International Journal of Innovation, Creativity and Change. www.ijicc.net
Volume 7, Issue 5, 2019

The Improvement of Conceptual and Procedural Understanding by Scaffolding with Responsiveness

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This study aims to determine the differences in teaching with responsiveness and expository to conceptual and procedural understanding. Achievement motivation aims to describe the characteristics of students. The method in this study is Quasy Eksprimen Design. Data collection utilises interviews, tests, and questionnaires. The data analysis technique used is a multivariate analysis test. The results of the data analysis are (1) students taught by scaffolding with a relatively good expository obtained an average of 69.43 (2) students taught by scaffolding with a relatively better response obtained an average of 77.81. It can be concluded that the learning outcomes obtained through scaffolding with responsiveness better impact than through scaffolding with expository.

Key words: *Scaffolding, responsiveness, expository, learning outcomes.*

Introduction

English proficiency is necessitated in the current era in Indonesia. However, English proficiency is still low in Indonesia. In 2018, Indonesia ranked 51st out of 88 countries in terms of English proficiency, and actually decreased their score to 51.58 from 52.14 in 2017. This score places Indonesia 13th out of 21 countries in Asia and is below the average value of English proficiency in the Asian region itself (53.94). That was explained in the research report of the EF English Proficiency Index (EPI) or EF EPI. This report is prepared based on data analysis from the results of the English language test conducted through the world's first free online test, the EF SET (Standard English Test). The research has become the largest

study in the world to measure the level of English proficiency of adults whose native language is not English.

This problem could not be overcome until mid-2018. Researchers found that student learning outcomes were not satisfactory. When researchers observe the learning process, students display different characteristics in response to lessons. Some students are enthusiastic about doing the assignments given by the teacher, always ask for assistance when they do not understand the material, do not complain when learning, and pay attention to the teacher. However, some students are not enthusiastic about learning and ignore the teacher when they are explaining the material. Some students also do not want to do their work and like to imitate their friends' assignments, make rowdy in class, play alone when the teacher explains the material, and show bored expressions when learning. From these observations, the researchers looked at the differences in the characteristics of students through the lens of learning motivation. In addition to varying levels of achievement motivation, data is also obtained that student achievement is diverse.

The researchers tried also asked English teachers about student's test results, in last semester's tests there were 20 students out of 43 who did not reach the Minimum Passing Criteria (KKM) score. This problem needs to get serious attention and if it is not resolved immediately it will have an impact on the learning outcomes of students' conceptual understanding and understanding in their next English subject (Miyazaki, Fujita and Jones, 2017); (Pfister, Moser Opitz and Pauli, 2015); (Prayitno, Subanji and Muksar, 2016).

Abdu, Schwarz and Mavrikis, (2015) and Belland (2014), provide that to overcome student problems, students need encouragement and help from others. This encouragement or assistance is called scaffolding (Belland, 2014; Dove and Hollenbrands, 2014). There are several previous studies that are related to the provision of scaffolding, namely: (1) Bakker, Smit, & Wegerif, (2015), (2) DeJarnette, Dao and Gonzalez, (2014), and (3) Wulandari & Damayanti, (2019). These studies revealed that students' ability to solve problems can develop well if given scaffolding by the teacher. The scaffolding given to students is not necessarily the same and is dependent upon the individual student and the problems they face. Tropper, Leiss, & Hänze, (2015) and Visnovska & Cobb, (2015) explained that appropriate scaffolding is based on students' differing levels of understanding.

Researchers have noted in previous studies that there is generally only a focus on providing scaffolding. As Bakker, Smit & Wegerif (2015) argue, scaffolding has the potential to improve conceptual understanding that is useful in mathematics education. DeJarnette, Dao & Gonzalez, (2014) describe the patterns of interaction between teachers and students during group work and identify results that can improve conceptual understanding through research scaffolding and dialogic teaching in mathematics education. Wulandari & Damayanti (2019)

identify that scaffolding can help students to solve problems or understand problems conceptually which cannot be solved independently, through an educational game called "Telolet".

In this study, researchers have added response activities after learning with scaffolding. The teacher will check student learning outcomes after carrying out learning with scaffolding. Thus, when the teacher checks the student understanding, they utilise responsiveness to straighten out students' conceptual and procedural understanding that are considered as wrong (Amin, 2017; Ardiawan, 2016; Hoa Vo and Abimbola O. Asojo, 2018). Response is the term for question and answer activities which are carried out at the end of learning.

During this time, the teacher only uses scaffolding with expository. Expository is a learning method in which students do not need to search for and find facts, concepts, and principles because they have been clearly presented by the teacher (Hardiyanto, Susilawati & Harjono, 2018). Scaffolding equation with expository is an active teacher providing detailed explanations or learning information about learning material. As such, the expository method tends to be teacher-centred. The expository method is often analogous to the lecture method because it is directly providing information to students (Azizah & Banowati, 2015).

Previous researchers have rarely studied scaffolding with responsiveness. So the researchers provided additional activities at the end of learning in the form of responsiveness. Smit, Van Eerde and Bakker, (2013) said that there are several benefits and objectives for implementing a response: (1) as a tool to integrate theory with practice, and (2) it is an activity capable of being a media responsiveness for correctness (verification) or tracking errors in their knowledge. If responsiveness activities are carried out seriously in scaffolding learning, they will increase knowledge related to a piece of information or subject.

Knowledge can be understood in depth if it masters conceptual and procedural understanding (Degeng, 2013; Hidayati and Sinulingga, 2015). If one of the two is not available, then the understanding will not be profound. Having conceptual knowledge, but not the necessary procedural knowledge, will result in students having good intuition about a concept but not necessarily being able to solve a problem On the other hand, having procedural knowledge, but not having sufficient conceptual knowledge, will result in students being adept at manipulating symbols but not understanding and knowing the meaning of such. This condition allows students to provide answers to a problem without understanding what they are doing. So conceptual and procedural understanding are both indispensable and interrelated with each other (Bisson *et al.*, 2016).

Scaffolding activities with this response are positive and should be applied in every learning (Lesmana and Maryanti, 2018). The hope is that students can both conceptually and

procedurally, understand the material that has been taught by the. To prove whether scaffolding learning with responsiveness gives significant results or not, the student's character is identified through achievement motivation and this this will be examined between students who are given scaffolding with responsiveness and students who are given scaffolding by expository.

Method

Subject

This study describes scaffolding with responsiveness in English lessons. Students involved in the study population were students of class VII. The research sample was determined by using a purposive sampling technique with 172 students who had different levels of achievement motivation. Student learning outcomes data was obtained from daily English tests in grade VII. Classes are divided into two groups. The first group of experimental classes contained two classes (class A = 43 and class B = 43). The second group of control classes are of two classes (class C = 43 and class D = 43). Based on the two groups, the researcher aims to test the research hypothesis.

Design

The form of research used in this study is Quasi-Experiment Design. According to Kerlinger, (2014) & Sugiyono, (2017) Quasy-Experiment Design is used in educational research as there is often difficulty in controlling or manipulating all relevant variables. The design used is the Post-test-Only Control Design, which is a design that includes a control group as a comparison (Sugiyono, 2017). Data collection methods used in this research consisted of interviews, tests, and student questionnaires. The instruments in this study included interview guidelines, pre-test, and post-test questions.

Measure

Data collection uses questionnaire sheets, question sheets, and observation sheets. The questionnaire was prepared to obtain data on the level of student achievement motivation. This is intended to be able to classify students through their level of achievement motivation. The questionnaire used in this study is a closed questionnaire, which means that the statements presented are accompanied by answers that have been pre-determined. The scale used in this study is a Likert scale model in which respondents are asked to choose one of the answers that have been pre-determined. The data in this study is quantitative, then the variables to be measured are translated into indicator variables. The indicator variables are then used as a starting point for compiling instrument items that can be statements. The answer to each item of the instrument that uses a Likert scale has a gradation from very

positive to very negative, using the following words: very agree, agree, disagree, and strongly disagree (Syofian, Setiyaningsih and Syamsiah, 2015). The Likert scale is an attitude measurement instrument consisting of a list of statements and someone who responds must make a consideration of each statement and choose a response from the level of agreement to the level of disagreement (Kho, 2018). This method has several advantages, among others, it can be used to collect data with a large sample size, the data obtained is more objective because respondents can give answers freely without being influenced by researchers, and the data is more easily analysed because the questions asked are all the same (Budiaji, 2013).

Question sheets are prepared to get data about the students' conceptual and procedural understanding of English. The questions represent different aspects of conceptual and procedural understanding. After all the instruments have been prepared, the test lattice is tested for validity to ensure that the instrument is ready for use.

Observation sheets are prepared to obtain data on student activities during learning that can be used as a reference to determine student achievement motivation. The instrument used in this study was a questionnaire, an observation sheet was prepared to obtain various data about the relationship of achievement motivation to conceptual and procedural understanding of English.

Result

The research data consisted of understanding learning outcomes and procedural understanding obtained from research samples distributed across two groups. The experimental group had a scaffold with responsiveness for two classes (class A and class B = 43). While the second group had scaffolding with expository for two classes (class C = 43 and class D = 43). The data from the students' pre-test and post-test test results will be presented in the form of a Descriptive Statistics table as in Table 1.

Table 1: Post-test Test Result Data for Experiment Class and Control Class

Learning methods	**N**	**Test results**	**Mean**	**Std.Deviation**	**Df**	**Sig. (2-tailed)**
Scaffolding with responsiveness	86	Post-test	77,81	7,882	85	,000
Scaffolding with expository	86	Post-test	69,43	7,612	85	,000

From the results it can be seen that the average results of the post-test test of the class scaffolding with responsiveness are better than the class with scaffolding with expository

treatment. However, to know the significant difference between the learning outcomes of the control class and the experimental class, an Independent Sample T-Test was conducted. The results of the data analysis obtained sig. (2-tailed) of 0,000 or <0.05. According to the decision-making guidelines in Table 1, it can be concluded that there is a significant difference between the experimental class and the control class.

From the descriptive statistics test results in the form of learning outcomes, conceptual and procedural understanding are distinguished based on students who have high achievement motivation and students who have low achievement motivation. Student learning outcome data will be presented in the form of descriptive statistics tables as in Table 2.

Table 2: Descriptive Statistics Results

Descriptive Statistics					
Learning Outcomes	Treatment	Achievement Motivation	Mean	Std. Deviation	N
Conceptual Understanding	*Scaffolding with Responsiveness*	Low motivation	44.47	7.766	34
		High motivation	47.42	9.793	52
		Total	46.26	9.114	86
	Scaffolding with Expository	Low motivation	17.94	6.302	48
		High motivation	21.21	9.118	38
		Total	19.38	7.799	86
	Total	Low motivation	28.94	14.853	82
		High motivation	36.36	16.094	90
		Total	32.82	15.909	172
Procedural Understanding	*Scaffolding with Responsiveness*	Low motivation	45.41	7.484	34
		High motivation	46.02	8.948	52
		Total	45.78	8.359	86
	Scaffolding with Expository	Low motivation	17.33	6.413	48
		High motivation	20.24	8.867	38
		Total	18.62	7.685	86
	Total	Low motivation	28.98	15.505	82
		High motivation	35.13	15.574	90
		Total	32.20	15.799	172

Differences in learning outcomes of conceptual and procedural understanding taught through scaffolding with responsiveness and scaffolding with expository can be distinguished based on students who have high achievement motivation and students who have low achievement motivation, as shown in table 2. Thus, there are differences in average scores, mean and standard deviation, which are significant in the two experimental groups. Notably, the

learning outcomes achieved by students who have high achievement motivation are better than those who have low achievement motivation.

The results of the Multivariate Test analysis test are presented in Table 3.

Table 3: Results of Multivariate Tests Analysis

Tests of Between-Subjects Effects						
Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Conceptual Understanding	31457.122[a]	3	10485.707	148.981	.000
	Procedural Understanding	31912.528[b]	3	10637.509	165.891	.000
Intercept	Conceptual Understanding	179263.262	1	179263.262	2546.980	.000
	Procedural Understanding	173723.920	1	173723.920	2709.208	.000
Exp	Conceptual Understanding	29043.264	1	29043.264	412.648	.000
	Procedural Understanding	30284.349	1	30284.349	472.281	.000
Motivation	Conceptual Understanding	404.597	1	404.597	5.749	.018
	Procedural Understanding	128.685	1	128.685	2.007	.158
exp * motivation	Conceptual Understanding	1.073	1	1.073	.015	.902
	Procedural Understanding	55.034	1	55.034	.858	.356
Error	Conceptual Understanding	11824.291	168	70.383		
	Procedural Understanding	10772.751	168	64.124		
Total	Conceptual Understanding	228549.000	172			
	Procedural Understanding	220996.000	172			
Corrected Total	Conceptual Understanding	43281.413	171			
	Procedural Understanding	42685.279	171			
a. R Squared = .727 (Adjusted R Squared = .722)						
b. R Squared = .748 (Adjusted R Squared = .743)						

The results of the analysis in Table 3 show the significance level of scaffolding probability value with a responsiveness of 0,000 <0.05, so the null hypothesis is rejected. This means that there are differences in students' conceptual and procedural understanding between groups learning English through the scaffolding method with responsiveness and those students learning through the scaffolding method with expository.

Table 2 shows that the total scaffolding method with responsiveness is 46.26 and in the scaffolding method group with expository is 19.38. The mean score of the post-test scaffolding group with responsiveness is higher than the scaffolding group with expository. Descriptive statistics show that the application of learning scaffolding with responsiveness, better influence students' conceptual and procedural understanding of English as compared to the scaffolding method with expository.

Based on Table 3 it can also be seen that the significant level or probability of achievement motivation is 0.018> 0.05, so the null hypothesis is rejected. This means that there are differences in students' conceptual and procedural understanding of English between different levels of achievement motivation.

The results of the analysis in Table 3 show the results of the null hypothesis test and provide that the value of the significance level of interaction learning and achievement motivation on the results of the post-test conceptual and procedural understanding is 0.902>0.05, this means the null hypothesis is accepted. This means there is no interaction between the learning methods of scaffolding with responsiveness and scaffolding with expository with achievement motivation levels (high and low).

Discussion

Scaffolding learning method with responsiveness significantly influences the conceptual and procedural understanding of students in English subjects. Scaffolding with responsiveness is more effective in increasing conceptual and procedural understanding than scaffolding with expository. The increase in conceptual and procedural understanding of students can be understood as the impact of the learning methods used. Conceptual and procedural understanding are important goals in learning English (Rittle-Johnson, Fyfe, & Loehr 2016). To improve English language skills students must have a deep understanding of English concepts and procedures. Conceptual and procedural understanding are the foundation of learning English, therefore, it must be firmly embedded in the minds of students, because it will determine the level of student understanding of English language learning (Smit, Van Eerde, & Bakker 2013).

Conceptual and procedural understanding are important parts of the learning process and problem solving, both in the learning process itself and in real life (Hutkemri, 2014). The ability of conceptual and procedural understanding become the foundation for solving problems in English language learning. Laswadi, Kusumah, Darwis, & Afgani, (2016) stated that conceptual and procedural understanding are the main results of education. Conceptual and procedural understanding are very important in learning English because students can easily apply and solve problems in daily life. Through abstraction and formulation, students will develop more complete concepts and procedures. Then students can apply English concepts and procedures into new fields in the real world. Therefore, it is important to bridge the concepts and procedures of English with daily experience and the application of English in everyday life (Serhan, Syam and AlMdallal, 2015).

The results of the first hypothesis testing indicate that there are significant differences in the conceptual and procedural understanding of English students between groups of students learning through the scaffolding method with responsiveness and groups of students learning through scaffolding with expository. The average learning outcomes of conceptual and procedural understanding of students learning through scaffolding with responsiveness were higher than for scaffolding with expository, namely 77.81 and 69.43, respectively. This means that the use of scaffolding with responsiveness gives students a better conceptual and procedural understanding of English as compared to using scaffolding with expository. The findings of this study are consistent with the results of previous studies that the implementation of scaffolding learning with responsiveness has shown satisfactory results in the acquisition of learning English in schools (Amin, 2017; Sari & Surya, 2017).

Rahman, Kadaryanto, & Rusminto, (2015) took a sample of 35 students. They found positive results in overcoming student difficulties when students make mistakes during the process of solving mathematical problems. The scaffolding method is an important idea from Vygotsky, where the teacher provides assistance to students in the learning process at the right time and stops the assistance by allowing students to take responsibility after students can solve problems so that they can achieve the learning objectives. The success of a teacher in teaching and learning activities in learning mathematics can be measured by the success of students when participating in learning activities. The success can be seen from students' understanding, mastery of the material, and learning outcomes

Hutkemri, (2014) states that understanding means to understand correctly in a matter. Understanding and mastering a concept and procedure is a prerequisite for mastering further material. The research found the following categories of understanding: (1) mechanical understanding, namely remembering and applying something routinely or simple calculations, (2) inductive understanding, namely applying something in a simple case or similar case, (3) rational understanding, namely proving the truth of something , and (4)

intuitive understanding, which is to predict the truth of something with certainty (without hesitation) before further analysis.

Smit, Van Eerde and Bakker, (2013); Belland, (2014) suggested that scaffolding characteristics with responses related to learning are as follows: (1) presents an explanation (offering explanations), namely the explanations in the form of clear / explicit statements about what will be learned and also why, when , and how it is used, (2) involving student participation (inviting student participation), i.e. students are given the opportunity to participate in the learning process, (3) checking and clarifying student understanding (verifying and clarifying student understanding), ie if understanding arises according to the truth standard, the teacher checks/tests the student's response, on the contrary, if it does not match the truth standard, the teacher provides clarification of the truth, (4) demonstrates the specified behaviour (modelling of desired behaviour), is a teaching attitude that shows how a person must feel, think, or act according to the situation given / in specify, (5) inviting students to contribute instructions / ideas (inviting students to contribute clues), i.e. students are encouraged to provide instructions/ideas/ cues related to what must be completed in an assignment/exercise.

Sari & Surya, (2017) took a sample of 30 students consisting of 19 men and 11 women with heterogeneous abilities. Positive results have been found in encouraging students to learn through their active involvement, also called the scaffolding method. Scaffolding is the learning process in which students get help or guidance from the teacher so that they are more directed and the process of implementing learning and the objectives to be achieved are implemented well. According to Zhao, (2014) scaffolding helps in building real concepts in mathematics and higher-order thinking skills and will greatly assist in increasing a good level of confidence in mathematics.

Stender & Kaiser, (2015) identified five steps in learning by applying the Scaffolding method: (1) intentionality, which is to group complex parts that students want to master into several specific and clear sections, the parts are a unity to achieve competence as a whole; (2) appropriateness, that is focusing on assisting with aspects that cannot be mastered by students optimally; (3) structure, namely giving models so students can learn from the models displayed. The model can be given through the process of thinking, the model is verbalized with words, then students are asked to explain what has been learned from the model; (4) collaboration, which is the teacher collaborates and responds to the work done by students. The role of the teacher here is not as an evaluator, but as a collaborator; and (5) internalization, namely strengthening the ownership of knowledge possessed by students so that they are well mastered. The results of this study conclude that learning using the scaffolding method is effective in improving the mathematics learning outcomes of eighth-grade students, especially on the subject of cubes and beams.

Based on the findings of the study, the factors that cause scaffolding learning with responsiveness to affect students' conceptual and procedural understanding, include: (1) students are actively involved in the learning process, (2) new information must be directly related to daily life so that the truth of conceptual and procedural understanding of students is with certainty (without hesitation) before analysing further, (3) understanding and mastery of conceptual and procedural understanding are prerequisites for mastering further material, (4) checking and clarifying student understanding (verifying and clarifying student understanding), i.e. the understanding that emerges must be in accordance with the truth standard, the teacher checks/tests/ responds to students, conversely if it does not match the truth standard, the teacher provides clarification of the truth, (5) with scaffolding with responsiveness the teacher can solidify the student's knowledge. The view of scaffolding with responsiveness emphasizes how students can learn and the true standard of students' conceptual understanding. However, it is very different from scaffolding's view with expository. In scaffolding with expository, the teacher does not focus on examining and clarifying students' conceptual and procedural understanding, because the teacher does not examine/test/respond to students.

Students who use the scaffolding method with expository produce high scores but a very low percentage of learning outcomes as to conceptual and procedural understanding. This means that very few students do not correctly understand the concepts, procedures, or material. This is because the teacher does not check/test/respond to students at the end of learning. Students cannot do assignments on English material if they do not have a mastery of the material. At the time of response, the teacher can also straighten out students' incorrect conceptual and procedural understandings. In this way, the response is a term of assistance or support for question and answer activities that are generally used in the learning process to improve students' conceptual and procedural understanding (Lesmana and Maryanti, 2018). Meanwhile, Yeo & Quek, (2014) stated that support in the form of guidance, guiding questions, warnings, describing problems into completion steps, and giving examples, could foster student independence in learning. Response is one of the activities used to encourage students to have an understanding and mastery of needed knowledge. If mastery is still considered lacking, then students must relearn the material (Romano and Woods, 2018).

Based on preliminary observations made, researchers conducted observations on learning materials in English. The observations made are observing teaching and learning activities in class VII. These observations indicate that during the learning process students have different characteristics in responding to the lesson. From these observations, it can be seen that there are differences in the learning motivation of each student as indicated by the differences in activities carried out by students during learning.

Differences in student activity are obtained from the results of interviews conducted with teachers. Learning motivation in each student is still diverse, and teachers make many attempts to develop a conducive learning environment for all. After the implementation of various teaching methods, it is seen that not all students have high a motivation to learn, and that learning motivation in each student is diverse, because many factors influence student learning motivation, not only external factors but internal factors (Albrecht and Karabenick, 2018). Because of the diversity of student learning motivation it is necessary to look at the relationship between students' conceptual and procedural understanding of English subjects and the learning process performed (Mercader *et al.*, 2018).

Based on these observations it is known that not all students' learning motivation is high. In addition to the varying levels of motivation, data is also obtained that student learning outcomes are diverse. The learning outcomes obtained precisely refer to aspects of cognitive abilities, namely to conceptual and procedural understanding. This data was obtained from the results of daily tests of one of the English materials that had been taught. The conceptual and procedural understanding of English which is obtained from the daily test scores varied between grades of 70 to 100, there are even some students whose daily test scores are below the KKM.

Based on the data obtained about the diversity of students' motivation to learn, it is necessary to see the relationship between conceptual and procedural understanding of students as a result of the learning process carried out. Based on the results of initial observations, researchers are interested in knowing the relationship between learning motivation to conceptual understanding and procedural understanding of English lessons in students.

The results of testing the second hypothesis in this study found that there are differences in conceptual and procedural understanding between students who have high achievement motivation and low achievement motivation. The average results who have high achievement motivation are greater than those who have low achievement motivation. In Table 2, the findings identified that conceptual understanding scaffolding with responsiveness obtained (M = 46.26; SD = 9,114), which is more than the scaffolding group with expository obtained (M = 19.38; SD = 7,799). While students who are motivated to excel in the group learning outcomes of procedural understanding and scaffolding with responsiveness were obtained (M = 45.78; SD = 8.359), which is more than the scaffolding group with expository obtained (M = 18.62; SD = 7.685).

The main effect of the treatment variable was discussed earlier, then the effect of the interaction between treatment variables was discussed next. The results of the analysis show that there is no interaction between teaching (scaffolding with responsiveness and scaffolding with expository) and achievement motivation in learning concepts of English conceptual

understanding. Hair, Black, Babin, & Anderson, (2014) state that interactions can occur if the independent variables do not bring consequences separately and individually. Conversely, interactions may not occur if more than one independent variable has significant separate effects. The separate effects of the independent variable are called the main effect. Hair, Black, Babin, & Anderson, (2014) suggested that the interaction effect is a joint effect or a joint effect of two or more independent variables on the dependent variable.

There is no significant interaction effect between teaching scaffolding with responsiveness or scaffolding with expository, and achievement motivation on learning outcomes. In contrast, the influence of scaffolding with response and scaffolding with expository is not more dominant than learning outcomes of conceptual and procedural understanding. These results are the same as relevant previous studies (Smit, Van Eerde and Bakker, 2013; Belland, (2014)

Although the results of the study showed that there was no significant interaction effect between scaffolding with response or scaffolding with expository and achievement motivation for learning outcomes in conceptual and procedural understanding, the higher mean value was achieved by scaffolding with response. These results indicate that learning English by using scaffolding with responsiveness can provide a good learning environment for students' conceptual and procedural understanding.

Conclusion

Based on the results of the research and discussion, it is concluded that scaffolding learning with responsiveness and achievement motivation for learning outcomes of conceptual understanding and procedural understanding in English subjects is quite good and effective. This is based on the following: (1) scaffolding learning with responsiveness in English subjects at Surabaya Junior High School in class VII students can be implemented well, although it requires additional time. The implementation of teacher responsiveness can straighten out students' incorrect conceptual and procedural understanding so that mistakes are not carried forward; and (2) scaffolding learning with responsiveness in English subjects viewed using post-test questions. Learning outcomes taught by scaffolding with expository have not reached the mastery of student learning. While scaffolding with responsiveness has reached mastery learning to improve learning outcomes of students' conceptual and procedural understanding.

Acknowledgments

The researcher would like to thank the school principal at SMPN 48 Surabaya for giving research permission. The researcher would also like to thank the English teachers who helped

in collecting research data. Researchers will also say a big thank you to the UNIPA Surabaya campus for helping with funding during this research.

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