

# Application of Academic Supervision of GROW Model Coaching to Improve the Ability to Make Learning Modules Using the Flipbook Maker Application of Motorcycle Engineering Competence Teacher at SMK N 2 Binjai

Moch. Musta'in<sup>1</sup> Arif Rahman<sup>2</sup> Restu<sup>3</sup>

<sup>1,2,3</sup>*Education Administration, State University of Medan, Medan, Indonesia*

\*Corresponding Author: [mustain.moch80@gmail.com](mailto:mustain.moch80@gmail.com), [arifrahman@unimed.ac.id](mailto:arifrahman@unimed.ac.id), [restugiran@gmail.com](mailto:restugiran@gmail.com)

## ABSTRACT

The purpose of this study was to determine the application of the academic supervision of the GROW coaching model technique in increasing the ability of teachers to competence motorcycle engineering expertise to create learning modules using the flipbook maker application. The research design used was school action research. The subjects of this study were 4 teachers' competency in motorcycle engineering expertise at SMK N 2 Binjai. Data collection using questionnaires, observation, and interviews. The results showed that the application of academic supervision of the GROW coaching technique model improved the ability of teachers to competence motorcycle engineering expertise to create learning modules using the flipbook maker application. Through participation in coaching, the teacher turns out to be more reflective so there is a desire to improve his abilities and make changes. Coaching techniques raise their self-awareness of learning rather than teaching or finding solutions to the problems faced. In coaching there is a collaborative process that focuses on solutions, results-oriented and systematic, where the coach facilitates the improvement of the coachee's abilities.

**Keywords:** *Academic Supervision, GROW Model Coaching, Ability, Learning Modules, Flipbook Maker Application*

## 1. INTRODUCTION

The World Bank [1] states that teacher quality is the most important factor in improving the quality of education. According to McKinsey in a report issued by the World Bank [1] stated that the quality of the education system is unlikely to exceed the quality of teachers. It is appropriate with Syaodih expressed in Mulyasa [2] that no matter how good a curriculum is, the results depend on what the teacher and students do in the class. Hattie [3] also states that there are 6 determinants of student learning outcomes, namely student characteristics (50%), teachers (30%), school environment (5% -10%), home environment (5% -10%), principals (5% -10%) and peers (5% -10%). Based on these various opinions, it can be concluded that teachers are an important key in improving the quality of education.

The Southeast Asian Teaching Competency Standards Framework [4] formulates aspects of teacher pedagogical competence including the ability to know the

content of the subjects they train, know the characteristics of the students they develop, know how students learn and how to teach effectively, prepare effective learning plans and developing study programs based on textbooks, manuals and other study materials. Sungkono [5] states that the development of teaching materials is important for teachers so that learning is more effective, efficient and does not deviate from the competencies to be achieved. James W. Brown in Sardiman [6] states that the teacher acts as a learning process planner by mastering and developing subject matter, planning and preparing daily lessons, controlling and evaluating student activities. As stated by Kusumam et al. [7] that teachers are expected to be able to design or make teaching materials that play a role in determining the success of the learning process through a teaching material. Various teaching media will be very useful for children to learn according to different learning styles [8-10]. The conclusion that we get from the various opinions above is that teachers have an important role in determining the success of learning objectives by

preparing, making or developing teaching materials according to the needs of students.

A teacher must have the ability to make innovative teaching materials according to the needs of students so that learning runs effectively and efficiently to achieve learning goals. Facts and realities in the field are still many teachers who use conventional teaching materials, namely teaching materials that are left to use, just buy without the effort to plan, prepare or make them yourself [11]. Swathi [12] in his research shows that there are still many teachers who have not packaged learning materials and developed teaching materials properly, including making module teaching materials. There are no teaching materials in the form of modules because the teacher's ability to compile modules is low, as well as technical guidance for the preparation of module teaching materials that have not been carried out by supervisors. As stated by Kuswanto et al. [13] that some teachers in MGMP have the low ability in writing modules. In line with this, Rachman et al. [14] stated that there are still many teachers whose abilities are low so that it is difficult to make modules. The results of the questionnaire assessment of 10 productive teacher respondents held in February 2017 at SMK N 2 Binjai showed that the ability to make learning modules based on the flipbook maker application at SMK Negeri 2 Binjai was still low. Based on some of the research above, it can be concluded that the teacher's ability to make module teaching materials is still low so it needs to be improved.

Wiles in Purwanto [15] argues that supervision is an aid in the development of a better learning situation that includes the entire teaching and learning situation both objectives, teaching materials, learning techniques, learning methods, teachers, students and the learning environment/atmosphere. Daresh in Prasojo & Sudiyono [16] states that academic supervision is a series of activities to help teachers develop their abilities in managing the learning process. In line with this, Glickman in Sudjana [17] suggests that academic supervision is a series of activities to help teachers develop their ability to manage the learning process to achieve learning goals.

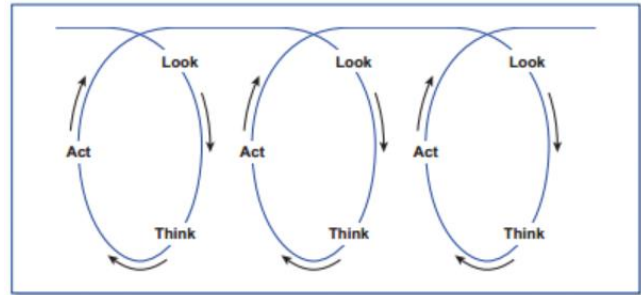
Coaching for problematic teachers or low abilities is one of the academic supervision activities [17]. Coaching is an activity of escorting and assisting people who are fostered from their current condition to a better condition. Coaching is the process of mentoring someone (teacher or school principal) who is fostered from their current condition to a better condition according to their needs [18]. GROW is a model of coaching that is oriented towards human development. Based on research conducted by Hutagaol [19], coaching techniques are proven to be able to improve teacher pedagogical competence.

**2. RESEARCH METHODS**

The design of this research is school action research. The action research model used in this study is a model developed by Stringer. The simplicity of the Stringer

model is very suitable for use in educational research involving students and teachers [20]. The use of the Stringer model makes it easier for researchers to see, examine what is happening, adjust procedures and take action based on what is seen by adjusting changes and internal and external conditions [20].

The Stringer model has a strong basic framework with three stages of action, namely: look (see or see), think (think) and act (act) which provide the basis for everyone to conduct direct investigations. The action cycle in this action research can be seen in the following figure :



**Figure 1.** Stringer Model Action Cycle  
(Source : Yaumi dan Damopolii, 2014:41)

The criteria for the category of teacher ability scores are as follows:

- 90% ≤ NA ≤ 100% = Very high
- 80% ≤ NA < 89% = High
- 70% ≤ NA < 80% = Middle
- 60% ≤ NA < 69% = Low
- NA < 60% = Very low

To calculate the assessment criteria using the following formula:

$$\text{Value} = \frac{\text{Total Rating Score Obtained}}{\text{maximum score}} \times 100\% \quad (1)$$

**3. RESEARCH RESULTS AND DISCUSSION**

The results of the preliminary analysis assessment before taking the action of applying academic supervision of coaching techniques in increasing the ability of teachers to make learning modules can be seen in the table below:

**Table 1.** The results of preliminary analysis assessment of the module development

No	Respondent	Value (%)	Explanation
1.	Respondent 1	56.25	Very Low
2.	Respondent 2	68.75	Low
3.	Respondent 3	62.50	Low
4.	Respondent 4	56.25	Very Low
5.	Respondent 5	62.50	Low
6.	Respondent 6	62.50	Low
7.	Respondent 7	75.00	Middle
8.	Respondent 8	56.25	Very Low
9.	Respondent 9	56.25	Very Low
10.	Respondent 10	68.75	Low

### 3.1 Cycle I

Cycle I is carried out based on three stages of action research using the Stringer model: looking, thinking, and acting. At the looking stage, the researcher reads and analyzes the initial results of the survey which shows that the ability of productive teachers to make learning modules based on the flipbook maker application at SMK Negeri 2 Binjai is still low. This activity was carried out by the researcher to prepare a plan in the form of determining the research subject of four motorbike engineering competency teachers as respondents. The result of the looking stage is the existence of research subjects and materials needed for module development. The results of the thinking stage are the materials needed to carry out academic supervision activities of coaching techniques. The stage of acting (act) in this study was carried out by coaching the GROW model. The application of coaching in academic supervision activities using the GROW model have sequences of training stages, namely: goal, reality, obstacle/option, way forward / will / what's next. In the action stage, the facilitator must make the respondents comfortable, not causing tension between the facilitator and the respondent. The strategy used is to choose a suitable time to study.

- i. *Goal Stage*, The coach engages the coachee (respondent) to determine himself the purpose of coaching activities, namely to improve the ability to compile learning modules using the flipbook maker application. Activities at this goal stage are carried out by giving non-directive questions to the coachee so that they can set their own goals for this academic supervision activity.
- ii. *Reality Stage*, The Coach (facilitator/researcher) invites the coachee (respondent) to conduct self-assessment related to the ability to make learning modules. The coach (facilitator/researcher) also asks about the efforts that have been made to improve the ability to make learning modules. The Activity in this reality stage is carried out by giving non-directive questions to the coachee so that they can conduct self-assessments related to the ability to make learning modules. The result of this reality stage is the coachee's awareness that the ability to make learning modules is still low or needs to be improved based on self-assessment. Each respondent gave a response that they were still unable to make their own modules.
- iii. *Option Stage*, The activity carried out is the coach (facilitator/researcher) asking the coachee (respondent) about the options or ways the respondent overcomes the obstacles that cause them to be unable to make teaching materials or modules. The result of this option/obstacle stage is that the coachee (respondent) thinks of a solution or way so that they are able to make their own teaching materials or modules. What the

respondent needs to do is: 1) committed to providing special time to learn to make teaching materials or modules by themselves, 2) reading and understanding the literature on making teaching materials or modules, 3) committing to taking part in training/guidance in making teaching material or module.

- iv. *Way forward/will Stage*, The activity carried out is the coach (facilitator/researcher) invites the coachee (respondent) to determine how they can improve their ability to make learning modules using the flipbook maker. At this stage, the respondent is committed to following guidance or training to make modules. In the action (act) stage, respondents follow the guidance in academic supervision to make modules using the flipbook maker application which includes making learning modules and making learning modules using the flipbook maker application.

The ability of respondents to make modules on academic supervision of coaching techniques cycle I can be seen in the table below :

**Table 2.** The ability of respondents to make modules in cycle I

No	Respondent	Aspects			Value (%)	Explanation
		1	2	3		
1.	Respondent 1	75	87.5	62.5	75.00	Middle
2.	Respondent 2	100	75	50	75.00	Middle
3.	Respondent 3	75	87.5	75	79.17	Middle
4.	Respondent 4	100	75	62.5	79.17	Middle
Average value					77.08	Middle

The aspects assessed in the ability to make modules include: preparation, planning, and composing the module. The results of observing the respondents' ability to make learning modules in the first cycle showed that they did not meet or match the desired completeness criteria.

In the first cycle, the researcher also observed the respondents' ability to make modules using the flipbook maker. The ability of respondents to make modules using the flipbook maker for academic supervision of the first cycle of coaching techniques can be seen in the table below.

**Table 3.** The ability to create modules using a flipbook maker in cycle I

No	Respondent	Aspects		Value (%)	Explanation
		1	2		
1.	Respondent 1	93.75	62.5	78.13	Middle
2.	Respondent	100	62.5	81.25	High

	2				
3.	Respondent 3	100	50	75.00	Middle
4.	Respondent 4	93.75	75	84.38	High
Average value				79.69	Middle

Aspects assessed in the ability to create modules include module preparation and creation. The results of observing the respondents' ability to make modules using the flipbook maker in the first cycle showed that they did not meet or match the desired completeness criteria.

In addition to observing the teacher's ability to make learning modules using the flipbook maker, the activities of the facilitator or researcher also carry out activities to apply the academic supervision of coaching techniques to respondents. The purpose of carrying out this activity is to see whether the implementation of the coaching technique academic supervision in making learning modules using the flipbook maker is in accordance with the expected steps.

The results of observations on the process of implementing academic supervision activities in the GROW model coaching technique can be seen in the following table.

**Table 4.** Implementation of coaching technique academic supervision in making module using a flipbook maker in cycle I

No	Coaching Stages	Value (%)	Explanation
1.	Goal	75,00	Middle
2.	Reality	75,00	Middle
3.	Obstacles/Options	75,00	Middle
4.	Way Forward/Will	83,33	High
Average value		77,08	Middle

The results of observing the process of implementing the coaching technique academic supervision activities carried out in the first cycle showed that they did not meet or match the desired completeness criteria.

In total, the results of the action research in cycle I showed a value below the success criteria of action that had been predetermined if  $\geq 80\%$ , both the value of the ability to make learning modules and the value of the teachers' ability to make module using the flipbook maker and the value of the academic supervision process of the GROW model coaching technique.

Based on the results of the reflection and evaluation carried out in cycle I, it was decided to continue the action to cycle II.

### 3.2 Cycle II

In the Look cycle II stage, the coach (facilitator) together with the coachee (respondent) conducted an evaluation to each module made in cycle I. The teachers did show great interest in participating in training, but these teachers haven't understood yet how to make a learning module using a good flipbook maker in accordance with the rules of drafting a learning module.

The first activity carried out is the coach (facilitator) and the coachee planning a return meeting for the implementation of cycle II. If in the first cycle, the place for the implementation of guidance is only determined by the facilitator, then in the second cycle the respondents are given the flexibility to choose a comfortable place to study.

At the thinking stage in cycle II, the facilitator will take several steps. First, the facilitator will prepare training materials related to weaknesses and weaknesses in the first cycle. Second, the facilitator prepares the steps for implementing the coaching using the GROW model stage for the second cycle. Third, the facilitator prepares the materials and tools needed to carry out the actions in this second cycle in the form of a laptop and paper. Fourth, the facilitator prepares an observation sheet that was previously compiled at the look stage.

At the stage of action to repair the weaknesses and deficiencies that exist in the first cycle. In the action stage of cycle II, the effort made was to optimize the improvement of the teacher's ability to make learning modules using the flipbook maker by studying the difficulties faced by teachers in cycle I as an effort to improve the implementation of coaching technique academic supervision.

Activities at the goal stage are carried out by giving non-directive questions to the coachee so that they can set their own goals for this academic supervision activity. The result of this goal stage is the existence of a goal (goal) of the coaching technique academic supervision activities, namely improving learning modules that are not in accordance with the rules for preparing learning modules and the criteria for acceptable learning modules.

At the stage of the reality cycle II, the coachee realizes that they begin to understand how to make modules after practicing directly. In addition, they also realized that the module material they created needed to be revised. The difficulty that they feel is their lack of focus on working on the module and the need for additional time for them to improve and complete the module development. Respondents also asked the facilitators not to be too quick to explain answers when they asked questions.

At the options/obstacle stage, the coachee is committed to re-participating in the training as well as the seriousness of preparing himself and the things needed during the training such as teaching materials for making modules. In addition to this, respondents asked themselves to be given flexibility in determining the time and place of training/guidance between the coach and the coachee.

The final step is way forward, which is to re-agree on the guidance meeting in making modules that adjust the time and place according to the condition of the coachee. Each respondent proposed a different time and place according to their conditions and readiness. The result of the first meeting in the action stage cycle II was a meeting schedule to improve the flexible learning module.

In the second cycle, the results of the good actions were the teacher's ability to make modules, the teacher's ability to make modules using the flipbook maker, and the process of implementing academic supervision of the GROW model coaching technique as in the following table.

**Table 5.** The ability to make modules in cycle II

No	Respondent	Aspect			Value (%)	Explanation
		1	2	3		
1.	Respondent 1	75	87.5	62.5	83.33	High
2.	Respondent 2	100	75	50	87.50	High
3.	Respondent 3	75	87.5	75	87.50	High
4.	Respondent 4	100	75	62.5	87.50	High
Average value					86.46	High

**Table 6.** The ability to make modules using *flipbook maker* in cycle II

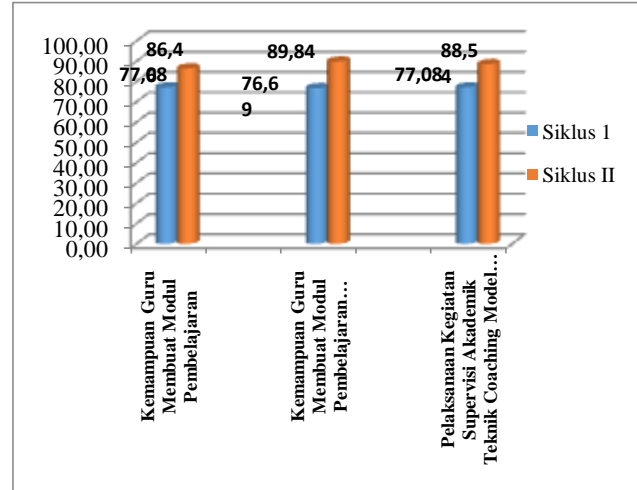
No	Respondent	Aspect		Value (%)	Explanation
		1	2		
1.	Respondent 1	93.75	62.5	87.50	High
2.	Respondent 2	100	62.5	93.75	Very High
3.	Respondent 3	100	50	87.50	High
4.	Respondent 4	93.75	75	90.63	Very High
Average value				89.84	High

**Table 7.** Implementation of coaching technique academic supervision in module making using a flipbook maker in cycle II

No	Coaching Step	Value (%)	Explanation
1.	Goal	91,67	Very High
2.	Reality	83,33	High
3.	Obstacles/Options	87,50	High
4.	Way Forward/Will	91,67	Very High

Average value	88,54	High
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The comparison of the actions results in cycle I and cycle II, both the teacher's ability to make learning modules and the teacher's ability to make modules using the flipbook maker, and the process of implementing academic supervision activities in the GROW model coaching technique can be seen in the following tables and graphs :



**Figure 2.** Graph of The Comparison of Observation Results in Cycle I to Cycle II

The picture above shows an increase in the results of the action from cycle I to cycle II. Thus the implementation of the GROW coaching model in academic supervision activities is carried out only until the second cycle because it has met the indicators of the success of the action.

Some factors which have influenced the success of the second cycle are the dynamic, enthusiastic, and flexible facilitator so that the teacher who is guided feels comfortable and shows a desire for direct interaction with the facilitator. The teacher did not feel burdened with the material provided by the facilitator. Providing flexibility for respondents to choose the time and location of learning can provide comfort to respondents in participating in coaching in academic division activities provided by the facilitator.

The use of coaching in education, especially in schools can effectively improve student learning outcomes and increase teacher professional competence [21]. Coaching is carried out by emphasizing natural communication processes to increase the knowledge, abilities, and competences of teachers. The application of coaching is carried out by growing and increasing the self-awareness of a coachee to find ways, solutions, or goals through natural conversation or communication [21]. The use of coaching is carried out with a different approach, namely by helping coachees to make choices based on their own readiness, interests, or learning styles.

Coaching is carried out to help coachees towards independence with their new learning [21].

The use of the GROW coaching model in academic supervision can improve the ability of teachers to make learning modules because this action is done face-to-face to the trained teacher. The process of implementing coaching does not interfere with teacher working hours. In addition, teachers are also freer to express ideas and questions because there are one facilitator and one teacher.

#### 4. CONCLUSION

From this research, it can be concluded that the application of the GROW coaching model in academic supervision activities can improve the ability of teachers to make learning modules and learning modules using the flipbook maker application. The things that cause enhancement of this ability:

1. The implementation of coaching is able to expose the potential of teachers in maximizing their performance, by means of a coach or supervisor asking open-ended questions so that teachers have awareness of themselves (self-awareness), their own potential, and situation. With this awareness, teachers are automatically motivated to make changes. By participating in coaching, teachers are more reflective, so that there is a desire to improve their abilities.
2. Coaching emphasizes more on one's own awareness of learning rather than teaching or finding solutions to the problems at hand. In coaching, there is a collaborative process that focuses on solutions, is results-oriented, and systematic, where the coach facilitates his improvement.

The implementation of the academic supervision of the GROW coaching model technique can improve the ability of teachers to make learning modules using the flipbook maker application. This happens because the GROW model coaching technique has very specific steps that are easy to apply directly. Thus the GROW model coaching technique can make the coachee be able to identify goals for the problems faced or the goals to be achieved and focus on solutions to these problems.

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