Students’ Multiple Intelligence in Learning during Toefl Preparation

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Abstract
The purpose of this study was to find out students’ multiple intelligence in learning during TOEFL preparation at STKIP Abdi Pendidikan Payakumbuh. This study was carried out of descriptive research that undertaken through phenomenological approach by employing questionnaire to 31 students selected by using purposive sampling technique. The findings of this study show that the most multiple intelligence used by the students was musical intelligence with the score 606, while the multiple intelligences that less dominant used by the students was logical-mathematical intelligence with the score 531.

Key Words: multiple intelligence: TOEFL, TOEFL Preparation

INTRODUCTION
English has become the international language because of that someone must have a good ability in English. There are many parameter who determine the English quality which is mastered by someone. It can be seen in TOEFL test (Test of English as Foreign language). TOEFL is arranged to measure the people ability in English especially to evaluate the people whose native language is not English. Sulistyo (2009) states that TOEFL has been utilized as a means of measuring the proficiency of nonnative speakers of English.

In fact, English is the foreign language in Indonesia that means Indonesian people included as nonnative speaker of English. Actually, in college level especially for English department, TOEFL is learnt for academic purposes. TOEFL becomes one of the courses thought for student in the college. In STKIP Yayasan Abdi Pendidikan Payakumbuh, this course is given to the second and third year student, but it is some subject that relates to TOEFL Preparation Test like Listening III (focuses on strategies in Listening Comprehension), Grammar IV (focuses on strategies in Structure and Written Expression), and Extensive Reading (focuses on strategies in Reading Comprehension test). They learn those subject for one semester before having the test. Finally, the
students have to take their TOEFL score before going to the proposal seminar at least three times as long as in the collage.

However, it is not easy to pass the TOEFL test since they have to follow some exercises before having the test. Al-rawashdeh (2011) states that students who want to take the TOEFL test should take into consideration that it is important for them to be prepared well before they take the test. Based on the previous facts, students must follow the preparation to achieve a higher score on the TOEFL. In the preparation test, students obtain kinds knowledge. It enriches their knowledge about TOEFL. Thus, they can develop their mind before having the TOEFL test. In this case, they can use visual media in learning TOEFL. These abilities called Multiple Intelligences (MI).

According to Armstrong (2009) there are eight areas in multiple intelligences. First, linguistic intelligence, it can support them in learning phonology and syntax of language. Second, logical-mathematical intelligence, it can allows them to be a problem solver. They can solve their problem in learning English. Third, spatial intelligence, it can support them in developing visual words. Fourth, bodily-kinesthetic intelligence, it can help them to express their ideas and feelings on it. Fifth, musical intelligence, it can allows them to use music in learning process. Sixth, interpersonal intelligence, it will help them to build the relationship with other people. Seventh, intrapersonal intelligence, it is close related to how they control their own emotions in process of learning English. Eighth, naturalist intelligence, it can help them to describe about living things.

However, based on the observation did by the researcher at STKIP Yayasan Abdi Pendidikan Payakumbuh, researcher found some problems. During the preparation before having the test, students face some difficulties. Some of them have the same difficulties that is less motivation, lack of knowledge and also the difficulties in some elements for example equipment and facilities. According to Al-rawashdeh (2011), there are five major dimensions to the nature of difficulties in TOEFL. They are TOEFL student, TOEFL test or exam, TOEFL curriculum, Equipment and facilities and language center staff. In TOEFL student, the student face the difficulties by themselves for example lack of confident. In TOEFL test, the questions are difficult for the student. In TOEFL curriculum, the teacher do not facilitate the students in material. In equipment and
facilities, it is related to the equipment and facilities given to the student. In language
center staff, the teacher must be qualified in teaching.

From the phenomenon above the researchers interested to do the research entitle
“Students’ Multiple Intelligences in TOEFL Preparation at the fourth year students of
STKIP Yayasan Abdi Pendidikan Payakumbuh”.

**REVIEW OF RELATED LITERATURE**

**TOEFL**

TOEFL is the test given to see someone ability in English. According to Ali (2012)
TOEFL is the test of English as foreign language. It is the standardlize to see someone
ability in English writing that covers three aspects, they are listening, writing and reading.
Moreover, Al-Rawashdeh (2011) state that TOEFL is the test that aims at testing student’s
knowledge and usage of English language. The Test Of English as a Foreign Language
(or TOEFL, pronounced "toe-full", or sometimes just "toffle") evaluates the potential
success of an individual to use and understand Standard American English at a college
level. This is required for non-native applicants at many American and English-speaking
colleges and universities.

Moreover, there are many purposes in TOEFL. According to Hakim (2008) states
that there many purposes of TOEFL. For example, academic purposes (scholarship the
requirement for graduating from the higher education such as: S1, S2 and S3, research
writing and etc) and common purposes (applying a job, promoted in the job, and etc)

In particular for academic purposes. not only international educational
institutions, several domestic higher-learning institutions as well as non educa-tional
agencies have also made use of the score of individuals taking TOEFL as a requirement
of not only admission, recruit-ment, but also exit purposes. This implies that many have
relied on TOEFL as a dependable tool that can provide good evidence of one s proficiency
in English as a foreign language.

In addition, There are two types of TOEFL test, they are *Paper and Pencil Based
TOEFL (PBT)* and *Computer Based TOEFL (CBT)*. *Paper Based* is the test that even
question and answer are done using paper and pencil. The paper-and-pencil version of the
TOEFL consisted of three sections: listening, structure, and reading. The listening section
consisted of 50 questions, the structure section 25, and the reading section 45 questions.
**Computer Based** is the model of TOEFL test that questions delivered using computer and the test taker also answers using computer. As it is the case with CBT, the items could be seen on the screen only one at a time meaning that the test taker could not see the items unless answering the previous one. According to Edward W Wolfe (2003). The computer-based TOEFL consists of four sections: (a) listening, (b) structure, (c) reading, and (d) writing. The first three sections are composed of multiple choice items, and the fourth section is a direct writing assessment.

**Multiple Intelligences**

There are eight areas of multiple intelligences classified by Armstrong (2009):

1. **Linguistic Intelligence**

   Armstrong (2009) defines that linguistic intelligence is the capacity to use words effectively, whether orally or in writing. This intelligence includes the capability to manipulate the syntax or structure of language, the phonology or sounds of language, the semantics or meanings of language, and the pragmatic dimensions or practical uses of language. It can be said that linguistic intelligence is someone intelligence to manipulate the syntax, structure of language and other elements of language.

2. **Logical-Mathematical Intelligence**

   Armstrong (2009) claims that logical-mathematical intelligence is the capacity to use numbers effectively and to reason well. This intelligence includes sensitivity to logical patterns and relationships, statements and propositions, functions and other related abstractions. The kinds of processes used in the service of logical-mathematical intelligence include categorization, classification, inference, generalization, calculation and hypothesis testing.

   It can be said that logical-mathematical intelligence is the way how someone use number and give their reason correctly. This intelligence related to think abstractly in doing something.

3. **Spatial Intelligence**

   Armstrong (2009:7) spatial intelligence is the ability to perceive the visual-spatial world accurately and to performs transformation upon those perception.
This intelligence involves sensitively to color, line, shape, forms, space and the relationships that exist between these elements. It includes the capacity to visualize, to graphically represent visual or spatial ideas, and to orient oneself appropriately in a spatial matrix.

So, spatial intelligence is involve sensitively to visualize and orient oneself appropriately. It can be conclude that spatial intelligence is an intelligence to understand about visual words and how they can perceive visual words.

4. Bodily-Kinesthetic Intelligence

Amstrong (2009) claims that bodily-kinesthetic intelligence is expertise in using one’s whole body to express ideas and feelings and facility in using one’s hands to produce or transform things. This intelligence includes specific physical skills such as coordination, balance, dexterity, strength, flexibility, and speed as well as tactile and haptic capacities.

In summary, bodily-kinesthetic intelligence is an intelligence how someone control, express their bodily emotions. Not only about that but also how someone be a problem solver for themselves.

5. Musical Intelligence

There are some definition about musical intelligence had given by experts. According to Amstrong (2009) defines that musical intelligence is the capacity to perceive, discriminate, transform and express, musical forms. This intelligence includes sensitivity to the rhythm, pitch or melody, and timbre or tone color of a musical piece. It means musical intelligence is an intelligence to determine a musical ability.

In brief, musical intelligence is the ability to understand and express their ideas in music. Include poetry, patterns and other elements of sounds.

6. Interpersonal Intelligence

Amstrong (2009) states that interpersonal intelligence is the ability to perceive and make distinctions in the moods, intentions, motivations, and feelings of other people. This can include sensitivity to facial expressions, voice and gestures. So, interpersonal intelligence is an ability to make and distinctions their own emotions.
To summarize, interpersonal intelligence is an intelligence that someone use to interact with others and make distinctions with their own emotions.

7. Intrapersonal Intelligence

Amstrong (2009) defines that intrapersonal intelligence is self knowledge and the ability to act adaptively on the basis of that knowledge. This intelligence includes having and accurate of oneself, awareness of inner moods, intentions, motivations, temperaments and desires and the capacity or self discipline, self-understanding and self-esteem.

It can be said that intrapersonal intelligence is the ability to understand about themselves. This ability includes how people control their emotion, their moods and their self esteem.

8. Naturalist intelligence

There are some experts who state the definition of naturalist intelligence. According to Amstrong (2009) states that naturalist intelligence is expertise in the recognition and classification of the numerous species, the flora and the fauna of an individual’s environment. This also included the sensitivity to other natural phenomena and in the case of those growing up in an urban environment to discriminate among inanimate objects such as cars and sneakers. In short naturalist intelligence is an ability to classify flora and fauna in environment.

For these reasons, naturalist intelligence is an ability to differentiated flora and fauna, how they can adapt with their environment and how they can learn in their environment.

METHODOLOGY

This research is a descriptive research which mixes the quantitative and qualitative method (mixed method research). It is based on Creswell (2003) who states that mixed method research is a research that involves collecting data either simultaneously or sequentially to best understand the research problems. The data collection involves gathering both numeric information (e.g., on instrument) as well as text information (e.g., interviews) so that the final database represents both quantitative and qualitative information.
The participants of this research are the third year students of STKIP Abdi Pendidikan Payakumbuh. The writer chooses third year students of English department as participant. In third year students of English department there are two classes. They are about 82 students which are divided into two classes which consist of 45 students in class A and 37 students in class B. The writer choose one class as participant. It was class A. But only 31 students came, when the researcher took the data. The participant are taken by using purposive sampling. According to Gay et. al (2011:629) purposive sampling is the process of selecting a sample that is believed to be representative of a given population. It means that purposive sampling is the way to take a sample.

The source of data was close-ended questionnaire. It has six indicators of classroom environment, they are: involvement, affiliation, teacher support, task orientation, order and organization, and rule clarity (adopted from Chan, 1993; Fouts et al, 1993). They are spread into 40 questions. The students’ answered the questionnaire by Likert scale which contain five alternatives of answer namely: always, usually, sometimes, seldom, never.

According to Gay et. al (2011:388) questionnaire is a written collection of self-report question to be answered by a selected group of research participants. It means questionnaire is a written form that give to the group of participant and they will answer it. The writer arranges the questionnaire as follow.

**Table 3.1. The layout of questionnaire**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Sub Indicator</th>
<th>Total number of each indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Intelligences</td>
<td>1. Linguistic Intelligence</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>2. Logical-Mathematical Intelligence</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>3. Spatial Intelligence</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>4. Bodily-Kinesthetic Intelligence</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>5. Musical Intelligence</td>
<td>5</td>
</tr>
</tbody>
</table>
The data obtained were analyzed by using statistical analysis in finding total score, means and standard deviation of each item related to students’ multiple intelligence in learning during TOEFL preparation. Besides, a qualitative data analysis is several simultaneous activities that engage the attention of the researcher: collecting information from the field, sorting the information into a story or picture, and actually writing the qualitative text (Cresswell, 1994: 153). In addition, Miles and Huberman (1992: 18-20) divide qualitative data analysis into two approaches, i.e. flow analysis model and interactive analysis model. However, this research used the second approach which is appropriate with this research.

The interactive analysis model applied in this research can be explained with some steps as follows:

1. Data collection
   Collecting data starts from searching model data in form of questionnaire.

2. Data Reduction
   Data reduction means summarizing data, selecting the important ones, focusing on the stated topic, and deleting unnecessary data (Sugiyono, 2006: 338). The process of data reduction in this research was started by categorizing the data based on the indicators of classroom environment.

3. Data Presentation
   In a qualitative research, data presentation might be arranged in the forms of essay, charts, flowcharts, categorization, etc. The purpose is to help comprehend what aspects are discussed in the data and plan the next works based on what have been comprehend.
In this research, the data was presented by arranging into narration from the students’ multiple intelligence in learning during TOEFL preparation.

4. Conclusion

Withdrawing some inferences are the final step after data presentation. The initial conclusions which are supported by valid and consistent evidence make the conclusions are strongly believed to be incredible.

FINDINGS AND DISCUSSION

The researcher focused on the students’ multiple intelligence in TOEFL preparation by employing the questionnaire. There were eight indicators in multiple intelligence. They were linguistic intelligence, logical-mathematical intelligence, spatial intelligence, bodily-kinesthetic intelligence, musical intelligence, interpersonal intelligence, intrapersonal intelligence and naturalist intelligence. To calculate the data, the researcher used the respondents’ respond for each categories.

In finding the students’ multiple intelligence in learning during TOEFL preparation, the writer used the percentage and score for each item in every indicator.

To find the percentage of each multiple intelligence, the writer used the formula suggested by Sudijono (2010:43) as follow:

\[
P = \frac{f}{N} \times 100%
\]

\[P = \text{Percentage of students’ multiple intelligence}
\]

\[f = \text{Frequency of Respond of each item}
\]

\[N = \text{Total number}
\]

<table>
<thead>
<tr>
<th>Category of Multiple Intelligence</th>
<th>Always (5)</th>
<th>Often (4)</th>
<th>Sometime (3)</th>
<th>Seldom (2)</th>
<th>Never (1)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>R</td>
<td>%</td>
<td>F</td>
<td>R</td>
<td>%</td>
</tr>
<tr>
<td>Linguistic Intelligence</td>
<td>35</td>
<td>175</td>
<td>22.58</td>
<td>56</td>
<td>224</td>
<td>36.13</td>
</tr>
<tr>
<td>Logical-Mathematical Intelligence</td>
<td>24</td>
<td>120</td>
<td>15.48</td>
<td>48</td>
<td>192</td>
<td>30.97</td>
</tr>
</tbody>
</table>
Based on the table above, it can be seen that the students mostly used musical intelligence in learning English. It can be seen from the score, the students musical intelligence is in highest score. The lowest intelligence used by the students was logical-mathematical intelligence because this intelligence got the lower score than other intelligence.

The first intelligence is Linguistic Intelligence. The percentages are 22.58% (35 students) who answer always, 36.13% (56 students) who answer often, 34.48% (54 students) who answer sometime, 6.45% (10 students) who answer seldom and 0% (0 students) who answer never. The total of students responds in linguistic intelligence is 581. It can be happened because they probably like to read, write and speak about English.

The second intelligence is Logical-Mathematical Intelligence. The percentages are 15.48% (24 students) who answer always, 30.97% (48 students) who answer often, 36.78% (57 students) who answer sometime, 14.19% (22 students) who answer seldom and 2.58% (4 students) who answer never. The total of students respond in logical-mathematical intelligence is 531. It can be happened because they still think learn about graph, number and diagram was difficult.

The third intelligence is spatial intelligence. The percentages are 27.10% (43 students) who answer always, 36.77% (57 students) who answer often, 29.03% (45 students) who answer sometime, 5.81% (9 students) who answer seldom and 1.29% (2 students) who answer never. The total of students responds in spatial intelligence is 593.

<table>
<thead>
<tr>
<th>Spatial Intelligence</th>
<th>42</th>
<th>210</th>
<th>27.10</th>
<th>57</th>
<th>228</th>
<th>36.77</th>
<th>45</th>
<th>135</th>
<th>29.03</th>
<th>9</th>
<th>18</th>
<th>5.81</th>
<th>2</th>
<th>2</th>
<th>1.29</th>
<th>593</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bodily-Kinesthetic Intelligence</td>
<td>29</td>
<td>145</td>
<td>18.71</td>
<td>44</td>
<td>176</td>
<td>28.39</td>
<td>50</td>
<td>150</td>
<td>32.26</td>
<td>31</td>
<td>62</td>
<td>20</td>
<td>1</td>
<td>1</td>
<td>0.64</td>
<td>534</td>
</tr>
<tr>
<td>Musical Intelligence</td>
<td>62</td>
<td>310</td>
<td>40</td>
<td>43</td>
<td>172</td>
<td>27.74</td>
<td>31</td>
<td>93</td>
<td>20</td>
<td>12</td>
<td>24</td>
<td>7.74</td>
<td>7</td>
<td>7</td>
<td>4.52</td>
<td>606</td>
</tr>
<tr>
<td>Interpersonal Intelligence</td>
<td>36</td>
<td>180</td>
<td>23.23</td>
<td>46</td>
<td>184</td>
<td>29.68</td>
<td>47</td>
<td>141</td>
<td>30.32</td>
<td>20</td>
<td>40</td>
<td>12.90</td>
<td>6</td>
<td>6</td>
<td>3.87</td>
<td>551</td>
</tr>
<tr>
<td>Intrapersonal Intelligence</td>
<td>43</td>
<td>215</td>
<td>27.74</td>
<td>44</td>
<td>176</td>
<td>28.39</td>
<td>42</td>
<td>126</td>
<td>27.10</td>
<td>20</td>
<td>40</td>
<td>12.90</td>
<td>6</td>
<td>6</td>
<td>3.87</td>
<td>563</td>
</tr>
<tr>
<td>Naturalist Intelligence</td>
<td>43</td>
<td>215</td>
<td>27.74</td>
<td>56</td>
<td>224</td>
<td>36.13</td>
<td>47</td>
<td>141</td>
<td>30.32</td>
<td>5</td>
<td>10</td>
<td>3.23</td>
<td>4</td>
<td>4</td>
<td>2.58</td>
<td>594</td>
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<tr>
<td>Total Score</td>
<td>4.553</td>
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</table>
it can be seen that some of the students used spatial intelligence in learning English. It can be happen because they do not like to learn without see the real object. It can be said that some of them like to learn by using the real object.

The fourth intelligence is bodily-kinesthetic intelligence. The percentages are 18.71% (29 students) who answer always, 28.39% (44 students) who answer often, 32.26% (50 students) who answer sometime, 20% (31 students) who answer seldom, and 0.64% (1 student) who answer never. The total of students respond in bodily-kinesthetic intelligence is 534. It can be happen because only some of them give participation and like an active activity in learning.

The fifth intelligence is musical intelligence. The percentages are 40% (62 students) who answer always, 27.74% (43 students) who answer often, 20% (31 students) who answer sometime, 7.74% (12 students) who answer seldom and 4.52% (7 students) who answered never. The total of students respond in musical intelligence is 606. it can be seen that most of the students used musical intelligence in TOEFL preparation because many of them responded that they like to learn by using music. It can be seen that they like to learn by using music because it is the highest score from all indicator. It can be happen because they feel enjoy listen to the music while learning.

The sixth intelligence is interpersonal intelligence. The percentages are 23.23% (36 students) who answer always, 29.68% (46 students) who answer often, 30.32% (47 students) who answer sometime, 12.90% (20 students) who answer seldom and 3.87% (6 students) who answer never. The total of students respond in interpersonal intelligence is 551. It can be happen that they like to solve their problem in learning during TOEFL preparation by themselves.

The seventh intelligence is intrapersonal intelligence. The percentages are 27.74% (43 students) who answer always, 28.39% (44 students) who answer often, 27.10% (42 students) who answer sometime, 12.90% (20 students) who answer seldom and 3.87% (6 students) who answer never. The total of students respond in intrapersonal intelligence is 563. It can be happen because they like to solve problem by doing interaction with others.

The last intelligence is naturalist intelligence. The percentages are 27.74% (43 students) who answer always, 36.13% (56 students) who answer often, 30.32% (47 students) who answer sometime, 3.23% (5 students) who answer seldom and 2.58% (4
students) who answer never. It can be seen that they like to learn outside. This indicator is the second one after musical intelligence with the score 594. It can be happen because some of them like to learn outdoor.

From the discussion above, it can be seen that the multiple intelligence which dominant used by the students was musical intelligence. It can be happen because they like to learn by using music. Then, they used naturalist intelligence. It can be happen because they like to learn outdoor. Next, they used spatial intelligence, it can be happen because they like to learn by seeing the real object and watching film or video in English.

They also used linguistic intelligence because they like to read, write and speak in English. Then, they used intrapersonal intelligence. the writer assumes that they like to solve their problem by doing interaction with others. After that, they used bodily-kinesthetic intelligence. the writer assumes that they like to solve their problem by themselves.

Furthermore, logical-mathetical intelligence was less dominant. The writer assumes that they do not like to learn about number, diagram and graph in English. They probably felt bored when they learn about it. They probably still have difficulties in learning about graph, diagram and number in English.

Based on the result of data analysis, it was found that the multiple intelligences used by the third students in learning during TOEFL preparation of STKIP Abdi Pendidikan Payakumbuh dominated by Musical intelligence. This multiple intelligence was at most used by the students because the percentages of this categories was in highest level from eight indicators. In addition, Hoerr (2010:174) states that Music can be a wonderful way to grab your students’ attention or signal a transition between activities. Music can help you to develop a creative, welcoming atmosphere while providing exposure to a variety of musical composers and genres. Music is also a powerful tool to help with memorization and retention. So, it can be said that music can help the students to develop their creativity in the class. Music also can help the teacher to develop the student creativity.

CONCLUSION
This research discusses about the third year students’ multiple intelligence in learning during TOEFL preparation of STKIP Abdi pendidikan Payakumbuh in 2014/2015 Academic Year.

Based on the explanation of the research findings above, it can be concluded that the students multiple intelligence are divided into eight indicator. They are linguistic intelligence, logical-mathematical intelligence, spatial intelligence, bodily-kinesthetic intelligence, musical intelligence, interpersonal intelligence, intrapersonal intelligence and naturalist intelligence.

The finding of this research, the multiple intelligences that at most used by the students was musical intelligence, while the multiple intelligences that less dominant used by the students was logical-mathematical intelligence.

Based on the explanation of research finding above, The researcher suggest for the students to know about their multiple intelligences. After knowing the multiple intelligences, the students are expected to apply their multiple intelligences in learning during TOEFL preparation in order they can easier in learning, faster and enjoyable, because they learn with what they fell comfortable with. The lecturer could develop the students multiple intelligences and find suitable technique in the classroom. By using suitable technique, the lecturer can develop it and know the way the students learn.

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