THE EFFECT OF DIFFERENTIATED INSTRUCTION AND ACHIEVEMENT MOTIVATION ON STUDENTS’ WRITING COMPETENCY

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Abstract

This experimental study aims at investigating the effect of Differentiated Instruction and achievement motivation on students’ writing competency of tenth grade students of SMAN 2 Denpasar. The design of this research was 2x2 factorial design. Data of students’ writing competency were collected by using an essay type test. Meanwhile, data of students’ achievement motivation level were collected by using questionnaire. The acquired data were analyzed statistically by two way ANOVA and Tukey test. This research discovers: 1) there is a significant difference in writing competency between the students taught with Differentiated Instruction and those taught with conventional method, 2) there is no significant difference in writing competency between the students having low achievement motivation taught with different instruction and those taught with conventional method, 3) there is a significant difference in writing competency between the students having high achievement motivation taught with Differentiated Instruction and those taught with conventional method, and 4) there is a significant interaction effect of teaching method (Differentiated Instruction and conventional method) and achievement motivation level (high and low levels) on students’ writing competency.

Keywords: differentiated instruction, achievement motivation, writing competency

INTRODUCTION

Education plays very a significant role in this era since the quality of the education will influence the quality of the generation. It expects the educators to provide a good learning situation or meaningful learning experience for the students. Buchori (2001) argues that meaningful learning can survive learners, but meaningless learning just burdens the students.

International Commission on Education for the Twenty-first Century (Delors, 1995) in Marhaeni (2005) states that to face the global challenges, education in the world must be based on four pillars of education, namely learning to know (the students learn to know and study a knowledge), learning to do (the students learn to use their knowledge to develop their skill), learning to be (the students learn to use their knowledge and skill to live), and learning to live together (the students learn to realize that humans can not live alone, they have to interact with and respect each other). The four pillars require not only good knowledge on the part of the learner, but also how the learner becomes the agent of his/her life, becoming knowledgeable, skillful, self-regulated, and independent. These four pillars are very important for meaningful education. Meaningful education must be understood as that the learning (the process and the outcome) must be applicable in real life problem solving.

In education context, learning is not merely focused on natural sciences, but also on language or foreign language. Language is very important to be learned
because it is a part of human possession as a tool of communication for their social interaction and relationship. Besides teaching first language, it is also very important to teach foreign language, especially English. It is so because English is an international language that is used most frequently in communication with foreigners.

In Indonesian education context, English is a compulsory subject to be learned. In addition, English has a prime position to be learnt rather than the other foreign languages. English is started to be introduced from Elementary school, secondary school (junior high school and senior high school), and university level. In secondary school, the students are expected to achieve both standard and basic competencies established by the government. Standard and basic competencies are regulated for four English skills, namely: listening, reading, speaking, and writing.

Among those skills, writing is the focus in this study. Byrn (2004) states that writing is transforming our thoughts into language. It is a very complex skill that requires both physical and mental activity on the part of the writer. Furthermore, Chakraverty and Gautum (2001) define writing is a reflective activity that requires enough time to think about the specific topic, to analyze and to classify any background knowledge. It means writing integrates several processes, such as: finding topic, providing information to support the topic, classifying ideas, organizing ideas in logical sequence and implementing linguistics knowledge. Moreover, Saraka (1988) views writing as one of written form involving ideas, opinions of someone, or in other words, writing is a think through writing.

Writing well is one of the most important and essential skill that an individual can possess (Veit and Gould, 2004). It is so because today written communication is more popular, like in email, facebook, twitter, magazine, newspaper, etc. Flower and Hayes (2009) state that writing involves cognitive (task environment, long term memory, and writing process) and creative process. Cognitive enables to produce ideas and arrange them well. Meanwhile, creative process is seen from the new ideas and their organization in writing.

According to Raimes (1983:54), teaching writing is important because of three reasons. First, writing reinforces the grammatical structure, idiom and vocabulary that teacher has been working within the class. Second, when the student writes, they have a chance to be adventurous with the language. Third, the students become more involved in the language, involved with themselves and their readers. Due to the facts above, we can see clearly the overall objectives of teaching writing are in order to enable the students to express their ideas and thoughts in a written form.

In the context of teaching English in the classroom, it is common that there is diversity among the students. The diversity is in terms of their motivation, gender, and ability level. In the context of this study, the ability of every student in learning English needs to be taken into account. It leads teachers to select teaching method which can cope all levels of students. To know whether or not diversity is taken into account or not, observation was done.

Based on observation done in SMAN 2 Denpasar, several phenomena were taken into account for this research. First, the teachers tended to ignore the students’ competency in giving instruction. All the students were given the same instruction level. Second, the students’ writing competency did not achieve the satisfying standard yet. It could be proven from the average score of students of 6.9. It was lower than the minimum standard established by the school. Third, the teachers just assessed students’ writing products. The process of writing tended to be ignored.

The phenomena mentioned previously indicate that instruction applied in the classroom is still conventional. It viewed and cared students as homogenous. In reality, they are heterogeneous. It makes the educators should find the latest theory on how to solve the problem on students’ heterogeneity. For that reason, effort needs to be considered on how the
students of different ability can be best treated. It leads the educators to apply Differentiated Instruction (DI) to teach heterogeneous class.

To differentiate instruction is to recognize students' varying background knowledge, readiness, language, preferences in learning and interests; and to react responsively. Differentiated instruction is a process in teaching and learning for students of differing abilities in the same class. The intent of differentiating instruction is to maximize each student's growth and individual success by meeting each student where he or she is and assisting in the learning process (Trace, Hall, Strangman, Nicole and Meyer, Anne. 2011). It implies that teaching diverse students should be administered with diverse instruction.

Andersen (2009) states that Differentiated Instruction stems from beliefs about differences among learners, how students learn, differences in learning preferences, and individual interests. By its nature, differentiation implies that the purpose of schools should be to maximize the capabilities of all students. It views that the students in the classroom should not be treated in the same way. Rather, it should be treated differently based on its nature. It seems that giving the instruction which is based on their nature is fairer for the students than giving the same instruction.

In line with Andersen (2009), Tomlinson (2000) states that at its most basic level, differentiation consists of the efforts of teachers to respond to variance among learners in the classroom. Whenever a teacher reaches out to an individual or small group to vary his/her teaching in order to create the best learning experience possible, that teacher is differentiating instruction. Furthermore, Tomlinson also said that differentiated instruction can be implemented in all grades including of senior high schools because senior high schools vary greatly, and if teacher wants to maximize their students' individual potential, they will have to attend the differences.

In learning a foreign language, students' success in mastering the foreign language is not merely determined by language learning strategies applied or situation of learning in the classroom, but also language aptitude and motivation (Gardner, 2003). Motivation can be defined as a desire to achieve a goal, combined with the energy to work toward that goal (Abisamra, 2002). In other words, motivation is a push that leads the humans to do something to reach their goals. In language learning, the goal, of course, is the mastery of the foreign language.

Wigfield and Eccles (2002) state that achievement motivation covers several human behaviors, namely: persistence, quality, vigor, and performance. In context of learning, it involves choice of the task, the persistene on the task, vigor in carrying the task out, and quality of the task. In relation to the achievement motivation, Marhaeni (2005) states that achievement motivation is built from the readiness of individuals to receive new things. In this case, those new things are feedback given by the students' themselves, guidance from their peers, and the teachers along learning process. Students having high motivation will maximize that feedback to improve their achievement and reach their excellent goal in learning.

Based on the previous explanation about DI, achievement motivation and students' writing competency, there were four questions which should be investigated in this research, namely:

- Is there any significant difference in writing competency between the students taught with Differentiated Instruction and those taught with conventional method?
- Is there any significant difference in writing competency between the students having high achievement motivation taught with Differentiated Instruction and those taught with conventional method?
- Is there any significant difference in writing competency between the students having low achievement motivation taught with Differentiated Instruction and those taught with conventional method?
- Is there any significant interaction of Teaching method (Differentiated
Instruction and Conventional Teaching method) and students’ achievement motivation level (High and Low) on students’ writing competency?

METHOD
To administer this research, Posttest Only Control Group with 2x2 factorial design was applied. There were 120 tenth grade students of SMAN 2 Denpasar in the academic year 2011/2012 included to be the sample. To get the sample, cluster random technique was applied. Next, the students were classified into high, average, and low level students based on their score in the report book of first semester. Then, questionnaire was distributed to classify students’ motivation level. The data involved students’ writing competency and achievement motivation data. The instruments were developed by creating blueprint and modifying the previous instrument used by other researchers. Then, those instruments were tested their validity and reliability. The data analysis involved descriptive and inferential analysis. Descriptive analysis aims at describing data by measuring mean and standard deviation. Meanwhile, inferential analysis aims at testing the hypothesis. Inferential analysis was done by using Two-Way ANOVA which is followed by Tukey test to know interaction effect.

FINDING AND DISCUSSION
The calculation of descriptive analysis measuring mean and standard deviation to 6 groups of data can be presented in the table 1

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Std Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>DI</td>
<td>76.43</td>
<td>7.6</td>
</tr>
<tr>
<td>CM</td>
<td>74.08</td>
<td>6.6</td>
</tr>
<tr>
<td>DIHM</td>
<td>81.97</td>
<td>2.89</td>
</tr>
<tr>
<td>DILM</td>
<td>70.9</td>
<td>6.92</td>
</tr>
<tr>
<td>CMHM</td>
<td>75.6</td>
<td>6.58</td>
</tr>
<tr>
<td>CMLM</td>
<td>72.57</td>
<td>6.38</td>
</tr>
</tbody>
</table>

Notes:
DI = Differentiated Instruction
CM = Conventional Method
HM = High Motivation
LM = Low Motivation
Std dev= standard deviation

Based on table 1, it is known that (1) mean value of DI is higher than CM, (2) mean value of DIHM is higher than CMMHM, and (3) mean value of DILM is lower than CMLM. In term of standard deviation (SD) value, SD value of DI is the highest value. It is followed by the value of DILM, CM, CMHM, CMLM, and DIHM. However, this result can not be used to answer the research problems. To answer research problems, inferential analysis by Two-way ANOVA was applied. The result can be presented in table 2.

<table>
<thead>
<tr>
<th>Source</th>
<th>F</th>
<th>Sig. (Probability)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching method (TM)</td>
<td>4.72</td>
<td>0.032</td>
</tr>
<tr>
<td>Motivation level (ML)</td>
<td>42.5</td>
<td>0.00</td>
</tr>
<tr>
<td>TM*ML</td>
<td>13.8</td>
<td>0.00</td>
</tr>
</tbody>
</table>
To answer the first research question, it can be seen from the value of \( \text{tm} \) (teaching method). From the table 2, it is known the sig value or probability of 0.032 which is lower than 0.05. It means that there is a significant difference in writing competency between the students taught with Differentiated Instruction and those taught with conventional method. Meanwhile, the fourth hypothesis is answered by looking the value of \( \text{tm}^*\text{aml} \). From the table 2, it is known that the value of \( \text{tm}^*\text{aml} \) of 0.00 which is lower than 0.05. It means that there is a significant interaction effect on the implementation of teaching method (Differentiated Instruction and conventional method) and motivation level (high and low) on students’ writing competency.

Since there is an interaction, it is followed by further analysis by Tukey test for two groups which are compared. The result of Tukey test can be seen in the table 3.

<table>
<thead>
<tr>
<th>No</th>
<th>Compared groups</th>
<th>Q</th>
<th>Q table</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DIHM with CMHM</td>
<td>6.0</td>
<td>2.80</td>
<td>significant</td>
</tr>
<tr>
<td>2</td>
<td>DILM with CMLM</td>
<td>1.5</td>
<td>2.80</td>
<td>insignificant</td>
</tr>
</tbody>
</table>

The analysis of the result of Tukey test on high achievement motivated students shows Q value of 6.0 is higher than critical Q table value of 2.80, \( \alpha = .05 \). It means that there is a significant difference between writing competency of high achievement motivated students taught by Differentiated Instruction than those by conventional method in which writing competency of high achievement motivated students taught by Differentiated Instruction is better than those by conventional method. However, this result is in contrast for low achievement motivated students. The table 3 shows Q value of 1.5 is lower than the critical Q table value of 2.80, \( \alpha = .05 \). It means there is no significant difference between the writing competency of low achievement motivated students in learning taught by Differentiated Instruction than those by conventional method. Even though they are not different, but their mean scores are different. The mean score of students having low achievement motivation taught with Differentiated Instruction of 70.9 which is lower than mean score of the students having low achievement motivation taught with conventional method of 72.57. So, it can be concluded that mean score of students having low achievement motivation taught with conventional method is higher than those taught with Differentiated Instruction. However, they do not differ significantly.

Based on the result of hypothesis testing by two-way ANOVA, it is discovered that the teaching method implemented during teaching and learning process affects significantly toward students’ writing competency of the tenth grade students of SMAN 2 Denpasar in the academic year 2011/2012. It is proven by probability value of 0.032 which is lower than 0.05, \( \alpha = .05 \). Further analysis shows that the mean size score of students taught by Differentiated Instruction is 76.43; while the mean score of students taught by conventional method is 74.08. It means that the mean score of students taught by Differentiated Instruction is higher than those taught by conventional method. Based on the result of hypothesis testing and the analysis, it can be interfered generally that students’ writing competency taught by conventional method is not effective to the students’ writing competency but on the other hand,
differentiated instruction is better than conventional teaching method.

It means differentiated instruction implemented in writing contribute positively on the students’ writing competency of tenth grade students of SMAN 2 Denpasar. The same finding was found by Koeze (2007). Koeze (2007) carries out a research in elementary school in USA. This research proves that there was significant difference in reading achievement between the students taught with Differentiated Instruction and conventional method. Here, Differentiated Instruction increases the students reading achievement.

Further analysis on the finding indicates that writing competency is a process which occurs continuously. During the process, there are many aspects that should be considered, they are: students’ readiness, level of students, students’ interest, learning style, etc. the students who are not ready to join the class because of their level can be shocked if they are given difficult materials. The students facilitated to study with materials which match with their level have more confident feeling to study. So, they can construct knowledge in writing appropriately. It is based on Allan (2012) who states that Differentiated Instruction gives more chance for students to construct knowledge more appropriately than traditional teaching because students’ diversity is taken into account.

Besides that, Tomlinson (2000) states what makes Differentiated Instruction is successful to be implemented. The most important factor in differentiation that helps students achieve more and feel more engaged in school is being sure that what teachers differentiate is high-quality curriculum and instruction. For example, teachers can make sure that: (1) curriculum is clearly focused on the information and understandings that are most valued by an expert in a particular discipline; (2) lessons, activities, and products are designed to ensure that students grapple with, use, and come to understand those essentials; (3) materials and tasks are interesting to students and seem relevant to them; (4) learning is active; and (5) there is joy and satisfaction in learning for each student. In the context of writing, all of those factors facilitate the students to write. So, they can produce high quality writing.

Another conclusion from the result of hypothesis testing on the simple effect discovered that conventional method seems not to maximize with the nature of teaching writing. Conventional method does not have chances for the students to study based on their level. This teaching technique tends to make the students who are categorized into low feel frustrated to study since the materials are difficult for them. It makes them “stuck to write”. As the consequence, they tend to ignore and be lazy to write. In other words, they do not enjoy their learning. As being mentioned previously by Tomlinson (2000) that joy and level of difficulty in learning can make learning more successful. Learning level which matches with students level is considered to be more effective than learning level taught for all level of students.

For further analysis, it is important to discuss whether the teaching method implemented in writing was the only factor which affected students’ writing competency. Motivation is a factor which significantly influences students’ competency in foreign language learning (Gardner, 2003). There are several kinds of motivation; one of them is achievement motivation. This current research also aimed to find out whether achievement motivation affected significantly on the development students’ writing competency.

The hypothesis testing administered by two-way ANOVA discovered achievement motivation has significant effects on the development of students’ writing competency. The analysis of descriptive statistics data indicates the mean score of students’ taught by differentiated instruction (mean score = 81.97) is higher than mean score of students’ writing competency taught by conventional method (mean score = 75.6). Further analysis by Tukey test indicates the Q value of 6.0 which is higher than the critical Q table value of 2.80, $\alpha = 0.05$. This analysis indicates
that there is a significant difference between writing competency of high achievement motivated students taught by Differentiated Instruction and those taught by conventional method in which students’ writing competency taught by Differentiated Instruction is better than those taught by conventional method. In other words, Differentiated instruction affects the students' writing competency significantly.

This finding is also proved by a research conducted by Tuckman and Sexton (1990) in Marhaeni (2005) about the effect of self-efficacy that is a factor that influences achievement motivation. Self-efficacy is an attitude on how capable people judge themselves. This research discovered the highest self-efficacy group which was found to be twice as productive as the middle group and 10 times as the low group. Furthermore, this research reflects a clear relationship between self-efficacy and academic productivity. For that reason it is concluded that high achievement motivated students have higher academic achievement rather than the low achievement motivated students.

By implementing various choices into a classroom, students become more motivated and excited to learn (Koeze, 2007). Differentiation is not about letting the students choose whatever they want to do; it is about knowing the students and planning assignments accordingly. Differentiation is a process of how to implement these best practices into a classroom. Because pre-assessment plays a vital role in lesson design, it should be a required component of teacher preparation. In the context of this research, the students having high motivation because they get materials which are in their level are more motivated to learn. It makes their writing better than the students who get the same materials.

McCleland (2008) states high motivated students need feedback. For them, feedback is essential in their learning. The feedback should not be difficult to be received and understood by them. In other words, feedback must be appropriate on their level. Here, if high motivated students are given feedback which is appropriate on their level, they are more motivated to study. It is not only for high level students, but also for average and low level students. They get feedback which is appropriate on their level, they are motivated to study.

For low achievement motivated students, it is discovered that the mean score of students’ writing competency (mean = 72.57) taught by conventional method is higher than the students taught by Differentiated Instruction (mean = 70.9). Further analysis in hypothesis testing by Tukey test proves Q value of 1.5 is lower than the critical Q table value = 2.80, α = .05. It means that there is no significant difference in writing competency between the students taught by conventional method and Differentiated Instruction.

For low motivated students, both Differentiated Instruction and conventional method have the same effect on students’ writing competency. This condition can be investigated from two different theories. Marhaeni (2005) states low achievement motivated students like static condition in which they feel secure and comfortable. In this research, the static condition is the implementation of conventional method. In different side, when the students are given teaching materials and process learning which match with their level, it can make students also feel secure (Kirkey, 2012). It makes both Differentiated Instruction and conventional method have the same effect.

The results of the second and third hypothesis testing direct to the result of fourth hypothesis testing that is whether or not there is a significant interaction between the teaching method and achievement motivation level. The fourth hypothesis testing done by two-way ANOVA proves that probability value of 0.00 which is lower than 0.05, α = .05 (F > F table, α = .05). It means that there is a significant interaction between the implementation of teaching method and the level of achievement motivation. So, it can be concluded that writing competency of tenth grade students of SMAN 2 Denpasar is influenced by achievement motivation.

The discussion of all the results of hypothesis testing indicates that
Differentiated Instruction and achievement motivation level give positive effect to the students' writing competency. Writing is considered a difficult skill because it involves cognitive and linguistic components. If the same materials are given to all students, some students who are in average and low level will have more difficulty. It makes writing is worse and worse in students opinion. Students may get more difficulty in writing and they tend to write poorly. By Differentiated Instruction, the different level of students are treated differently also. It makes learning is more accessible for them.

In addition, achievement motivation is a drive to reach excellent standard. High achievement motivated students like new and challenging things. Moreover, they usually set goal of their task in learning. Therefore, high achievement motivated students need new things (e.i. feedback) as the reflection of their progress to reach goals. The students are facilitated to study if they get feedback which is appropriate on their level.

From all the characteristics of the aspects mentioned, namely: writing competency, Differentiated Instruction, and achievement motivation, it can be stated that all of the aspects closely related to each other and also explain the phenomenon of this research. Differentiated Instruction provides accessible learning for all students' levels which make the students learn based on their levels. Meanwhile the students having high motivation force themselves to study since they get accessible condition. The students can reach optimum writing competency if they are taught by Differentiated Instruction and have high achievement motivation.

**CONCLUSION AND SUGGESTION**

Based on the result of hypothesis testing, there are four conclusions that can be made. First, there is a significant difference in writing competency between the students taught with Differentiated Instruction and those taught with conventional method. It is proven by the value of probability of 0.032 which is lower than 0.05. From the result of descriptive analysis, it is known the mean score of the students taught with Differentiated Instruction is 76.43; meanwhile the mean score of the students taught with conventional method is 74.08. It means that the students' writing competency taught with Differentiated Instruction is higher than those taught with conventional method. So, it can be concluded that the Differentiated Instruction affects better than conventional method on students' writing competency. Second, there is significant difference in writing competency between the students having high achievement motivation taught with Differentiated Instruction and those taught with conventional method. It is proven by the result of calculation by Tukey test. The result of the calculation shows that the value of Qcounted of 6.00; meanwhile Qcritical value is 2.83 in which Qcounted is higher than Qcritical. From descriptive analysis, the mean score of students having high achievement motivation taught with Differentiated Instruction of 81.97 which is higher than mean score of the students having high achievement motivation taught with conventional method of 75.6. It means that Differentiated Instruction affects better than conventional method on students' writing competency of the students having high achievement motivation. Third, there is no significant difference in writing competency between the students having low achievement motivation taught with Differentiated Instruction and those taught with conventional method. It is proven with the Qcounted value of 1.5; meanwhile Qcritical value is 2.80. From the result of the calculation, Qcounted is lower than Qcritical value. Even though they are not different, but their mean scores are different. The mean score of students having low achievement motivation taught with Differentiated Instruction of 70.9 which is lower than mean score of the students having low achievement motivation taught with conventional method of 56.73. So, it can be concluded that mean score of students having low achievement motivation taught with conventional method is higher than those taught with Differentiated Instruction.
Instruction. However, they do not differ significantly. Second, there is a significant interaction effect of teaching method (differentiated instruction and conventional method) and achievement motivation level (high and low levels) on students’ writing competency. It is proven by probability value of 0.00 which is lower than 0.05.

Furthermore, based on the finding and conclusion, there are four suggestions suggested. First, Differentiated Instruction should be used in teaching writing as an alternative method to solve problems of students’ low writing competency. It is suggested since it affects better on students’ writing competency. Second, since achievement motivation has significant role in contributing students’ writing competency, the English teachers are expected to know the level of their students’ achievement motivation since it will influence the choice in implementing teaching method. Beside that, the English teacher should increase the students’ achievement motivation in writing so that the students can reach their optimum writing. Second, in implementing Differentiated Instruction, motivation should also be taken into account. As being found that the students having high motivation taught with differentiated instruction have higher writing competency than those taught with conventional method. Third, in implementing Differentiated Instruction, the teacher should be critical in choosing materials and process to reach the learning objectives.

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