated offline. Materials with hybrid flipbooks are given to students through e-learning or google drive.

Based on the observation data in the second cycle, it was found that students got an average score of 3.4 for the application of the Hybrid Flipbook in strengthening student engagement, it can be analyzed that there is an increase in the results of the learning process. The percentage of the implementation of the second cycle got a score of 85.00%, which means that in the second cycle, the target of the research success indicator was 80% of the student engagement indicator score. At the end of the lesson, collaborators and researchers do reflection. In the final evaluation results, it was agreed that classroom action research was discontinued because the research success indicators had reached 85%, which means that the research success indicators had reached 85%. Student activity has increased both in terms of behavior, emotional and cognitive.

As an analysis of the results of the implementation of the hybrid flipbook in increasing student engagement, the data on the increase in the application is shown in Table 2 from pre-study, cycle I, and cycle II:

The Criminology course is one of the reinforcements for the Law course at the PPKn FKIP Study Program, Universitas PGRI Yogyakarta. This course is in semester 4 which at the time of the study was attended by 35 students. At the beginning of the preliminary observation, there was a tendency for a lack of learning interaction with students. Learning criminology which is full of legal nuances does not pay attention to aspects of the media used and student involvement. This research then collaborates on research involving collaborators from media and education lecturers who can bring changes to learning by presenting learning that is more attractive to students. At the time of preliminary observation, there was a tendency for learning to be less interesting and student involvement less likely.

Less than optimal learning is caused by (1) student activities during online learning are not optimal. The lecture method still dominates in learning; (2) Students cannot be detected in their activeness in learning because many students do not turn on the video during learning. Students reasoned because the quota and signal factors were not optimal; (3) Students are more passive in online learning because there are not many activities to do; (4) Student motivation is reduced by online learning techniques, and (5) Learning that



**Table 2.** Results of Pre Research, Cycle I, and Cycle II on *Student Engagement Indicators* using *Flipbook Hybrid Media*

No	Element	Indicator	Average		
1	<i>Behavioral engagement</i>	Compliance with rules	52.5%	72.5%	80.0%
		Learning engagement	55.0%	67.5%	77.5%
		Ability to ask	50.0%	60.0%	85.0%
2	<i>Emotional engagement</i>	Attitude towards learning	57.5%	70.0%	87.5%
		Interest in value	77.5%	87.5%	90.0%
		Affective reactions to the learning environment	60.0%	77.5%	85.0%
3	<i>Cognitive engagement</i>	Efforts to master the material	62.5%	77.5%	90.0%
<i>Total</i>			59.29%	73.21%	85.00%

Source: Pre-research observation results, cycle 1 and cycle 2

is carried out online and offline requires new strategies to maximize learning. Based on these conditions, collaborators with researchers then develop learning media that focus on increasing learning motivation and increasing student activities. The focus which later became the study of this research was developing flipbook hybrid learning media and trying to improve student engagement.

The flipbook hybrid media is used to conduct classroom action research to increase student engagement. Student competencies that will be improved by student engagement are based on various problems found during initial observations. Through increasing student engagement, students are more active in interacting with lectures, both in terms of cognitive, emotional, and student behavior to interact with learning. In the first cycle, the media used to conduct classroom action research was then developed. The first cycle of research used flipbook hybrid media to increase student engagement. Students during online and offline learning can learn optimally by using these media without depending on quotas. Learning materials are equipped with visuals, so students can access these materials easily. The media becomes the initial study material that provides the basics of understanding the material presented to lead to better interactions. The teaching materials delivered also involve student activities.

The score obtained from the student engagement indicator in the first cycle is based on the evaluation of the collaborators and researchers have not yet reached the achievement indicator, which is 80% of the student engagement indicator so the research is repeated taking into account the inputs from the observations. Changed, among others, strengthening videos in flipbook hybrid media, increasing lecturer interaction by providing feedback on questions to increase the activity of weak students.

Learning planning in cycle II was carried out by making preparations for re-media creation by adding videos and question activities that would increase student engagement indicators. The media used still uses a hybrid flipbook and is distributed to students to help the offline and online learning process and aims to increase student activities. The

learning carried out is focused on increasing the weaknesses of the implementation of learning based on the observation of cycle I. The learning process is carried out by collaborating with the media and producing data.

Based on the results of observations about student engagement in semester 4 in cycle II, a percentage of 85.00% was obtained. Based on 7 indicators of student engagement, data is obtained that the six indicators have reached the criteria of success, but there is one criterion that has not met the criteria of success, namely learning engagement, but on average it has reached the indicator of 85%.

The graph can be used to analyze that there has been an increase in the application of the hybrid flipbook to criminology learning with an indication of student engagement. The score obtained for the assessment indicator is 73.21%. The score shows an increase due to the use of media which increases student activity. This activity is due to the media used to present multimedia in learning such as text, audio, and visuals. The media also increases student activities independently or guided.

Based on research results from pre-research, cycle I, and cycle II, it turns out that there is an increase in the application of flipbook hybrid learning media in increasing student engagement in Criminology courses. Six of the seven indicators have reached the degree of applicability, while one indicator that is less than optimal is an indicator of involvement in learning. Based on the observation data, it was obtained that the achievement indicator value was 85%, which means the research was stopped because it had reached the target.

## 4 Conclusion

Based on the results of research on increasing student engagement using flipbook hybrid media in the Criminology course, it can be concluded that the implementation of classroom action research has increased student engagement competence in the application of flipbook-based hybrid media. This can be seen from the condition of the results achieved in the initial pre-study, namely 59.29%, increased to 73.21% in the first cycle, and then increased again to 85% in the second cycle. The use of flipbook hybrid learning media can improve three main elements in student engagement, namely behavioral, emotional, and cognitive factors. Based on the seventh-grade action research, six indicators of student engagement have been achieved with an indicator of 80% achievement.

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