



The Effectiveness of Using the Digital-Based Flipped Classroom Model in Learning German Grammar level A2.1

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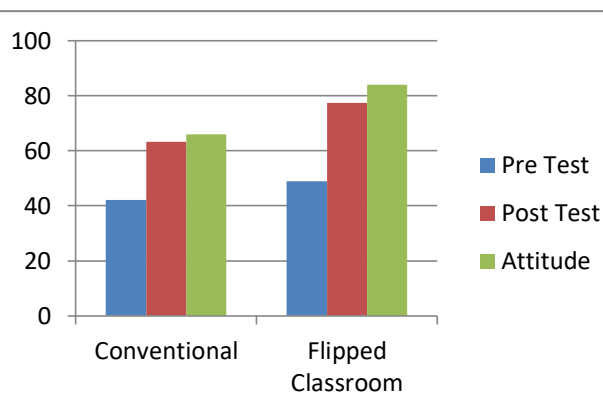
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Abstract

The importance of using technology must be a form of today's learning. To realize student-centered learning, a supportive learning model is needed. Learning German grammar is one of the subjects which considered quite difficult because it requires a good and right understanding in specified time. This research was aimed to know the effectiveness of digital-based flipped classroom model in learning German grammar level A2.1. The method was quasi-experimental design. The experimental design used one group pre test-post test. The instruments used in this study were tests, questionnaires and observation sheets. The results of the data analysis showed the mean value of the pre-test was 48.82 and the mean value of the post-test was 77.35. Thus there is an increase after using the flipped classroom, which is 28.53. From the calculation, the average value of N-Gain score was 57.14%, so it can be concluded that the use of flipped classroom is quite effective in learning German grammar level A2.1. This statment is reinforced by the results of the questionnaire which concludes that most students think that flipped classrooms need to be applied in learning German grammar level A2.1.

Keywords: Flipped classroom, German grammar, quasi-experimental design

The significant finding: It was discovered that most students think that flipped classrooms need to be applied in learning German grammar level A2.1.



ARTICLES

I. Introduction

Technological developments nowadays require the development of human resources who are able to compete globally. Many sources of information that can be accessed anywhere provide opportunities and convenience in mastering knowledge. The easiness of developing technology has a positive impact in various fields including education and teaching. Currently, technology with all its advantages is able to provide fast and unlimited access to information so that the students can obtain learning materials easily (Salsabila, et al: 2020). This view shows that today's learning models tend to be student-centered. It is intended that students better understand the material, and the process in

class is only discussion and practice. Learning in the digitalization era provides learning opportunities anywhere and anytime through various sources, such as e-books, learning videos, etc. The use of digital technology in education has developed starting from the use of Audio Visual Aid (AVA) devices to deliver learning material in class, followed by the use of computers as media to access and process information, the use of software on computers to facilitate the processing and exchange of information (Munir in Amarullah , et al: 2019). These developments made a paradigm shift in Purdy and Wright (Amarullah, et al: 2019), that there are paradigm shifts and differences in learning form between learning that does not involve technology and learning that uses technology and

between the concept of learning in the classroom (classroom setting) and open learning or learning. digital technology that does not have to operate learning in the classroom.

German grammar is the rules of German language that are contained in a sentence. Sri Mulyati (2015: 17) argues that grammar is a way how different parts are organized into a same system. Grammar is also a grammatical rule by which words are formed into effective sentences. Grammar as part of learning a foreign language is one of the important components that must be mastered to support other language skills. Grammar is a system or rules in arranging several words into a sentence that is learned by the German language learning process. Therefore, adequate grammar mastery can support foreign language learning process (Sugiarti and Mudin: 2017). Learning foreign grammar is considered quite difficult to understand, including German grammar. Based on a survey, 37.5% of students thought that German grammar was too difficult because they did not have basic skills at the previous level of education. This has an impact on learning in the classroom. In a previous study by Ihsan et al (2021) regarding the problems of German language education students who didn't learn German language at the previous level of education, concluded that the main problems that greatly influenced

were the lack of mastery of vocabulary, difficulties in sentence structure (grammatical), and lack of ability in pronunciation. This problem could impact on the achievement of student learning objectives according to the specified time. Students who already have basic skills can understand faster than those who do not have basic abilities. If some students don't understand what is presented in a real-time classroom lecture, it's too bad for them. The teacher must barrel on to pace the lesson for the class as a whole, which often means going too slow for some and too fast for others (Horn: 2013). This problem is found in the results of student questionnaires about the effectiveness of learning time in the classroom, students who do not have basic skills think that there is not enough time to understand, on the contrary some state that there are too many explanations, and retard learning other materials and didn't fulfill the entire material to be taught. This problem effects on the level of German grammar cognition. Based on prior observation found that, not only basic skills, but also German grammar material level A2.1 is still difficult for students to understand because they don't have any preparation regarding the material to be studied and is monotonous, whether knowledge was only from lecture. Good preparation in the learning does not only depend on the lecture but also on students, moreover the current learning is more student oriented (student centered learning). Cognitive aspects can be

influenced by students' learning readiness. Students condition who are ready to learn, will try to respond the questions that have been given by educators. To give the correct answer, students must have knowledge by reading and studying the material that will be taught by educators (Effendi: 2017). This means with all efforts students seek and explore the material provided, while the teacher acts as a mediator, facilitator and only as a companion to ensure students are able to master the material well. In this case, students are more independent and maximize their curiosity deeper and become active so that they can make the class atmosphere better. Referring to the problems above, a good learning model is needed that can contribute to the learning process, which students can play more roles than lectures. One of the learning models that help students is Flipped Classroom. This model gives possibility for students to be have good preparation because they already have knowledge about the material and will be deepened in the class. In traditional learning, lecturer deliver material, to increase understanding of the material, students will do assignments at school and are given homework. Meanwhile, in the flipped classroom, students participate in preparing for learning by watching videos, understanding powerpoints and accessing learning resources provided by lecturer either through e-learning or other ways (Susanti: 2019). According to Bishop and Verleger flipped classroom is a student-centred learning method consisting of two parts with interactive learning activities during lesson and individual teaching

based on computer out of lesson. Bergmann & Sams explained traditional flipped classroom model as "what is done at school done at home, homework done at home completed in class". Basic information is provided by the resources and materials shared by teacher before class. Some activities such as problem solving, discussion, brainstorming are performed during class time and teacher has the role of guide in this process (Ayçiçek and Yelken: 2018). This was conveyed by Horn (2013) that viewing lectures online may not seem to differ much from the traditional homework reading assignment, but there is at least one critical difference: Classroom time is no longer spent taking in raw content, a largely passive process. Instead, while at school, students do practice problems, discuss issues, or work on specific projects. The classroom becomes an interactive environment that engages students more directly in their education. This learning model is supported by technological developments. There are many sources used to assist students in finding information, including German grammar materials, namely digital media. The application of flipped classroom is also considered to be time efficient. There are 5 elements in the flipped classroom model, namely 1) Students are active in learning; 2) Technology facilitates direct learning process; 3) Study the material online before attending class; 4) Authentic problems are assigned to students; and, 5) Activities in the classroom are focused on discussion and other communicative activities guided by the lecturer (Becker in Julinar 2019: 367). Some previous research

results showed that the flipped classroom contributed to the learning process and learning outcomes. Sahara and Sofya (2020) in a study entitled *The Effect of Application of the Flipped Learning Model and Learning Motivation on Student Learning Outcomes* showed that there were differences in student learning outcomes, namely those using the flipped learning model were higher than conventional ones. Furthermore, in learning foreign languages, Nurfadhila (2019) in a study entitled *The Use of the Flipped Classroom Model in Improving Students' Arabic Speaking Skills* showed that 63% of the results of the overall percentage of each item in the questionnaire students agreed with using the flipped classroom model to improve speaking skills.

II. Research Method

The method in this study was quasi-experimental method namely a quasi-experiment without any comparison class or control class because the number of samples is too small and the sample consisted of students who had basic German skills and those who did not. In addition, this study is only to determine the effectiveness of the flipped classroom learning model. The population in this study were students of the German language education study program and the sample were 17 students of the German language education study program who learned the *Strukturen zur Aufbaustufe A2.1* (German grammar A2.1) lesson. The experimental design used is one group pre-

test-post test. The data that will be seen is the pre-test and post-test scores from the flipped classroom learning model. The technique of collecting data was through a test which included the material to be given, a questionnaire about learning German grammar which contained 15 statements and observation sheet. The procedure of this research includes preparation, observation, implementation, data processing and result description.

At the preparation stage, the researcher (1) prepares learning plan and accessible sources, (2) prepares questionnaires and observation sheets, (3) prepares pre-test and post-test questions about the material that would given, (4) conveys the material to be studied and (5) provide accessible sources including video links to the material intended to be studied at home. Furthermore, in the observation stage, the researcher (1) observes the student's attitude which consists of active, creative and independent in the learning process of German grammar with a conventional and the flipped classroom model, (2) making a systematic report on the observations during the meeting. At the implementation stage, the researcher (1) gives pre-tests to students, (2) prepares the needs for the learning process (3) guides and facilitates presentations, discussions, questions and answers (4) gives post tests to students about the material that has been discussed and learned, (5) giving a questionnaire at the end of the lesson. For data processing, the researchers (1) collected data in the

form of pre-test and post-test scores, questionnaires and observations, (2) calculated the results of pre-test, post-test and questionnaires, (3) looked for the effectiveness of N-gain using the SPSS program. At the stage of result description, the researcher (1) summarizes all the results and (2) describes the results.

III. Result and Discussion

From the results of data processing, the average of the pretest, post-test and attitudes with the conventional model and the flipped classroom model are shown in the following chart:

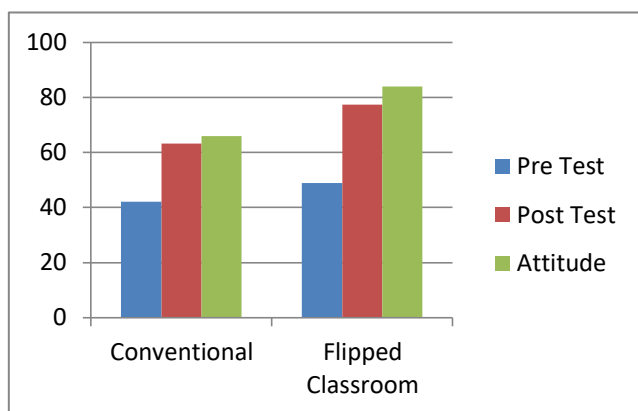


Figure 1. Percentage of the average value of pre test, post test and attitude

From the figure 1 above, can be seen that the average of pre-test with the conventional model is 42.06 and the flipped classroom model is 48.82. From this result, there is a difference of 6.76 points. Furthermore, the average of post-test in the conventional model is 63.24 and the flipped learning model is 77.35. These results

showed that the post-test score in the flipped classroom model is higher with a difference of 14.11. And for the attitude on the conventional model is 65.88 and on the flipped classroom model is 83.94. From these results, it can be seen that the attitude of the flipped classroom model is higher than the conventional model with a difference of 18.06 points. From these three assessments, it can be concluded that the flipped classroom model can provide quite good results compared to the conventional model. Furthermore, to measure the effectiveness of the flipped classroom learning model, it is continued by using N-Gain with the formula:

$$N\ GAIN = \frac{Posttest\ score - Pretest\ score}{Ideal\ score - Pre\ Test\ score}$$

To find out the distribution of the N Gain Score and the category of N-Gain effectiveness interpretation, used the reference as follows:

Table 1. N-Gain score category

N Gain value	Category
$g > 0.7$	High
$0.3 \leq g \leq 0.7$	Medium
$g < 0.3$	Low

Source : Syahfitri dalam Rudianto (2015:40)

Table 2. Percentage interpretation of N-Gain Score

Percentage (100%)	Interpretation
< 40	Not effective
40 – 55	Less effective
56 – 75	Quite effective
> 76	Effective

Source : Hake R.R. dalam Hartati (2016:3)

To find out the results of N Gain used SPSS program and obtained the following results :

Table 3. Calculation result of N-Gain used SPSS

Descriptive Statistics					
	N	Min	Max	Mean	Std. Dev
Ngain_Score	17	.38	.70	.5714	.10230
Ngain_Persen	17	38.46	70.00	57.1438	10.22978
Valid N (listwise)	17				

From the table above, it can be seen for the N Gain score, the mean value is 0.5714. It is interpreted as medium. For N Gain percent the average value is 57.14. For the interpretation there is quite effective. From these results, it can be concluded that the use of flipped classroom is quite effective in learning German grammar level A2.1. This is reinforced by the results of the questionnaire, namely 93.75% of students stated that they felt more active if they learned material outside the classroom through digital sources such as learning videos. At the same number, 93.75% of students also agreed that learning German grammar in class was discussion and practice.

IV. Conclusion

Based on the explanation above, it can be concluded that the flipped classroom learning model is a learning model that provides opportunities for students to learn material outside the classroom using digital sources that can be utilized, before experiencing the learning process in the classroom. This learning model provides space for students to process in class by

presentations, discussions and exercises. Learn time could be more effective

The results showed that the flipped classroom learning model was quite effective in learning German grammar level A2.1. This is evidenced by the average value of the pre-test at and post-test at 48.82 and 77.35. Compared with the conventional model, the pre-test value of 42.06 and the post-test value of 63.24, it can be seen that the flipped classroom model is higher with the difference between pre-test 6.76 and post-test 14.11. It may be seen that the difference is not too far because not all students have basic German language skills. This can be seen from the results of the questionnaire 37.5% of students from the sample do not have basic German language skills. However, through the average attitude observation results, it can be seen that the conventional model is 65.88 and for the flipped classroom it is 83.94 with a difference of 18.06 points.

This calculation is continued by finding the N-Gain score and the mean value is 0.5714. For N-Gain percent the average value obtained is 57.14. These results indicated that the use of flipped classroom is quite effective in learning German grammar level A2.1. This is reinforced by the results of the questionnaire, namely 93.75% of students stated that they felt more active if the material had been given to be studied through digital sources such as learning videos. At the same number, 93.75% of students also agreed that learning German grammar in class was discussion and practice.

From the explanation above, it can be concluded that the use of the digital-based

flipped classroom learning model for learning German grammar level A2.1 is quite effective.

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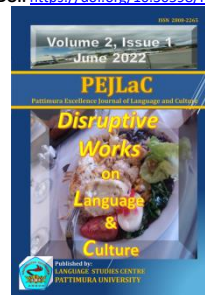


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