

## Effects of piano accompaniment on instrument training habits and performance self-efficacy belief in flute education

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### Abstract

Education methods to be used in the emotional, mental and psychological development of instrument education are of great importance in terms of education process. In this context, the training habits and self-efficacy developments of the students with their instruments can be supported by the accompaniment education process, thus increasing the performance of the instruments. In this context, an experimental method was used in the research by using piano accompaniment training practice, individual instrument training habits and instrument performance self-efficacy belief questionnaires. Pre-test-post-test pattern of this method was preferred. The study was carried out with 9 students who studied flute in Nevsehir Hacı Bektas Veli University music department. After the experiment process, the scores of the groups were reached by using T-test. As a result of the research, it was revealed that the application of piano accompaniment in flute education has a positive effect on all sub-dimensions of both questionnaires. In addition, it was determined that students use time in a disciplined and productive way, develop themselves in terms of musicality, see themselves more adequate with the positive progress of the psychological effects of this development, and increase their love for their instrument and desire to work.

Keywords: Instrument education, flute education, piano accompaniment, training habits, self-efficacy developments;

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## 1. Introduction

Instrument education is one of the most important elements of professional music education. The aim of this education is to raise individuals who are technically and musically equipped to express themselves in their instruments by supporting the cognitive, affective and psychomotor aspects of students who choose music as a profession.

“Through instrument education, it is aimed that students develop their musical knowledge and tastes, musicality, their ability to make music together, acquire regular and disciplined training habits, and recognize national and universal music art.” (Oz, 2001, p. 3)

Flute education constitutes one dimension of instrument education. According to Cuceoglu (2006), flute education is a training process that is carried out in a way to learn how to play the flute, to improve the playing of the flute, and to use the instrument effectively, and that is conducted by instructor and student with communication and interaction. (Cuceoglu, 2006, p. 593).

When the course contents for the flute education given in the Faculty of Fine Arts Music Department are examined, it is seen that it includes the place of the flute in the history of music, its development, the works and studies composed for the flute, the techniques included in these works and studies, the technical studies in the flute repertoire and the studies aiming to teach and learn in line with the repertoire levels (URL 1).

Flute education progresses with a program that is taken from the beginner level and that includes different target behaviors at each stage. This training includes studies such as musicality, tone quest, and intonation starting from the basic technical achievements.

“The first subjects to be addressed in flute training are correct posture and grip in the flute playing position, using the diaphragm breath correctly and with the desired quality, and thus obtaining a strong tone. In the process that follows, target behaviors can be counted as playing the etudes and works by paying attention to the techniques of vocalization, playing the decorations in accordance with their structures, performing the volume changes in etudes and works correctly, obtaining a clean and quality tone in all octaves and playing in accordance with the etudes and speed steps”(Yayla, 2000 p. 11).

The ultimate aim of flute education is to improve the student's ability to make music with her/his instrument. For this reason, studies should be made for a quality tone, musicality and intonation from the beginning of the education and the student should be listened while playing.

Intonation is one of the most difficult problems that flute players face. The individual should also work on intonation and develop her/himself, regardless of her/his good technique, good tone and articulation. Listening is important for a good intonation. When performing collective studies or individual studies with accompaniment, students should first listen to their own instrument, and then the other instrument that they make music with or accompany their own instrument. Students should be active listeners as well as active players (Ozen 2017 p.15, Ozmentes, 2005, p.94).

Undoubtedly, instrument education does not only include studies on technical skills or musicality in solo performances. Accompaniment studies have positive effects on behaviors such as rhythm, musicality, intonation, careful listening and interpretation.

Benefits of accompaniment training to the player can be summarized as improving the technical skill, playing independently and motivation. It also includes improving the intonation as well as improving the rhythm skill that is acquired thanks to the accompaniment training. The instrument student should be able to imagine how her/his work should sound in order to stay in tone while working alone. It will be difficult for a beginner or intermediate player to be able to clearly guess how the party or piece is played. The degree of affective skill is of primary importance for the mastery of

playing. Therefore, it is of great importance for players with this level to perform accompanied works (Topoglu, 2006, p.40).

“In order to play more comfortably and frequently, the orchestra party of many orchestra accompanied flute concertos has been adapted to the piano. Therefore, the necessity of working with the accompanying party to interpret and present the works completely becomes a natural part of the flute education” (Hepyuçel and K. Yıldırım, 2017, p.488).

As with any instrument, piano accompaniment trainings are of great importance in flute education. Due to its fixed pitch, the piano contributes to the intonation of the solo instruments it accompanies and the improvement of timbre quality.

According to Coskuner (2007), in the future, piano accompaniment trainings will allow the student to play even the smallest piece of work or etude by staying in tone, and to play the music by minimizing the problem of intonation as s/he will play with the accompaniment. In the first years, students do not pay enough attention to the cleanliness of the sound they get while playing the instrument, since they pay attention to many technical issues at the same time. Thus, the students are not sure of the cleanliness of the sounds they obtain, and they think that it is often correct. In a training accompanied by the piano, the student will listen to the piano and consider how accurate, clean and bright the sound is.

Piano has the most extensive range of sounds, and which has the characteristics of multi-tone. No matter which instrument is it combined with, the range of sounds it plays is within the range. Piano accompaniment is more advantageous than other musical instruments in terms of harmony effect (Xinyu, 2019, p.1169).

Piano accompaniment trainings are important in terms of affective development in flute education. In order for the process to pass effectively and efficiently while training with the flute, the working hours of the student are important in terms of the quality of work. Supporting these trainings with piano accompaniment increases the student's desire to make music with the flute and the sound s/he makes from her/his instrument, and will cause her/him to work more carefully and diligently towards the development of sound quality and to gain positive working habits.

Springer and Silvey (2018) mention that, the accompaniment used seems to be an important consideration for music educators who are seeking ways to improve their students' practice habits and performance skills

It was observed that students who do not play together, and therefore do not have the habit of making music together for a long time, have significant difficulties when performing the accompanying sized works that they will play with accompaniment later and experience significant tensions since this habit has not been reinforced from the very beginning (Cilden&Sendurur, 2003). This will break the self-confidence and willingness of the student about the instrument, and reduce the efficiency of the training, thus negatively affecting the instrument training process.

From this point of view, the aim of the research is to reveal the development effects of individual instrument playing habits and instrument performance self-efficacy beliefs with the use of piano accompaniment in the instrument training processes of individual instrument flute education students in music departments.

Within the framework of all these described, the problem statement of this study is composed as: "What are the effects of training with piano accompaniment in flute education on instrument training habits and instrument performance self-efficacy belief?"

## **1.1. Sub-problems**

1. What is the effect of working with piano accompaniment in flute education on students in terms of instrument training habits?
2. What is the effect of working with piano accompaniment in flute education on students in terms of instrument performance self-efficacy beliefs?

## **1. Method**

### **1.1. Research model**

Experimental design was used in this research. Single group pre-test-post-test experimental design was preferred out of the quantitative research approaches. Yamak, Bulut, and Dundar (2014), in their study, explained the single-group pretest-posttest experimental pattern as a method that tests the relationship between variables and observed the effects of at least one independent variable on the dependent variable (Cohen & Manion, 1997; Fraenkel & Wallen, 1996; Gay & Airasian, 2000).

### **1.2. Research group**

The universe of the research is the students who receive individual instrument flute education in the music departments of the faculties of fine arts, and the sample of it is the students who study individual instrument flute in Nevsehir Hacı Bektas Veli University, Faculty of Fine Arts, Music and Performing Arts Department.

The research group was formed with 9 students who received individual instrument flute training during the 2018-2019 academic years. In this formation, the class level, success level, range, technical level and personal development of the students were taken into consideration. The experimental group consisting of 9 people was formed by examining the students' average scores, regular attendance to the lesson, their skills in terms of technique and tone, their level of study and work, and being graduated of fine arts high school.

### **1.3. Data Collection Tool**

An independent variable was applied to the single group created with this model. This process was subject to measurement both before and after the experiment. The fact that the post-test scores were larger than the pre-test scores in the data obtained indicates that the independent variable is effective. Regarding this model, the effect of the independent variable on the dependent variable is revealed by testing the difference between the pre-test and post-test averages. For this, "T" test is preferred for comparing two measurements on a single group. If the distribution is not normal, Wilcoxon test, a nonparametric method, can also be used. In this context, the techniques used in the analysis of the data obtained from instrument study habits and instrument performance self-efficacy belief questionnaires and the planning of the research and research process were included.

In instrument training the students improve their skills in playing instruments and also supports their ear training. Clearness of the voice, musicality and performing within a beat are among the most significant things expected from the students. The accompanied performances are very important for accurate, reliable and controlled execution of the aforementioned behaviors. Accompanying instrument piano is in institutions offering music education (Coşkuner, 2016). Piano is an ideal and useful instrument since it is a polyphonic instrument with a wide tessitura. It is an instrument that offers piano sound limit width, can be used easily in polyphonic ear training due to the constant pitches, and is the greatest assistant of the educator in music education due to its harmonic

accompaniment instrument (Yönetken, 1996, p. 69). For this reason, working with a companion will enable the student to always control himself and listen to the piano. Accompanied studies with piano will minimize the problem of intonation. In a work accompanied by the piano, the student will listen to the piano and think that the sound he obtained is correct, clean and bright. It is clear that adding a color with piano accompaniment will have important contributions in creating a pleasant working environment, strengthening the enthusiasm of work and developing a sense of self-confidence (Çilden, Şendurur, 2003, p.1). In this sense, the concept of piano accompaniment was determined as an independent variable. The piano accompaniment used as an independent variable was applied to the experimental group throughout the study process. Thus, it was aimed to reveal the effect of Instrument Training Habits and Performance Self-Efficacy Belief, which are the dependent variables of our independent variable piano accompaniment. For this purpose, the explanations of the two dependent variables regarding the concepts 2.3.1. presented under the title.

### **1.3.1. Individual Instrument Training Habits Questionnaire**

In musical instrument education, which is an important dimension of music education, the questionnaire, which is composed of 18 items in order to determine the training habits of students, was created by Küçükosmanoğlu, Babacan, Babacan, Yüksel (2016). The construct validity of the questionnaire was analyzed by factor analysis and it was determined that it had 4 factors in line with the findings obtained. According to the results of the rotated components matrix analysis, the Kaiser-Meyer-Olkin value of the questionnaire items was found as .925, and the result of and Barlett test was found to be significant ( $p < .05$ ), and the fact that chi-square value = 4159.217, and  $df = 256$  revealed the suitability of the data for explanatory factor analysis. Cronbach's Alpha reliability coefficient which contains all the items of the questionnaire was found as .891. It was determined that the questionnaire, created in four-dimension and in five-grade Likert type, can be used safely in determining the individual instrument training habits of students (Küçükosmanoğlu, H. O. & Babacan, E. & Babacan, M. D. & Yüksel, G. 2016).

### **1.3.2. Instrument Performance Self-Efficacy Belief Questionnaire**

The questionnaire prepared by Girgin (2015) in order to determine the instrument performance self-efficacy beliefs of the students receiving music education consists of three sub-dimensions and 20 items in five-point Likert-type. According to Girgin (2015), the amount of variance explained by the whole scale is 47%, and factor load values of the items in the questionnaire vary between 0.47 and 0.76. The reliability of the questionnaire was determined by looking at the Cronbach Alpha value. Cronbach Alpha values of the sub-dimensions of the scale were determined as .86, .76, and .61, respectively. Findings obtained from exploratory factor analysis and reliability analysis reveal that the instrument performance self-efficacy belief questionnaire is a valid and reliable measurement tool that can be used to determine the instrument performance self-efficacy beliefs of the students of the music department.

### **1.4. Pilot study**

In order to ensure the reliability of the questionnaires for this research, a pilot application was conducted on 55 students apart from the experimental group. As a result of the obtained data and analyzes, the four-dimensional structure of the individual instrument training habits questionnaire and the three-dimensional structure of the instrument performance self-efficacy questionnaire were confirmed. When the internal consistency coefficients (Cronbach alpha) of the questionnaires were calculated, for the individual instrument training habits questionnaire, the reliability coefficient was calculated as .709, by excluding the questions 9 and 17 from the factor analysis. The 9<sup>th</sup> and 17<sup>th</sup>

questions for the same questionnaire were not included in the factor analysis because they reduced the reliability coefficient. In factor analysis, the 1<sup>st</sup> and 11<sup>th</sup> questions were removed because the factor load was below .30, and the 3<sup>rd</sup> question was removed because it was distributed in more than one dimension. According to the latest factor analysis results, the 4-factor structure of the questionnaire was confirmed. The 4 factors obtained explain 72,447% of the total variance. In this context;

For the first factor (valuing the training), (questions 4, 5, 6, 7, and 8) explain 35,826% of the variance.

For the second factor (interest and desire), (questions 12, 13, 14, and 15) explain 18.232% of the variance.

For the third factor (correct use of time), (questions 2-16) explain 9.914% of the variance.

For the fourth factor (reluctance to training), (questions 10-18) explain 8,876% of the variance.

When the internal consistency coefficient (Cronbach alpha) of the instrument performance self-efficacy belief was calculated, since the questions 1, 4 and 15 decreased the reliability coefficient they were excluded from the factor analysis and the reliability coefficient was calculated as 703. In addition, in the factor analysis, 9<sup>th</sup>, 10<sup>th</sup> and 14<sup>th</sup> questions were removed as they were distributed to more than one dimension. According to the latest factor analysis results, the 3-factor structure of the questionnaire was confirmed. The 3 factors obtained explain 63,732% of the total variance. In this context;

For the first factor (psychological indicators), (questions 8, 11, 16, 17, 18, 19, and 20.) explain 42.923% of the variance.

For the second factor (feeling incompetent), (questions 12 and 13) explain 11,447% of the variance.

For the third factor (feeling efficient), (questions 2, 3, 5, 6, and 7.) explain 9,363% of the variance.

These results reveal that the measurements made are reliable.

### **1.5. Experimental Pattern of the Research**

In the research, an experimental group was created to start the experimental process after the literature review. Following this formation, the works that the students will continue in accordance with their levels within the 10-week training period were determined. In this context, the instrument levels of the students were taken into consideration. It is aimed for each student to complete 10 sections in a 10-week period (one section for each week). In this respect, the works written by Joachim Qantz, Johannes Donjon, Gabriel Faure, Jean Baptiste Loeillet, Francois Devienne, Bach, Handel, Telemann and Mozart for the flute were used. Individual instrument training habits and instrument performance self-efficacy belief questionnaires, whose validity and reliability were provided prior to the experimental study, were applied to the experimental group created as a pre-test. After the pre-test, a 10-week training process was initiated, and in this process, the researchers continued the experimental group's piano accompaniment. During the 10-week period, the audio and video recordings were also taken and the working processes of the students were checked by the researchers. With the end of the 10-week training process, individual instrument training habits and instrument performance self-efficacy belief questionnaires were re-applied to the students. The data obtained were analyzed and compared in their first and last form.

### 1.6.Data Analysis

Quantitative data analysis methods were used to evaluate the content analysis of the obtained data. The stages followed in the analysis and interpretation of the quantitative data obtained from the research and the formatting of the findings as a result of these stages were given in the order of sub-problems. SPSS program was used to analyze the data. Pre-test and post-test scores of the experimental group were determined using the T-test as a suitable statistical method for the analysis of the data. In the interpretation of the obtained results, the level of significance was accepted as  $p < .05$ .

## 2. Findings

### 2.1.Findings Related to the First Sub-Problem

Table 1. Independent T-Test Results of Individual Instrument Training Habits Levels of Students in the Study Group According to the Status of Practicing Piano Accompaniment Education

Individual Instrument Training Habits	N	X	t	P
<i>(First sub-dimension)</i> Valuing the training				
Experimental Group Pre-test	9	3,9556	36,146	
Post-test	9	4,2667	22,989	,000
<i>(Second sub-dimension)</i> Interest and desire				
Experimental Group Pre-test	9	1,6667	23,094	
Post-test	9	2,0000	21,466	,000
<i>(Third sub-dimension)</i> Correct use of time				
Experimental Group Pre-test	9	3,6667	12,702	
Post-test	9	4,3889	20,230	,000
<i>(Fourth sub-dimension)</i> Reluctance to training				
Experimental Group Pre-test	9	2,8889	26,000	
Post-test	9	2,8333	12,851	,000

$p < .01 < .05$

As shown in Table 1, the pre-test and post-test total scores obtained by the students in the study group from the questionnaire of individual instrument training habits revealed a significant difference in all four sub-dimensions in terms of applying piano accompaniment education. ( $P < .01 < .05$ ). In addition, when the average score values of the experimental group are compared, it is seen that there is an increase in the first sub-dimension (valuing the training), the second sub-dimension (interest-

desire), the third sub-dimension (correct use of time), and a decrease in the fourth sub-dimension. According to these findings, it can be said that applying piano accompaniment education on students has positive effects in all four dimensions and they have a significant effect in four dimensions.

## 2.2. Findings Related to the Second Sub-Problem;

Table 2. Independent T-Test Results of Instrument Performance Self-Efficacy Belief Levels of the Students in the Study Group According to the Status of Practicing Piano Accompanied Education

Instrument Performance Self-Efficacy Belief	N	X	t	P
<b>(First sub-dimension) Psychological Indicators</b>				
Experimental group Pre-test	9	2,4643	6,771	
Post-test	9	3,4762	14,748	,000
<b>(Second sub-dimension) Feeling incompetent</b>				
Experimental group Pre-test	9	2,4375	6,789	
Post-test	9	1,8333	5,185	,001
<b>(Third sub-dimension) Feeling efficient</b>				
Experimental group Pre-test	9	3,2500	13,308	
Post-test	9	3,3333	15,250	,000

p <01 <, 05

As it can be seen in Table 2, the pre-test and post-test total scores of the students in the study group from the instrument performance self-efficacy belief questionnaire show a significant difference in three sub-dimensions in terms of applying piano accompanied education (P <.01 <.05). When the average values of the groups are analyzed, it is revealed that there is a significant increase in data of the first dimension (psychological indicators) and the third dimension (feeling efficient), while the data of second dimension (feeling incompetent) decreases. According to these findings, it can be said that applying piano accompanied education on students has positive effects in three dimensions and they have a significant effect in three dimensions.

## 3. Conclusion, Discussion and further studies

The research was carried out to determine the development of individual instrument training habits and instrument performance self-efficacy belief trends with piano accompaniment education in-class and out-of-class trainings of students receiving individual instrument flute training. In the study, an experimental group was formed and an experimental study was conducted with 9 students. In this process, works were selected in accordance with the level of each student in the experimental group consisting of 9 people and trainings with piano accompaniment were made. These works were used in accordance with the goals and objectives both in-class and out-of-class trainings. This process was carried out with the researchers in the in-class trainings, and it was supervised by the researchers in the out-of-class trainings. During this 10-week period, the applications of each student in the

experimental group were carefully inspected during the training process. Before this process started, individual instrument training habits and instrument performance self-efficacy belief questionnaires, whose reliability was provided by pilot study, were applied to students as a pre-test. At the end of the 10<sup>th</sup> week, the same questionnaires were applied to the students as a final test and the application phase of the study was ended. Accordingly, the data were analyzed comparatively within the experimental group and the results were obtained. In this context, the pre-test and post-test total scores obtained by the students in the experimental group from the questionnaire of individual instrument training habits revealed a significant difference in the questionnaire applied as a result of applying piano accompaniment training to the students. When the average score values of the questionnaire consisting of four sub-dimensions are compared, it is seen that there are increases and decreases according to the dimensions. In this context, it was observed that students use their training time more efficiently, and by understanding the value of their time spent with the training, they transform their reluctance into interest and desire to training. This situation shows that students differentiate their piano accompanied training processes positively in all four sub-dimensions. The study made by [Klee \(1999\)](#) noted that flutists who prepared music with computer-generated accompaniments performed slightly better than those who practiced without accompaniment.

When the data of the instrument performance self-efficacy belief questionnaire applied to the students in the experimental group were examined, it was observed that the pre-test and post-test total scores they received showed a significant difference as a result of the piano accompaniment training. When the average score values of the questionnaire consisting of three sub-dimensions are compared, it is seen that there are increases and decreases according to the dimensions. In this context, it was revealed that the students' self-confidence and self-efficacy in their instruments improved in this process and their sense of inadequacy decreased significantly. In addition, their psychological development had a positive impact on their performance and on the idea that they could carry this performance forward. Again, this shows that students differentiate their piano accompaniment training processes in three sub-dimensions. According to [Springer and Silvey \(2018\)](#), uses of types of accompaniment are important because they may help develop students' musical comprehension, encourage more thorough preparation for solo and ensemble events, and motivate them to practice more frequently and/or for longer durations.

In general terms, it was determined that the 10-week education process that students spent with piano accompaniment had positive effects on individual instrument training habits and instrument performance self-efficacy beliefs. In this sense, it can be said that working with piano accompaniment keeps students in a more conscious and productive training process against the lesson and instrument, and that students' consciousness towards both their instrument and individual instrument lessons develops positively. According to [Li \(2018\)](#), the piano accompaniment foreshadows the situation of the work, and the accompaniment process enhances the emotion of the music, which can relieve the psychological pressure of the players, make the performance process more relaxed, confident and enjoyable, and bring the audience a sense of reality of immersive experience. The accompaniment is arranged on the basis of music materials such as tonality, speed and strength of music, which is a supplement of music works.

Looking at the results of the research, it was observed that the studies with piano accompaniment in flute education resulted in favor of the research group. In flute education, it is important for students to gain effective individual training habits in terms of education process. This situation supported the self-efficacy belief in the flute performance and made the student feel confident. The training hours allocated by the student whose self-confidence is boosted, efficiency, desire to work, and discipline increased, and this situation positively affected the flute education process. Many research results in the literature support the findings of this study.

In their experimental study, with results similar to this study, Ergen and Bilen (2010) concluded that accompanied violin trainings had positive effects on intonation, self-confidence and attitude towards violin lesson.

Topoglu (2010), in his study in which he investigated the effectiveness of accompaniment studies in the violoncello training process to the intonation accuracy of violoncello students, determined that the accompanying works in the violoncello training positively affected the intonation and made the instrument training process more enjoyable. In addition, it was revealed that the accompaniment trainings increased the time spent with violoncello, motivation and efficiency regarding the process.

In they study Springer and Silvey (2018) concluded that; uses of certain types of accompaniment are important because they may help develop students' musical comprehension, encourage more thorough preparation for solo and ensemble events, and motivate them to practice more frequently and/or for longer durations.

Sonsel and Tanrıverdi (2019) concluded that the piano accompanied viola initial training applied to the experimental group students is beneficial in terms of intonation and rhythm, and that the students increase their success in starting the instrument and facilitate the process.

Hepyuçel and Kurtaslan Yıldırım (2017), in their work in which they carried to determine the adequacy of the time allocated to the accompanied trainings in the institutions providing flute education in Turkey, the preferred accompaniment types and the contributions to learning by accompaniment, found that piano accompaniment works are the most preferred ones by the lecturers. In addition, it is among the results of the research that accompaniment trainings contribute to students in terms of tone and musicality.

The expanding of the research and its application to different sample groups are suggested to reach definite generalizations and to obtain different results. The accompaniment training should be added to the instrument education curriculum as a subject area and the programs of the individual instrument courses given at the universities should be developed and more emphasis should be given to teaching methods, and more time should be devoted to practicing with accompaniment.

In this research, piano was used as accompaniment. The research can be developed using different accompaniment instruments

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