

CHAPTER III METHODOLOGY

This chapter explains about five subchapters, namely; research design, population and sample, data collection, data analysis, validity and reliability.

3.1 Research Design

This current study focused on describing learners' engagement with both teacher and peer written corrective feedback, exploring how learners engage with both teacher and peer written corrective feedback, comparing learners' engagement with teacher written corrective feedback and learners' engagement with peer written corrective feedback, examining the relationship between learners' engagement with written corrective feedback (both teacher and peer) and learners' writing ability. Therefore, in achieving these research purposes, this study used and gathered both quantitative and qualitative data. As stated by (Creswell, 2014) that collecting and integrating both quantitative and qualitative data by using distinct designs based on theoretical frameworks and philosophical assumptions may called as mix methods research. It was used to complete more understanding regarding the research problem.

In conducting mix method research, as part of quantitative research side, the researcher combined multiple research designs by using descriptive quantitative, comparative and correlation design. Descriptive quantitative design was used to collect data regarding learners' engagement with both teacher and peer written corrective feedback. Moreover, the researcher also used descriptive qualitative design to collect qualitative data by using interview and observation. It was used to complete understanding related to how learners' engage with both teacher and peer written correction feedback. Then, comparative design was used to answer research question whether there was significant difference between learners' engagement with teacher written corrective feedback and learners' engagement with peer written corrective feedback or not. Furthermore, in association with writing ability, the researcher used correlation design to examine whether there

was significant correlation between both teacher and peer written corrective feedback with writing ability or not. Moreover, to give more understanding related to research design of this current study, it can be seen on Figure 3.1.

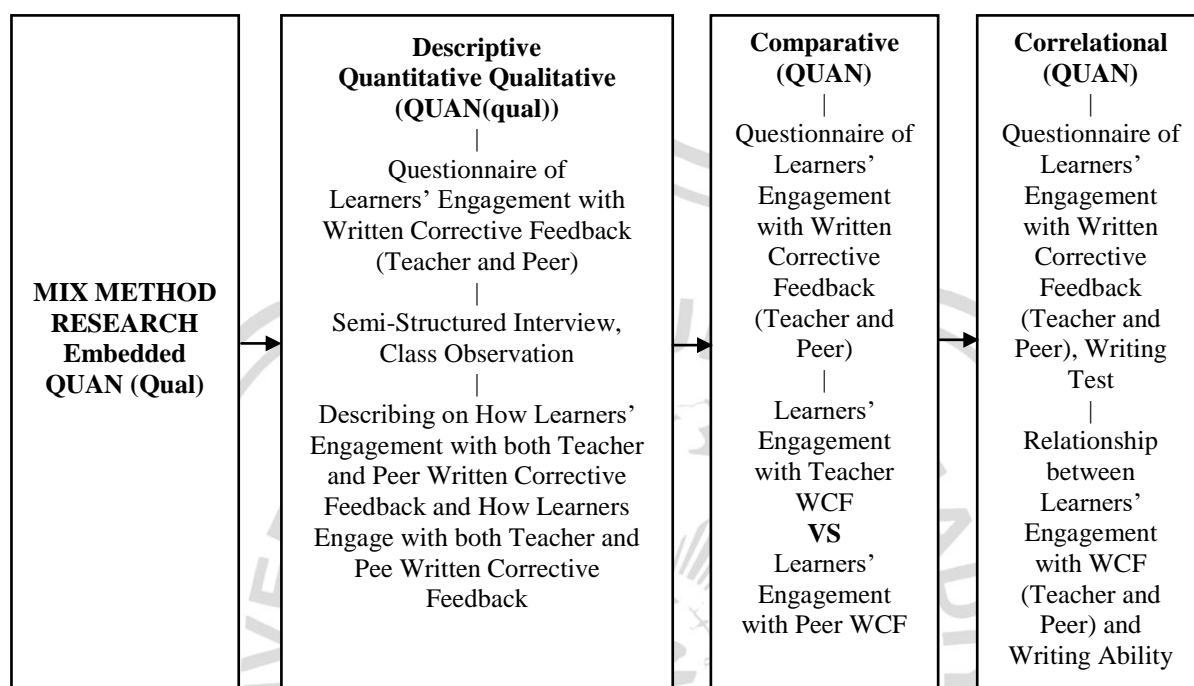


Figure 3.1. The Procedural Diagram Illustrating the Research Design

3.2 Participants

The participants of this study were students of senior high school at 11th grade in MA. Masyhadiyah Giri who were divided into three classes, namely; XI Science 1, XI Science 2 and XI Social. Each class had different number of students as stated on the Table 3.1.

Table 3.1. Participants of Study

Class	Number of Students
XI Science 1	29
XI Science 2	26
XI Social	33
Total	88

So, the total of participants based on the Table 3.1 above were 88 learners. This total number of participants (88 learners) was also showed the number of population and the sample. It was because the researcher used to total sampling to select research respondents. Total sampling was a technique for collecting the data which is the total number sample is similar with the total population (Sugiyono, 2007). It was used since the total of students at 11th grade of MA Masyhadiyah Giri were 88 learners and it was less than 100 in number, the researcher selected all the population became the sample of this study.

The age of learners were 16-17 years old. These learners have already join English subject in the first semester at 11th grade. So, now they were joining English subject on the beginning of second semester at 11th grade. They have learn English as compulsory subject to pass their study at 11th grade. Moreover, based on information from their English teacher, these participants had an average ability level in English, especially for writing. It was seen from the English teaching and learning process, including writing on the previous semester.

By looking to this background condition, it also made the researcher become interest and curious about the level of learners' engagement with both teacher and peer written corrective feedback and compare it. Then, also correlates it with learners' writing ability. By doing a study to this participants, it was expected can help to answer the questions: first, whether there was correlation between the level of learners' engagement with both teacher and peer written corrective feedback and their writing ability; second, whether there was significant difference between learners' engagement with teacher written corrective feedback and learners' engagement with peer written corrective feedback; third, how do learners' engage with both teacher and peer written corrective feedback.

3.3 Data Collection

In process of collecting data, the researcher needed the instruments and also does some systematic procedures. The instruments and the procedure of collecting data used in this research are set as follows:

3.3.1 Instruments

This current study used four kinds of instruments, namely; questionnaires, writing test, semi-structured interview and classroom observation.

1. Questionnaires

In this study, questionnaires was used to measure learners' engagement with teacher and peer written corrective feedback. Learners' engagement with written corrective feedback questionnaire which used in this study was adapted from (Tsao et al., 2021). It had five items which consist of one behavior engagement item, two cognitive engagement items, and two social engagement items. In addition, to assess affective learners' engagement, the researcher combined by adapting affective engagement questionnaire from (Y. Fan & Xu, 2020) which consist of four items. So, total items of learners' engagement questionnaire was nine items and covered four dimensions learners' engagement (i.e., behavior, cognitive, social and affective engagement).

First, behavior engagement concerns on learner uptake and revision operations toward written corrective feedback; second, cognitive engagement concerns on how learner process written corrective feedback (noticing and understanding linguistic errors); third, social engagement concerns on being interactive and initiating engagement when receive written corrective feedback; last, affective engagement concerns on learners' emotional reactions and attitudinal responses toward written corrective feedback. However, before the researcher distributes the questionnaires to the participants, the researcher analyses learners' responses toward the questionnaires to measure the validity and reability of the questionnaires.

In current study, there would be two kinds of questionnaires to measure both learners' engagement with teacher written corrective feedback and learners' engagement with peer written corrective feedback. Each of them consist of nine items. So, each learner filled eighteen items of questionnaire. The answer of each questionnaire item were given a 5-point Likert scale (i.e. strongly disagree=1, disagree=2, neutral=3, agree=4, strongly agree=5). So, the maximum score of each questionnaire was 45. Here, if learners' score of questionnaire below 22.5. It

means they possess low engagement with written corrective feedback, meanwhile if learners' score of questionnaire above 22.5, they belongs to high engagement with written corrective feedback. For more detail of learners' engagement with both teacher and peer written corrective feedback questionnaires can be seen on appendix 1 and 2.

2. Writing Test

In this current study, writing test was employed to get learners' score in writing. According to (Barrette, 2004) test was used to evaluate the progress about the materials which had been taught in class and to represent learners' ability. The writing test which conducted in this study related to personal letter topic. However, learners' writing test would be corrected by using both teacher and peer written corrective feedback. In this test, the learners were asked to write a composition related to personal letter text. Then, to give more understanding related to kind of writing test which conducted in this study, description of writing test could be seen on Table 3.2.

Table 3.2 Description of Writing Test

Questions	Indicators
Please Handwrite a personal letter text to your friend on one piece of paper (at least 200 words) about your daily activities	<ul style="list-style-type: none"> -Time for doing task is 30 minutes -The writing is expected to contain minimum of 200 words -The writing consist of the learners' experiences related to their daily activities -The writing should follow the text structure of personal letter and linguistic features

Furthermore, based on the data collection procedures (see Table 3.3), the implementation of writing test was on the meeting 1. Moreover, regarding the form of writing test which distributed to the learners and the content validity of these writing tests could be seen on appendix 7, 8 and 9. Then, the writing rubric as scoring assessment of learners' writing ability, the researcher used writing

rubric by (Brown, 2007) which could be seen on appendix 9. This writing rubric had been internationally standardized and measured some aspects of writing which consist of content, organization, grammar, vocabulary and mechanics.

3. Semi-Structured Interview

The interview was held last meeting (meeting 6). It was conducted post task and after the learners fill the questionnaires. The aim of the interview was to obtain answers which used to confirm and complete the questionnaire results. It was dig more regarding learners' experiences and learners' engagement in conducting teacher and peer written corrective feedback. In addition, the interview explored how do learners engage with both teacher and peer written corrective feedback. A semi-structured interview instrument was chosen because it allowed for more open discussions with the interviewees. The semi-structured interview consisted of 24 questions (see appendix 10). The questions concerned to learners' engagement with both teacher and peer written corrective feedback. The interview questions were used only as a guideline, and the learners were invited to express their ideas freely and openly to inform regarding their engagement with both teacher and peer written corrective feedback. Each learner was interviewed at her/his preferred time. The sample of interview participants were chosen as needed based on learners' questionnaires results. The interview process was audio-recorded. The audio-recordings were transcribed, analyzed and reported.

4. Classroom Observation

Another qualitative data instrument which used in this mix methods study was classroom observation. Classroom observations tend to be used for helping add and complete the findings of a study as these observations provide first-hand data about the learners' social and affective engagement (Svalberg, 2009). During conducting classroom observation, the researcher might collect information, especially regarding learners' engagement. In this current study, classroom observation was used to dig more on how learners engage with both teacher and peer written corrective feedback. The few minutes after receiving the written

corrective feedback showed the learner's first impressions. In this study, classroom observations were conducted during the process of teacher and peer written corrective feedback. It was carried out using observation checklist during teaching and learning process. Moreover, regarding the classroom observation checklist, it could be seen on appendix 12.

3.3.2 Procedure of Collecting Data

The researcher completed data collection through six meetings which consist of eight step procedures (see Table 3.3). In the first meeting, the researcher together with English teacher introduce this research into learners by explaining concept and significance of teacher and peer written corrective feedback (1st step). Not only that, in the first meeting also the teacher give materials related to personal letter topic. After that, the 2nd step was the researcher gave a writing test by asking learners to write a composition (see on appendix 8). It needed time for about 30 minutes.

Next, in the second meeting, the researcher gave explanations related to scoring writing rubric and also gave training to learners regarding how to implement written corrective feedback (3rd step). It was conducted by introducing some ways to evaluate a writing composition, which concerned on both content and form. For example by evaluating grammatical errors and structure text, etc. Then, also explained about editing symbols which could be used to indicate the error location. For example, underline or wavy line might indicate error, while strikeouts used to delete words in the composition. Moreover, to give clear understanding regarding implementation of written corrective feedback, the researcher practices how to apply some those strategies by evaluating a sample writing composition.

After that, the teacher do teacher written corrective feedback. The researcher also asked learners to discuss and provide written corrective feedback on their peers' compositions (4th step). Then, in the third meeting, learners revise their original writing draft based on peer WCF (5th step). In the fourth meeting, learners revise their original writing draft based on teacher WCF (6th step). Then,

the researcher asked learners to fill questionnaires for doing pilot study in order to check the validity and reliability of the questionnaires (7th step). In fifth meeting, learners were asked to fill the questionnaires of learners' engagement both teacher and peer written corrective feedback (8th step). In sixth meeting, the researcher conducted semi-structured interview based on the questionnaire results (9th step).

Table 3.3 Data Collection Procedures

Meeting	Procedures	Data Collected
Meeting 1	1 st step : Introduction and Explanations related to both Teacher and Peer Written Corrective Feedback, explanations related to personal letter materials 2 nd step : In-class writing test	Original Writing Draft
Meeting 2	3 rd step : Explanations related to scoring writing rubric, giving example how to correct writing sample 4 th step: Doing teacher WCF and peer WCF	Discussion Recording
Meeting 3	5 th step : Learners revise their original writing draft based on peer WCF Class observation	Revised Writing Draft (Peer WCF) Writing score 1 Researcher's checklist
Meeting 4	6 th step : Learners revise their original writing draft based on teacher WCF Class observation 7 th step : The researcher do pilot study to check the validity and reliability of the questionnaires	Revised Writing Draft (Teacher WCF) Writing score 2 Researcher's checklist Valid and reliable questionnaires
Meeting 5	8 th step : Learners fill the questionnaires	Questionnaires' score
Meeting 6	9 th step : Conducting semi-structured interview	Interview Results Data

3.4 Data Analysis

First, in determining the findings of first and second research questions about how was learners' engagement with both teacher and peer written corrective

feedback, the researcher conducted quantitative analysis of learners' questionnaire results by calculating descriptive statistics (i.e., mean, standard deviation, sum and range) of learners' engagement with teacher and peer written corrective feedback through SPSS software. Then, to support the result from quantitative analysis by using SPSS software, the researcher also conduct qualitative analysis by using semi-structured interview and classroom observation.

Second, to determine the findings of third and fourth research questions about the relationship between learners' engagement with both teacher and peer written corrective and writing ability, the researcher conducted quantitative analysis by using *Pearson Product Moment* formula. However, before conducted the correlation test, the researcher needed to check the normal distribution of the data. It was used to check whether a data set was in normal distribution or not. To conduct normality test, the researcher used *Kolmogorov-Smirnov* by using SPSS software.

After testing the normality, the researcher used *Pearson Product Moment* formulain SPSS software to check the correlation between learners' engagement with both teacher and peer written corrective and writing ability. According to (Ary et al., 2010) *Pearson Product Moment* formula was used when the data are continuous (interval and ratio). In this study, the form of data was interval and ratio. Interval data came from learners' engagement with teacher and peer written corrective feedback questionnaires while ratio data come from writing ability. In this study, the independent variable (X) was interval and the dependent variable (Y) was ratio. So, in determining the correlation, the researcher used *Pearson Product Moment* formula. As (Muijs, 2004) stated that if we want to look at the correlation between variables under continous data (both interval and ratio), we needed to use *Pearson Product Moment*.

Table 3.4 Summary of Bivariate Relationship by (Muijs, 2004)

		Independent		
		Nominal	Ordinal	Continuous
Dependent	Nominal	Cross tabulation + Chi square + Phi	Cross tabulation + Chi square + Phi	Two nominal groups: t-test
	Ordinal	Cross tabulation + Chi square + Phi	Cross tabulation + Chi square + Phi or Spearman's rho	Spearman's rho
	Continuous	T-test (2 groups) + Cohen's D	Spearman's rho	Pearson's r

In this study, there are two variables; they are score of learners' engagement with teacher and peer written corrective feedback questionnaires and score of writing ability. The correlation coefficients vary between -1 and $+1$. -1 indicates a perfect negative relationship, $+1$ indicates a perfect positive relationship and 0 indicates no relationship.

Based on (Muijs, 2004), the interpretation *Pearson Product Moment* value is:

- < 0.1 = Weak
- < 0.3 = Modest
- < 0.5 = Moderate
- < 0.8 = Strong
- ≥ 0.8 = Very Strong

Regarding the correlation hypothesis testing, there were two alternative hypotheses (H_a) and also two null hypotheses (H_0).

1. The first null and alternative hypothesis said:

a. $H_0 : \mu_A = \mu_B$

There was no significant correlation between learners' engagement with teacher written corrective feedback and learners' writing ability.

- b. $H_i : \mu_A \neq \mu_B$

There was significant correlation of learners' engagement with teacher written corrective feedback and learners' writing ability.

Based on *Pearson Product Moment* formula analysis, the significances of the correlation study on first hypothesis were:

- a. If the significance p value is more than 0,05, so H_0 is accepted

It meant that there was no significant correlation between learners' engagement with teacher written corrective feedback and learners' writing ability.

- b. If the significance p value is lower than 0,05, so H_1 is accepted

It meant that there was significant correlation between learners' engagement with teacher written corrective feedback and learners' writing ability.

2. The second null and alternative hypothesis said:

- a. $H_0 : \mu_A = \mu_B$

There was no significant correlation between learners' engagement with peer written corrective feedback and learners' writing ability.

- b. $H_i : \mu_A \neq \mu_B$

There was significant correlation of learners' engagement with peer written corrective feedback and learners' writing ability

Based on the *Pearson Product Moment* formula analysis, the significances of the correlation study on second hypothesis were:

- a. If the significance p value is more than 0,05, so H_0 is accepted

It meant that there was no significant correlation between learners' engagement with peer written corrective feedback and learners' writing ability.

- b. If the significance p value is lower than 0,05, so H_1 is accepted

It meant that there was significant correlation between learners' engagement with peer written corrective feedback and learners' writing ability.

Third, to determine the finding of fifth research question about the comparison between learners' engagement with teacher written corrective

feedback and learners' engagement with peer written corrective feedback, the researcher analyzed used *Paired Sample T-Test* formula. It was used to determine whether there was significant difference between learners' engagement with teacher written corrective feedback and learners' engagement with peer written corrective feedback or not. The researcher used *Paired Sample T-Test* because the data was normal distribution and belonged to paired data, in which the data came from two different treatments with same participants. Moreover, regarding the hypothesis testing of comparative study could be stated as below:

a. $H_0 : \mu_A = \mu_B$

There was no significant difference between learners' engagement with teacher written corrective feedback and learners' engagement with peer written corrective feedback

b. $H_1 : \mu_A \neq \mu_B$

There was significant difference between learners' engagement with teacher written corrective feedback and learners' engagement with peer written corrective feedback

Based on the *Paired Sample T-Test* analysis, the significances of the comparative study on the hypothesis were:

a. If the significance p value is more than 0,05, so H_0 is accepted

It meant that there was no significant difference between learners' engagement with teacher written corrective feedback and learners' engagement with peer written corrective feedback

b. If the significance p value is lower than 0,05, so H_1 is accepted

It meant that there was significant difference between learners' engagement with teacher written corrective feedback and learners' engagement with peer written corrective feedback

Last, in determining the findings of fifth research question about how do learners engage with teacher and peer written corrective feedback, the researcher analyzed the learners' interview results, classroom observation results and the

documents (learners' original and revised writing composition). In analyzing the interview results, the researcher did transcription of the interview recordings. Then, the researcher used a coding process to learners' answer during interview session. Next, in analyzing the results of classroom observations, the researcher examined the observation checklist of learners' engagement with teacher and peer written corrective feedback. Then, the researcher made a summary result based on the observation checklist to interpretate the results.

3.5 Validity and Reliability

This subchapter explains about the validity and reliability of questionnaires which used as one of the instrument in this reasearch. The researcher did pilot study in one of the class which became the participants of this study, that was social class (consists of 33 learners). It was used to measure validity and reliability of the questionnaires. There were two kinds of questionnaires, namely: learners' engagement with teacher written corrective feedback questionnaire and learners' engagement with peer written corrective feedback questionnaire. The detail validity and reliability of each questionnaire would be presented below:

3.5.1 Validity and Reliability of Learners' Engagement with Teacher Written Corrective Feedback Questionnaire

Table 3.5 Summary of Validity and Reliability of Learners' Engagement with Teacher Written Corrective Feedback Questionnaire

	N	%
Valid	33	100.0
Cases Excluded ^a	0	.0
Total	33	100.0

a. Listwise deletion based on all variables in the procedure.

Table 3.5 above showed that all items of learners' engagement with teacher written corrective feedback questionnaire were 100% reliable and valid. The detail validity and reliability of this questionnaire would be presented below:

item.8	Pearson Correlation	.073	-.019	-.006	.188	.391*	.214	.401*	1	.469**	.575**
	Sig. (2-tailed)	.688	.917	.973	.295	.025	.232	.021		.006	.000
	N	33	33	33	33	33	33	33	33	33	33
item.9	Pearson Correlation	.309	.300	.096	.118	.133	.228	.515**	.469**	1	.635**
	Sig. (2-tailed)	.080	.090	.595	.514	.462	.202	.002	.006		.000
	N	33	33	33	33	33	33	33	33	33	33
total	Pearson Correlation	.550**	.462**	.475**	.487**	.693**	.549**	.713**	.575**	.635**	1
	Sig. (2-tailed)	.001	.007	.005	.004	.000	.001	.000	.000	.000	.000
	N	33	33	33	33	33	33	33	33	33	33

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

Table 3.6 above showed that the significance value or p-value on all items is <0.05 . It means that all items in learners' engagement with teacher written corrective feedback questionnaire were valid. Next, the reliability of learners' engagement with teacher written corrective feedback questionnaire was presented below:

Table 3.7 Reliability of Learners' Engagement with Teacher Written Corrective Feedback Questionnaire

Cronbach's Alpha	N of Items
.742	9

Table 3.7 above showed that the *Cronbach's Alpha* of this questionnaire was 0.742. It was higher than 0.60. It means that all items of learners' engagement with teacher written corrective feedback questionnaire were reliable.

3.5.2 Validity and Reliability of Learners' Engagement with Peer Written Corrective Feedback Questionnaire

Table 3.8 Summary of Validity and Reliability of Learners' Engagement with Peer Written Corrective Feedback Questionnaire

		N	%
Cases	Valid	33	100.0
	Excluded ^a	0	.0
	Total	33	100.0

a. Listwise deletion based on all variables in the procedure.

Table 3.8 above showed that all items of learners' engagement with peer written corrective feedback questionnaire were 100% reliable and valid. The detail validity and reliability of this questionnaire would be presented below:

Table 3.9 Validity of Learners' Engagement with Peer Written Corrective Feedback Questionnaire

		item.1	item.2	item.3	item.4	item.5	item.6	item.7	item.8	item.9	total
item.1	Pearson Correlation	1	.420 ⁺	.211	.362 ⁺	.455 ^{**}	.185	.075	.407 ⁺	.125	.608 ^{**}
	Sig. (2-tailed)		.015	.240	.038	.008	.303	.680	.019	.488	.000
	N	33	33	33	33	33	33	33	33	33	33
item.2	Pearson Correlation	.420 ⁺	1	.368 ⁺	.081	.183	.334	.364 ⁺	.105	.127	.540 ^{**}
	Sig. (2-tailed)	.015		.035	.654	.307	.057	.037	.561	.483	.001
	N	33	33	33	33	33	33	33	33	33	33
item.3	Pearson Correlation	.211	.368 ⁺	1	.315	.212	.482 ^{**}	.425 ⁺	.203	.699 ^{**}	.734 ^{**}
	Sig. (2-tailed)	.240	.035		.074	.237	.004	.014	.256	.000	.000

	N	33	33	33	33	33	33	33	33	33	33
	Pearson Correlation	.362 [*]	.081	.315	1	.412 [*]	.384 [*]	.098	.329	.162	.581 ^{**}
item.4	Sig. (2-tailed)	.038	.654	.074		.017	.027	.589	.061	.368	.000
	N	33	33	33	33	33	33	33	33	33	33
	Pearson Correlation	.455 ^{**}	.183	.212	.412 [*]	1	.119	.069	.330	.183	.582 ^{**}
item.5	Sig. (2-tailed)	.008	.307	.237	.017		.509	.701	.060	.309	.000
	N	33	33	33	33	33	33	33	33	33	33
	Pearson Correlation	.185	.334	.482 ^{**}	.384 [*]	.119	1	.518 ^{**}	.229	.028	.598 ^{**}
item.6	Sig. (2-tailed)	.303	.057	.004	.027	.509		.002	.201	.879	.000
	N	33	33	33	33	33	33	33	33	33	33
	Pearson Correlation	.075	.364 [*]	.425 [*]	.098	.069	.518 ^{**}	1	.501 ^{**}	.243	.570 ^{**}
item.7	Sig. (2-tailed)	.680	.037	.014	.589	.701	.002		.003	.172	.001
	N	33	33	33	33	33	33	33	33	33	33
	Pearson Correlation	.407 [*]	.105	.203	.329	.330	.229	.501 ^{**}	1	.362 [*]	.625 ^{**}
item.8	Sig. (2-tailed)	.019	.561	.256	.061	.060	.201	.003		.039	.000
	N	33	33	33	33	33	33	33	33	33	33
	Pearson Correlation	.125	.127	.699 ^{**}	.162	.183	.028	.243	.362 [*]	1	.554 ^{**}
item.9	Sig. (2-tailed)	.488	.483	.000	.368	.309	.879	.172	.039		.001
	N	33	33	33	33	33	33	33	33	33	33
	Pearson Correlation	.608 ^{**}	.540 ^{**}	.734 ^{**}	.581 ^{**}	.582 ^{**}	.598 ^{**}	.570 ^{**}	.625 ^{**}	.554 ^{**}	1
total	Sig. (2-tailed)	.000	.001	.000	.000	.000	.000	.001	.000	.001	
	N	33	33	33	33	33	33	33	33	33	33

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

Table 3.9 above showed that the significance value or p-value on all items is <0.05 . It means that all items in learners' engagement with peer written corrective feedback questionnaire were valid. Next, the reliability of learners' engagement with peer written corrective feedback questionnaire was presented below:

Table 3.10 Reliability of Learners' Engagement with Peer Written Corrective Feedback Questionnaire

Cronbach's Alpha	N of Items
.772	9

Table 3.10 above showed that the *Cronbach's Alpha* of this questionnaire was 0.772. It was higher than 0.60. It means that all items of learners' engagement with peer written corrective feedback questionnaire were reliable.

