The Effect of Peer Assessment Application on Writing Anxiety and Writing Motivation of 6th Grade Students

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Abstract
This research, aims to investigate whether peer assessment application has an effect on writing anxiety and writing motivation of 6th grade students. It is one of the quantitative research designs. The study group of the research consists of 6th grade students attending a secondary school in Turkey. There are 35 students in the study, 17 are in the experimental group and 18 are in the control group. The data of the study were collected with "Writing Anxiety Scale" and the "Writing Motivation Scale". For six weeks, a peer assessment application was carried out and the texts written by the students were evaluated by their peers with a peer assessment form. In the analysis of the data, firstly t-test was performed for unrelated groups, and two-way ANOVA was used for complex measures. According to the findings obtained in the research, it was concluded that writing anxiety of the experimental group students, who have lessons with peer assessment method, decreased significantly compared to the control group students who have lessons with the current program. When the students’ writing motivations were examined, it was found that writing motivation scores of the experimental group students were higher than the control group students. In line with these findings, it can be stated that peer assessment application reduces students’ writing anxiety and increases their writing motivation. Based on the results obtained, some recommendations were made.

Keywords: Writing Anxiety, Writing Motivation, Peer Assessment, Writing Skill

Introduction: Writing Anxiety
The act of writing is a skill that reflects the mental and emotional world of the person and creates a communication environment by providing the opportunity to convey experiences and observations (Hidi & Boscolo, 2006). Writing, the foundations of which are laid with the process of starting school, can be defined as a language that is created for the purpose of transferring phenomena such as feelings, thoughts, dreams, observations, experiences, experiences, and impressions, which are a mental production of the individual (Topuzkanamış, 2014). At the same time, this skill has a structure that activates the high level thinking skills, affective and cognitive structures of the individual by playing an active role in both the personal and social life of the individual (Özdemir & Özbay, 2016).

It can be stated that the complex structure of writing, the inability to follow the feedback, correction and evaluation stages, the intensity experienced in the classrooms and the problems caused by the teacher are effective in the slower and insufficient progress of the writing skill compared to other skills (Karatay, 2013). The difficult process in the nature of writing creates boredom and reluctance in students and causes students to have further difficulties in writing (Kurudayoğlu & Karadağ, 2010). Because negative emotions such as fear and tension against writing can negatively affect writing skills. Cognitive and emotional domains such as attitude, motivation, anxiety, self-control, self-efficacy, and self-regulation are components that directly influence writing (Ahiskalı, 2020).
Negative situations and obstacles that arise in the writing process can cause students to experience anxiety especially towards writing. Although writing anxiety is generally based on the first writing experiences of students (Houp, 2009), careless evaluation of written texts is another factor that increases writing anxiety (Bruning & Horn 2000). When anxiety levels of students reach a certain step, they exhibit behaviors such as distraction, avoidance of writing, and delaying in the writing process (Aşılıoğlu & Özkan, 2013). Individuals who have writing anxiety complete the writing process with a difficult process in general. In particular, they are more concerned about how their writing products will be perceived. This anxiety can also be expressed as evaluation anxiety (Madigan, Linton & Johnson, 1996). It is generally known that anxiety has an effect that can take place in all stages of writing and negatively affect writing (Corbett-Whitter, 2004). Missing information in the writing area, not being able to receive a qualified writing education, fear of being disliked, and worrying about not being able to write well are some of the internal and external factors that cause writing anxiety.

Writing anxiety directly affects students’ desire, perspective and motivation for writing lessons (Martinez et al., 2011). Writing motivation means using and organizing one’s cognitive and emotional domains in order to carry out the writing process successfully. In other words, it makes the person ready for writing by directing the person to write (Nelson, 2007). Willing to write, having knowledge about the subject, and giving feedback right on the spot and on time are some of the factors that influence writing motivation (Hidi & Boscolo, 2006). Tiryaki (2012) states that guiding students in the writing process, adopting a process-based writing approach, creating a free environment in the selection of topics, and using different methods, strategies and techniques are effective in reducing writing anxiety caused by lack of motivation. Because, the lack of writing components can reduce students’ motivation to write and cause students to avoid writing. For this reason, it is thought that raising awareness about writing in students by giving quality writing education will positively influence writing motivation (Wang & Liu, 2008).

The individual’s purpose to influence, activate and inform the reader by conveying something increases the motivation to write. Via the act of writing the person enters the process of reaching and sharing with others, and reaches both immediate environment and readers. This situation also creates an evaluation process. Because the importance of teacher and peer assessment is very important for increasing the quality of the written text (Nelson, 2007). Hidi & Boscolo (2006) states that lack of feedback during the writing process affects motivation negatively. For this reason, constructive and guiding feedback given to students during the writing process motivates students by reinforcing their sense of competence and allows a qualified writing product to emerge.

Peer assessment is one of the alternative assessment practices that develop students’ critical thinking and creativity skills. While students evaluate each other’s writing work, they also improve their own learning (Chong, Goff & Dej, 2012). In general, peer assessment can be defined as the evaluation of the work done by the students within the framework of certain criteria by their friends. At the same time, peer assessment makes learning permanent by improving students’ cognitive and metacognitive skills (Topping, 2009). Thus, students participate in the evaluation process to come to a conclusion about the quality of their peers’ written products. At the same time, they have information about their own performance while performing the assessment (Bostock, 2001). Peer assessment has several strengths stated by researchers, such as motivating students, providing active participation and providing learning responsibility (Sluijsmans, Dochy, & Moerkerke, 1999). With peer assessment, students can exhibit many behaviors such as performing the act of writing more consciously, reflecting what they have done, and being more active and self-confident in the learning process. For this reason, it is very important that the evaluation criteria are clear and understandable in the peer assessment process, in order for the process to be successful. In addition to its advantages, peer assessment has some limitations. Some of the students state that they do not accept the assessment made by their peers suggesting their peers do not have sufficient knowledge and skills.
Regarding assessment, and also a biased assessment can be made by them (Yurdabakan, 2012). It was observed that students avoid peer assessment due to situations such as lack of self-confidence, anxious approach to peer assessment and friendship relations (Sluijsmans et al., 2003; Sluijsmans, 2002). Worrying about the assessment of their writing by the students and the thought of revealing the mistakes made by the students lead the students to writing anxiety.

In recent years, it is seen that the interest in peer assessment practices in teaching processes has increased. The use of peer assessment at all age groups and at all levels has been effective in realizing this increase (Scruggs & Mastropieri, 1998). In addition, the use of peer assessment online via distance education increases the prevalence of peer assessment (Tseng & Tsai, 2007, Yang & Tsai, 2010). There is information in the literature that peer assessment is effective in learning processes, in the development of writing skills. It is thought that it especially reduces students’ writing anxiety and increases their motivation accordingly (Bushell, 2006). There are studies in the literature confirming this knowledge that peer assessment reduces students’ writing anxiety (Leki, 1990, Hansen & Liu, 2005, Çınar, 2014, Kurt & Atay, 2007, Kaynak, 2017). In addition, there are studies regarding peer assessment (Akılli, 2007; Bozkurt & Demir, 2013; Çırak, 2015; Hanrahan & Isaacs, 2001; Lindblom & Pihlajamaski, 2006; Sahin, 2008; Taşdemir, 2014); Yurdabakan & Cihanoglu, 2009). In this research, it was aimed to examine whether peer assessment method has an effect on students’ writing anxiety and writing motivation. For these purposes, answers were searched to the following questions.

- Is there a significant difference between writing anxiety scale scores of two groups?
- Is there a significant difference between writing motivation scale scores of two groups?

**Method**

**Research Model**

The research was designed with pre-test and post-test control groups quasi-experimental design. In this design, whereas the researcher makes a special intervention to one of the groups while performing procedure, does not intervene to the other group and makes evaluations by determining the scores that the groups received as a result of the procedure. In addition, in this design, subjects are selected purposefully without being random (Creswell, 2017).

**Study Group**

The study group of the research consists of 6th grade students of a secondary school in the city of Van in Turkey. There were 35 students in the study; 17 were in the experimental group and 18 were in the control group. In the study, an experimental group and a control group were formed among randomly selected students from two classes by random method. While the first four weeks of the research was performed with face-to-face training, the last two weeks was performed via Zoom meetings within the scope of distance education due to the pandemic.

**Application Process**

In this study, which aims to measure the writing anxiety and motivation of 6th grade students via peer assessment method, students were first informed about the process by the practice teacher.

| 1.week | Pre Test | Writing anxiety scale |
| 2.week | Compliance training regarding peer assessment process |
| 3.week | Evaluation via text writing and peer assessment form |
| 4.week | Evaluation via text writing and peer assessment form |
| 5.week | Evaluation via text writing and peer assessment form |
| 6.week | Post Test | Writing anxiety scale |
| 7.week | Writing motivation scale |
the teacher had the students write an article about the subject they wanted without subject limitation, and then these articles were distributed randomly in the class. The students assessed the written texts of their peers via the form and gave required feedback. The session was ended by rearranging the texts in line with the feedback. In the 4th, 5th and 6th sessions, the teaching process was continued in this way and the application process was completed. The peer assessment form, which was developed by Dölek (2016), was used in the research. Before the experimental process regarding the “Peer Assessment Form”, the students were informed about how to evaluate the form and it was stated that the students must assess the written texts objectively.

Data Gathering Tools
The data of the study was gathered with the “Writing Anxiety Scale” and the “Writing Motivation Scale”.

Writing Anxiety Scale
“Writing Anxiety Scale, which was developed by Deniz and Demir (2019) in order to measure secondary school students’ writing anxiety, consists of 26 items and 3 factors in 5 likert type. The factors of the scale are writing process, avoidance and writing pleasure, respectively. The KMO value of the scale, for which exploratory factor analysis was performed, was found as .89 and Bartlett chi-square value was .01 and the scale was developed. Test-retest procedure was applied to test the reliability of the scale and the reliability coefficient was found .88.

Writing Motivation Scale
“Writing Motivation Scale”, which was developed by Deniz and Demir (2020) in order to measure secondary school students’ motivation for writing, consists of 13 items and a single factor in 5 likert type. The internal consistency coefficient obtained by test-retest process was .85 and the KMO value for the EFA was .94. The Cronbach Alpha reliability coefficient of the scale was determined as .89. The Spearman-Brown reliability coefficient of the scale was found .86, and the Guttman Split-Half reliability coefficient was .85. It was concluded that these values were similar to Cronbach’s Alpha reliability coefficient, and the scale was highly reliable.

Analysis of Data
Data analysis of the research was conducted using SPSS 20 statistical package program. In the analysis of the data, firstly t-test was performed for unrelated groups, then two-way ANOVA was used for complex measures. In this analysis method, the comparison of measurement results of two groups is the measurement for unrelated samples, on the other hand pre-test and then post-test are given to experimental or control group, and (repeated) measurement is made for related samples (Can, 2019). In order to carry out this analysis, the normality assumptions of the groups must be provided. Accordingly, the normality assumptions of the scale were calculated by applying the Shapiro-Wilk test. As a result of this calculation, it was determined that pre-test and post-test results of writing anxiety scale and writing motivation scale of each group were higher than p>0.05, and it was observed that the test corresponds average assumptions. Besides, for the homogeneity of the variances of this test, Levene’s test was performed and it was determined that pre-test and post-test results of the scales were higher than p>0.05. This result indicates the feasibility of the test.

Findings and Comments
In this part, findings and comments regarding the research questions are presented under sub-headings.

Findings and Comments Regarding the First Sub-Problem of the Study
In this section, the t-test for the comparison of the pre-test results of the groups; Two-way ANOVA analyzes were used to compare the pre-test and post-test scores. The t-test results of the pre-test scores of the students in the experimental and control groups from the writing anxiety scale are given in the table below.
Table 1: T-test Results Regarding the Writing Anxiety Scale Pre-test Scores of the Experimental and Control Groups

<table>
<thead>
<tr>
<th>Groups</th>
<th>n</th>
<th>X̅</th>
<th>sd</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>17</td>
<td>58,24</td>
<td>3,212</td>
<td>33</td>
<td>.994</td>
<td>.327</td>
</tr>
<tr>
<td>Control</td>
<td>18</td>
<td>57,06</td>
<td>3,765</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Looking at Table 2, “there is no significant difference” between the writing anxiety scale pretest scores of the experimental and control groups \[t(33)= .994(p=.327)\]. According to this finding, the writing anxiety of the students in the experimental and control groups can be expressed close to each other before the application.

Table 2: The Pre-test and Post-test Results Regarding the Scores that Students Obtained from Writing Anxiety Scale

<table>
<thead>
<tr>
<th>Groups</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>X̅</td>
<td>sd</td>
</tr>
<tr>
<td>Experimental</td>
<td>17</td>
<td>58.24</td>
</tr>
<tr>
<td>Control</td>
<td>18</td>
<td>57.06</td>
</tr>
</tbody>
</table>

According to Table 1, it was determined that the average scores of the students in the experimental group obtained from writing anxiety scale were \((X= 58.24)\) in the pre-test and \((X= 52.41)\) in post-test; the control group students’ scores were \((X= 57.06)\) in pre-test and \((X= 55.78)\) post-test. In this direction, it is seen that the writing anxiety scores of the experimental group students who took the course with the peer assessment method were lower in the post-test than the control group students who took the course with the current program.

Table 3: ANOVA Results Indicating the Comparison of Writing Anxiety Scale Pre-test and Post-test Scores of Students from Experimental and Control Group

<table>
<thead>
<tr>
<th>Resource</th>
<th>Sum of Squares (SS)</th>
<th>df</th>
<th>Mean Square (MS)</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement (Pre-test Post-test)</td>
<td>220,445</td>
<td>1</td>
<td>220,445</td>
<td>28,636</td>
<td>.000</td>
</tr>
<tr>
<td>Measurement*Group</td>
<td>90,331</td>
<td>1</td>
<td>90,331</td>
<td>11,734</td>
<td>.002</td>
</tr>
<tr>
<td>Error</td>
<td>254,041</td>
<td>33</td>
<td>7,698</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to Table 3, significant difference was observed between pre-test and post-test average writing anxiety scores of the experimental and control groups \[F(1-33) =28,636; p<0,05\]. Within the scope of this finding, it can be said that writing anxiety scores of the students vary according to the applied curriculum, without making any group distinctions. In addition, it is seen that the effect of the group on the measurement is significant in practice \[F(1-33) =11,734; p<0,05\].

The change in pre-test and post-test scores of writing anxiety scale is indicated in Graph 1.

According to Graph 1, it is seen that the scores that experimental and control groups obtained from pre-test were close to each other; the scores obtained from post-test decreased in both groups, however...
there was a serious decrease in the experimental group. From this view point, it can be expressed that writing anxiety of experimental group students, who have lessons via peer assessment method has decreased significantly compared to control group students who have lessons via current program.

Findings and Comments Regarding the Second Sub-Problem of the Study

In this part, for the comparison of groups’ pre-test results t-test and for the comparison of pre-test and post-test scores two-way ANOVA analyzes are included.

Table 4 involves T-test results of pre-test scores that students’ from experimental and control group obtained from writing motivation scale.

<table>
<thead>
<tr>
<th>Groups</th>
<th>n</th>
<th>X̅</th>
<th>.sd</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>17</td>
<td>53,65</td>
<td>4,401</td>
<td>33</td>
<td>.505</td>
<td>.617</td>
</tr>
<tr>
<td>Control</td>
<td>18</td>
<td>52,94</td>
<td>3,827</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Looking at Table 4, no significant difference was found between the writing motivation scale pretest scores of the experimental and control groups \[t(33)= .505 \text{ (p=} .617\)]. It can be stated that the writing motivations of the experimental and control group students before the application were close to each other.

Table 5: Results Regarding Pre-test and Post-test Scores that Students obtained from Writing Motivation Scale

<table>
<thead>
<tr>
<th>Groups</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>X̅</td>
</tr>
<tr>
<td>Experimental</td>
<td>17</td>
<td>53,65</td>
</tr>
<tr>
<td>Control</td>
<td>18</td>
<td>52,94</td>
</tr>
</tbody>
</table>

According to Table 5, it was determined that average scores that students in experimental group obtained from writing motivation scale were \(\bar{X} = 53,65\) in pre-test and \(\bar{X} = 57,88\) in post-test; control group students’ scores were \(\bar{X} = 52,94\) in pre-test and \(\bar{X} = 52,72\) in post-test.

Table 6 ANOVA results indicating the comparison of pre-test and post-test scores of experimental and control group students obtained from writing motivation scale

<table>
<thead>
<tr>
<th>Resource</th>
<th>Sum of Squares (SS)</th>
<th>df</th>
<th>Mean Square (MS)</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement (Pre-test Post-test)</td>
<td>70,401</td>
<td>1</td>
<td>70,401</td>
<td>6,892</td>
<td>.013</td>
</tr>
<tr>
<td>Measurement*Group</td>
<td>86,858</td>
<td>1</td>
<td>86,858</td>
<td>8,503</td>
<td>.006</td>
</tr>
<tr>
<td>Error</td>
<td>337,085</td>
<td>33</td>
<td>10,215</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When Table 6 is observed, a significant difference is determined between pre-test and post-test writing motivation score averages of experimental and control groups \[F(1-33)= 6,892; p<0,05\]. In addition, it was determined that the effect of group on measurement was significant in practice \[F(1-33)= 8,503; p<0,05\].
According to Graph 2, it is observed that scores of two groups obtained from pre-test were close to each other; post-test scores increased in both groups, but there was a serious increase in experimental group.

Discussion and Conclusion

It was concluded that peer assessment application reduced students’ writing anxiety in this study, in which peer assessment application effect on writing anxiety and motivation of 6th grade students were examined. Considering this result, it is suggested that the writing anxiety of experimental group students, who have lessons with peer assessment method, decreased significantly compared to control group students who have lessons with the current program. When the writing motivations of 6th grade students were examined, it was found that experimental group students’ writing motivation scores were higher than control group. In line with these results, it can be stated that peer assessment application increased students’ writing motivation.

Researches investigating the effect of peer assessment can be found in the literature. Karabay-Koçyiğit and Gündüz-Sefer (2004) aimed to improve the writing skills of students with feedbacks in their study, which aimed to examine the texts of these stories with peer and teacher assessment by having students write six stories. In the study, they found that students’ thinking skills improved, they were able to follow their individual development and gained different perspectives. In their study, Cheng and Warren (2005) measured students’ verbal and written expression skills via peer assessment and concluded that students developed positive attitudes towards peer assessment. In Hamzadayı and Çetinkaya’s (2011) research, in which it was aimed to improve students’ writing processes via peer assessment activities, it was suggested that peer assessment application is an effective application that can be used in teaching processes and in the development of written expression skills. Tudor (1996) and Topping (2000) stated that peer assessment is effective in students’ written expression practices. In Karateke-Bayat and Gün’s (2020) research, which was conducted considering the issue of teaching Turkish as a foreign language, it was suggested that the use of peer assessment in the evaluation of written products reduces students’ writing anxiety. Kurt and Atay (2007) stated that peer assessment reduces students’ writing anxiety and this application increases students’ self-confidence. In Yiğit and Kirmızılı’s study (2015), in which teachers’ opinions about peer assessment were examined, it was observed that the great majority of teachers suggested that peer assessment improves students’ critical thinking and decision-making skills. Hansen and Liu, (2005) state that feedback, which is in the natural process of peer assessment, improves students’ writing skills and increases their knowledge about writing process.

Unlike these results, there are studies indicating that peer assessment applications cause anxiety and distress in students. Teacher and peer assessment applications can sometimes cause a sense of guilt in students along with the mistakes made by them. For this reason, in some of the studies it was observed that students, who are afraid and who do not want to be laughed at, avoid the act of writing (Bargiel & Bargiel, 2009). For this reason, in some studies, students stated that they preferred teacher assessment to peer assessment because they found teacher assessment more reliable (Kara, 2013). In Koç’s (2011) research regarding undergraduate students, it was found that peer assessment creates an environment of pressure among students and that an objective assessment cannot be made by students. Some recommendations were made in this study, in which the effect of peer assessment on students’ writing anxiety and motivation was examined.

• In order for writing process to be realized in line with desired aim and purpose, researches can be conducted to determine the factors that cause writing anxiety.
• The feedback given during writing process directly affects writing motivation and anxiety of students. Therefore, alternative assessment approaches can be preferred.
• Studies can be carried out regarding the effect of peer assessment on other language skills.

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