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**ANALYSIS OF GRUTZMACHER OP-38 VOLUME 1 CELLO ETUDES NO.1-3-6-7-8-9-12**

**ABSTRACT**

The aim of this research is to provide easiness for the performance of those etudes by students, forming exercises related to the difficulties on the right and left hand determined in the 1st-3rd-6th-7th-8th-9th-12th etudes of Grutzmacher op.38 Volume 1 taking place in the violoncello education literature. In this research, etudes no.1-3-6-7-8-9-12 included in book have been analyzed and the technical subjects involved are determined. The technical subjects related with the use of left hand included in the book consist of arpeggio, double stops, regular scale, chromatic scale, perfect fifths, trill, double trills, change of position in legato on two strings, preparing fingers, broken thirds, flageolet, left hand agility. The technical subjects related with the use of right hand included in the book consist of whole bow legato, legato and detache in the upper half of the bow, musical dynamics, the whole bow marcato, staccato in the upper half of the bow, string crossings in the whole bow legato, detache in the upper half of the bow, syncopé, spiccato in the lower half of the bow, playing triple stops, legato in the middle of the bow, slurred staccato, spiccato, martele. 7 exercises has been written related to these difficulties. It has been thought that this study will be useful for violoncello education.

**Keywords:** Violoncello, Musical Analysis, Violoncello Etude Book, Exercise, Cello

**GRUTZMACHER OP-38 1. DEFTERDEKİ 1-3-6-7-8-9-12 NO'LU ETÜTLERİN ANALİZİ**

**ÖZET**

Araştırmanın amacı viyolonsel eğitimi literatüründe yer alan Grützmacher op.38 1.defterde yer alan 1-3-6-7-8-9-12'inci etüdlere belirlenen sağ ve sol eldeki zorluklara ilişkin alıştırmalar yazılarak, bu etüdlere öğrenciler tarafından yorumuna yönelik kolaylıklar getirmektir. Araştırmada etüd kitabında yer alan 1-3-6-7-8-9-12 no'lu etüdlere analiz edilmiş, kapsadığı teknik konular belirlenmiştir. Araştırmada "etüd analiz modeli" kullanılarak teknik konuların içerdiği zorluklar alan uzmanlarının görüşleri alınarak sağ el ve sol el teknikleri yönünden incelenmiş; sol ele ilişkin arpej, çift ses, kromatik dizi, kent, trill, çift sesli trill, çift telde legato pozisyon geçme, parmak hazırlama, kırık üçlü, flajole, ajelite zorluklarının yer aldığı tespit edilmiştir. Sağ ele ilişkin tüm yay legato, üst yarıda legato ve détaché, nüans, tüm yay marcato, üst yarıda staccato, tüm yay legato tel değiştirme, üst yarıda détaché, yay senkopu, alt yarıda spiccato, akor çalma, yayın ortasında legato, bağlı staccato, spiccato, martele zorluklarının yer aldığı tespit edilmiştir. Bu zorlukların giderilmesine yönelik 7 alıştırmaya yazılmıştır. Bu çalışmanın viyolonsel eğitimine katkı sağlayacağı düşünülmektedir.

**Anahtar Kelimeler:** Viyolonsel, Müziksel Analiz,  
Viyolonsel Etüd Kitabı, Alıştırma, Cello

## 1. INTRODUCTION (GİRİŞ)

### 1.1. The Cello (Çello)

The cello's four strings are tuned in fifths, exactly an octave below the four strings of the viola: C-G-d-a. Its range can extend, even in orchestral music, to three and a half octaves, from C to g" with all the chromatic intervals. The great virtuosi can play even higher, but in general these very high notes are only pleasing at the end of slow passages and are not often used with normal fingering; they are usually obtained by means of harmonics, which speak more easily and have much better quality (Macdonald.2002;45)

Although it is the noblest and most profound in tone of the violin family, the cello is probably the youngest member and certainly the most recently perfected in form and proportion. Although its large size makes it particularly vulnerable to damage, its design (as with its smaller relatives, the violin and viola) has given it remarkable longevity, and instruments made three hundred years ago are still used and treasured by discerning players. (Stowell, 2002;1)

### 1.2. Etude (Etüt)

The concept of *etude* which can be defined as "a special composition created for the purpose of ensuring technical development of the performer on his/her musical instrument" (Scholes, 1992; Sadie, 1995) is among the indispensable factors of violoncello training and repertoire. Each *etude*, whether *study etude* or *concert etude*, plays a crucial role in elimination of many difficulties which may be experienced by the student/the performer with the musical works of which he/she included in his/her repertoire by means of one or more technical objectives that it contains. Therefore, it is evident that it would be significantly beneficial to scrutinize each *etude* with an analytical approach both in terms of "themes or technical difficulties that it contains" and "methods to eliminate the said difficulties" (Cited from Dalkıran, 2002).

Some techniques which are tried to be improved by means of *etudes* and which are efficient in playing stringed instruments are specified hereunder together with the definitions thereof. Furthermore, these techniques are the ones applicable in analyzed *etudes*.

## 2. RESEARCH SIGNIFICANCE (ÇALIŞMANIN ÖNEMİ)

Araştırmamanın amacı viyolonsel eğitimi literatüründe yer alan Grützmacher op.38 1.defterde yer alan 1-3-6-7-8-9-12'inci etüdlere belirlenen sağ ve sol eldeki zorluklara ilişkin alıştırma yazılarak, bu etüdlere öğrenciler tarafından yorumuna yönelik kolaylıklar getirmektir. Araştırmada etüd kitabında yer alan 1-3-6-7-8-9-12 no'lu etüdlere analiz edilmiş, kapsadığı teknik konular belirlenmiştir. Araştırmada "etüd analiz modeli" kullanılarak teknik konuların içerdiği zorluklar alan uzmanlarının görüşleri alınarak sağ el ve sol el teknikleri yönünden incelenmiş; sol ele ilişkin arpej, çift ses, kromatik dizi, kent, trill, çift sesli trill, çift telde legato pozisyon geçme, parmak hazırlama, kırık üçlü, flajole, ajelite zorluklarının yer aldığı tespit edilmiştir. Sağ ele ilişkin tüm yay legato, üst yarıda legato ve détaché, nüans, tüm yay marcato, üst yarıda staccato, tüm yay legato tel değiştirme, üst yarıda détaché, yay senkopu, alt yarıda spiccato, akor çalma, yayın ortasında legato, bağlı staccato, spiccato, martele zorluklarının yer aldığı tespit edilmiştir. Bu zorlukların giderilmesine yönelik 7 alıştırma yazılmıştır. Bu çalışmanın viyolonsel eğitimine katkı sağlayacağı düşünülmektedir.

## 3. METHOD (YÖNTEM)

### 3.1. Study Method (Çalışma Metodu)

"Musical Analysis" method has been followed in the study. In this manner, right and left hand techniques of the *etudes* constituting the

subject-matter of the study have been emphasized in terms of playing violoncello. Furthermore, inscribing of technical studies related with the etudes bears the qualification of a distinctive synthesis. The Etude Analysis Model has been constituted by the thesis advisor and the analyst together with all phases and details thereof in accordance with the requirements of the study devoted to violoncello training created by Dr. Başak GÜLER on 2007 with the consultancy of Prof. Dr. Türev BERKİ.

### 3.2. Findings and Comments (Bulgular ve Yorum)

Table 1. The table related to the left hand difficulties in the etude  
(Tablo 1. Etütte yer alan sol el kullanımına ilişkin zorluklar)

Technical issues	Measures they are used in	Percentage of use (%)
Arpeggio	1,2,5,6,14,18,21,22,25,26,29-54,59-65,67,77,82,83,84,86,87,88,89,90,91,104,109	%59
Double stops	3,4,7,8,11,12,13,15,16,17,19,20,23,24,27,28	%14
Chromatic scale	96,97,98,99,100,101,102,103,104	%8

The technical issues related with the use of left hand included in etude no.1 consist of arpeggio (59%), double-stops (14%) and chromatic scale (8%). Playing double-stops among the technical issues included in this etude has been determined as a difficulty requiring preliminary preparation.

Table 2. The table related to the right hand difficulties in the etude  
(Tablo 2. Etütte yer alan sağ el kullanımına ilişkin zorluklar)

Technical issues	Measures they are used in	Percentage of use (%)
The whole bow legato	1,2,5,6,10,21,22,25,26,29,30,45,62-69,71-81,90-109	%54
Legato ve détaché in the upper half the bow	82-89	%7
Musical dynamics	1-8,11,12,15-37,41-44,49-52,57,58,63-76,79-89,94-111	%77

The technical issues related with the use of right hand included in etude no.1 consist of the whole bow legato (54 %), legato and détaché in the upper half of the bow(7%), musical dynamics (77%). Double-stops exercise has been notated in accordance with the etude. It has been considered that studying on the exercises mentioned below prior to playing the etude would eliminate the difficulty included in sample sequence.



Figure 1. Sample section  
 (Şekil 1. Örnek kesit)

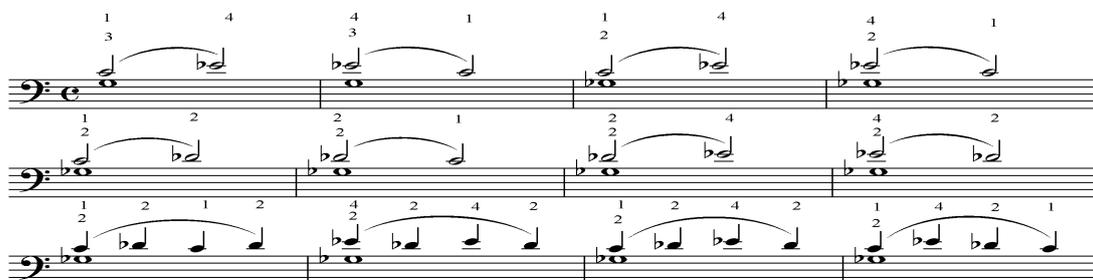


Figure 2. Exercise  
 (Şekil 2. Alıştırma)

• **Findings & Comments (Bulgular ve Yorum) to Etude No**

Table 3. The table related to the left hand difficulties in the etude  
 (Tablo 3. Etütte yer alan sol el kullanımına ilişkin zorluklar)

Technical issues	Measures they are used in	Percentage of use (%)
Perfect fifths	5, 6, 9, 10, 21, 22, 25-32, 45-47, 77, 78, 83, 84, 95, 99, 100, 103	%19
Regular scale	50, 54, 57-62, 64, 68, 71-76, 87, 88, 117-119	%16
Trill	51, 52, 55, 56, 65, 66, 69, 70, 125, 126	%7
Chromatic scale	77, 82	%1

The technical issues related with the use of left hand included in etude no.3 consist of perfect fifths (19%), regular scale (16%), trill (7%) and chromatic scale (1%). Playing perfect fifths among the technical issues included in this etude has been determined as a difficulty requiring preliminary preparation.

Table 4. The table related to the right hand difficulties in the etude  
 (Tablo 4. Etütte yer alan sağ el kullanımına ilişkin zorluklar)

Technical issues	Measures they are used in	Percentage of use (%)
String crossings in the whole bow legato	1-48, 77-80, 83-86, 105-108, 113, 114, 121-124	%51
Legato and détaché in the upper half of the bow	91-102	%9
Détaché in the upper half of the bow	109-112, 115-116	%4
Musical dynamics	15, 16, 21-24, 29-36, 39, 40, 45-48, 53-63, 67-76, 80, 82, 86, 89, 90, 103, 104, 107, 108, 111, 112, 117-120, 123-126	%54

The technical issues related with the use of right hand included in etude no.3 consist of string crossings in the whole bow legato (51%), legato and détaché in the upper half of the bow (9%) , detache in the upper half of the bow(4%) and musical dynamics (54%). Perfect fifth exercise has been notated in accordance with the etude. It has been considered that studying on the exercises mentioned below prior to playing the etude would eliminate the difficulty included in sample sequence.



Figure 3. Sample section  
 (Şekil 3. Örnek kesit)

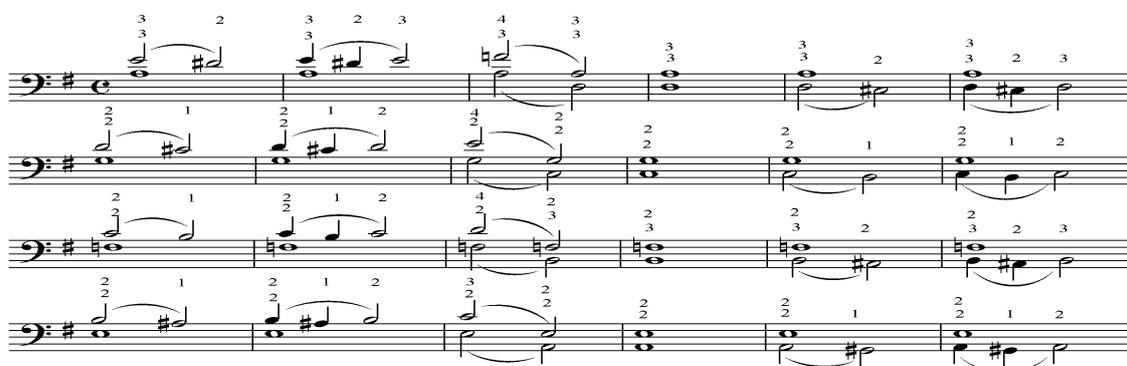


Figure 4. Exercise  
 (Şekil 4. Alıştırma)

• Findings & Comments (Bulgular ve Yorum)to Etude No 6

Table 5. The table related to the left hand difficulties in the etude  
 (Tablo 5. Etütte yer alan sol el kullanımına ilişkin zorluklar)

Technical issues	Measures they are used in	Percentage of use (%)
Preparing fingers	1-88,97-104,113,114,117,118,133-136,141-154,157-228	%82
Arpeggio	89-96,105-112,115,116,119-132,137-140,155,156	%16
Perfect fifths	1,3,4,6-9,11-17,19,20,22-25,27-34,36,37,39-42,44,45,47,49,51,52,54-60,62-66,68,69,71-74,76,77,79,80,97,98,101,102,113,114,117,118,133,135,136,141,143-145,147-150,152,153,157,158,160,161,163,165,167,168,170-173,175,176,178,179,209-213,227,228	%50

The technical issues related with the use of left hand included in etude no.6 consist of preparing fingers (82%), arpeggio (16%), perfect fifths (50%). Preparing fingers among the technical issues included in this etude has been determined as a difficulty requiring preliminary preparation.

Table 6. The table related to the right hand difficulties in the etude  
(Tablo 6. Etütte yer alan sağ el kullanımına ilişkin zorluklar)

Technical issues	Measures they are used in	Percentage of use (%)
String crossings in the whole bow legato	1-16,33-40,49-56,81-133	%36
Legato ve détaché in the upper half of the bow	17-32,41-48,57-64, 157-164,173,178	%18
Syncope	65-72,147-149,227-229	%6
Legato in the middle of the bow	133-136,141-146,150-154,165-172,179-226	%30
Musical dynamics	1-12,15-28,31-60,63-124,129-136,139-144,147-176,178,179,181-195,197-203,208-230	%83

The technical issues related with the use of right hand included in etude no.6 consist of string crossings in the whole bow legato (36 %), legato and détaché in the upper half of the bow(18%), syncope (6%), legato in the middle of the bow exercise (30 %) and musical dynamics (83%). Legato in the middle of the bow exercise has been notated in accordance with the etude. It has been considered that studying on the exercises mentioned below prior to playing the etude would eliminate the difficulty included in sample sequence.



Figure 5. Sample section  
(Şekil 5. Örnek kesit)

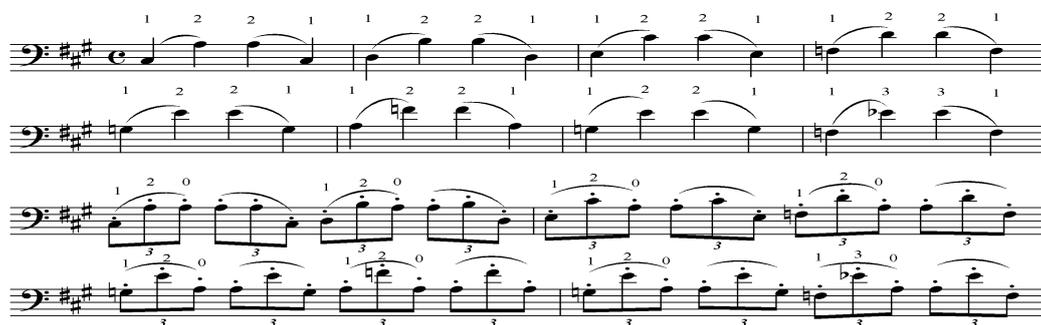


Figure 6. Exercise  
(Şekil 6. Alıştırma)

• **Findings & Comments (Bulgular ve Yorum) to Etude No 7**

Table 7. The table related to the left hand difficulties in the etude  
(Tablo 7. Etütte yer alan sol el kullanımına ilişkin zorluklar)

Technical issues	Measures they are used in	Percentage of use (%)
Double stops	9-16,25-32	%11
Regular scale	33-38,49-55	%9
Arpeggio	41-44,46,47,57-61,64,134,135	%10
Broken thirds	81-100,104-113,116-133,136	%35

The technical issues related with the use of left hand included in etude no.7 consist of double stops (11%), regular scale (9%), arpeggio (10%) and broken thirds (35%). Playing double stops among the technical issues included in this etude has been determined as a difficulty requiring preliminary preparation.

Table 8. The table related to the right hand difficulties in the etude  
(Tablo 8. Etütte yer alan sağ el kullanımına ilişkin zorluklar)

Technical issues	Measures they are used in	Percentage of use (%)
Détaché at upper half of the bow	81-88,97-100,116-122	%13
The whole bow legato	65-80,89-96,104-115,123-136	%36
Staccato and legato in the middle of the bow	101-103	%2
Musical dynamics	2,3,5,6,10,11,15,21-24,29-40,46-50,53-56,61-64,67,68,72-74,76-80,89-96,101-115,124,125,128-137	%59

The technical issues related with the use of right hand included in etude no.7 consist of détaché at upper half of bow(13%), whole bow legato (36 %), staccato and legato at middle of bow (2 %) and musical dynamics (59%). Double stops exercise has been notated in accordance with the etude. It has been considered that studying on the exercises mentioned below prior to playing the etude would eliminate the difficulty included in sample sequence.

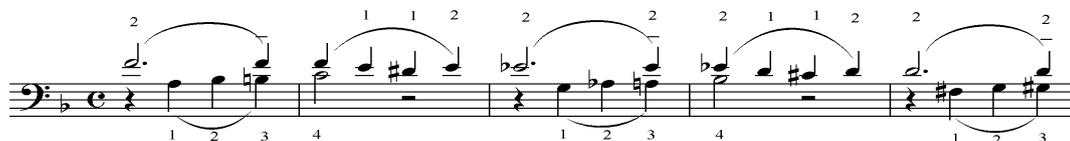


Figure 7. Sample section  
(Şekil 7. Örnek kesit)

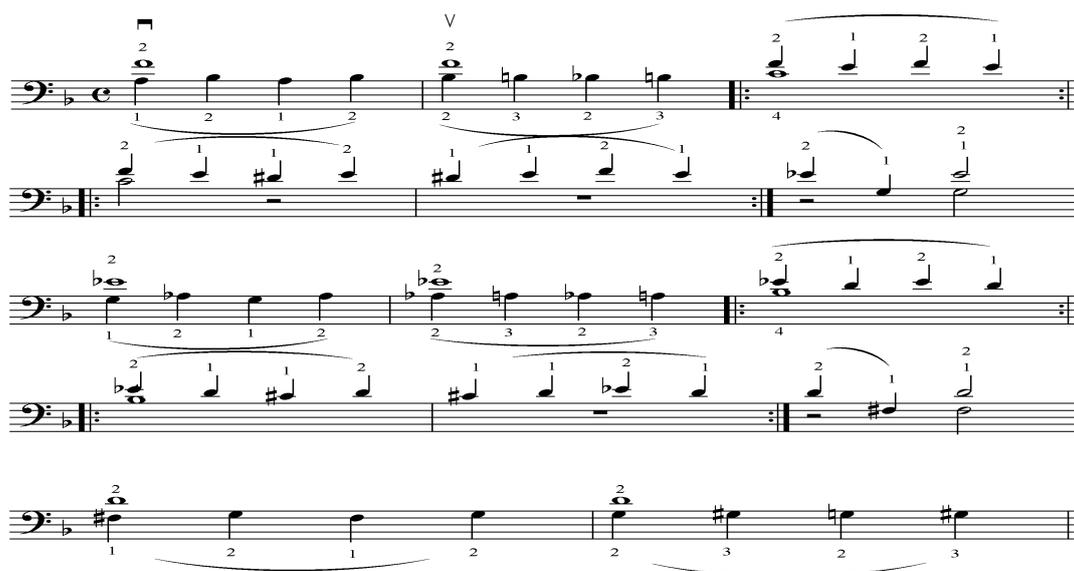


Figure 8. Exercise  
(Şekil 8. Alıştırma)

• **Findings & Comments (Bulgular ve Yorum) to Etude No 8**

Table 9. The table related to the left hand difficulties in the etude  
(Tablo 9. Etütte yer alan sol el kullanımına ilişkin zorluklar)

Technical issues	Measures they are used in	Percentage of use (%)
Arpeggio	1, 3, 4, 19, 22	%5
Regular Scale	1, 7, 9	%3
Trill	12-76	%74
Flageolet	78-85	%9

The technical issues related with the use of left hand included in etude no.8 consist of arpeggio (5%), regular scale (3%), trill (74%) and flageolet (%9). Playing trill among the technical issues included in this etude has been determined as a difficulty requiring preliminary preparation.

Table 10. The table related to the right hand difficulties in the etude  
(Tablo 10. Etütte yer alan sağ el kullanımına ilişkin zorluklar)

Technical issues	Measures they are used in	Percentage of use (%)
The whole bow legato	1-11, 18-22	%18
Legato in the upper half of the bow	24-76	%60
Musical dynamics	2, 4, 6-11, 16-18, 20-23, 25, 27, 29-32, 34, 35, 37-39, 41, 42, 44-53, 55, 56, 58-65, 68-73, 78-87	%73

The technical issues related with the use of right hand included in etude no.8 consist of the whole bow legato (18 %), legato in the upper half of the bow (60%) and musical dynamics (73%). Trill exercise has been notated in accordance with the etude. It has been considered that studying

on the exercises mentioned below prior to playing the etude would eliminate the difficulty included in sample sequence.



Figure 9. Sample section  
(Şekil 9. Örnek kesit)



Figure 10. Exercise  
(Şekil 10. Alıştırma)

• **Findings & Comments (Bulgular ve Yorum) to Etude No 9**

Table 11. The table related to the left hand difficulties in the etude  
(Tablo 11. Etütte yer alan sol el kullanımına ilişkin zorluklar)

Technical issues	Measures they are used in	Percentage of use (%)
Left hand agility	1-46	%56
Arpeggio	48-79	%39

The technical issues related with the use of left hand included in etude no.9 consist of left hand agility (56%), staccato in the upper half of the bow (39%). Left hand agility among the technical issues included in this etude has been determined as a difficulty requiring preliminary preparation.

Table 12. The table related to the right hand difficulties in the etude  
(Tablo 12. Etütte yer alan sağ el kullanımına ilişkin zorluklar)

Technical issues	Measures they are used in	Percentage of use (%)
The whole bow legato	1-46	%56
Staccato in the upper half of the bow	48-79	%39
Musical dynamics	3, 4, 7, 8, 10-33, 36, 37, 40-63, 65-82	%86

The technical issues related with the use of right hand included in etude no.9 consist of the whole bow legato (56 %), staccato in the upper half of the bow (39%) and musical dynamics (86%). Left hand agility exercise has been notated in accordance with the etude. It has been considered that



Table 14. The table related to the right hand difficulties in the etude  
(Tablo 14. Etütte yer alan sağ el kullanımına ilişkin zorluklar)

Technical issues	Measures they are used in	Percentage of use (%)
Slurred staccato	1, 3, 5-9, 11-19, 21, 23, 25-40, 49-56, 65-70, 86, 88, 90-102, 104-151	%71
Spiccato	41-48, 50, 52-54, 57-64, 71-85, 87, 89	%23
Martellato	49, 51, 53-56, 65-70	%7
Musical Dynamics	1, 3, 5-10, 18, 19, 21, 23, 25-32, 39-48, 50, 52, 55-70, 72-89, 101, 102, 104, 106-110, 112, 114-116, 118-151, 154, 155	%73

The technical issues related with the use of the right hand included in etude no.12 consist of slurred staccato (71%), spiccato (23%), martellato (7%) and and musical dynamics (73%). Slurred staccato exercise has been notated in accordance with the etude. It has been considered that studying on the exercises mentioned below prior to playing the etude would eliminate the difficulty included in sample sequence.



Figure 13. Sample section  
(Şekil 13. Örnek kesit)

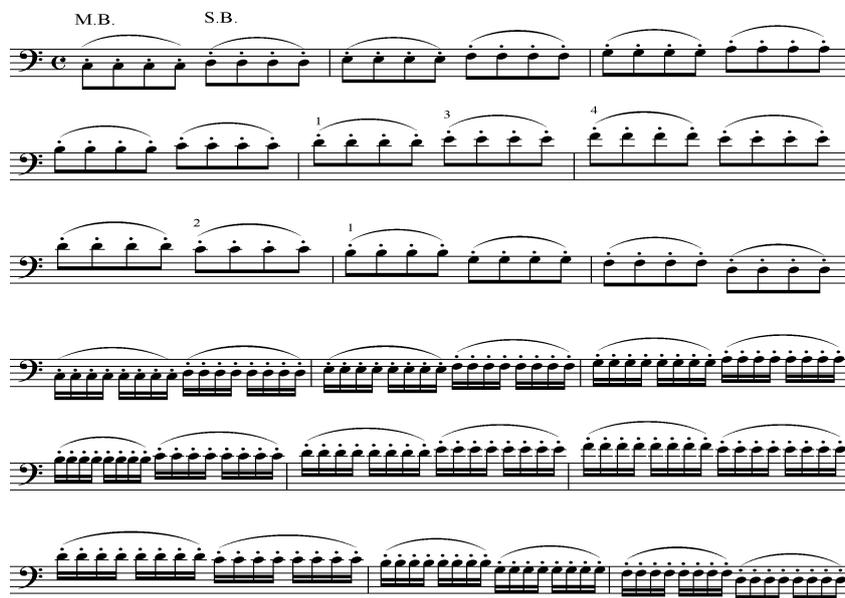


Figure 14. Exercise  
(Şekil 14. Alıştırma)

#### 4. CONSEQUENCES (SONUÇLAR)

It is concluded that arpeggio, double stops, regular scale, chromatic scale, perfect fifths, trill, double trills, change of position in legato on two strings, preparing fingers, broken thirds, flageolet, left hand agility technics take place in these etudes.

It is concluded that the whole bow legato, legato and detache in the upper half of the bow, musical dynamics, the whole bow marcato, staccato in the upper half of the bow, string crossings in the whole bow legato, detache in the upper half of the bow, syncope, spiccato in the lower half of the bow, playing triple stops, legato in the middle of the bow, slurred staccato, spiccato, martele technics take place in these etudes.

The exercises created in a manner devoted to the difficulties determined in the etudes should be in an easier tone than or the same tone with the respective difficulties as well as bear the same finger numbers.

The exercises created in a manner devoted to the difficulties determined in the etudes should be easier than the respective difficulties.

##### 4.1. Recommendations (Öneriler)

- The difficulties covering right hand experienced in etudes may also be supported with the help of scales.
- Etude analysis model can be applied to the other violoncello etude books.
- Etude analysis model can be applied to the etude books notated for other musical instruments.
- Etude analysis model can be applied to the musical works notated for violoncello.
- Etude analysis model can be applied to the musical works notated for the other musical instruments.

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