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Musical Hearing Education Youtube Videos: a Netnographic Study of Student Problems and İnstructors Responses

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Abstract

In this study, musical hearing education was examined outside the traditional classroom environment and it was aimed to determine the problems experienced by the students and the solution suggestions of the instructors for these problems in line with the comments made on the videos on Youtube channels. A total of 405 comments and 167 responses from 317 videos from 7 Youtube channels were included in the study. Netnography method was used in the study and the data were analyzed by content analysis technique. MAXQDA 2020 package program was used for the content analysis process. It was observed that students encountered many problems in single tone, two tones (intervals), three tones, four tones, melody and rhythm repetition studies in musical hearing education.The category in which students made the most comments in musical hearing education studies was melody, followed by rhythm hearing. Students face many problems, especially melody and rhythm memory, such as inaccurate giving/not giving tones, not being able to evaluate themselves and realize their mistakes, and not knowing the working method. Although the instructors provide opinions, suggestions and recommendations for these problems, Youtube videos are insufficient for some problems that need to be solved face-to-face.

Keywords: Musical hearing, ear training, youtube videoes, youtube comments, musical hearing problems.

Introduction

Today, a new teaching and learning dynamic has emerged thanks to the internet, which is accessible almost everywhere. Lessons that used to be conducted face-to-face in classrooms in the past can now be carried out in virtual environments, online and with videos through social media. Mayfield (2010) defines social media as media in which users can easily participate, share and create content, including blogs, social networks, wikis, forums and virtual worlds. The most commonly used social media platforms are Facebook, Twitter, Myspace, Wikipedia, Instagram and Youtube. The most popular of these platforms is Youtube. YouTube is a place where individuals can freely access, watch and share videos online (Burke & Snyder, 2008). Although YouTube was created as a video-sharing service for ordinary users, its potential for educational use has not gone unnoticed (Snelson, 2011).

Youtube has provided music educators and students with a wide learning and teaching environment that covers both theoretical and practical areas such as instrument, voice and musical hearing. Youtube is an alternative that can be used in the world of education, especially in music. Videos on YouTube can be used as an audio-visual learning environment that helps teachers to provide material at school (Rahmaturrizk & Sukmayadi, 2020). Teachers can find content not available in other sources, cultural background information about artists and musical styles, or listening examples for their lessons on YouTube (Dougan, 2014).

Monkhouse & Forbes (2015) argue that youtube for music performances can raise awareness, aid understanding of performances, and support musical interpretation and style by listening to and analyzing video footage of both historical and contemporary performances. Webb (2007) argues that youtube is a resource for promoting creative and artistic activities in music education, but visual listening should be used in addition to traditional forms of listening. Cayari (2018) stated that platforms such as youtube allow students to discover and learn more about music performance on their own and can help them discover more about the specific

musical interests and skills they hope to acquire. Since YouTube also provides a virtual communication environment for students and instructors, students can also post videos with their thoughts on the content presented by their instructors or video responses to videos. Comments below each video allow viewers to post ideas and questions, share additional resources, and submit requests for new videos (Marone & Rodriguez, 2019).

Research shows that Youtube is a platform that can be used not only for listening and watching music but also in almost every field of music education. In this study, it is aimed to examine musical hearing education Youtube videos and to address a dimension of music education that is not encountered in the literature. In the ear training studies conducted through videos shared in virtual environments other than the traditional classroom environment, what kind of problems students encounter while practicing and how educators offer solutions to these problems were investigated on Youtube.

LITERATURE REVIEW

When the studies on music education on YouTube were examined, it was seen that these studies were mostly related to instruments and instrument education. Gerekten at all. (2023) stated that YouTube is the social media platform with the highest usage rate for the development of individual instrument skills. Whitaker at all (2014) examined YouTube music education videos in terms of content and specific features; he stated that the videos on YouTube related to music education are mostly performance-based videos, followed by instructional videos. In the study, it was stated that these instructional videos were for instrument education and the most frequently observed instrument was the piano. Kruse & Veblen (2012), in their study to identify traditional folk music videos on Youtube and to determine their characteristics, concluded that most of the banjo, fiddle, guitar and mandolin videos are aimed at beginners and contain technique-based musical goals. In this direction, he stated that the needs in online learning can be met, as people seeking instrumental training can often be musicians seeking basic musical skills. Marone & Rodriguez (2019) addressed the opportunities of YouTube in the music learning and teaching process and examined the guitar software, effects features and how they can be used in guitar lessons and training videos shared by social media celebrities on Youtube. In the study conducted by Uygun (2020), the number of views, lesson duration and features, likes and dislikes of youtube videos shared for 5 instruments were examined. It was seen that the flute instrument had the least of these features, the most

watched instrument was the baglama, and the most lesson duration belonged to the piano instrument. In addition, it was concluded that most of the lesson features were for educational purposes and did not have continuity. Lei at all. (2021) states that social media contributes to instrument training and helps musicians in technical issues such as finger usage, posture and rhythm, and in developing musical styles. Gülüm (2022) examined Youtube violin education videos and concluded that in line with the video comments, students encountered some technical problems, especially at the beginner level (posture / grip, right / left hand), and that the instructors made suggestions for solving these problems. Atmaca & Gerekten (2023) analyzed Youtube comments in a study to determine the needs of bağlama students who want to receive amateur level instrument training, and found that students mostly had problems with the selection of bağlama types and tuning, and needed information on many technical and musical issues.

Apart from instrument education, music education studies on youtube consist of various dimensions. Parasiz (2018) found that students in the Turkish Music department mostly used YouTube in their individual studies on instrument, choir, hearing, voice training, orchestra, popular music, Turkish music and folk music repertoire courses. In two studies examining the use of YouTube by librarians and educators, it was found that librarians used YouTube for training library-related information and communicating with other libraries, while educators used YouTube for teaching, sharing content they created, creating a resource to help teaching, or for their own research (Dougan, 2014; Adeyinka et all..., 2018). Cayari (2016) examined the effects of virtual vocal ensembles posted on websites such as Youtube and stated that music educators can benefit from these videos in their work and that videos can help students learn music making skills with virtual content outside of choral lessons in the classroom. Lehimler (2018) stated that extracurricular activities through online hearing programs have a significant impact on improving students' musical hearing skills and motivation.

Problem Situation

As a result of the reviews in the literature, it is seen that youtube videos are used in many areas such as vocal, performance, popular/traditional music, primarily instrumental, in formal and informal music education. The idea that led the researcher to this study is that there is no study on musical hearing or ear training.

When musical hearing education, which is the focus of the research, is considered as a whole, it consists of hearing, reading and writing dimensions. Musical hearing includes

recognizing and distinguishing loudness, distinguishing and analyzing two or more notes played at the same time, and repeating a melody motif and rhythm pattern. In many conservatory entrance exams in Turkey, only the 'hearing' dimension of musical hearing is used to measure students' abilities. For this reason, as a result of the youtube search, it was seen that musical hearing education lessons mostly cover the musical hearing dimension for conservatory. Accordingly, only the hearing dimension of musical hearing education was included in the study, and the ear training studies on YouTube, which determine basic musical ability, were discussed.

The content of the musical hearing training videos on Youtube consists of single tone, melody (horizontal hearing), two tones (intervals), three tones, four tones (vertical hearing), and rhythm hearings. These videos were prepared by educators in series from beginner to advanced levels. In this study, it was aimed to determine the 'hearing' problems experienced by the students in musical hearing education via youtube and to examine the responses of the instructors in line with these problems. In line with this purpose; a) What are the problems experienced by the students who comment on the musical hearing videos on Youtube while practicing? b) What are the suggestions and recommendations of the instructors for solving the problems? Answers to the questions were sought.

Method
Research Model
In this study, the netnography method was used to examine the problems experienced by students in hearing and the dimensions of instructor responses in line with the comments in the conservatory preparation musical hearing videos. This method, developed by Robert V. Kozinets, is a new qualitative research method that adapts ethnographic research methods to work with communities in virtual environments (Kozinets, 2002).

Data Collection
In the study, student comments and instructor responses on the Youtube channels of musical hearing instructors and students were used as data.

The sample of the study was selected according to the purposive sampling method. Purposive sampling is a sampling method in which sample selection is based on information about the characteristics of the population and the purpose of the research. It involves the researcher selecting a subset that is believed to be representative and typical of the population (Earl, 2004). In this direction, the words 'musical hearing' and 'ear training' were first typed into the search engine to determine the sample. In the

results, it was seen that musical hearing education videos were mostly given as conservatory preparation courses. In this direction, another search was made using the keyword 'conservatory preparation' and as a result of all these keywords used, firstly; channels broadcasting in Turkish and providing musical hearing education were identified. Then, the musical hearing education videos on the 7 youtube channels with the highest number of video shares, views and subscribers were determined as the sample of the study. Burcu Koşal Studio (77.7 B), Caner Başbuğa (176 B), Emre Yücelen (1 mn), Ferhat Savaş (2.65 B), Music Teorim (23.3 B), osmanhocaylahazırlanıyorum (17.3 B) and Yılmaz Karaman (173 B) are the channels included in the study. However, the videos on these channels that did not receive any comments or were closed to comments were excluded from the study. As a result, 10,022 comments from a total of 317 videos were analyzed in the study. The data collection process was carried out between 12.12.2023 and 17.04.2024.

In netnographic research, while collecting data, researchers have to decide whether the data are functional or not; they have to separate relevant and informational messages from irrelevant and social messages (Kozinets, 2002). For this reason, in the study, only the comments of the students about the problems they experience in 'hearing' in the musical hearing process and the dimensions of the answers given by the educators were addressed. Accordingly, sentences with the following characteristics were not included in the study.

- Comments from students and educators expressing thanks, gratitude, appreciation or just using emoji,
- Repeated sentences of the same student on different channels,
- Sentences that are difficult to understand,
- Comments on conservatory exams and the content of the exams,
- Questions, answers and dialogues between students

10,022 comments were reviewed by two expert educators and 405 comments and 167 responses were included in the study.

Data Analysis
In the study, student comments and instructor responses were analyzed using content analysis. This method involves analyzing texts to make reliable and precise inferences. Its main purpose is to reveal the underlying meanings of written, audio, visual or other content that conveys symbolic and meaningful information. Content analysis is a method that enables the identification of words, symbols, meanings, themes, thoughts, messages and categories (Krippendorff, 2004).

An inductive data-driven approach moves from the specific to the general, so that specific instances are observed and then combined into a larger whole or general statement (Chinn and Kramer 1999). The main characteristic of all content analysis is that many words of a text are classified into much smaller content categories (Weber 1990; Burnard 1996). In the inductive content analysis approach, topics and categories draw their sources from the data sets (Zhang & Wildemuth, 2009). That is, codes emerge from participants' words and can form semantic sentences. This analysis process includes open coding and creating categories from codes. These sections, which form a meaningful whole in themselves, were coded by two researchers. First, the codes were examined by bringing them together, and within the commonalities found, they were matched with categories that could explain the data at a general level and collect the codes in certain categories. As a result of the categories and codes created, 6 categories and 29 codes were formed for student comments and 2 categories and 6 codes were formed for instructor responses.

In the student comments; in the categories of one tone, two tone, three tone and four tone hearing, the code "Musical hearing/perception" expresses the comments covering the problems experienced in sound sensation. With the code "discrimination/analysis", comments covering the problems experienced in distinguishing and naming sounds are described. With the code "intonation", comments about intonation problems are discussed. With the code "Vocal range", comments about notes in the upper and lower octaves that exceed the students' vocal range are discussed. The code "Self-evaluation" covers the comments about the problems students have with how to check their correct or incorrect answers.

In the category of melody, the code "Memory" refers to comments about the inadequacy of melodic memory. With the code "Rhythm", comments about the problems experienced in the rhythmic structure of the melodies are explained. With the code "Intonation", intonation problems experienced while repeating the melody are discussed. With the code "Vocal range", comments about the notes in the upper and lower octaves that exceed the vocal range are expressed. The code "Self-evaluation" refers to the comments about the problems that students have about how to check their correct or incorrect answers. With the code "Method-Technique", comments about what should be done to improve melodic memory are explained.

Among the codes related to the rhythm hearing category, the code "Memory" describes comments about the inadequacy of rhythm memory. The code "Timing" describes the problems experienced in the note beats patterns within

the rhythm. With the code "Tempo", comments arising from problems with the speed of the rhythm are discussed. With the code "Method-Technique", comments on what should be done to improve rhythm memory are expressed.

In instructor responses; in the category of responses for students: The code "Instruction" refers to the instructors' direct answers to student questions. The code "Study Suggestion" describes the responses that include the instructors' study suggestions for the problems experienced by the students. The code "Evaluation" refers to the responses including what students can do to evaluate themselves. The code "Support and motivation" describes the responses that include the morale, support and motivation sentences given to the students. The code "Channel Follow-up" in the category of "Guidance" refers to the responses in which instructors directed students to watch other videos shared by the instructors on their channels. The code "Private Lesson" refers to the responses in which instructions were given about the necessity of working face-to-face with an instructor.

Student comments are coded as C1, C2, C3.. and Instructor responses are coded as R1, R2, R3…
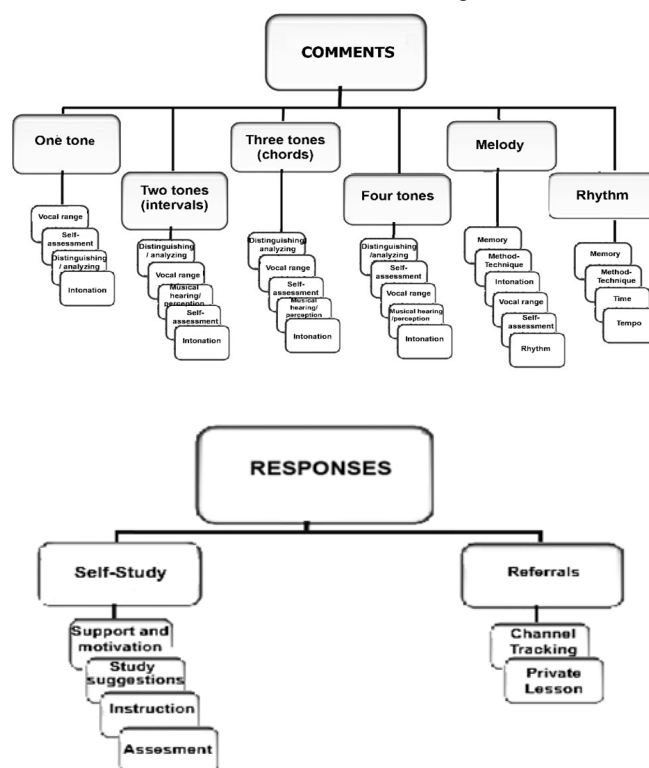
The code scheme is indicated in the figure below;

Fig. 1: Coding Map

FINDINGS

In this section of the research, student comments and instructor responses are given with sample sentences. As a

result of the code matrix, the most commented categories and codes are presented in a table, and then the most used code is determined with the code cloud (Table 1).

As seen in Table 1, the most common problems experienced by the students in one tone hearing were related to vocal range and self-assesment. It is seen that most of

Table 1: Categories and Codes Related to Student Comments

	Code	Comment Number	Example Sentences
One tone	Vocal range	17	C8 I repeat (sing) all the notes in the video correctly, but I sing the notes one octave lower. Is this important? C15 Teacher, I have a problem with control my voice while repeating notes, I can't reach high-pitched notes.
	Self-assessment	10	C31 Teacher, if you sing (repeat) all the one tones, we will have the chance to evaluate what we do ourselves. C26 I wish you would write which notes they are, we would check ourselves.
	Distinguishing/ analyzing	4	C2 When you press the keys in one note, I first try to hold the note with my mouth closed and then say naaa.., I can do it all this way, but when it comes to repeating the note at once, I can't do it.
	Intonation	3	C6 When you play one note, I can repeat the note correctly, but the frequency is not exactly where it should be, I look at it from the Tuner application, what should I do for this?
Two tones (intervals)	Distinguishing/ analyzing	29	C46 I can't separate intervals C52 I can repeat the second note, but I cannot the first.
	Vocal range	11	C76 I'm 16 years old and I have a hard time making high-pitched sounds. C78 I have difficulty with chest register, falsetto register is easier
	Musical hearing/ perception	9	C34 The notes you play, sound the same, I don't hear them. Can you clarify how we should make this sound distinction for those who don't know anything? C36 In intervals, it sounds like you always play the same sound
	Self-assessment	5	C81 I didn't understand what I was doing because it always felt the same. C82 How do we know if we are repeating the correct notes?
	Intonation	1	C71 Most of the sounds are correct but there is an intonation problem
Three tones (chords)	Distinguishing/ analyzing	30	C115 I can hear and repeat, but I cannot tell which chord they are. C119 I always sing (repeat) the chords you ask in the basic case.
	Vocal range	14	C124 Teacher, can we use the falsetto for the high-pitched sounds in the ear exam? C131 I have an alto voice, I have difficulty in sing some chords. The falsetto is also very challenging, I hope it will develop over time.
	Self-assessment	7	C134 How will I know if I am repeating the chords correct? C136 I am sure that I repeated one and two tones (intervals) correctly, but I don't know if I did three tones (chords) correctly or incorrectly.
	Musical hearing/ perception	2	C86 I cannot hear the chord separately and repeat the notes correctly
	Intonation	1	C120 I have intonation problems
Four tones	Distinguishing/ analyzing	18	C148 I always sing (repeat) the last note wrong in four tones, C151 I always sing inversion of four tones.
	Self-assessment	10	C168 I am studying for the exam, but how will I know if I sing the notes correctly?
	Vocal range	7	C161 Since I am a male, I can sing chest register better and I cannot sing falsetto
	Musical hearing/ perception	2	C140 I have problems with the four notes, my ear perceives the first note and the last note very differently.
	Intonation	1	C159 I can sing most of the notes correct but not clean

	Code	Comment Number	Example Sentences
Melody hearing	Memory	114	C181 Melodic memory is very difficult for me. It does not stay in my mind, it goes away immediately. C193 I can't keep the melody in my mind, can you please help me? C220 Melody is very difficult, I can't do it, especially when it comes to the end and middle, it is bad and I forget.
	Method-Technique	19	C313 I can't repeat the melody. Is there a way of working or a trick that you can improve if you do this? I am inadequate in melody C323 How should I listen to the melodies, should I divide them into two, is there a tactic, logic or way to improve this work?
	Intonation	8	C296 I can remember the melodies but I can't stay in tune. Y299 When singing (repeat) melodies, is it necessary to give the exact frequency of the tone pressed?
	Vocal range	7	C304 Do you also accept lower octave of the given tone as correct? C306 I am a soprano, these melodies have very low notes for me, although I can repeat the melodies, I cannot sing some notes.
	Self-assessment	5	C309 If you sing us the correct version after the melody, it will be more useful for us to understand what we did right. C311 After the repetition of the melody, it would be very good if you play the same one again so that we can see our mistakes and correct ones.
	Rhythm	3	C292 Teacher, I have a good ear for melody, but I make mistakes in beats.
Rhythm hearing	Memory	49	C335 Wasn't this rhythm a little difficult, the rhythm repetition is long because i forget until they reach the end. C340 I can't remember the rhythm repetition, what should I do? C342 Teacher, I start to forget the rhythm towards the end.
	Method-Technique	12	C397 How can I improve the rhythm repetition practice? C398 I have difficulty with the rhythm and I don't know how to play it.
	Time	4	C384 Teacher, I have a problem with timing.
	Tempo	3	C386 The tempo of the rhythms was fast and I had difficulty repeating them.

the students had problems with sound separation/naming and vocal range in two and three tones hearing. In four tones hearing, students had the most problems with sound separation/naming and self-evaluation. In melody and rhythm hearing, it is seen that students mostly do not know how to work to improve their memory.

Table 2 shows that instructors' responses to self-study category consisted mostly of supportive motivational sentences and study suggestions. In addition, this category also includes direct instructions to student questions. The responses in the refferals category are mostly related to the channel following code and instructors are directed to watch the videos on their own channels.

As a result of the code matrix browser made in line with the findings obtained from the research; the category in which students made the most comments according to

Table 2: Categories and Codes for Instructor Responses

	Code	Number of Answers	Sentence Examples
Self-Study	Support and motivation	45	R84 You can do it with plenty of study and repetition
			R86 It is normal to have difficulties at first, you can succeed as long as you increase and do not neglect your studies. Keep going without getting tired.
			R90 Yes, rhythms may seem difficult at first, but as you practice and progress, they will start to come easily.
			R100 When you work regularly and in a planned way, you will realize that you are improving. Keep up the good work.

|	Code	Number of Answers	Sentence Examples
Self-Study	Study Suggestions	44	R37 For 3 and 4 tones, you can install a piano application on your phone and work from there.
			R52 When practicing rhythm, I suggest you break it up in the first stage. It also helps if you practice a lot of rhythm and bona.
			R56 You can listen to music and sing them in the same key, which is incredibly useful for melody repetition.
			R61 For melody, I would recommend you to work in two parts again, like question and answer. Focus on the question first, then the answer. As you practice, your melodic memory will improve and you will start to answer easily.
	Instruction	35	R3 The notes you vocalize must have the same frequency and tone.
			R15 The speed of the beats is actually normal, you can slow down the video if you wish.
			R29 I think the longer you give for intonation, the better, the more useful it is.
	Assesment	6	R129 If you don't understand or realize that you are vocalizing the notes correctly, then there is already a problem.
			R130 On the piano, you should press and sound the notes yourself and then check the accuracy by pressing the notes one by one.
Referrals	Channel Tracking	24	R133 If you have difficulty with 3 and 4 tones, you can also look at videos where I run only 3 and only 4 tones.
			R134 You can watch my rhythm hearing practice videos from the basics. There we work with city names and from the basics.
			R140 I will regularly share 2, 3 rhythm and melody studies every week, so stay tuned
	Private Lesson	13	R155 I suggest that you study with a good teacher and complete your deficiencies in this way.
			R158 You need to work hard, I suggest you work with a teacher and take private lessons.
			R166 I cannot say anything without knowing your level and competence. I suggest you work systematically with a good teacher.
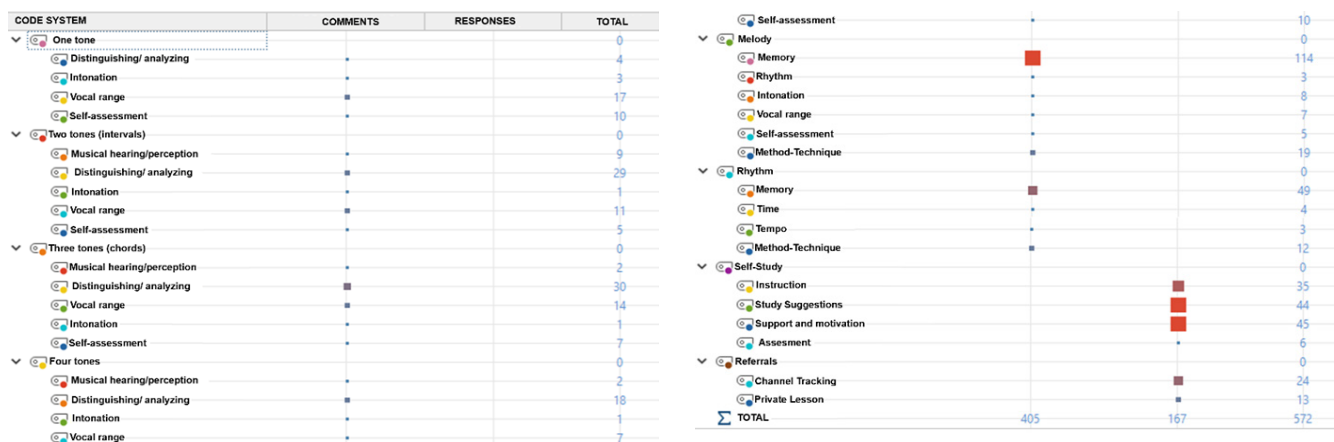
Fig. 2: Code Matrix Browser

the categories was determined as melody. Students had the most problems with vocal range in the one tone category, and the most problems with distinguishing/ analyzing in the two tones, three and four tones categories. In the melody and rhythm hearing categories, students stated that they had the most problems with memory. In the comments of the instructors, the most common responses in the category of self study are study suggestions and support/motivation. In

the category of referrals, channel following is suggested the most, followed by referral to private lessons.

As a result of the analysis using the code cloud, the most frequently used code was "memory". Students stated that they had the most problems with memory.

CONCLUSION AND DISCUSSION

Musical hearing education videos on Youtube have provided students with opportunities to prepare for music aptitude test, to create additional resources for out-of-school studies, and to share their problems with the features of being able to watch and comment anywhere and anytime. Instructors, on the other hand, can share their own videos, respond to comments on the videos, try to solve students' problems and guide students. In addition to all these features, Youtube also creates a new field of study for researchers. From this point of view, in this study, the use of musical hearing lessons broadcasted on Youtube channels outside the real classroom environment was examined, the problems experienced and the solutions brought by the instructors to these problems were mentioned.

Musical hearing skills are of great importance for a musician's musicality (Yayla, 2006) and help students develop auditory, short-term memory and musical attention (Karpinski, 2000). In the study, the students stated that their vocal range were insufficient in one tone, two and three tones hearing, and that they had problems in distinguishing and analyzing sounds in two, three and four tones. One of the most important parts of being a good musician is good hearing. Being able to distinguish the intervals in music is a part of this. Burns and Ward (1982) stated that successful musicians usually have a good mastery of identifying musical intervals and can easily and accurately identify musical intervals.

The category in which students make the most comments in musical hearing videos is melody hearing. This is followed by rhythm. Students had more problems in memorizing melodies and rhythms in these studies. In addition, the students expected advice from the instructors about the development of melody and rhythm memory and study method. Memory is of great importance in all dimensions of music. Musical memory is the power to keep in mind, store and recall when necessary the music or musical elements that are heard, read, written, listened to, sung or played through the traces they leave (Uçan, 1994). All well-known aptitude tests in the world include musical memory and rhythm dimensions, while some aptitude tests (such as Oregon, Drake, Gordon) focus specifically on musical memory.

The common problem that students experience in tones and melody studies is related to intonation. When repeating notes and melodies, they experience problems such as not being at the same frequency, not singing clean or not staying in tune. The general and common problem experienced by the students in all the studies is that they are unable to evaluate themselves and realize their rights and wrongs because they are in an education with videos outside the traditional classroom environment. It is not possible for technological tools such as YouTube to completely replace traditional teaching methods (Debevec et all. 2006). In this study, the biggest limitation of YouTube is the inability to get feedback in the studies that require practice. In previous studies, similar results were reached and it was seen that the biggest disadvantage of YouTube educational videos was not receiving feedback (Atmaca & Gerekten 2023; Gülüm, 2023).

The instructors' responses to student comments mostly consisted of support and motivational statements to make students believe that they can succeed. This is followed by study suggestions and direct answers to student questions. Apart from these, the instructors also gave answers that included instructions to watch other videos on their channels and to take private lessons from another teacher in order to overcome the problems experienced. The responses of the musical hearing instructors in the study are similar to the responses of violin educators in the study conducted by Gülüm (2023). The instructors generally made suggestions to the students in line with the solution of the problems and stated that it is necessary to get the support of an expert instructor for some practical problems that cannot be solved remotely.

As a result, it was observed that students actively benefit from YouTube videos both for additional resources and to prepare for aptitude exams. Thanks to the ability to comment on YouTube videos, students can share their problems and receive suggestions from instructors. However, students encounter many problems, especially melodic memory, such as singing tones incoreccly, not being able to evaluate themselves and realize their mistakes, and not knowing how to work. Although instructors provide opinions, suggestions and recommendations for these problems, Youtube videos are insufficient for some problems that need to be solved face-to-face.

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