## CHAPTER IV

## RESEARCH FINDINGS AND DISCUSSION

## A. Data Findings

Data collecting activity was conducted in $25^{\text {st }}$ September, 2014. The sample was B class of Writing II Subject of the Third Semester students of English Education Study Program of STAIN Palangka Raya in Academic Year 2014/2015". The students were given a task. They were required to translate, make own sentences and fill the blank.

The researcher used interater in analyzing the writing product. This activity was conducted to minimize subjective effect. There were total two examiners, the researcher was helped by Mr. Ismail Yakub, S.Pd. in scoring the students' writing products. The displayed data below is the cross check of those two examined writing products. The error which is displayed detected at least of two examiners.

1. The Result of Pre Test

In this section, the data obtained of pretest. The pretest was taken on Thursday, $25^{\text {st }}$ September, 2014 at $09.00-09.30$ in class B of third semester. They were 20 students who followed this test. The pretest scores were presented in table 4.1.

Table 4.1 Description of Pre Test Scores of the Data Achieved by the Students

| NO. | STUDENTS' <br> CODE | RATER <br> I | RATER <br> II | FINAL <br> SCORE |
| :---: | :--- | :---: | :---: | :---: |
| 2 | APR | 50 | 55 | 52.5 |
| 10 | ARF | 25 | 15 | 20 |
| 3 | BLA | 35 | 40 | 37.5 |
| 4 | DBI | 40 | 40 | 40 |
| 5 | DWK | 60 | 60 | 60 |
| 7 | FJR | 40 | 25 | 32.5 |
| 17 | HDJ | 40 | 40 | 40 |
| 8 | ITN | 40 | 55 | 47.5 |
| 9 | KRW | 40 | 45 | 42.5 |
| 11 | MLN | 35 | 45 | 40 |
| 6 | NDR | 75 | 65 | 70 |
| 1 | NWT | 35 | 35 | 35 |
| 12 | PTR | 40 | 45 | 42.5 |
| 13 | RML | 45 | 55 | 50 |
| 15 | RMY | 30 | 25 | 27.5 |
| 14 | RNI | 55 | 60 | 57.5 |
| 18 | SSI | 35 | 50 | 42.5 |
| 16 | STI | 40 | 55 | 47.5 |
| 19 | TTS | 70 | 70 | 70 |
| 20 | WND | 25 | 35 | 30 |

The distribution of students' pretest scores can also be seen in the following figure.

Figure 4.1 Histogram of Frequency Distribution of Pre Test Scores


The figure 4.1 showe the pretest scores of students. It can be seen that there were 17 students got score 20-59. There was one student got 60-69, there were two students got 70-79.

Table 4.2
The Table of Calculation of Mean, Standard Deviation, and Standard Error of Mean of Pre Test Scores in Experiment Group Using SPSS 22 Programs

| SCORE |  |
| :---: | :---: |
| N Valid | 20 |
| Missing | 0 |
| Mean | 44.000 |
| Std. Error of Mean | 2.9879 |
| Median | 42.500 |
| Mode | $40.0^{\text {a }}$ |
| Std. Deviation | 13.3624 |
| Variance | 178.553 |
| Range | 50.0 |
| Minimum | 20.0 |
| Maximum | 70.0 |

2. The Result of Post Test

This section, it was described the obtained data of improvement the students' writing scores after taught using module of preposition of time. The post test was taken on Saturday, $16^{\text {st }}$ October 2014 at $09.00-09.30$ in class B of third semester. They were 20 students who followed this test. The post test scores were presented in table 4.3.

Table 4.3
The Description of Post Test Scores of the Data Achieved by the Students

| The | NO | STUDENTS' CODE | RATER I | RATER II | FINAL SCORE |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2 | APR | 70 | 70 | 70 |
|  | 10 | ARF | 70 | 60 | 65 |
|  | 3 | BLA | 70 | 65 | 67.5 |
|  | 4 | DBI | 50 | 50 | 50 |
| distributi | 5 | DWK | 80 | 85 | 82.5 |
|  | 7 | FJR | 65 | 55 | 60 |
|  | 17 | HDJ | 70 | 45 | 57.5 |
| on of | 8 | ITN | 65 | 60 | 62.5 |
| students' | 9 | KRW | 65 | 60 | 62.5 |
|  | 11 | MLN | 70 | 70 | 70 |
| post test | 6 | NDR | 100 | 95 | 97.5 |
|  | 1 | NWT | 70 | 50 | 60 |
| scores | 12 | PTR | 65 | 85 | 75 |
|  | 13 | RML | 65 | 70 | 67.5 |
| can also | 15 | RMY | 40 | 50 | 45 |
|  | 14 | RNI | 65 | 75 | 70 |
| be seen | 18 | SSI | 35 | 55 | 45 |
| in the | 16 | STI | 70 | 75 | 72.5 |
|  | 19 | TTS | 95 | 95 | 95 |
| followin | 20 | WND | 45 | 40 | 42.5 |

g figure.

Figure 4.2 Histogram of Frequency Distribution of Post Test Scores.


The figure 4.2 show the post test scores of students of experiment group. It could be seen that there were five students got score 40-59. There were seven students got score 60-69. There were five students got score 70-79. And there were three students got score 80-90.

Table 4.4
The Table of Calculation of Mean, Standard Deviation, and Standard Error of Mean of Post Test Scores in Using SPSS 22 Programs.

## Statistics

Score

| N | Valid | 20 |
| :--- | :--- | ---: |
|  | Missing | 0 |
| Mean | 65,875 |  |
| Std. Error of Mean | 3,3011 |  |
| Median | 66,250 |  |


| Mode | 70,0 |
| :--- | ---: |
| Std. Deviation | 14,7629 |
| Variance | 217,944 |
| Range | 55,0 |
| Minimum | 42,5 |
| Maximum | 97,5 |
| Sum | 1317,5 |

3. The Comparison of Final Scores between Pre Test and Post Test

Based on the data above, it could be seen the comparison in Table 4.5.
Table 4.5
The Description of Pre and Post Test Scores of the Data Achieved by the Students

|  | N <br> O. | STUDE <br> NTS <br> CODE | RATE <br> PEST |  | POST <br> TEST | PRE <br> TEST | POST <br> TEST |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OF PRE <br> TEST <br> SCORE |  |  |  |  |  |  |  |
| 2 | APR | 50 | 70 | 55 | 70 | 52.5 | 70 |
| 10 | ARF | 25 | 70 | 15 | 60 | 20 | 65 |
| 3 | BLA | 35 | 70 | 40 | 65 | 37.5 | 67.5 |
| 4 | DBI | 40 | 50 | 40 | 50 | 40 | 50 |
| 5 | DWK | 60 | 80 | 60 | 85 | 60 | 82.5 |
| 7 | FJR | 35 | 65 | 30 | 55 | 32.5 | 60 |
| 17 | HDJ | 40 | 70 | 40 | 45 | 40 | 57.5 |
| 8 | ITN | 40 | 65 | 55 | 60 | 47.5 | 62.5 |
| 9 | KRW | 40 | 65 | 45 | 60 | 42.5 | 62.5 |
| 11 | MLN | 35 | 70 | 45 | 70 | 40 | 70 |
| 6 | NDR | 75 | 100 | 65 | 95 | 70 | 97.5 |
| 1 | NWT | 35 | 70 | 35 | 50 | 35 | 60 |


| 12 | PTR | 40 | 65 | 45 | 85 | 42.5 | 75 |
| :---: | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 13 | RML | 45 | 65 | 55 | 70 | 50 | 67.5 |
| 15 | RMY | 30 | 40 | 25 | 50 | 27.5 | 45 |
| 14 | RNI | 55 | 65 | 60 | 75 | 57.5 | 70 |
| 18 | SSI | 35 | 35 | 50 | 55 | 42.5 | 45 |
| 16 | STI | 40 | 70 | 55 | 75 | 47.5 | 72.5 |
| 19 | TTS | 70 | 95 | 70 | 95 | 70 | 95 |
| 20 | WND | 25 | 45 | 35 | 40 | 30 | 42.5 |

Table 4.6
TTabl
Table 4.6
The Calculation of Mean, Standard Deviation, and Standard Error of Mean Pre Test and Post Test Scores in Using SPSS 22 Programs.

| Statistics |  |  |
| :--- | ---: | ---: |
|  | Score X | Score Y |
| Valid | 20 | 20 |
| N Missing | 0 | 0 |
| Mean | 65,875 | 44,000 |
| Std. Error of Mean | 3,3011 | 2,9879 |
| Median | 66,250 | 42,500 |
| Mode | 70,0 | $40,0^{a}$ |
| Std. Deviation | 14,7629 | 13,3624 |
| Variance | 217,944 | 178,553 |
| Range | 55,0 | 50,0 |
| Minimum | 42,5 | 20,0 |
| Maximum | 97,5 | 70,0 |
| Sum | 1317,5 | 880,0 |

4. Testing Hypothesis Using SPSS 22 Program

The writer applied SPSS 22 program to calculated $t_{\text {test }}$ in testing Hypothesis of the study. The result of the $t_{\text {test }}$ using SPSS 22 program was described in Table below.

Table 4.7
Standard Deviation and Standard Error of Y and X Group statistic

| Group Statistics |  |  |  |  |  |  |
| :--- | :--- | ---: | ---: | ---: | ---: | :---: |
|  | Code | N | Mean | Std. Deviation | Std. Error Mean |  |
| Score | X | 20 | 65,875 | 14,7629 | 3,3011 |  |
|  | Y | 20 | 44,000 | 13,3624 | 2,9879 |  |

Table 4.8
The Calculation $\mathbf{t}_{\text {test }}$ Using SPSS 22 Independent Samples Test

|  |  | Levene's Test for Equality of Variances |  | t-test for Equality of Means |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | F | Sig. | T | Df | Sig. (2tailed) |  | Std. <br> Error <br> Differe <br> nce | 95\% Confidence Interval of the Difference |  |
|  |  | Lower |  |  |  |  |  |  | Upper |
| S | Equal variances assumed |  | ,041 | ,840 | 4,913 | 38 | ,000 | 21,8750 | 4,4525 | 12,8614 | 30,8886 |
| e | Equal variances not assumed |  |  | 4,913 | 37,629 | ,000 | 21,8750 | 4,4525 | 12,8584 | 30,8916 |

Since the result of Test between pretest and post had difference scores of variance, it was found that the result of $\mathrm{t}_{\text {observed }}$ was 4.913.

To examine the truth or false of null hypothesis stating that using Module of Preposition of Time did not increase the third semester students' writing scores, the result of $\mathrm{t}_{\text {test }}$ was interpreted on the result of degree of freedom to
get the $\mathrm{t}_{\text {table. }}$. The result of degree of freedom (df) was 38 , it was found from the total number of students in both group minus 2 .

Table 4.9
The Result of $\mathbf{t}_{\text {observed }}$ and $\mathbf{t}_{\text {table }} / \mathbf{t}_{\text {test }}$

| Variable | $\mathrm{t}_{\text {observed }}$ | $\mathrm{t}_{\text {table }}$ |  | Df |
| :---: | :---: | :---: | :---: | :---: |
|  |  | $5 \%$ | $1 \%$ |  |
| $\mathrm{Y}-\mathrm{X}$ | 4.913 | 2.042 | 2.750 | 38 |

The interpretation of the result of $\mathrm{t}_{\text {test }}$ using SPSS 22 Program, it was found the $t_{\text {observed }}$ was greater than the $\mathrm{t}_{\text {table }}$ at $1 \%$ and $5 \%$ the level significance or $2.042<4.913>2.750$. It could be interpreted based on the result of calculation that Ha stating that "the students taught by Module of Preposition of Time gain better writing achievement" was accepted and Ho stating "the students was taught by Module of Preposition of Time did not gain better writing achievement" was rejected. It meant that teaching writing by using Module of Preposition of Time increases the third semester students' writing scores at STAIN of Palangkaraya.

## B. Types Error of Using Preposition of Time

1. Identification Types Error of Using Preposition of Time in Pretest

Table. 4.10

## Types of Errors in Pretest

| N | CODE | TYPE OF ERROR | TOTAL |
| :---: | :---: | :---: | :---: |



Based on the table above the type of error frequency high to low is Addition: Simple Omission of Preposition by 53.46 \%, Others: by 31.10 \%, Selections of Incorrect Preposition by 14.96 \%, and Insertion of preposition: by 0.39 \%.
2. Identification Types Error of Using Preposition of Time in Post Test

Table. 4.11
Types of Errors in Post Test

| $\begin{aligned} & \mathrm{N} \\ & \mathrm{O} \end{aligned}$ | CODE | TYPE OF ERROR |  |  |  |  |  | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | OMISSITION OF PREPOSITION |  |  | $\begin{gathered} \text { INSERTION } \\ \text { OF } \\ \text { PREPOSITION } \end{gathered}$ | SELECTIONS OF <br> INCORRECT PREPOSITION | OTHERS |  |
|  |  | ON | IN | AT |  |  |  |  |
| 1 | APR | - | 1 | - | - | 1 | 5 | 7 |
| 2 | ARF | 1 | 1 | - | - | 1 | 3 | 6 |
| 3 | BLA | 1 | - | - | - | - | 4 | 5 |
| 4 | DBI | 1 | 5 | - | - | - | 4 | 10 |
| 5 | DWK | - | - | - | - | - | 4 | 4 |
| 6 | FJR | 2 | - | 2 | - | - | 3 | 7 |
| 7 | HDJ | - | - | - | - | - | 6 | 6 |
| 8 | ITN | 1 | 4 | 1 | - | - | 2 | 8 |
| 9 | KRW | 2 | 4 | - | - | - | 3 | 9 |
| 10 | MLN | 1 | - | - | - | - | 5 | 6 |
| 11 | NDR | - | - | - | - | - | 1 | 1 |
| 12 | NWT | 1 | 2 | - | - | - | 3 | 6 |
| 13 | PTR | 2 | - | - | 1 | - | 4 | 7 |
| 14 | RML | - | 3 | - | - | 1 | 4 | 8 |


| 15 | RMY | - | 5 | 1 | - | - | 5 | 11 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 16 | RNI | - | 2 | - | - | - | 4 | 6 |
| 17 | SSI | - | 8 | - | - | 1 | 5 | 14 |
| 18 | STI | - | - | 1 | - | - | 3 | 4 |
| 19 | TTS | - | - | - | - | 1 | - | 1 |
| 20 | WND | 1 | 6 | 2 | - | - | 5 | 14 |
|  | OTAL | 13 | 41 | 7 | 1 | 5 | 73 | 127 |
| PERCENTA GE |  | $\begin{gathered} 10.2 \\ \% \end{gathered}$ | $\begin{gathered} 32.2 \\ \% \end{gathered}$ | $\begin{aligned} & 5.5 \\ & \% \end{aligned}$ | 0.78\% | 3.93\% | 57.48\% | 100\% |
|  |  | 48.02\% |  |  |  |  |  |  |

Based on the table above the type of error frequency high to low is Addition: Simple Omission of Preposition by 48.02. \%, Others: by $57.48 \%$, Selections of Incorrect Preposition by $3.93 \%$, and Insertion of preposition: by $0.78 \%$.
3. The Calculation Types Errors in Pretest and Post Test

Table 4.12
The Calculation Types and Frequency of Problems in Using Preposition of Time in Pre Test and Post test

| Type of <br> Preposition | Type of <br> Problems | Pretest <br> Scores | Posttest <br> score | Percentage |
| :--- | :---: | :---: | :---: | :---: |
|  | F | F |  |  |
| Preposition <br> of Time | Omission of <br> Preposition | 136 | 61 | $49.25 \%$ |
|  | Insertion of <br> Preposition | 1 | 1 | $0.50 \%$ |


|  | Selection of <br> Incorrect <br> Preposition | 38 | 5 | $10.75 \%$ |
| :---: | :---: | :---: | :---: | :---: |
|  | - Others | 79 | 73 | $38.00 \%$ |
| TOTAL | $\sum \mathbf{4 0 0}$ |  | $\mathbf{1 0 0 \%}$ |  |

Based on the tables of errors types above, the highest types of error in using preposition of time made by students in pretest and pos test was Omission of Preposition with the frequency 197 (49.25\%). The second was Others with the frequency 152 (38.00\%), the third was selections of Incorrect Preposition with the frequency 43 (10.75\%) and the last was insertion of Preposition with the frequency 2 ( $0.50 \%$ )

The result of the table mentioned above has collected some important information from the student's writings. The study reveals errors that the students made in using preposition of time.
first, Omission of preposition, learners fail to use a preposition in a sentence where it is obligatory that's mean some students admitted that they are confused and got difficulties in applying the function preposition of time in a sentence because they thought that there are few prepositions which are different but have the same meaning with the frequency 197 (49.25\%).

For examples:
In: We will visit them on May, It should be, We will visit the in May
$\boldsymbol{A t}$ : I usually do the homework in night; it should be I usually do the homework at night/ at midnight

On: I got many gifts in my birthday, it should be, I got many gifts on my birthday

Second, Insertion of Preposition - learners add on preposition in a sentence where it is not needed with frequency $2(0.50 \%)$.

For example: I will go home on the next week,
Third, learners use the wrong preposition in a sentence. There are just a few instances of this error category, they are confused and got difficulty to find out the right preposition in a sentence with the frequency 43 (10.75\%). There are many prepositions and they are generally different but sometimes have the same meaning. For examples:

The Direction was making own sentence in using preposition of time
Student A: I live at G.obos Street
Student B: Udin puts the flowers on the table Student C: Diana studies in universities Indonesia

And the last, Others or Grammatical Errors, these errors side of three types of preposition of time that made by the students in writing, with frequency 152 (38.00\%).

For example:
My favorite TV program start at 10.00 , it should be, my favorite TV program starts at 10.00.

The Frequency and Percentage of Difficulties in using preposition of time in figure 4.6

Figure 4.6 the Frequency and Percentage of Difficulties That Faced by Students Made by Students


From those reasons, it could be concluded that the students do not fully understand on the use preposition of time. Although they had been taught about it before, they were still confused which one to use when making preposition of time in sentence.

## C. Solution Going Toward

The Writer used a Module of preposition of time as Solution gave tests then questioners to know students opinion in determining as good characteristics of module.

Table. 4.13

## Students Test Scores

| CODE | Test 1 | Test 2 | Test 3 | Avarege |
| :--- | :---: | :---: | :---: | :---: |
| ARF | 7 | 5 | 7 | 6,33 |
| BLA | 6 | 8 | 8 | 7,33 |
| DBI | 7 | 8 | 8 | 7,67 |
| DWK | 7 | 8 | 8 | 7,67 |
| FJR | 7 | 5 | 10 | 7,33 |
| HDJ | 7 | 6 | 10 | 7,67 |
| INT | 8 | 10 | 10 | 9,33 |
| KRW | 8 | 7 | 10 | 8,33 |
| MLN | 6 | 4 | 9 | 6,33 |
| NDR | 9 | $` 10$ | 10 | 9,50 |
| NWR | 8 | 9 | 6 | 7,67 |
| PTR | 9 | 10 | 10 | 9,67 |
| RML | 5 | 3 | 8 | 5,33 |
| RMY | 6 | 8 | 8 | 7,33 |
| RNI | 6 | 10 | 8 | 8,00 |
| SSI | 9 | 7 | 0 | 5,33 |
| STI | 7 | 10 | 10 | 9,00 |

| TTS | 9 | 10 | 10 | 9,67 |
| :--- | :---: | :---: | :---: | :---: |
| WND | 6 | 3 | 8 | 5,67 |

Based on the tables of Tests Scores above, there were 3 students got $<60$ and there were 17 students got $>60$.

Table 4.14

## Questioners Statistics

| CODE | $\begin{gathered} \hline \text { ITEM } \\ 1 \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { ITEM } \\ 2 \\ \hline \end{gathered}$ | $\begin{gathered} \text { ITEM } \\ 3 \\ \hline \end{gathered}$ | $\begin{gathered} \text { ITEM } \\ 4 \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { ITEM } \\ 5 \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| APR | 4 | 4 | 4 | 3 | 4 |
| ARF | 5 | 4 | 4 | 4 | 4 |
| BLA | 4 | 3 | 4 | 3 | 4 |
| DBI | 4 | 5 | 5 | 4 | 4 |
| DWK | 4 | 4 | 3 | 4 | 5 |
| FJR | 4 | 3 | 3 | 5 | 4 |
| HDJ | 3 | 4 | 4 | 3 | 3 |
| INT | 4 | 4 | 4 | 3 | 4 |
| KRW | 4 | 3 | 4 | 2 | 3 |
| MLN | 3 | 4 | 4 | 3 | 4 |
| NDR | 5 | 4 | 4 | 4 | 5 |
| NWR | 4 | 3 | 4 | 3 | 4 |
| PUTRI | 4 | 4 | 4 | 4 | 4 |
| RML | 4 | 4 | 3 | 4 | 4 |
| RMY | 3 | 4 | 3 | 4 | 4 |
| RNI | 4 | 4 | 4 | 4 | 3 |
| SSI | 3 | 4 | 3 | 2 | 3 |
| STI | 3 | 4 | 3 | 4 | 4 |
| TTS | 5 | 3 | 5 | 4 | 5 |
| WND | 3 | 4 | 3 | 4 | 3 |
| TOTAL SCORES | 77 | 76 | 75 | 71 | 78 |


| Percentage | $77 \%$ | $76 \%$ | $75 \%$ | $71 \%$ | $78 \%$ |
| :--- | :--- | :--- | :--- | :--- | :--- |

The percentage of collaborative categorization of data independence concerning student motivation, initiative and creativity, discipline and responsibility student responsibility for learning is:

- $81 \%-100 \%$ : very independent
- $61 \%-80 \%$ : independent
- $41 \%-60 \%$ : quite independently
- $21 \%-40 \%$ : less independent
- $0 \%-20 \%$ : very less independent

Based on data above, percentage for good characteristics of module was Independent or good.

## D. Discussions

The main purpose of the study is to describe the errors types of using preposition of time and the effect using module as solusition on writing made by third semester of STAIN Palangka Raya.

The finding of the research in classifying errors using preposition of time on, in and at faced by the third semester STAIN of Palangka Raya, the types of errors are made by students in using preposition of time were Omission of Preposition with the frequency 197 ( $49.25 \%$ ). The second was Others or Grammatical errors with the frequency 152 (38.00\%), the third was selections of

Incorrect Preposition with the frequency 43 (10.75\%) and the last was insertion of Preposition with the frequency 2 ( $0.50 \%$ )

Then The result of the data analyzes showed that the module in using preposition of time gave significance effect on the students' writing scores for the Third Semester of STAIN Palangka Raya. It was proved by the mean scores of the students who were taught using the module in using preposition of time was 65.87 and the students who were taught without using the module in using preposition of time was 44.00.

Those statistical findings were suitable with the theories as mentioned before

There are three types of errors in relation to the use of preposition

1. Omission of Preposition - learners fail to use a preposition in a sentence where it is obligatory. For example: Facebook was created at 2008 by a younger man
2. Insertion of Preposition - learners add on preposition in a sentence where it is not needed. For example: we will not regret on the next week
3. Selections of Incorrect Preposition- learners use the wrong preposition in a sentence. There are just a few instances of this error category. For example: we can do some business on Facebook on the free time or as a career ${ }^{1}$.

Module by Suryosubroto is printed teaching materials are designed to be studied independently by the participants learning. The module is also called the media for independent study because it has been equipped with instructions for self-study. That is, the reader can do without the presence of the teaching

[^0]and learning activities directly. Language, patterns, and the nature of other requirements contained in this module is arranged so that it may seem like a "language teacher" or a language teacher who is giving instruction to his students. So from that, the media is often called self-instructional materials. Teachers do not directly give lessons or teach something to the students with face-to-face, but enough with these modules. The module is a tool or learning tool containing materials, methods, limitations, and how to evaluate systematic designed and attractive to achieve expected competencies in accordance with the level of complexity ${ }^{2}$.

There are reasons why using Module preposition of time gives effect on the third semester of IAIN Palangka Raya. First, Self-instructional, Students are able to learn by themselves, do not depend on others. Second, Selfcontained, whole matter of learning from one unit of competency is studied contained in one complete module. Third, Stand-alone module developed is not dependent on any other media or should not be used together with other media. Fourth, Adaptive, adaptive power module should have a high level of development of science and technology. Fifth, User friendly, modules should also meet the rules of familiar friends / familiar with the wearer.

[^1]
[^0]:    ${ }^{1}$ Jha, A. K. op.cit. P. 49-57.

[^1]:    ${ }^{2}$ Suryosubroto.B. op.cit

