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Research Article

Opinions of string instrument students of music education department on sight reading[1]

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Abstract

Our scientific article entitled "A bright representative of the composer school - Adil The aim of this study is to find out views on sight reading of undergraduate music education students who are mainly trained on bowed string instruments including the violin, the viola and the cello. The sub-problems of the research relate to the differentiation of the prospective music teachers' views in terms of grade level, instrument education duration, and musical education duration. It is a descriptive study using literature review for qualitative data and survey methods for quantitative data. The study group consists of 43 string instrument students enrolled at Gazi University, Gazi Faculty of Education, Fine Arts Education Department, Music Education Branch during the 2021-2022 academic year. The quantitative pillar was carried out by using the Opinionnaire for Sight Reading on String Instruments (OSRSI). The opinion form is a 5-point Likert scale consisting of 35 items ranked across the options "Strongly disagree", "Disagree", "Neutral", "Agree" and "Strongly agree". The questions in the measurement tool have 7 dimensions. Dimension 1 is about the use of sight reading exercises in instrument lessons (4 items), Dimension 2 deals with practices to improve sight reading skills (4 items), Dimension 3 concerns attitudes towards new pieces for sight reading (2 items), Dimension 4 is related with another area of attitude towards new pieces for sight reading (5 items), Dimension 5 deals with difficulties encountered in sight reading (12 items), Dimension 6 is about factors affecting motivation in sight reading (6 items), and Dimension 7 covers the use of sight reading practices outside individual instrument lessons (2 items). The data were analyzed and interpreted with SPSS. The results revealed no significant relationship between the OSRSI scores and duration of instrument education or duration of music education. However, the grade level was shown to exert a significant effect on the scores obtained from the scale. These results can provide useful insights for developing strategies for music teachers and music education programs.

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Introduction

The individual's abilities, goals and objectives play an important role in determining the type of education to which they will be guided. Music education is divided into three as general music education, amateur/non-professional music education and vocational music education based on the target skills. Instrument education is also an important aspect of these three main branches. Instrument education helps the individual get to know themselves, improve their innate abilities, and ultimately realize themselves through acquiring new skills. Therefore, instrument education is an important

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branch of music education (Uslu, 1998, p. 24). Today, instrument education is offered in music schools as there is no formal program specifically designed to teach how to play musical instruments (Albuz & Demirel, 2019).

The aim of instrument education is to teach predetermined target skills as well as developing these skills. For this reason, instrument education is not limited to the duration of the formal music courses. Since the ability to play an instrument can be improved through a regular and systematic study, the individual's extracurricular studies should not be considered independent from the instrument education.

Acquiring the necessary skills in instrument education is accomplished by learning new etudes, musical pieces or works. Since learning of the new repertoire is possible with sight reading, sight reading and sight reading education constitute an important part of instrument education.

Sight reading means playing of a musical work that has not been studied before at first sight. Although it is almost impossible to perform a new work perfectly at first sight, a musician with adequate knowledge and technical skills can perform successfully with minimal errors if they understand the technical features of the work (Fenmen 1991, p. 31).

Sight reading consists of the stages of learning, reading and vocalization. Learning constitutes the first stage of sight reading, as some basic musical knowledge has to be learned before performing a piece (Öztutgan & Akbulut, 2019, p. 68).

Since the vocalization of a novel musical script is not merely about playing, the musical script must be analyzed mentally in the first place. Then comes the stage of vocalizing the mentally analyzed notes with an instrument.

Ercan (2008) listed the importance of reading as follows, which is the second stage of sight-reading in which musical writing is perceived through mental analysis:

- This skill gives the student the opportunity to practice accurately and properly.
- Once the student is able to read the musical notes with ease, they find it fun to read new pieces.
- The student who can easily read the notes can explore music in a wide and versatile way
- The ability to read notes without difficulty is of great importance for students who start to work on making music together. Playing in a band provides both the required motivation and improves their reading (p. 21-22).

In the last stage of sight reading, which is vocalization, mechanical movements are repeated in parts of our body such as arms, fingers and diaphragm. Also, at this stage, as in the reading process, the vocalization of the notes also has a mental character (Öztutgan & Akbulut, 2019, p. 72).

Sight reading is an important skill that every musician must have. It is of great importance that the stages that make up sight reading be meticulously conveyed to the student, comprehended and reinforced by the student. It is thought that the individual who has speed sight reading ability is likely to spend less time reading the piece at first sight and spare more time for technical and musical studies.

Sight reading is a crucial skill to be a musical student or a musician. As musicians specialize in their instruments over time, technical expectations increase too. Besides, with the limited working time and the increase in technical difficulties, sight reading becomes an indispensable skill (Likitwittaya, Promsukkul, & Buranaprapuk, 2021, p.148).

It is thought that the time saved thanks to speed sight reading can be invested in memorization practices, recognizing the repertoire of the relevant instrument, musicality and agility, and learning about the characteristics of different periods and styles.

A pianist with improved sight reading skills will probably grasp a new repertoire in a shorter time; in this way, they can experience a lot of new music and learn more about some features and styles of different composers (Hardy, 1992, p. 22)

Playing of a piece at first sight can be quite complex and challenging for students. The difficulties encountered in this process may decrease the students' motivation causing them to form a negative attitude towards their instruments. If the students are guided in overcoming the difficulties they encounter during sight reading, they may play an etude or work almost flawlessly by means of sight reading. This will in turn positively affect their motivation. Bearing all these in mind, the research problem was formulated as "What do undergraduate music education students who play string instruments think about sight-reading?"

Significance of Study

The significance of the research can be explained for each of the sub-problems as following.

Differentiation by grade levels: This sub-problem aims to reveal the changes, if any, in prospective music teachers' views on sight reading in string instruments at different grade levels. The results under this sub-problem will help figure out how students' education levels affect their thoughts about sight reading.

Differentiation by duration of instrument education: This sub-problem aims to reveal the changes, if any, in prospective music teachers' views on sight reading in string instruments based on the duration of their instrument education. These results will help figure out how students' instrument education periods affect their views on sight reading.

Differentiation by duration of music education: This sub-problem aims to reveal the changes, if any, in prospective music teachers' views on sight reading in string instruments based on the duration of their overall music education. The results under this sub-problem may help understand the relationship between students' music education duration and their views on sight reading in string instruments.

Overall, the answers to the research questions are expected to shed light on how undergraduate music education students' views regarding sight reading vary depending on certain factors. As a consequence, the study findings can help reconstruct attitudes of music education programs and music education departments towards sight reading.

Research Aim and Problem

The aim of the research is to expose the views of undergraduate students on sight reading whose main instruments of education are the violin, the viola and the cello. The research problem is "What are the opinions of undergraduate music education students about sight reading in string instruments?" The sub-problems are as following:

- How do the students' opinions about the use of sight reading in string instruments differ by grade level?
- How do the students' opinions about the use of sight reading in string instruments differ by duration of instrument education?
- How do the students' opinions about the use of sight reading in string instruments differ by duration of music education?

Method

Research Model

This study was designed as a survey among quantitative methods. In the survey model, an existing situation is described within its own conditions without any intervention (Karasar, 2013). In the same vein, the present study was carried out by performing descriptive analysis of the quantitative data collected from the study group so that the existing situation was depicted objectively.

Study Group

The study group of the research consists of 43 undergraduate students who were mastering playing the violin, the viola and the cello as an integral part of their study in Music Education Department under Gazi Education Faculty of Gazi University during the 2021-2022 academic year. Of the participants, 21 play the violin, 10 play the viola and the other 12 play the cello as their main instrument during their university education. Convenience sampling method was used to choose the study participants.

Convenience sampling is a method of selecting a sample group that is accessible, appropriate and willing to participate whom the researcher can easily access (Saunders, Lewis, & Thornhill, 2007). In the current research, the participants were chosen from Gazi University, Gazi Education Faculty, Music Education Department on the grounds that the researcher works in the same academic unit and thus can use the limited time, budget and resources effectively without walking out of the institution.

Table 1. Demographic facts about participants

		f	*%*
High school of graduation	Fine Arts	25	58,1
	Anatolian	13	30,2
	Other	5	11,6
Grade level	Undergraduate 1	10	23,3
	Undergraduate 2	9	20,9
	Undergraduate 3	12	27,9
	Undergraduate 4	12	27,9
Instrument of proficiency	Violin	21	48,8
	Viola	10	23,3
	Cello	12	27,9
Duration of education for the instrument	1-5 years	21	48,8
	6-10 years	18	41,9
	11-15 years	4	9,3
Total		**43**	**100**

As can be seen in Table 1; 49% of the students played the violin, 23% played the viola and 28% played the cello as the main instrument during their undergraduate music education. As for the class levels, 23% of them were enrolled in the first year, 21% in the second year, 28% in the third year and 28% were enrolled in the fourth year at the time of the research study. From the perspective of high school background, 58% of them were graduates of Fine Arts High Schools, 30% graduated from Anatolian High Schools and 5% graduated from other types of high schools. Regarding the duration of music education, 42% of the participants received music education for 1-5 years, 47% for 6-10 years and 9% studied music for 11-15 years when the study was carried out. Lastly, 49% of them were trained on their instrument of specialization for 1-5 years, 42% for 6-10 years and 9% for 11-15 years at the time of the study.

Data Collection Tools

Opinionnaire for Sight Reading on String Instruments (OSRSI)

This questionnaire was created by the researchers in order to identify string-instrument-specializing students' opinions about sight reading. The questionnaire form contains statements concerning the dimensions intended to be measured. The construct validity of the scale was ensured by means of making revisions and corrections as recommended by experts reviewing the draft items. After the construct validity check, the form had 35 items ranked on a rating scale ranging from the strongest negative response to the strongest positive response: "Strongly disagree", "Disagree", "Neutral", "Agree" and "Strongly agree". The questionnaire was in the form of 5-rating–scale. The distance between each interval was equivalent to 0.80 (Raengprapan, 2000; Leekitwattana, 2016) as follows:

Table 2. Scores and agreement/satisfaction levels

Score	Scale Limits	Description
5	4.51-5.00	Highest
4	3.51-4.50	High
3	2.51-3.50	Moderate
2	1.51-2.50	Low
1	1.00-1.50	Lowest

OSRSI is comprised of 6 sub-scales each representing a separate dimension.

- Dimension 1: Use of sight reading exercises in instrument lessons (4 items),
- Dimension 2: Practices to improve sight reading skills (4 items),
- Dimension 3: Attitudes towards new pieces for sight reading (2 items),

- Dimension 4: Another area of attitude towards new pieces for sight reading (5 items),
- Dimension 5: Difficulties encountered in sight reading (12 items),
- Dimension 6: Factors affecting motivation in sight reading (6 items),
- Dimension 7: Use of sight reading practices outside individual instrument lessons (2 items).

The opinionnaire form was given to the students learning to play string instruments as a part of their undergraduate study at Music Education Branch under Fine Arts Education Department affiliated to Gazi Education Faculty of Gazi University during the 2021-2022 academic year.

Table 3. Reliability check results

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.832	.843	35

Table 3 displays the results of the reliability statistics applied to the OSRSI scale. According to Kılıç (2016), α value obtained for all items indicates the total reliability of the questionnaire, and there is consensus that reliability is assured by α equal to or above 0.7. Since this value was found to be 0.83 in the current research, it was found reliable.

Data Collection

In this research, the data were collected in the pool formed by giving the "Opinionaire for Sight Reading in String Instruments" to the participants in person after ensuring both reliability and validity of the scale. Collected data were then classified and prepared for analysis.

Analysis of Data

Obtained data were tabulated in Excel and analyzed with SPSS. The data were processed with a number of statistical techniques including normality tests, ANOVA and descriptive analysis of *%* (percentage) and *f* (frequency) values.

Findings and Discussion

This study was conducted to explore the opinions of string instrument students on sight reading. Before presenting the findings of such descriptive analyses, it is useful to look at some values of quantitative data.

For deciding on the right type of test to perform descriptive analyses, distribution of the data is checked to see whether the data has a normal distribution or not. In this study, Skewness and Kurtosis values were checked for normality test. It was seen that the Skewness value ranged between 0.22 and 0.36 and the Kurtosis value varied between - 0.68 and 0.70. When Kurtosis and Skewness values are between -1.5 and +1.5, it is considered to be a normal distribution (Tabachnick & Fidell, 2009). The calculations proved that the data are normally distributed in this study.

University students' views on sight reading

Table 4. Descriptive statistics for students' views on sight reading

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Dimension 1	43	2.00	5.00	3.9128	.78088
Dimension 2	43	4.00	5.00	4.7093	.36973
Dimension 3	43	2.50	5.00	3.8140	.74820
Dimension 4	43	2.20	5.00	3.5070	.71760
Dimension 5	43	1.00	4.92	3.1938	.80028
Dimension 6	43	3.00	5.00	3.9884	.52503
Dimension 7	43	1.00	5.00	3.6279	1.00649
OSRSI	43	3.03	4.49	3.6904	.38114
Valid N (listwise)	43				

Dimension 1 shows the use of sight reading exercises in instrument lessons. It was found out that under this sub-scale the students' use of sight reading exercises was at a high acceptance/satisfaction level of 3.9128. It means that students have a high level of positive opinion about using sight reading in their classes.

Dimension 2 covers opinions about the practices aimed at improving sight reading skills. In this sub-scale, the overall acceptance/satisfaction level of sight reading skills was 4.70, which means that the students hold positive opinions regarding studies aimed at improving sight reading skills.

Dimension 3 contains statements reflecting the cognitive attitude in the face of a new piece for sight reading. The sub-scale score was calculated as 3.81, and it indicates a high acceptance/satisfaction level among students when they see a completely new musical script for sight reading. In other words, the students have a high level of positive cognitive view towards new sight reading pieces.

Dimension 4 includes affective attitude statements in reaction to a new sight reading work. The score of this sub-scale was 3.50, which is at a moderate level of acceptance/satisfaction. It can be said that the students have a moderately positive affective attitude towards a new sight reading piece.

Dimension 5 includes expressions of opinion regarding the difficulties encountered in sight reading. The acceptance status of the students in this sub-scale was found to be 3.19. It was again at a moderate level of acceptance/satisfaction, which means that the students have a moderately positive opinion of difficulties encountered during sight reading.

Dimension 6 includes expressions of opinion on the factors affecting motivation in sight reading. The students' opinions on such factors were calculated as 3.98 referring to a high acceptance/satisfaction level. It can be said that the students have highly positive opinions about the factors affecting motivation while reading sight in music.

Dimension 7 poses questions about the use of sight reading exercises outside of individual instrument training classes. It was seen that the students' acceptance of sight reading outside of the classroom was 3.62, which refers to a high level of acceptance/satisfaction. It can be said that students are highly open to applying sight reading exercises outside of the classroom.

The average of all the sub-scales was calculated as 3.69, which indicates a high degree of overall acceptance/satisfaction. It can be interpreted to suggest that the students generally have a high level of positive opinion about sight reading.

Students' views on sight reading in string instruments differing by their grade level

Table 5. Grade variable and OSRSI scores, between-group ANOVA test

	Sum of Squares	df	Mean Square	f	Sig.
Between Groups	11.112.668	3	3.704.223	2.884	.048
Within Groups	50.095.239	39	1.284.493		
Total	61.207.907	42			

Table 5 shows the results of the statistical relationship between the participants' OSRSI scores and their grade levels. It is understood from the table that the difference between the groups is statistically significant (f=2.884, p=0.048) and such variance did not occur by chance. In other words, it is reasonable to say that there is a relationship between the class variable and OSRSI scores.

In light of these data, it can be suggested that the students' attitudes towards sight reading vary as they go up to the next grade level after completing the courses in each year of the undergraduate program.

Students' views on sight reading in string instruments differing by duration of instrument education

Table 6. Instrument education duration variable and OSRSI scores, between-group ANOVA test

	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	24.068.040	10	2.406.804	2.074	.058
Within Groups	37.139.867	32	1.160.621		
Total	61.207.907	42			

Table 6 shows the statistical relationship between the participating students' instruments and their OSRSI scores. The p value of 0.058 obtained from the ANOVA test shows an insignificant difference between the groups. Thus, it seems that the duration of instrument education does not have a significant effect on the OSRSI scores of the students.

It was seen that the students' sight reading scores did not differ in spite of the change in their overall duration of instrument training. It can be inferred that the duration of instrument training has no effect on the change in students' attitudes towards sight reading.

Students' views on sight reading in string instruments differing by duration of music education

Table 7. Music education duration variable and OSRSI scores, between-group ANOVA test

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	20.698.899	11	1.881.718	1.440	.205
Within Groups	40.509.008	31	1.306.742		
Total	61.207.907	42			

Table 5 shows the statistical relationship between the instruments of the students participating in the research and their OSRSI scores. The p value of 0.20 obtained from the ANOVA test shows that the difference between the groups is not significant. It was found out that the time elapsed between the beginning of the music education of the students and the time of the research did not have a significant effect on the OSRSI scores of the students.

Discussion and Conclusion

The quantitative data in the study were tested with the applicable reliability analysis method and an adequate reliability coefficient was reached. In the normality test, it was seen that the data were homogeneously distributed, so it was decided to use the ANOVA test.

By looking at the results of the descriptive statistics on the students' views about sight reading, it was found that the students generally have a high level of acceptance/satisfaction with sight reading practices.

The use of sight reading in instrument classes is highly welcomed by students. They believe that practicing sight reading enriches their musical experiences in their lessons and helps them develop their musical skills.

Furthermore, it was seen that the students hold positive views regarding practices to develop sight reading skills. The students think that the studies to improve their sight reading skills are effective in improving their musical abilities. This shows that students want to participate actively in sight reading activities and are motivated to improve their skills.

It was revealed that the students exhibit a positive cognitive attitude towards sight reading pieces. Brand new sight reading pieces give them the opportunity to enrich their musical understanding and mental skills. Yet the students exhibit a moderate level attitude towards new sight reading passages from an affective point of view. It implies that the students have difficulty expressing their emotional reactions fully or require more time to emotionally connect with new musical pieces.

It was seen that the students approach the difficulties they encounter in sight reading with a moderate level of recognition. It suggests that sight reading involves some technical and musical difficulties. However, the students had a high level of acceptance of the factors affecting their motivation sight reading. It can be inferred that the students take advantage of various factors (e.g., inspiring pieces, guidance from instrumentalists, performance opportunities) to keep their musical motivation high.

Students' views on sight reading in string instruments differing by their grade level

The results showed that the difference between the groups was statistically significant (f=2.884, p=0.048). It is clear that there is a relationship between the grade variable and OSRSI scores. However, differences within groups were also found to have a significant effect because the "Within Groups" variance was higher than the "Between Groups" variance. Hence, this research has taken an important step to clarify the relationship between the grade variable and OSRSI scores. These findings can be used to understand the effect of grade levels on OSRSI scores in education systems in general.

Students' views on sight reading in string instruments differing by duration of instrument education

The results showed that the difference between the groups was not statistically significant (F=2.074, p=0.058). These results do not suggest a relationship between the duration of instrument education and OSRSI scores. However, the variance in the "Between Groups" section was reported to be higher than the variance in the "Within Groups" section.

In this regard, the study did not help to clarify the relationship between instrument education duration and OSRSI scores. Still, the findings suggest that more comprehensive studies are needed to see the relationship between instrument education duration and OSRSI scores.

Students' views on sight reading in string instruments differing by duration of music education

The results showed that the difference between the groups is statistically insignificant (F=1.440, p=0.205). Although a relationship was not found between the duration of music education and OSRSI scores, the researchers noted that the variance in "Between Groups" was higher than that in "Within Groups". In conclusion, this research was not of much use in revealing the relationship between the duration of music education and OSRSI scores. The results suggest that more comprehensive studies are needed to understand the relationship between the duration of music education and OSRSI scores.

When all these results are considered together, it becomes obvious that grade level, instrument education duration and music education duration have an influence on OSRSI scores. More specifically, there is a need for farther-reaching future studies to enlighten the relationship between instrument education duration and music education duration and OSRSI scores. This result can be generalized to suggest that the students' achievements in each class level lead to a positive increase in sight reading with instruments within the context of Gazi University Gazi Education Faculty Music Education Branch. On the other hand, the fact that the students in the same class have gone through different instrument and music education periods does not result in any difference in sight reading.

According to the research results, it seems that sight reading of melodic, tonal, modal, maqam melodies and students' favorite etudes or works have a positive effect on their motivation, while the challenges faced during sight reading have various effects on the motivation of the students.

The study results imply that the students perform individual sight reading exercises apart from instrument lessons and they feel pleased with these.

In this study, it was concluded that sight reading studies are done in instrument classes and that these studies are long enough for the students. However, due to a recent amendment on the curriculum in Gazi University Gazi Education Faculty Fine Arts Education Department Music Education Branch, the weekly hour of the Individual Instrument Training course has been cut down, so it is only 1 hour (50 minutes) per week. The lesson is now being offered to two students at one time during the 50-minute class hour. In the last instance, individual instrument training is available to each student for an average of 25 minutes weekly. It has the following drawbacks:

- Currently, the weekly lesson hours available to individual students are far from being adequate for achieving the target behaviors and outcomes in the course content of the individual instrument course
- The students also find the duration of this course inadequate
- This shortened period of individual instrument training course brings along other problems which have already been revealed by several researchers (Sever, 2014, p. 29).

In another study, the participating instructors were asked whether they find "the weekly course hours for the individual viola training course long enough". They stated that the course duration is not adequate (Sonsel, 2017, p. 130). Another research was conducted by Uçar and Taninmis in 2022 with the title "Instructors' Views on the Contribution of the Scale Studies in the Content of the Individual Instrument (Violin) Course to the Development of Students". In light of the findings, the authors suggested extending the duration of the individual instrument course in the curriculum of Music Education Undergraduate Program. It is thought that the time allocated to scale studies can be increased with the increase in the duration of the course. Taking into account the contribution of string and arpeggio exercises to sight reading skills, it is assumed that increasing the weekly course hours will also improve sight reading

education. Moreover, contrary to what the current study participants think, it seems that the time allocated to instrument lessons is not long enough, and thus not adequate time is allocated to sight reading activities in classes.

So far, it has been observed that regular scale studies help students make progress in developing skills such as analyzing difficult passages in etudes and works studied, producing the correct sounds, playing by staying in tempo, easiness in position transitions, dominance of the touch and musical playing (Uçar & Tanınmış, 2022, p. 297). Departing from this, it can be suggested that sight reading skill can be enhanced through practice and sight reading a new etude or musical piece can help improve this skill, and that technical and musical analysis of the etude or work of sight reading and playing the scale and arpeggio in the relevant tones will also promote sight reading.

Students think that a part of the instrument course should be devoted to sight reading and they request a separate course for sight reading in the curriculum. In Kaynar's (2020) article "Getting opinions about improving sight-reading abilities on guitar education and an experimental study towards applying of these opinions", expert opinions on sight reading were taken, and methods and techniques for sight reading were determined accordingly. The students in the study group were given a pre-test, then they were given sight-reading training reflecting expert opinions, and a post-test was applied finally. Consequently, a significant difference was observed in sight reading skills of the experiment group.

In Dalkıran's (2011) study "Sight Reading Skill in Violin Training", a significant difference was also observed in sight reading skills of students who did a sight-reading course when compared to the control group students. It was emphasized that sight reading should be included as a separate subject in the instrument curriculum.

Recommendations

Recommendations for Future Research

To start with, we suggest that standardization studies be carried out on the form developed in this study in order to raise it to the level of a self-efficacy scale. By using the future better version of the scale, students' sight reading self-efficacy would be identified, experimental studies would be conducted to strengthen their weak sides and their effectiveness could be tested.

Secondly, it is recommended to repeat this study in other institutions by using both similar and dissimilar musical instruments.

Owing to the fact that sight reading new pieces arouses varying levels of fear in individuals, it seems beneficial to further scrutinize the topic.

In the same vein, it is recommended to further study the topic in this field since students face a lot of difficulties in sight reading ranging from focusing to needing help, perceiving the notes, understanding the duration of the notes, reading the fingerings, changing the position, using the correct bow parts, applying the bow techniques, applying the articulation signs, applying the musical terms, ornamentation, double tone and playing chords.

Likewise, it is suggested that the topic be examined with new studies in this field because the difficulties encountered during sight reading have different effects on the motivation of the students.

Recommendations for Practitioners

The previous studies on sight reading revealed significant differences in sight reading skills of the experimental groups who went under sight-reading training. Thus, it would be useful to perform sight reading training in instrument lessons by increasing the weekly hours of instrument lessons or offering sight reading to all instrument groups as a distinct course in the curriculum.

The literature review provided access to sources on sight reading in string instrument education such as ABRSM (The Associated Board of the Royal Schools of Music) Violin Specimen Sight Reading, ABRSM Viola Specimen Sight Reading and ABRSM Cello Specimen Sight Reading. As can be understood, there is a small number of sources in sight reading education. Instead, abundance of books containing sight reading parts that progress systematically from the beginning level in string instrument education would reinforce sight reading training. Therefore, it is recommended to write extra source books targeting each of the instrument groups.

Limitations of Study

The results of this study are limited to;

- A group of undergraduate students (n=43) playing the violin, the viola and the cello as their main instrument who were enlisted in all grade levels across the Music Education Department of Gazi University Gazi Education Faculty during the 2021-2022 academic year,
- The sight reading aspect of string instrument education.

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Appendix 1. Opinionnaire for Sight Reading on String Instruments (in Turkish)

Yaylı Çalgılarda Deşifreye İlişkin Görüşler Formu (YÇDİGF)						
Açıklama: Bu anket sizin yaylı çalgılarda deşifrenin kullanımına ilişkin görüşlerinizin belirlenmesi amacıyla oluşturulmuştur. Samimi ve içten yanıtlarınız araştırmanın doğruluğu açısından oldukça önemli olacaktır. 1 Hiç katılmıyorum 2 Katılmıyorum 3 Kararsızım 4 Katılıyorum 5 Tamamen katılıyorum						
	Maddeler	1	2	3	4	5
1	Çalgı derslerinde deşifre çalışmalarına yer verilmektedir					
2	Çalgı derslerinde yapılan deşifre çalışmaları süre bakımından yeterlidir					
3	Çalgı derslerinde deşifre yaparken karşılaştığım zorlukların nasıl aşılacağı öğretilmektedir					
4	Çalgı dersinde deşifre için farklı kaynak kitaplar kullanılmaktadır					
5	Deşifre yeteneği çalışma ile geliştirilebilen bir beceridir					
6	Deşifre yapılacak etüdün/eserin teknik ve müzikal analizinin yapılması deşifreye katkı sağlar					
7	Deşifre yapılacak etüdün/eserin ilgili tonlarında dizi ve arpej çalmak deşifreye katkı sağlar					
8	Yeni etütler/eserler deşifre etmek deşifre becerisini geliştirir					
9	Çalgı dersinin bir bölümü deşifre çalışmalarına ayrılmalıdır					
10	Deşifre çalışmaları için müfredatta ayrı bir ders olmalıdır					
11	Yeni etütler/eserler deşifre etmek zordur*					
12	Yeni bir etüdü/eseri deşifre etmek beni korkutur*					
13	Deşifre esnasında karşılaştığım zorlukları aşabilirim					
14	Deşifre esnasında karşılaştığım zorlukları nasıl aşacağım konusunda yeterli bilgiye sahibim					
15	Deşifre yaparken yardıma ihtiyaç duyarım*					
16	Deşifre yaparken odaklanmakta zorlanırım*					
17	Deşifre yaparken notaları algılamakta zorlanırım*					
18	Deşifre yaparken nota sürelerini anlamakta zorlanırım*					
19	Deşifre yaparken duateleri okumakta zorlanırım*					
20	Deşifre yaparken konum değişimlerinde zorlanırım*					
21	Deşifre yaparken doğru yay bölümlerini uygulamakta zorlanırım*					
22	Deşifre yaparken yay uygulamakta zorlanırım*					
23	Deşifre yaparken artikülasyon işaretlerini uygulamakta zorlanırım*					
24	Deşifre yaparken müzik terimlerini uygulamakta zorlanırım*					
25	Deşifre yaparken süslemeleri çalmakta zorlanırım*					
26	Deşifre yaparken çift ses çalmakta zorlanırım*					
27	Deşifre yaparken akor çalmakta zorlanırım*					
28	Melodik ezgiler deşifre etmek beni motive eder					
29	Tonal ezgiler deşifre etmek beni motive eder					
30	Modal ezgiler deşifre etmek beni motive eder					
31	Makamsal ezgiler deşifre etmek beni motive eder					
32	Sevdiğim etütleri/eserleri deşifre etmek beni motive eder					
33	Deşifre esnasında karşılaştığım zorluklar motivasyonumu olumsuz yönde etkiler*					
34	Çalgı dersi dışında bireysel deşifre çalışmaları yaparım					
35	Çalgı dersi dışında deşifre çalışmaları yapmak beni mutlu eder					

* Olumsuz maddeler

Boyut 1: Çalgı derslerinde deşifre çalışmalarının kullanımı (1,2,3,4)

Boyut 2: Deşifre becerisinin geliştirilmesine yönelik çalışmalar (5,6,7,8)

Boyut 3: Yeni deşifre parçası karşısında tutum (bilişsel) (9,10)

Boyut 4: Yeni deşifre parçası karşısında tutum (duyuşsal) (11,12,13,14,15)

Boyut 5: Deşifre yaparken karşılaşılan zorluklar (16,17,18,19,20,21,22,23,24,25,26,27)
Boyut 6: Deşifre yaparken motivasyonu etkileyen faktörler (28,29,30,31,32,33)
Boyut 7: Bireysel çalgı ders dışında deşifre çalışmalarının kullanımı (34,35)

Appendix 2. Opinionnaire for Sight Reading on String Instruments

Opinionnaire for Sight Reading on String Instruments (OSRSI)						
Note: This questionnaire was created to identify your views on the use of sight-reading in string instruments. Honest and sincere answers are appreciated for the accuracy of the research results. 1 Strongly disagree 2 Disagree 3 Neutral 4 Agree 5 Strongly agree						
	Item	1	2	3	4	5
1	Sight reading exercises are included in instrument lessons					
2	Sight reading exercises in instrument lessons are long enough					
3	In instrument lessons, I am taught how to overcome the difficulties I encounter in sight reading					
4	Various source books are used for sight reading in instrument lessons					
5	Sight reading is a skill that can be developed with practice					
6	Performing technical and musical analysis of the etude/work to be sight read enhances sight reading					
7	Playing scale and arpeggios in the respective tones of the etude/work to be sight read enhances sight reading					
8	Sight reading new etudes/works improves sight reading skill					
9	A part of the instrument lesson should be devoted to sight reading exercises					
10	There should be a separate course in the curriculum for sight reading exercises					
11	It is hard to sight read new etudes/works*					
12	It scares me to sight read a new etude/work*					
13	I can overcome the difficulties I encounter during sight reading					
14	I have sufficient knowledge on how to overcome the difficulties I encounter during sight reading					
15	I need help with sight reading*					
16	I have trouble focusing when reading sight*					
17	I have trouble perceiving the notes when reading sight*					
18	I have trouble understanding the note durations when reading sight*					
19	I have trouble reading fingerings when reading sight*					
20	I have trouble in position changes when reading sight*					
21	I have trouble applying the correct bow segments when reading sight*					
22	I have trouble applying the bow when reading sight*					
23	I have trouble applying articulation signs when reading sight*					
24	I have trouble applying musical terms when reading sight*					
25	I have trouble playing the ornaments when reading sight*					
26	I have trouble playing double stops when reading sight*					
27	I have trouble playing chords when reading sights*					
28	It motivates me to sight read melodic tunes					
29	It motivates me to sight read tonal tunes					
30	It motivates me to sight read modal tunes					
31	It motivates me to sight read maqam tunes					
32	It motivates me to sight read the etudes/works I love					
33	The difficulties I encounter during sight reading affect my motivation negatively*					
34	I do individual sight reading exercises outside of instrument lessons					
35	It makes me happy to practice sight reading outside of instrument lessons					

* Reverse items

Dimension 1: Use of sight reading exercises in instrument lessons (items 1,2,3,4)
Dimension 2: Practices to improve sight reading skills (items 5,6,7,8)
Dimension 3: Attitudes towards new pieces for sight reading (items 9,10)
Dimension 4: Another area of attitudes towards new pieces for sight reading (items 11,12,13,14,15)
Dimension 5: Difficulties encountered in sight reading (items 16,17,18,19,20,21,22,23,24,25,26,27)
Dimension 6: Factors affecting motivation in sight reading (items 28,29,30,31,32,33)
Dimension 7: Use of sight reading practices outside individual instrument lessons (items 3)