

The Effect of Using Facebook in Writing Education on Writing Achievement, Attitude, Anxiety and Self-efficacy Perception

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Abstract The objective of the present study was to investigate the effect of Facebook use on writing achievement, writing attitude, writing anxiety and writing self-efficacy of the students in the written expression course. In the study, pre-test post-test quasi-experimental design with study and control groups was used. The experimental group included 96 students attending Psychological Counseling and Guidance Department in the Faculty of Education in a state university located in western Turkey during 2017-2018 academic year fall semester. In the study, the written expression course was instructed with written homework assignments in the control group and by sharing the written assignments on Facebook in the experimental group. The study findings demonstrated that Facebook use produced better results in terms of writing achievements and attitudes when compared to the conventional method, however the impact was not significant in terms of writing self-efficacy and writing anxiety.

Keywords Facebook, Writing Achievement, Writing Attitude, Writing Anxiety, Writing Self-efficacy Perception, Turkish Language Education

1. Introduction

The writing skill, which is among the expressive language skills, is related to social functions where individuals express their feelings, knowledge and ideas to each other. Technological advances improved communications opportunities for individuals and instruments such as social media, smart phones, etc. made writing an increasingly prominent skill in daily life. Successful use of this skill would greatly contribute to the reduction of potential communications problems. For

writing skill achievements, in-classroom education on writing are quite important. Graham and Perin [1] argued that writing activities in school environment have two complementary roles: the first is the use of strategies such as planning, assessment and reviewing the text in order to reach various goals, to write a report or explain a premise with evidence, and the second is to allow the students to acquire in depth and broad knowledge.

In written expression course, the fact that students possess all cognitive knowledge does not necessarily demonstrate that they developed active and accurate writing skills. Because, learning is a process that requires the acquisition of affective skills as well as cognitive skills. In this process, students' attitudes towards written expression, self-efficacy perceptions and writing anxiety can be considered as the factors that could affect achievement. In writing courses, the positive or negative emotional reactions of the students to writing skill form their writing attitudes. Attitude is not a directly observable trait, but it includes hypotheses that are derived from one's observable behavior. Thus, attitude is not considered as a behavior but a disposition for behavior. In order to decide on the behavior that is resistance to change, the reaction of the individual to that object should be observed in different environments [2]. Arıcı [3] stated that students were not very happy when they were asked to write an essay independent of their level of education, which could suggest that students usually do not like writing activities. This finding could reflect students' writing attitudes and negative in general. Karatay [4] stated that the negative experiences of the students in writing and inadequate feedback they receive in these activities lead to a negative attitude against writing in time.

Writing self-efficacy is another concept in the affective dimension of the learning, similar to writing attitude. Bandura [5], who advocated the social cognitive theory, defined the self-efficacy as a judgment about one's own

ability to organize the activities necessary to conduct and succeed in a certain performance. Bandura stated that self-efficacy belief had four resources; direct experiences, indirect experiences, verbal persuasion and emotional state. Based on this taxonomy, written expression self-efficacy could be defined as the total of the students' previous experiences about their own writing skills, indirect experiences such as the influence of the achievements of their friends or others in written expression, verbal persuasion of their teachers, friends and parents, and the students' perceptions about their writing skills due to their emotional state.

Another emotional state that could have an influence on written expression skills of the students is their anxiety levels. Anxiety is a force that improves and affects personality and a reaction that includes fear [6]. Writing anxiety is a condition unique to individual distinctions of individuals that demonstrate general predispositions to writing such as their approach or avoidance in writing [7]. Karakaya and Ulper [8] stated that determination of writing anxiety that determines the production of effective texts by the students and the factors that lead to anxiety was necessary, and thus it would be possible to assist teachers to produce competent texts by the determination of the emotional writing handicaps they experience in writing process. Seven [9] noted that according to the Yerkes-Dobson Curve, low anxiety leads to a low performance level, increasing anxiety leads to an increase in performance, and high anxiety leads to performance impairment. Acquisition of effective writing skills by the students depends on learning cognitive information and supporting the emotional dimensions of the students. A student who has a positive writing attitude, a high degree of writing self-efficacy, and an adequate level of writing anxiety and learns the information about writing education cognitively, could acquire active writing skills. Thus, in the present study, whether the written expression course instructed via Facebook for 14 weeks had an effect on the writing attitude, self-efficacy, anxiety and achievement was investigated.

1.1. Use of Facebook in Education Process

The impact of rapid changes in information and communication technologies on the learning processes including the education is an undeniable fact. Wang [10] stated that from the simplest to the most complex information and technology devices (e.g., internet, computers, and multimedia tools) help students improve their language skills and fulfill their communications needs. Wu [11] stated that Facebook includes three important educational values as an educational instrument and listed these values as follows: First, it provides social support for the students, secondly it provides the same via the interaction with the teachers, and it also guides the function of the relationship among the related individuals by

improving the student's self-image. Several studies reported that Facebook was used as a teaching tool in higher education. Salaway and Caruso [12] found that 49.7% of university students used Facebook to communicate with other students about their courses. Online instruction does not provide only an effective learning for the students, but also contributes to the knowledge content of the course instructed in college [13; 14]. Oğuz [15] stated that the development of oral and written expression skills of pre-service teachers could be considered an important investment to improve the quality of education. In order to improve the quality of education, it is important to keep up with developing technologies and to use contemporary educational methods instead of conventional methods.

There are no studies in the literature on the benefits of Facebook use in written expression course for the course-related communications among the students, sharing information about the course content, and sharing the texts they write in the final stage of process-based writing. The main research problem was to determine the degree of the effects of Facebook use on writing attitude, anxiety and self-efficacy perception, which are effective on written expression achievement.

1.2. Literature Review

It was observed that there are several studies on the writings of college students. Arıcı [16] identified the writing errors of university students and found that a great majority (68.6%) of the students misspelled words, a significant part (37.3%) made planning errors, about one third (31.3%) experienced problems in the determination of the main and supplementary themes, one in every four students (27.7%) made phrasal errors and had handwriting problems, also, one in every four students (24.1%) made punctuation errors, one in every five students (19.2%) did not adequately comply with the composition order, and some (7.2%) assigned wrong titles to their essays. In a study conducted with Turkish language teaching department students, Ungan and Arıcı [17] found that students wrote an average of 23 sentences on an essay paper and about 1 of these sentences was incorrect. Bağcı [18] analyzed the attitudes of Turkish language pre-service teachers towards written expression and written expression courses and found that their attitudes towards written expression and written expression courses were generally positive, they complained about their incompetency in written expression skills and they believed that they would suffer due to this incompetency in their professional lives. Uygun, Aktürkoğlu and Dedeoğlu [19] investigated the effect of self-organization skill development instruction on written expression and writing self-organization skill and attitude. The study results demonstrated that there was a statistically significant difference between written expression, writing self-regulation skills and attitude gains of the study and control groups favoring the experimental

group. Oğuz [15] investigated the self-efficacy perceptions of pre-service teachers' oral and written expression skills and found that more than half of pre-service teachers' verbal expression skills and half of pre-service teachers' written expression skills were inadequate. Pre-service teachers stated that their written expression skills were better than their oral expression skills, and the reasons for their inadequacy were stated as not reading books, lack of practice, lack of experience and certain personal traits. İşeri and Ünal [20] investigated the writing anxiety of Turkish language pre-service teachers based on various variables and found that their anxiety levels were low. It was determined that there was no significant difference between pre-service teachers' writing anxiety based on gender, grade level, residence, monthly income, residence before attending college, and the number of books read in one semester, however there was a significant difference based on the writing status. As the writing frequency of students increased, writing anxiety decreased and as writing frequency decreased, writing anxiety increased. Karakaya and Ülper [8] developed a scale to determine the pre-service teachers' writing anxiety levels and analyzed the pre-service teachers' writing anxiety levels based on several variables. The study findings demonstrated there were no significant differences between the pre-service teachers' writing anxiety based on gender and their parents' education levels, furthermore, important predictors of pre-service teachers' writing anxiety were writing studies, writing activities, time spent watching TV per day, and gender. These variables explained only 9.5% of the total variance in anxiety. Sevim and Özdemir Erem [21] investigated the effects of creative drama techniques on students' writing anxiety. In the study, it was found that creative drama technique had a positive impact on students' writing anxiety levels.

Review of the studies on Facebook revealed the following significant studies: Voivonta and Avraamidou [22] investigated the educational value of Facebook in higher education, and stated that Facebook could be a valuable pedagogical instrument for students to advance their learning. In a study conducted on digital learning achievements in higher education and Facebook tools, Davidovitch and Belichenko [23] found that Facebook groups were used to share learning material, create a dialogue and a fast and positive social climate among group members. Furthermore, it was revealed that Facebook groups had positive effect on student satisfaction and achievement in academic courses. Chugh and Ruhi [24] analyzed the role Facebook played as an educational tool in higher education in a literature review and stated that Facebook use had a multitude of benefits in learning and teaching such as increased teacher-student, student-student interaction, ease of learning, performance improvement and high participation. Al-Dheleai and Tasir [25] found that students had positive views on Facebook use for online interaction with their peers, there was a correlation

between students' perceived online interaction on Facebook and their academic performances, and Facebook was the most popular social network tool among college students. Aydın [26] reported that Turkish students learning English as a foreign language perceived Facebook as a communication, interaction, socialization, language learning and cultural interaction tool. Ellefsen [27] conducted a focus group study with higher education students and found that all participants in the focus groups had positive views on Facebook use. Kanthawongs, Kanthawongs and Chitcharoen [28] found that evaluations about Facebook had a positive effect on education, and relational commitment to perceived satisfaction with Facebook explained 53.20% of total variance, and the authors suggested the educators, university administrators and Facebook developers to implement the study findings in the instructional environment. In a Project-based study conducted on social networks, Maguth, Yamaguchi and Elliott [29] stated that students successfully used the technology to access and analyze the information and utilize it in communications and in producing information and presenting study findings. Dela Rosa and Vital [30] developed an instructional model for the learners of English as a second language (ESL) that utilized Facebook in the instruction of literature review and analysis work in argumentative text writing. In conclusion, they found that Facebook was a potential teaching and learning tool in the instruction of argumentative writing. According to Aydın [31], studies on Facebook reported that it had a positive impact on student participation and in-classroom interventions, and stated there was a serious lack of studies on the use of Facebook as an educational resource. It was considered that it was necessary to conduct the present study to fill the above-mentioned gap in the literature.

1.3. The Objective of the Study

The objective of the current study was to analyze the effect of Facebook use on students' writing expression achievements, writing attitude, anxiety and self-efficacy in higher education written expression course. Based on the main study objective, the following questions were determined as the sub-problems:

1. Is there a significant difference between the mean pretest and posttest written expression scores of the students in the experimental group?
2. Is there a significant difference between the mean pretest and posttest written expression scores of the students in the control group?
3. Is there a significant difference between the mean pretest and posttest "Turkish I Writing Expression Course Attitude Scale" scores of the students in the experimental group?
4. Is there a significant difference between the mean pretest and posttest "Turkish I Writing Expression Course Attitude Scale" scores of the students in the control group?

5. Is there a significant difference between the mean pretest and posttest "Writing Anxiety Scale" scores of the students in the experimental group?
6. Is there a significant difference between the mean pretest and posttest "Writing Anxiety Scale" scores of the students in the control group?
7. Is there a significant difference between the mean pretest and posttest "Writing Expression Self-Efficacy Scale" scores of the students in the experimental group?
8. Is there a significant difference between the mean pretest and posttest "Writing Expression Self-Efficacy Scale" scores of the students in the control group?

groups was emphasized. For this purpose, to establish the pre-intervention similarity between the study and control groups, which is a prerequisite of empirical studies, and since whether there was a significant difference between writing achievement, writing self-efficacy, writing anxiety and writing attitude pre-test scores and the normal distribution of the data were determined with both skewness and kurtosis values and the Shapiro-Wilks test, the data were tested by independent samples t test and the results are presented in Table 1.

As seen in the table, the control group **writing achievement** score was 51.22, and the experimental group writing achievement score was 47.12. Thus, although writing achievement of the control group seemed lower when compared to the writing achievement of the Experimental group, t-test result demonstrated that there was no significant difference between the two group scores [$t_{(94)} = 1.475$; $p > .05$]. Therefore, based on the writing achievement scores, it was determined that the two groups were similar.

As seen in the table, the control group **writing self-efficacy** score was 3.30 and the Experimental group writing self-efficacy score was 3.24. Thus, although the writing self-efficacy score of the control group seemed lower than the Experimental group, t-test result demonstrated that there was no significant difference between the two groups [$t_{(94)} = .565$; $p > .05$]. Therefore, based on the writing self-efficacy scores, it was determined that the two groups were similar.

2. Materials and Methods

Pretest/posttest experimental design with study and control groups was used in the study. The experimental model is a research where the data were produced to discover the causality between the variables under the control of the researcher [32; 33]. The quasi-experimental design is the most commonly used experimental design, especially in the field of education, where it is not possible to control all variables. In this model, groups are formed as study and control groups via random assignment [34; 32]. Since the quasi-experimental design was used in the study, the population and the sample were not selected, instead, experimental groups were selected, and the equality of the

Table 1. T-test Results on the Equality of Pretest Study and Control Groups

	Group	N	\bar{X}	S	Levene Test		Sd	t	P
					F	P			
Writing Achievement	Control	48	51,22	13,15	,000	,989	94	1,475	,144*
	Experimental	48	47,12	14,10					
Writing Self-Efficacy	Control	48	3,30	,50	,171	,680	94	,565	,574*
	Experimental	48	3,24	,51					
Writing Anxiety	Control	48	2,87	,86	,025	,875	94	-,430	,668*
	Experimental	48	2,94	,88					
Writing Attitude	Control	48	3,81	,45	,982	,324	94	2.149	,079*
	Experimental	48	3,60	,53					

* $p > .05$

As seen in the table, the control group **writing anxiety** score was 2.87 and the Experimental group writing anxiety score was 2.94. Thus, although the writing anxiety score of the control group seemed lower than the Experimental group, t-test result demonstrated that there was no significant difference between the two groups [$t_{(94)} = 430$; $p > .05$]. Therefore, based on writing anxiety scores, it was determined that the two groups were similar.

As seen in the table, the control group **writing attitude** score was 3.81 and the experimental group writing attitude score was 3.60. Thus, although the writing attitude score of the control group seemed lower than the experimental group, t-test result demonstrated that there was no significant difference between the two groups [$t_{(94)} = 2.149$; $p > .05$]. Therefore, based on writing attitude scores, it was determined that the two groups were similar.

It was observed that the variances were homogeneous based on the above-mentioned four analyzes and the experimental and control groups were equal in terms of writing achievement, writing self-efficacy, writing anxiety and writing attitude.

2.1. Participants

The experimental and control groups included freshmen attending Counseling and Guidance Department of an education faculty located in western Turkey. Out of these students, 48 were assigned to the experimental group and 48 were assigned to the control group.

Guidance and Psychological Counseling Department graduates could be employed in all educational institutions, counseling centers, guidance research centers, human resources departments in private companies, rehabilitation centers, and psychological counseling departments in universities. The members of this profession help individuals that have complete psychological health but experience certain emotional or social problems due to reasons such as bankruptcy, divorce, death or natural disasters. When they are employed in educational institutions, they provide solutions for the professional, personal and emotional problems of clients. Their education includes several courses in psychology, as well as sociology, philosophy, anthropology, and education. The Written Expression course is a compulsory course in all departments in the faculties of education. The course aims to develop writing skills and knowledge of the students attending the Guidance and Psychological Counseling Department. The course curriculum includes instruction of information on the writing plan, characteristics and types and related practices. Guidance and Psychological Counseling Department students would conduct interviews with their clients when they conduct their profession. A counselor who is successful in written expression course could utilize the method that allows the explaining the problems in writing by the clients who experience problems in communicating their problems verbally. In fact, expressive writing is a method of treatment developed by psychologist James W. Pennebaker [50]. Several studies demonstrated that expressive writing could be a beneficial factor in psychological and physical health services.

2.2. Data Collection Instruments

"Writing Expression Self-Efficacy Scale" [35] includes 54 items and 3 factors that explain 44.7% of the total variance. It was reported that both sub-factors and total score of the scale had internal consistency and Cronbach alpha coefficient for the whole scale was .96. Based on the reliability analysis conducted for the present study, it was found that Cronbach alpha was .95 for pre-test and post-test.

"Writing Anxiety Scale" [8] includes 35 items and the items explain 49% of the total variance in the property it aimed to measure. Based on the reliability analysis conducted for the present study, it was found that the pre-test Cronbach alpha was .96 and the post-test Cronbach alpha was .97.

"Turkish I Writing Expression Attitude Scale" [36] includes three factors and 21 items. The internal

consistency coefficient was .94 and the test re-test reliability coefficient was .88 for the scale that explained 65.237% of the total variance. Based on the reliability analysis conducted for the present study, it was found that the pre-test Cronbach alpha coefficient was .90 for and the post-test Cronbach alpha coefficient was .95. Thus, it can be stated that the measurements are reliable.

"Writing Expression Assessment Scale" developed by Topuzkanamış [37] to assess the essays was used to assess the writing papers of the students. In the scale that included 50 items that could be scored with a maximum 2 points, the themes are related number of items were as follows: "Paper layout" 5, "Topic" 5, "Title" 5, "Introduction" 4, "Development" 11, "Conclusion" 6, "Language and expression" 12 and "Spelling and Punctuation" 2 items.

The students wrote an essay at the beginning and the end of the education process in order to determine the written expression achievement levels of the students. The three essay topics were selected from the highest scored five topics determined by Bağcı [38] based on expert views. These topics were as follows:

Explain your ideal teacher based on the traits of a good Turkish language teacher. (This topic was adopted to exclude the "Turkish language teacher" section since there were no Turkish language pre-service teachers in the experimental group.)

Describe your views on the causes of social collapse and your solution proposals.

Describe your ideas about a book you read or a movie you watched and impressed with.

2.3. Data Collection and Intervention Process Steps

The study data were collected by applying the same tests in the pre and the post-tests using the instruments specified in the data collection instruments section. The intervention process was conducted with the learning process model. In the light of the constructivist approach, written expression education is conducted with process-based instruction. Based on the learning process model developed by Biggs and Moore [39], the learning process includes four basic components that influence the learning outcomes:

1. A well-structured knowledge base: The quality of the knowledge base is assessed by three characteristics: the quantity of information, the quality of the organization of the information and accessibility of the information. Anything that helps students to organize material in their minds or to increase accessibility of the information would improve the quality of the information base.
2. Motivational Content: Certain conditions encourage students' internal motivation. The two key conditions are clear goals and instructions and a warm and positive climate created by the teacher.
3. Interactions: Learning includes three main interactions: teacher-student, student-student, and

the interaction process that emphasizes the crucial role of teacher-student interaction in content research and instruction processes.

4. Active learning.

The intervention process steps were conducted based on the process specified by Biggs and Moore [39].

In order to provide a well-structured knowledge base, the book "Written Expression with Weekly Activities" [40] were used and the 14 topics included in the book was instructed by the educator the same way in both experimental and control groups, and writing studies were conducted in the course.

A Facebook group called "ADU Turkish Written Expression" was created with the experimental group. While the control group shared their essays in the classroom environment, the experimental group shared the same in Facebook.

Each week, a writing assignment adequate for the written expression topic was assigned, the experimental group presented the assignment via Facebook and the control group wrote it on paper and submitted it in the classroom.

Feedback on students' assignments was provided via Facebook for the experimental group and on paper for the control group.

Important information on spelling rules is provided via the language rules pictures published by Turkish Language Institute and shared on Facebook for the experimental group and in the classroom for the control group to motivate the students.

In both experimental and control groups, self-review, peer review and final publication steps were conducted for written expressions of the students for students-student, student-teacher interactions. The publication phase was conducted by reading the essay in the classroom for the control group and sharing it on Facebook for the experimental group.

2.4. Data Analysis

The essays written by the participating students were assessed with "Writing Expression Evaluation Scale" developed by Topuzkanamış [37]. Since the reported

interclass correlation coefficient for the scale was over 70, it was considered that assessment by one individual would be sufficient. Dependent samples t-test was used in the analysis of quantitative sub-problems of the study since the study data distribution was normal.

3. Findings

In this section, data collected on the research problem and sub-problems are presented.

Data on "Is there a significant difference between the mean pretest and posttest written expression scores of the students in the control group?" sub-problem are presented in Table 2.

As seen in the Table 2, the control group pre-test mean score was 51.22, and the posttest mean score was 47.12. It was observed that there was a significant difference between these two scores [$t(47) = 2.041$; $p < .05$]. Accordingly, it can be suggested that the writing achievement decreased at the end of the process in the control group.

Data on "Is there a significant difference between the mean pretest and posttest Writing Expression Self-Efficacy Scale scores of the students in the control group?" sub-problem are presented in Table 3.

As seen in the Table 3, the control group writing self-efficacy pre-test mean score was 3.30, and the posttest mean score was 3.81. It was observed that there was a significant difference between these two scores [$t(47) = 8.850$; $p < .05$]. Accordingly, it can be suggested that the writing self-efficacy improved at the end of the process in the control group.

Data on "Is there a significant difference between the mean pretest and posttest "Writing Anxiety Scale" scores of the students in the control group?" sub-problem are presented in Table 4.

As seen in the Table 4, the control group writing anxiety pre-test mean score was 2.87, and the posttest mean score was 2.45. It was observed that there was a significant difference between these two scores [$t(47)=4.211$; $p < .05$]. Accordingly, it can be suggested that the writing anxiety decreased at the end of the process in the control group.

Table 2. Control Group Writing Achievement Pretest and Posttest Scores t-Test Results

	Measurement	N	\bar{X}	S	Sd	t	p
Writing Achievement	Pretest	48	51,22	13,15	47	2,041	,047*
	Posttest	48	47,12	11,51			

* $p < .05$

Table 3. Control Group Writing Self-Efficacy Pretest and Posttest Scores t-Test Results

	Measurement	N	\bar{X}	S	Sd	t	p
Writing Self-Efficacy	Pretest	48	3,30	,504	47	8,850	,000*
	Posttest	48	3,81	,501			

* $p < .05$

Table 4. Control Group Writing Anxiety Pretest and Posttest Scores t-Test Results

	Measurement	N	\bar{X}	S	Sd	t	P
Writing Anxiety	Pretest	48	2,87	,866	47	4,211	,000*
	Posttest	48	2,45	,879			

*p<.05

Table 5. Control Group Writing Attitude Pretest and Posttest Scores t-Test Results

	Measurement	N	\bar{X}	S	Sd	T	p
Writing Attitude	Pretest	48	3,78	,463	47	2,529	,015*
	Posttest	48	3,52	,765			

*p<.05

Table 6. Experimental group Writing Achievement Pretest and Posttest Scores t-Test Results

	Measurement	N	\bar{X}	S	Sd	T	p
riting Achievement	Pretest	48	47,12	14,102	47	1,070	,290*
	Posttest	48	44,79	11,714			

*p<.05

Table 7. Experimental group Writing Self-Efficacy Pretest and Posttest Scores t-Test Results

	Measurement	N	\bar{X}	S	Sd	T	P
riting Self-Efficacy	Pretest	48	3,24	,512	47	-6,959	,000*
	Posttest	48	3,77	,481			

*p<.05

Table 8. Experimental group Writing Anxiety Pretest and Posttest Scores t-Test Results

	Measurement	N	\bar{X}	S	Sd	T	P
Writing Anxiety	Pretest	48	2,94	,884	47	4,506	,000*
	Posttest	48	2,53	,869			

*p<.05

Table 9. Experimental group Writing Attitude Pretest and Posttest Scores t-Test Results

	Measurement	N	\bar{X}	S	Sd	T	p
Writing Attitude	Pretest	48	3,60	,531	47	-,427	,671*
	Posttest	48	3,63	,715			

*p<.05

Data on “Is there a significant difference between the mean pretest and posttest “Turkish I Writing Expression Course Attitude Scale” scores of the students in the control group?” sub-problem are presented in Table 5.

As seen in the Table 5, the control group writing attitude pre-test mean score was 3.78, and the posttest mean score was 3.52. It was observed that there was a significant difference between these two scores [t(47)=2.529;p<.05]. Accordingly, it can be suggested that the writing attitude changed negatively at the end of the process in the control group.

Data on “Is there a significant difference between the mean pretest and posttest written expression scores of the students in the experimental group?” sub-problem are presented in Table 6.

As seen in the Table 6, the experimental group writing achievement pre-test mean score was 47.12, and the posttest mean score was 44.79. It was observed that there was no significant difference between these two scores [t(47)=1.070;p>.05]. Accordingly, it can be suggested that the writing achievement did not change at the end of the process in the experimental group.

Data on “Is there a significant difference between the mean pretest and posttest Writing Expression Self-Efficacy Scale scores of the students in the experimental group?” sub-problem are presented in Table 7.

As seen in the table, the experimental group writing self-efficacy pre-test mean score was 3.24, and the posttest mean score was 3.77. It was observed that there was a significant difference between these two scores

[$t(47)=-6.959;p<.01$]. Accordingly, it can be suggested that the writing self-efficacy improved at the end of the process in the experimental group.

Findings on “Is there a significant difference between the mean pretest and posttest “Writing Anxiety Scale” scores of the students in the experimental group?” sub-problem are presented in Table 8.

As seen in the table, the experimental group writing anxiety pre-test mean score was 2.94, and the posttest mean score was 2.53. It was observed that there was a significant difference between these two scores [$t(47)=4.506;p<.01$]. Accordingly, it can be suggested that the writing anxiety positively changed at the end of the process in the experimental group.

Data on “Is there a significant difference between the mean pretest and posttest “Turkish I Writing Expression Course Attitude Scale” scores of the students in the experimental group?” sub-problem are presented in Table 9.

As seen in the table, the experimental group writing attitude pre-test mean score was 3.60, and the posttest mean score was 3.63. It was observed that there was no significant difference between these two scores [$t(47)=-.427;p>.05$]. Accordingly, it can be suggested that the writing attitudes did not change at the end of the process in the experimental group.

4. Conclusion and Discussion

When the data obtained in the analyzes conducted on the quantitative findings were assessed comparatively between the study and control groups, the following results were obtained:

1. The achievement levels in the experimental group did not change, while those in the control group decreased.
2. Writing self-efficacy increased in both control and experimental groups.
3. Writing anxiety levels decreased in both control and experimental groups.
4. The attitudes in the control group changed in the negative direction, while the writing attitudes in the experimental group remained unchanged.

Based on the quantitative data findings, the decrease or the lack of increase in the writing achievements could be explained by the lack of knowledge among the students due to the lack of the development of reading habits during long years of training and the lack of adequate writing assignments in and outside the classroom during the primary and secondary education. Although it could be argued that the use of Facebook had a positive effect on writing achievement and writing attitude when compared to the conventional method, it was noteworthy that a single factor was not effective in increasing the achievement. A similar finding was also reported by Shepherd. Shepherd

[41] conducted a writing education research on 474 freshman students in various US colleges. The study findings demonstrated that there was no correlation between students’ writing applications and Facebook. However, in the study, it was reported that Facebook use was correlated with a better mass awareness, rhetorical status awareness, process writing and invention of the students. Escobar-Rodriguez, Carvajal-Trujillo and Monge-Lozano [42] reported that one of the obstacles to adopting Facebook as a learning tool could be the perceptions of the students on the use of technology as a learning tool in personal sphere. This finding might be related to the fact that certain students may sign up for a new account in Facebook during the experiment instead of using their personal accounts and based on the fact that students perceive Facebook as their personal space, it could be argued that Facebook could not serve as an educational instrument that affects their course performances positively.

Contrary to the study findings on foreign language learning, it was observed that there are studies on the positive contribution of Facebook to writing practices. Barrot [43] suggested that Facebook-based e-portfolio had a positive impact on students’ writing practices and was an adequate tool for e-portfolio assessment. Shih [44] investigated the effects of Facebook on the mixed teaching approach during peer review in the English instruction class. The researcher reported that after the Facebook-based peer review, students demonstrated better writing performance and positive attitudes towards Facebook use in writing education and concluded that Facebook was an effective tool in improving writing in English and motivation of the students. When this finding was compared with the findings of the present study, it can be suggested that the different outcomes might be due to the differences between writing education in a foreign language and native language. Therefore, different ways to improve the writing achievements of students, who are the future teachers, should be investigated.

The lack of a significant difference between the writing self-efficacy and writing anxiety scores could be attributed to the short experiment duration and the fact that the instructor communicated using similar approaches with both groups. In fact, in a study that investigated the effect of writing strategies on writing anxiety reached similar conclusions on writing anxiety [37]. West, Lewis and Currie [45] reported that students publishing their work on Facebook exposed them to a social pressure similar to a two-edged blade and although it allowed students to write better, using Facebook as an e-portfolio platform often did not reduce writing anxiety. Unlike the present study findings, West, Lewis and Currie [45] found that Facebook reduced anxiety and Bowers-Campbell [46] stated that it improved self-efficacy. Kabilan, Ahmad and Abidin [47] reported that the perceptions of English language learners on Facebook created a meaningful learning environment

and the students believed that Facebook contributed to their motivation and confidence in language skills and to their positive attitudes towards learning a language.

There are noteworthy studies that addressed various problematic aspects of Facebook use in education. Chen [48] mentioned their concerns about the access of unfamiliar peers to personal information about the students in Facebook use in education. When this finding is considered in conjunction with the present study findings, it can be stated that freshman students could be reluctant to share their written expressions with classmates that they were recently introduced. Hope [49] stated that despite the benefits of Facebook, students do not consider Facebook as social since the uncertainty of online communications leads to misinterpretations and conflicts among peers.

The following could be recommended based on the study findings:

1. The study could be conducted with different experimental groups in the future.
2. The study could be planned and conducted in two semesters.
3. Reading comprehension levels and reading habits of students could be scrutinized as an underlying variable behind the lack of the impact of Facebook use on writing achievements.
4. Based on the fact that students' writing anxiety was not too high even before the experiment, whether the faculty of education students had a predisposition that they would not use writing skills in their lives as a student or a teacher and thus, whether writing has a significant place in their lives could be investigated in future studies.
5. The experimental group students could be allowed to write essays without providing a topic.

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