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Page 1 of 9 Total Records : 81 Publications				Citation
<u>Group guidance services</u> A Supriyanto, A Wahyudi IJIET (International Journal	<u>based on folklore for st</u> of Indonesian Education a	udents Junior High Schoo and Teaching) 2 (1), 37-46, 20	L D18	29
<u>High school students' rea</u> I Maharsi, MI Ghali, S Maul International Journal of Ind	a <u>ding habit and percepti</u> ani Ionesian Education and Te	on on reading for pleasure eaching 3 (1), 80-89, 2019	2	24
<u>Fostering learning auton</u> <u>course</u> M Wulandari IJIET (International Journal	omy through the implen of Indonesian Education a	nentation o <u>f flipped learni</u> and Teaching) 1 (2, 2017	<u>ng in language teaching me</u>	edia 14
<u>Cultural factors in learnir</u> L Casinillo, MC Camulte, D IJIET (International Journal	ng mathematics: the cas Raagas, TS Riña of Indonesian Education a	<u>e on achievement level ar</u> and Teaching) 4 (1), 71-81, 20	nong Badjao students 120	13

Problications English teacher perception about Higher Order Thinking Skills (HOTS) in the 21st century learning DN Fakhomah, MS Utami			
IJIET (International Journal of Indonesian Education and Teaching) 3 (1), 41–49, 2019			
<u>A study of introduction to college English teachers' beliefs in their teac</u> AS Subekti	hing roles	11	
Learning poetry as a strategy to develop teaching skill among students MI Mulatsih	5 5	11	
<u>Teaching and learning science: students' perspective</u> R Rohandi International Journal of Indonesian Education and Teaching 1 (1), 16–31, 2017		9	
<u>Efforts to support and expand the use of educational technology as a r</u> E Retnawati IJIET (International Journal of Indonesian Education and Teaching) 3 (1, 20	means of delivering learning	9	
<u>English pre-service teachers' identity during teaching practice: Narrati</u> BS Hapsari, OT Ena International Journal of Indonesian Education and Teaching 3 (2), 204-214, 2	ive research 019	8	
Page 1 of 9 Total Records : 81	★ ≪ 1 2 3 4 5	» H	
Citation Statistics			



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Table of Contents

ENGLISH TEACHER PARTICIPANTS' ENGAGEMENT IN ONLINE LEARNING
SESSION OF TEACHING PROFESSION CERTIFICATION PROGRAM
Pius N. Prihatin
DEVELOPING THE STUDENTS' RESPONBILITY THROUGH NUMBERED HEAD TOGETHER MODEL IN SOCIAL SCIENCE LEARNING AT ELEMENTARY SCHOOL Harini Widyaningtyas, Retno Winarni and Tri Murwaningsih
LEARNING POETRY AS A STRATEGY TO DEVELOP TEACHING SKILL AMONG STUDENTS Maria Ika Mulatsih
THE APPLICATION OF SOCIAL SKILL TRAINING AS INTERVENTION TO IMPROVE SOCIAL SKILL FOR A SMALL NUMBER OF FRESHMEN STUDENTS Laurentius Sandi Witarso and Dhamayanti B. Utoyo
SECONDARY SCHOOL STUDENTS' CONSTRUCTION OF KNOWLEDGE: THE CASE OF FRACTIONS DIVISION Veronika Fitri Rianasari and Hongki Julie
BASIC TENSE PROBLEMS OF THE FIRST SEMESTER STUDENTS OF ENGLISH LANGUAGE EDUCATION STUDY PROGRAM Elisabeth Wulan Wahyuningtyas and Barli Bram
MATHEMATICS CLASSROOM ACTIVITIES BASED ON SOME TOPICS IN GRAPH THEORY TO DEVELOP CRITICAL THINKING OF PRIMARY AND SECONDARY SCHOOL STUDENTS
Eko Budi Santoso
CONNECTING ENGLISH LANGUAGE TEACHING WITH 12 BRAIN/MIND LEARNING PRINCIPLES Jorge Correa Rodriguez
PROMOTING RESPONSIBILITY THROUGH THE MATHEMATICS CAPITA SELECTA COURSE WITH RECIPROCAL TEACHING STRATEGY BASED ON IGNATIAN PEDAGOGY Dominikus Arif Budi Prasetyo
USING EXELSA MOODLE TO DEVELOP MATHEMATICS TEACHING SKILLS AND SPIRIT IN THE MICRO TEACHING COURSE Marcellinus Andy Rudhito
NURSING STUDENT'S EXPERIENCE IN CARING CHILDREN WITH DISABILITY: A QUALITATIVE STUDY Erna Erawati and Budi Anna Keliat
THE EFFECTIVENESS OF CAREER GUIDANCE PROGRAM FOR PSYCHOLOGY STUDENTS Monika

IJIET, e-ISSN 2548-8430, p-ISSN 2548-8422, Vol. 2, No. 2, July 2018

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SECONDARY SCHOOL STUDENTS' CONSTRUCTION OF KNOWLEDGE: THE CASE OF FRACTIONS DIVISION

Veronika Fitri Rianasari and Hongki Julie Mathematics Education Study Program, Sanata Dharma University veronikafitri@usd.ac.id and hongki_julie@usd.ac.id DOI: https://doi.org/10.24071/ijiet.2018.020205 Received 23 April 2018; revised 20 June 2018; accepted 2 July 2018

Abstract

Fractions are well known to be difficult to learn, but it is should not be surprising considering the complexity of the concepts involved. In working with fractions, children learn new rules that often conflict with well-established ideas about whole numbers. Many studies have revealed that fractions division has been thought to be the most complex of the mathematical operations in elementary mathematics. However, fractions and the operations have been recognized as an important foundation for the understanding of our number system. Therefore, teachers should provide meaningful learning experiences that relate to division of fractions. This present study aimed to analyze secondary school students' construction of knowledge in fractions division. This descriptive study was conducted with 44 seventh grade students in Pangudi Luhur Junior High School in Yogyakarta, Indonesia. During a one-week unit of lesson on division of fractions, students were given a task-based activity specifically designed to promote students' understanding. Data sources in this study included observation of the learning process and a pre and posttest of students' conceptual knowledge and procedural computation skills. The result showed a significant improvement in students' conceptual knowledge and procedural knowledge.

Keywords: conceptual knowledge, division of fraction, procedural knowledge

Introduction

One of mathematics topics learned from elementary and continuing up to secondary school is fraction. Lortie-Forgues, Tian and Siegle (2015) argued that understanding of fractions plays an important role in learning the next mathematics concepts and fractions have many applications in everyday life. However, many research revealed some important issues about some challenges in teaching and learning fraction. The first issue is many students have great difficulty in understanding fraction (Ma, 1999 and Lortie-Forgues, Tian and Siegle, 2015). Furthermore, Fendel (1987 in Tirosh, 2000) and Ma (1999) revealed that division of fractions is considered to be the most difficult, the most mechanical and least understood topic in elementary mathematics. According to Ma (1999), the difficulty is not only the difficulties experienced by students in

learning the fractions, but also the difficulties experienced by teachers in teaching the concept of fractions.

The second issue is about the way of teaching and learning mathematics, especially in Indonesia. Mathematics in Indonesian curriculum tended to be taught in a very formal way; teachers explain the mathematics operation and procedures, give some examples, and ask students to do the other similar problems (Armanto, 2002). In learning fractions, students are taught algorithms with little attempt to ground them in a meaningful experience.

Because of the complexity of division of fraction concepts, more time should be allocated in the curriculum for developing students' understanding of fractions division. But just more time is not sufficient to improve understanding; the emphasis of instruction should also shift from the development of algorithms for performing operations on fractions to the development of a quantitative understanding of fractions divisions. Considering this fact, the teaching and learning need to focus on how understanding fractions division can be taught. This need leads to the third issue namely explorative activities. In Realistic Mathematics Education (RME), it is important to give students the opportunity to explore some daily life contexts in which mathematics play a role.

Theory

Realistic Mathematics Education (RME)

The philosophy of RME is mathematics as a human activity, which means that mathematics must be connected to reality, stay close to students and should be relevant to society (Gravemeijer, 1997). There are three main principles in the RME (Gravemeijer, 1997, Treffers, 1991, and Julie, 2014), namely:

Guided reinvention through progressive mathematizing

In realistic mathematics learning, students are given the opportunity to explore problems to experience a process similar to the process by which the mathematics was invented. Through solving a series of problem, students are expected to produce strategies evolved from informal to more formal procedures so that at the end a formal procedure can be found by students.

Didactical phenomenology

In RME, students explore phenomena or situation series that are meaningful for them. According to Freudenthal (1983, in Gravemeijer 1997), situations where a given mathematical topic is applied are to be investigated for two reasons. Firstly, to reveal the kind of application that have to be anticipated in instruction; secondly, to consider their suitability as points of impact for a process of progressive mathematization.

Self-developed models

In realistic mathematics learning, models are interpreted as mathematical representations of problems. Models are used, explored, and developed to bridge the difference in levels from concrete to formal levels. Therefore, the term model or symbol here is always associated with the process of mathematization.

Students' Knowledge of Division of Fractions

When studying division, students can gain a lot of new knowledge, for example students can learn about rational and irrational numbers, place value, the connections among the four basic operations, as well as about the limits and power of relating mathematics to the real world (Ball, 1990). However, in many textbooks, introduction to fractions division states simply "Dividing by fraction is the same as multiplying by its reciprocal". There is little or no attention given to the meaning of divisions with fractions and division with whole numbers (Ball, 1990). Therefore, many students are puzzled that the answer to a problem such as

 $\frac{1}{3} \div \frac{1}{6} = 2$ is bigger than the number they started with.

There are two common methods for division of fractions taught in elementary schools in many countries, namely common-denominator method and inversion method. Capps (1962) stated that textbooks in the past have favored the inversion method and the common-denominator method more often appears in meaningful teaching. Capps (1962) revealed that the inversion method of division of fractions reinforce students' skills in multiplication of fraction since the inversion method of fractions division requires multiplication as part of the computational procedures. In this research, the researchers facilitated students to give meaning to the inversion method so they really understand why in dividing by fraction is the same as multiplying by its reciprocal.

Tirosh (2000) explained that students' errors made in division of fractions can be categorized in three main categories:

Algorithmically based errors

These errors are made in the computational process when an algorithm is viewed as a meaningless series of steps. For example: $\frac{3}{4} \div \frac{1}{8} = \frac{4}{3} \times \frac{1}{8} = \frac{4}{24} = \frac{1}{6}$ These kinds of errors are usually explained as resulting from rote memorization of the algorithm.

Intuitively based errors

These errors result from misconceptions associated with division; students tend to overgeneralize properties of operations with natural numbers to fractions and to interpret division primarily using a primitive, partitive model of division.

Errors based on formal knowledge

These errors result from limited conceptions of the nature of fractions and inadequate knowledge related to properties of the operations. For example, students think that division is commutative and consequently argue that $1 \quad 3 \quad 3 \quad 1$

 $\frac{1}{2} \div \frac{3}{4} = \frac{3}{4} \div \frac{1}{2}$

Method

This study was a descriptive study analyzing secondary school students' construction of knowledge in fractions division. The study was conducted with 44 seventh grade students in Pangudi Luhur Junior High School in Yogyakarta, Indonesia.

During a one-week unit of lesson on division of fractions, students were given a task-based activity specifically designed to promote students' understanding. Data sources in this study included observation of learning process and a pre and post-test of students' conceptual knowledge and procedural computation skills.

Findings and Discussion

The research results were divided into three sections. Those are students' initial knowledge of fractions division, the learning process of division of fractions, and students' knowledge about fraction division in the post test. *Students' initial knowledge of fractions division*

Students' initial knowledge of fraction division is revealed through a pre-test. In the pre-test, students were given a contextual problem that requires them to translate the contextual problem into a mathematical sentence and apply the

knowledge of fractions to solve the problem. The problem given is as follows:

Mrs Surya has 2 kg of flour and
$$1\frac{1}{4}$$
 kg of sugar.
She will make some cakes.
For each cake she makes, she needs $\frac{1}{2}$ kg of flour and $\frac{1}{4}$ kg of sugar
How many cakes can be made by Mrs Surya?

Based on students' answer, it can be showed that there were only 16 (36%) students who were able to translate the problem into a mathematical sentence and there were only 10 of them who can give correct procedure of fractions operations. The students' answer also revealed that there were some students who gave an incorrect mathematical sentence and the others directly gave the final answer.

The following are the students' strategy to solve the problem: Students used repeated subtraction strategy

Sugar $(1\frac{1}{4} \text{ kg})$ Flour (2 kg) The first cake $2 - \frac{1}{2} = \frac{2}{1} - \frac{1}{2} = \frac{4 - 1}{2} = \frac{3}{2} \operatorname{kg}$ $1\frac{1}{4} - \frac{1}{4} = \frac{5}{4} - \frac{1}{4} = \frac{5-1}{4} = 1 \text{ kg}$ The second cake $\frac{3}{2} - \frac{1}{2} = \frac{3 - 1}{2} = \frac{2}{2} = 1$ The third cake $1 - \frac{1}{4} = \frac{4 - 1}{4} = \frac{3}{4}$ The third cake $1 - \frac{1}{2} = \frac{2 - 1}{2} = \frac{1}{2}$ $\frac{3}{4} - \frac{1}{4} = \frac{3 - 1}{4} = \frac{2}{4}$ The fourth cake The fourth cake $\frac{1}{2} - \frac{1}{2} = 0$ $\frac{2}{4} - \frac{1}{4} = \frac{2 - 1}{4} = \frac{1}{4}$ Therefore, Mrs. Surya can make 4 cakes Figure 1. Students' answer using repeated subtraction on the pre-test

Figure 1 shows that the students were able to translate the problem into mathematics symbol and they used repeated subtraction strategy to find how many cakes that can be made by Mrs Surya.

- Flour Flour $2 \div \frac{1}{2} = 2 \times \frac{2}{1} = \frac{4}{1} = 4$ (cakes) $2 \div \frac{1}{2} = 2 \times \frac{2}{1} = \frac{4}{1} = 4$ (cakes) Sugar Sugar $2 \div \frac{1}{4} = \frac{5}{4} \times \frac{4}{1} = \frac{5}{1} = 5$ (cakes) $2 \div \frac{1}{4} = \frac{5}{4} \times \frac{4}{1} = \frac{5}{1} = 5$ (cakes) 4 + 5 = 9Therefore, Mrs. Surya can make 4 cakes Therefore, Mrs. Surya can make 9 cakes Figure 2. Students' answer using Figure 3. Students' answer using inversion method and having correct inversion method and having incorrect conclusion on the pre-test conclusion on the pre-test
- Students used inversion method

Students were able to translate the problem into mathematic symbols and they used the inversion method to find the answer.

- Students were not able to translate the problem into mathematics symbol

Cake ingredients owned: $2 + 1\frac{1}{4} = 3\frac{1}{4}$				
Cake ingredients needed: $\frac{1}{2} + \frac{1}{4} = \frac{2+1}{4} = \frac{3}{4}$				
The number of cakes that can be made:				
$3\frac{1}{4} \div \frac{3}{4} = \frac{13}{4} \div \frac{3}{4} = \frac{13}{4} \times \frac{4}{3} = \frac{13}{3} = 4\frac{1}{3}$				
Therefore, Mrs. Surya can make 4 cakes.				



The pre-test result showed that many students that can apply inversion method appropriately while dividing fractions, but some students who apply this method made mistakes in drawing conclusions. In addition, pre-test results showed that some students used informal strategy to solve the problems i.e. repeated subtraction strategy. The repeated subtraction strategy seems to be more meaningful for the students, as no student has made a mistake in drawing conclusions with this strategy.

The learning process of division of fractions

In facilitating students to understand the fractions division operation, the researchers designed some contextual problems in which the students can

construct the meaning of the fraction division operation through the problem solving process. As has been revealed in the pre-test, most of the students have mastered the inversion method when dividing fractions but they have difficulty in understanding the concept of fractions division and inversion method so that they have difficulty in applying that knowledge to solve contextual problems. The following is one of the contextual problems used in learning of fractions division.

Mother has a 1,5 litres drinking bottle. The bottle only contains three-quarters of the portion. Mom will pour the water into some 250 ml small bottles.

a. How many small bottles can be filled with the water from a large bottle?

b. How many part of the water in the bottle which is not fully charged?

The mathematical concept in the contextual problem is the concept of division operation. In solving the problem, students can use their knowledge of the division of integers, if they first convert the unit of volume to obtain integers. If students do not convert the unit of volume, they will work with decimals or fractions.

The following is the answer given by most of the students in the class:

1, 5 litre = 1500 ml (conversion of unit's volume)..

 $1500 \text{ ml} \div 4 = 375 \text{ ml}$

375 ml x 3 = 1125 ml.

 $1125 \text{ ml} \div 250 \text{ ml} = 4 \text{ bottles and the rest is } 125 \text{ ml}$

From the students' answer, the teacher asked the students to make an illustration of the answer. Here is the illustration given by the students:



From the illustration, the teacher led a discussion and so that the student can derive the conclusion that 125 ml is a half of 250 ml. From the discussion, the students can conclude that there are 4 bottles of 250 ml that can be fully filled with water and there is 1 bottle of 250 ml that is only filled one half. Furthermore, the teacher asked the students not to convert the unit so that the students must perform the division operation involving decimals or fractions i.e. $1,125 \div 0,25 \text{ or } 1\frac{1}{8} \div \frac{1}{4}$. With this kind of activities, the students are guided to give

meaning of the following operations $1\frac{1}{8} \div \frac{1}{4} = 4\frac{1}{2}$, and to make sense why when

they divide by a number less than one, the quotient is larger than the dividend.

In the process of learning, teachers play a role in giving opportunities to students to express ideas, stimulate social interaction, build mathematical concepts contained in the contextual problems, and clarify opinions or answers given by students.

Students' knowledge about fractions division on the post test

After one-week unit of lesson, the students were given a post-test. The posttest contains a bare numbers problem that requires them to carry out a fractional division procedure and a contextual problem that requires them to translate the contextual problem into a mathematical sentence and apply the knowledge of fractions division to solve the problem. The problem given is as follows:

1)
$$\frac{5}{8} \div \frac{1}{4} = \dots$$

2) Yesterday Mrs. Ana bought $2\frac{3}{4}$ kg of rice.

Today, Bu Ana buys another $2\frac{1}{2}$ kg of rice.

- a) How many kilograms of rice does Mrs Ana have?
- b) If Bu Ana wants to share the rice to some of her neighbours who each need $\frac{3}{4}$ kg of rice, how many neighbours get the rice?

Based on the students' answer in solving bare numbers problem, there were 37 students (84%) who were able to use inversion method in dividing fractions but 4 of them were not able to derive the correct final answer because they made mistakes in multiplying and simplifying fractions.

The following are the students' strategies used to solve the bare numbers problem: - Students used inversion method and got the correct final answer

There were 33 students who were able to use inversion method correctly in fractions division.

$$\frac{5}{8} \div \frac{1}{4} = \frac{5}{8} \times \frac{4}{1} = \frac{20}{8} = 2\frac{1}{2}$$

Figure 5. Students' answer using inversion method correctly on the post-test - Students used inversion method but made errors in calculations

$$\frac{5}{8} \div \frac{1}{4} = \frac{5}{8} \times \frac{4}{1} = \frac{32}{8} \times \frac{5}{8} = \frac{310}{8} = \frac{31}{80}$$

Figure 6. Students' errors on the post-test in multiplying and simplifying fractions

Students' answer on the post-test shown in figure 6, 7, 8 reveal that many students made algorithmically based errors in addition to errors in technical calculations e.g. errors in the division of integers. Their answers show that the

algorithm in dividing or multiplying fractions is viewed as a meaningless series of steps.

$$\frac{5}{8} \div \frac{1}{4} = \frac{5}{18} \times \frac{4^2}{1} = \frac{10}{1}$$

Figure 7. Students' errors on the post-test in simplifying fractions multiplication

Furthermore, based on the students' answer in solving the contextual problem, 39 students (89%) were able to translate the problem into mathematical sentence, only 30 out of them are able to derive the correct final answer. In this paper, the researchers only focus on question 2b, because this paper focus on students' comprehension in fractions division.

$$\frac{5}{8} \div \frac{1}{4} = \frac{5}{8} \times \frac{4}{1} = \frac{32}{5}$$

Figure 8. Students' errors on the post-test in multiplying fractions

The following are the students' strategies in solving a contextual problem:
Students used inversion method correctly and derive the correct final answer
Figure 9. Students' answer using inversion method correctly and having the correct final

The amount of rice owned by Mrs. Ana:

$$2\frac{3}{4} + 2\frac{1}{2} = 4\frac{3+2}{4} = 4\frac{5}{4} = 4 + 1\frac{1}{4} = 5\frac{1}{4}$$
The number of neighbors who get the rice:

$$5\frac{1}{4} \div \frac{3}{4} = \frac{21}{4} \div \frac{3}{4} = \frac{21}{4^{1}} \times \frac{4^{1}}{3} = \frac{21}{3} = 7$$
Therefore, there are 7 neighbors who get the rice



There were only 26 students (59%) who were able to use inversion method correctly and do the calculation correctly.

- Students used inversion method but made errors in calculation

The amount of rice owned by Mrs. Ana: $2\frac{3}{4} + 2\frac{1}{2} = 4\frac{4}{6}$ The number of neighbors who get the rice: $4\frac{4}{6} \div \frac{3}{4} = 4\frac{6}{4} \times \frac{4}{3} = 4\frac{16}{18}$

Figure 10. Students' errors on the post-test in adding fractions, in using inversion method, and in multiplying fractions

Figure 10 shows that these students made errors because they did not understand the concepts in fractions and its operations, for example in adding, multiplying, and dividing fractions. Therefore these errors can be categorized as algorithmically based errors; these errors resulted from rote memorization of the algorithm.

- Students used repeated addition



Figure 11. Students' answer using repeated addition and having the correct final answer on the post-test

There are 2 students used repeated addition shown in Figure 11. This strategy seems to be more meaningful for them because they were able to get the conclusions correctly. However, this strategy is inefficiently used if the problem involves a relatively large number. This strategy also implies that the student's understanding might not have reached the formal level of understanding of the fractions division operation.

Conclusion

The students in this research were provided with the opportunities to develop an understanding of the concepts of fractions divisions in order to make sense algorithms of fractions division that they have learned in elementary school. The impact of this learning process can be seen from the results of the pre-test and post-test. The result of the pre-test showed that most of the students were not able to apply their knowledge of fractions in solving contextual problems, and also they made algorithmically based errors; errors resulted from rote memorization of procedures. The post-test showed a positive progress on students' understanding and skills in solving problems both problems that require procedural understanding as well as conceptual understanding although there are still some students who did not show a deep understanding of the concept of fractions division. This positive progress can be achieved due to the use of appropriate contextual problems in learning process that enable the students to solve the problems by linking the problem with their prior knowledge, and also because of the teacher's role that facilitates the discussion so that the students actively engage in making sense of procedures and the result of calculation using the procedures.

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BASIC TENSE PROBLEMS OF THE FIRST SEMESTER STUDENTS OF ENGLISH LANGUAGE EDUCATION STUDY PROGRAM

Elisabeth Wulan Wahyuningtyas and Barli Bram Sanata Dharma University elisabeth.wulan03@gmail.com and barli@usd.ac.id DOI: https://doi.org/10.24071/ijiet.2018.020206 received 14 December 2017; revised 2 May 2018; accepted 29 June 2018

Abstract

This paper investigated the problems of understanding basic or fundamental tenses in English grammar (the present tense, present continuous tense, present future tense, and present future continuous) that are faced by the first semester students of the English Language Education Study Program of Sanata Dharma University, Yogyakarta. Basic tenses in English grammar play a decisive role in various aspects related to learning English as the target language. Accordingly, it is essential to conduct a study on the issues of basic tenses in order to assist students to overcome their grammatical problems. Data were collected through questionnaires that were emailed to the participants. Results showed that the students had difficulties in producing or analyzing the present continuous tense, the present perfect tense and the present perfect continuous tense. The first semester students also faced difficulty in remembering the formula of each tense. The students admitted that they rarely reviewed the basic tenses regularly and they found it difficult to comprehend their grammar lessons well in the classroom.

Keyword: basic tense, English grammar, English learner, present tense

Introduction

In Indonesia, English is taught as a first foreign language (Lauder, 2008) and it is included in the Indonesian curriculum which states that the students should have English lessons in their school. Therefore, learning English in Indonesia is an obligation for the students in all levels, namely the Elementary School, Junior High School, and Senior High School (Lie, 2007). It might because that English is global language (Lauder, 2008) that is used by many people around the world to be able to communicate each other so that Indonesia Government of education include English as one of the compulsory subjects to be taught at schools. Moreover, there are many Indonesia universities that provide English as one of the study program within in both English department and non English department. Lie (2007, see Bram, 2016, p.58) said that the university students who do not take English-based study program, like the English Education or English Arts Study Program are given an English course "two hours per week" to improve their English skills, especially in speaking for good communication in English. It is to prepare the universities students to have good skills to communication in English because nowadays, "English competence" is needed to get a good job and position in the workplace (Siregar, 2010).

Furthermore, in learning English, it is also an obligation for the students to learn also grammar or structure of English. It is because grammar is the fundamental in comprehending sentences in English. However, the students might face difficulties in learning and understanding English grammar because the students cannot keep away from their first language (see Sunarto, 2012, p. 187; Çakır, 2011) whereas, the patterns in English sentences are definitely different from sentences in Indonesian (Inayati & Damayanti, 2016). In this study, the writer will investigate the students' difficulties and what method(s) they suggest to get meaningful learning activities in learning English grammar.

English grammar is difficult to master, especially for students who learn English as a foreign language and the students may face difficulties in applying English grammar in both speaking and writing in English (Elturki, 2014). However, many students assumed that English grammar is an uninteresting course to learn by a using handbook (Vannestal & Linquist, 2007). It is still hard to motivate the students to learn English grammar even though there are many improvements in creating English grammar modules which it consists of activities for the students to have "peer discussion" and ability to solve problems in order to improve their knowledge of English grammar (Vannestal & Linquist, 2007; see Mestari, & Malabar, 2016, p. 125).

Learning English grammar is regarded as a way to increase the students' English skills and abilities to use it in a suitable and correct way (see Bram, 2014, p. 295 & Kurniasari, 2017). Indeed, the students will be easier to communicate in good English if they master English grammar. It cannot be denied that the students need to have good, accurate and meaningful English grammar to be able to have good communication in both spoken and written (Mestari, 2016). Furthermore, learning English grammar is also to prepare the students to have ability in reading English text in university level, especially for those who take the English Language Study Program where all of the texts given are in English (Lie, 2007).

Hence, the English grammar teachers should have meaningful plan in teaching. The English grammar learning activities should be interesting and enjoyable so that the students will be encouraged to explore their "innovation and creativity" in creating meaningful way of learning English grammar (Buditama, 2017). Therefore, it is needed for the teachers to provide authentic materials in the teaching learning activities because it is useful and helpful for the students to connect their own learning experiences to the language used by the native speaker of English (Burgess & Etherington, 2002; Mestari, 2016). By those authentic materials given the teachers, the students will be able to recognize and understand the English grammar in the "real language use" (Mestari & Malabar, 2016). Moreover, student-centered is one of effective approaches in understanding basic English grammar (Buditama, 2017). Giving many exercises for the students is needed in order to lead the students to have good memory and understanding on English grammar patterns (Burgess & Etherington, 2002; Mestari, 2002; Mestari, 2016). As we know, teaching English grammar is "to give some rules" in English and its

"exceptions" (Çakır, 2011). However, drilling in teaching English grammar is effective so far in order to improve students' grammatical problems in using correct verb within the sentences and differentiating the time in each tense (Nawaz, et al., 2015). Moreover, it also can increase the students writing skills in English. However, the teachers should provide teaching learning activities which are appropriate for both the students' needs and level and also the aims of the course (Mestari & Malabar, 2016).

Method

This study was qualitative research, aiming to collect the data as much and detailed as they can (Sandelowski, 2000). Moreover, Ary, Jacobs, Sorensen, and Walker (2013, pp. 25-27) said that in qualitative research, the current writers presented narrative description and interpretation as the results of data analysis in rich and comprehensive detail. Furthermore, this study was a questionnaire-based study. The writers distributed the questionnaire to the participants via email because this channel was considered effective and efficient. The writers then emailed the questionnaire to the participants to send back the complete version which had been filled by them to the writer.

There were 27 participants of this study and they were chosen randomly. All of them were the first semester students in the English Language Education Study Program, Sanata Dharma University (SDU) Yogyakarta, Indonesia. Nonetheless, the writers believed that the number of the participants sufficed since their responses were considered as the representation of the students' problem and suggestion in learning basic tenses of English Grammar. Furthermore, the participants who were involved in this study were those who had ever learned basic English grammar in both Senior High School and university in the beginning semester. Then, to interact with them in order to get information for this study, the writer contacted them via email because it was an efficient way as what was explained in the previous subsection.

The writers used questionnaires to gain the data. In the questionnaires, the writers created two parts of the questions. The first part was to estimate the students' understanding in analyzing basic tenses of English grammar within some sentences and the degree of difficulty for each sentence based on their understanding. Then, the writer put a table to make it easy for the participants to answer the questions (analyzing the sentences). In the table, the writer provided some sentences to be analyzed by the students, alphabets [A = Present Tense (PT), B = Present Perfect Tense (PPT), C = Present Continuous Tense (PCT), D = Present Perfect Continuous Tense (PPCT)] as the participants' answer based on their understanding and analysis on the provided sentences and numbers (1 = very easy, 2 = easy, 3 = difficult, 4 = very difficult) as the participants' assumption of the difficulty level of those sentences. The writer also provided the example of how to fill the column of the table as the guidance for the students.

Furthermore, the second part was two open-ended questions which allowed the students to elaborate their problem(s) in learning English and their suggestion(s) for the lecturer in creating suitable method(s) in teaching basic English grammar. According to McDonough and McDonough (1997, p. 176), open-ended questions may allow the participants to give the detailed information and their point of view about some issue and it is about statements and asks for degrees of agreement. It means that here, the students were able to extend their opinions freely related to the issue in that questionnaire.

Findings and Discussion

In this sub section, the writers presented the findings gained from the study undertaken. The first part in the questionnaire was to measure the students' understanding about the four basic tenses of English grammar within several sentences. Here, the students' were asked also to give their perception on the difficulty level in learning basic tenses and elaborated it in the first open-ended question in the second part. Thus, table 4.1 showed the students' perception on difficulty level of basic tenses.

No	Dasia Tansas	Level			
INU	Dasic Telises	1	2	3	4
1	Present Tense	44%	33%	19%	4%
2	Present Continuous Tense	29.63%	37.04%	29.63%	4%
3	Present Perfect Tense	4%	15%	44%	37%
4	Present Perfect Continuous Tense	7%	4%	37%	52%

 Table 4.1 Students' Perception on Difficulty Level of Learning Basic Tenses

Based on the findings of the first part and the first open-ended question in the questionnaire, it could be summarized that the students in the beginning semester had difficulties in understanding the basic tenses of English grammar. As shown in Table 4.1, there were 44% of students who stated that Present Tense (PT) was easiest tense to be understood. Then, 37% of students assumed that the Present Continuous Tense (PCT) was still easy to be understood but sometimes they faced difficulty to make or to analyze the sentence of PCT. However, the students said the two tenses, PT and PCT, had ever been learned in Senior High School (SHS). So, when they got the materials about those two tenses in the beginning semester, they did not face serious problems in learning PT and PCT. Although sometimes, they had confusion in differentiating between the two sentences because some of the students assumed that at a glance, those two tenses looked similar. Meanwhile, 44% of the students regarded that the Present Perfect Tense (PPT) was difficult but more than fifty percent (52%) students assumed that the Present Perfect Continuous Tense (PPCT) was the most difficult tense compared with the other three. The students considered that it was very complicated to make sentences by using PPT and PPCT.

Furthermore, the writers had classified the students' difficulties in learning basic tenses of English grammar into several main problems. The first was that the student faced difficulty in remembering the formula of each tense. They admitted that they did not have habit to learn basic tenses of English grammar. Hence, it was easy for them to forget the formula of the tenses so in their learning, they faced difficulty in using those tenses. Then, the second was that the students could not accept the lecturer's explanation in the classroom well. They assumed that all this time, the lecturer's approach in teaching basic tenses especially was uninteresting and they did not have enough exercises to sharpen their understanding. Moreover, the students stated that it was complicated to decide the verb used in the sentence of PPT and PPCT whether it was a base form (V1), past simple (V2), or part participle (V3). In addition, the students mentioned another problem in applying *has been/have been* in the sentence of PPCT, when it should be *has been* and when it should be *have been*. These two tenses (PPT and PPCT) were the most complicated tenses for them.

However, in the second part of the questionnaire, the students elaborated their suggestions of method to learn basic tenses of English grammar. It was aimed for the lecturers, especially those who teach English grammar in the beginning or first semester. There were three main suggestions from the students. The first was that the students needed to have more exercises in making or analyzing sentences for each tense. Thus, it was needed for the lecturers to give them more exercises. So, they would be able to behave themselves to learn English grammar frequently so that they would remember the formulas of the tenses and later on, they would master English grammar, especially Basic tenses. Additionally, the students needed clearer explanations about the tenses because sometimes, it was difficult to determine and differentiate the time and verbs in each tense. Hence, the lecturers should have different approaches or methods which were more interesting, like providing games as one of tools to give examples or exercises for the students. Analyzing tenses within songs or stories were also suggested by the students because those were more interesting for them rather than sitting and listening to the lecturer's explanation in the classroom.

Conclusion

Indeed, learning basic tenses of English grammar is important because it is one of the fundamentals to have good communication in English. However, in the process, the students may face difficulties in understanding English grammar, especially Basic Tenses which have complicated patterns. Most of students who involved in this study assume that Present Perfect Continuous Tense is the most difficult and complicated tense to be learned. However, for other tenses, the students also mention their difficulties in analyzing and differentiating the time and verb used within the tense. It is a challenge for the English grammar teachers to pay attention in conducting or creating teaching learning activities which are meaningful and effective in learning English grammar. Meanwhile, the students suggest that the teachers should give English grammar materials by using interesting and enjoyable way, like providing games and authentic materials. However, having many exercises is also recommended for the students in order to strengthen their knowledge and understanding on English grammar.

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