

Full Length Research Paper

Note reading methods used in piano education of 4 to 6 years old children

Hatice Sezen

Music Education Department, Faculty of Education, Mehmet Akif Ersoy University, Turkey.

Received 29 May 2021; Accepted 20 July 2021

The aim of the study is to analyse the teaching methods and materials that are currently used in the basic piano education of children at the age of 4-6 years, using the existing literature, and to develop suggestions and recommendations regarding the process. The study covered various teaching methods and techniques that are used in introduction of the piano keyboard to children as well as teaching the titles of notes and their places on the staff throughout the process of habituation of note reading in children at age of 4 to 6 years. Considering the basic principle that note-teaching for children is a visual, auditory and psychomotor process respectively, it has been suggested that the musical notes should be perceived as a graphical structure. The study has sought an answer to the question how to perform the note-teaching for piano education of children in the most productive way possible. This process, which requires due diligence, has been developed in stages and each stage has been elaborated in detail. As a result of the literature review, considering that there are very limited number of studies in the literature on various note-learning methods and materials applied in early age piano education, it is suggested that this study will contribute to pedagogues giving early age piano education and can also shed light on further studies.

Keywords: Early age, piano education, note reading, teaching methods, materials.

INTRODUCTION

One of the most important steps of early-age piano education is to provide the children with the habit of note-reading. In order to run this process successfully, it is critical for piano pedagogues working with preschool children to possess the skills to implement stepwise methods, mnemonic techniques, visual materials and creative pedagogical teaching activities. Piano has the widest sound capacity among all instruments with its range more than seven octaves. Therefore, the note writing arranged for playing the piano contains two

different staves and clefs for both hands. Furthermore, it requires to read and play double, triple or more notes simultaneously in accordance with the polyphonic structure. It is pretty difficult for children receiving piano education at early ages to adapt to such complex note writing and therefore requires working with patience. Moreover, the eye (visual) - hand (manual) - ear (aural) coordination must be ensured simultaneously to be able to read multiple notes at a time. Therefore, we need to work fastidiously on providing children with note reading

E-mail: hsezen@mehmetakif.edu.tr.

Author(s) agree that this article remain permanently open access under the terms of the [Creative Commons Attribution License 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

skills to ensure that they can play piano pieces accurately and continue smoothly in the following processes. Starting with the very first lessons, use of effective teaching methods and materials regarding the note-reading skills of children will make the process efficient and productive.

Erden (1998) has stated that teaching methods have a critical place among the factors affecting student performance in educational situations. Demirel (2007) has addressed the concept of method in education and pointed out that we need to underline the ways how to provide students with new behaviours. Demirel suggests that the method is the pre-defined way or the way to be followed in order to achieve the goal. As Fidan (2012) stated, the method involves arrangement and operation of teacher and student activities by using techniques and tools according to a plan. At this point, Demirel (2007) expresses that the teaching methods will gain significance and functionality only if they constitute integrity with other elements of the curriculum (Yeşilyurt, 2013). Several note teaching methods are used in early-age piano education. It is critical that the piano educator has sufficient knowledge and experience on effective note teaching methods for successful provision of note-reading habit because there is a strong tie between specialized knowledge of teacher on this subject and children's reading note signs quickly and finding their respective places on the keyboard to display required behaviours.

It would be safe to make an analogy between the note-reading process of children in piano education and the method of reading a literary text. Unlike a piece of writing in a book, notes take their places on a musical writing both vertically and horizontally. Children try to recognize the musical writing by dividing it into different notes (letters) in the beginning whereas later in to note groups (words) as patterns and finally in to sentences. However, the volume and difficulty of the material in reading a musical piece is higher than that in a literary work. As a conclusion, when playing a musical piece, children need not only to comprehend the signs depicting the volume and tone of sound, two different staves and clefs, the number of scale and the musical structure, but also to conduct a chain of complex processes such as organizing himself/herself rhythmically and to follow the direction of the melody (Satdarova, 2016).

At the outset, children start to take the piano class to learn how to play the piano. We should not disappoint him/her with mere theoretical information and too many drills away from the instrument. Piano education for children is a process entailing various game activities and individual methods towards development of note-reading skills. Success in note-literacy can be achieved through ensuring that children frequently repeat simple and understandable concepts. The starting process of education includes many pieces of information that are necessary. The main principle in presentation of the material is accessibility and conciseness. Knowledge and

skills that are understandable and pre-taught to children should be used as helping tools in order to avoid that they do not get drowned in this "ocean of information". Lili Vespremi (1981), a Hungarian pedagogue listed the steps of note-reading process respectively as follows: to see where note are written – visual perception; to form an aural perception related t the sound of the relevant note - acoustic perception; to make sound by hitting the keys - motor (dynamic) perception; to check and compare visual and acoustic perception regarding the sound made, (Direktorenko, 2001, p. 28). Mangova (2015, p. 3) made a similar classification as seen in Figure 1.

The main approach in piano education should be a synthesis of game and learning activities in the process of providing children at age group of 4-6 years with note-reading habit with a view to effective implementation of all these steps. A child starting to take piano lesson faces so many highly complex, intermingled concepts. In order to complete this process successfully and to ensure that the child does not get discouraged and bored with all these concepts, all the activities should be well-planned and level-adjusted based on the principle of teaching by games, and should be implemented with proper materials developed for each teaching activity.

Games help children to find solutions to their problems by trial and error, and improve risk-taking experience of children. The pedagogue should determine his/her guidance for the child by a method considering contribution of games in children. The pedagogue should take neither a too active nor a too passive attitude. He/she should undertake such a role to give relief to the child indeed as needed and to take him/her to one step forward (Bozoklu, 1994; quoted by Ünal, 2006, p. 36). Although the main principle of early piano education is to develop musicians, it is actually to teach piano and music by playing games together, enjoying good times together and endearing them (Molla, 2002; quoted by Bekan, 2019, p. 23). Furthermore, the piano teacher should possess the skill to evaluate whether the child is ready to start piano education in terms of his/her age, cognitive, psychomotor and sensory development. Also, in this long, comprehensive education process that requires a lot of patience, it is another dimension for the piano teacher to run all the teaching stages by taking into account the development period of the child.

The literature review has shown us some studies conducted on examination of piano methods used for preschool students and identification of target behaviours and methodologies (Işıkdemir, 2017; Kaynak, 2004). Additionally, there are also studies that cover general musical methods applied by teachers in piano classes and expert opinions on this subject (Burak et al., 2020; Ersoy, 2010; Kılınçer, 2013; Onuray, 1998; Özyazıcı, 2019; Uçar, 2015; Yaliloğlu, 2019; Yılmazlar, 2004). There are also thesis and papers that generally examine piano teaching techniques (Gasimova, 2011; Halvaşı, 1989). Some of these studies analyzed note-reading

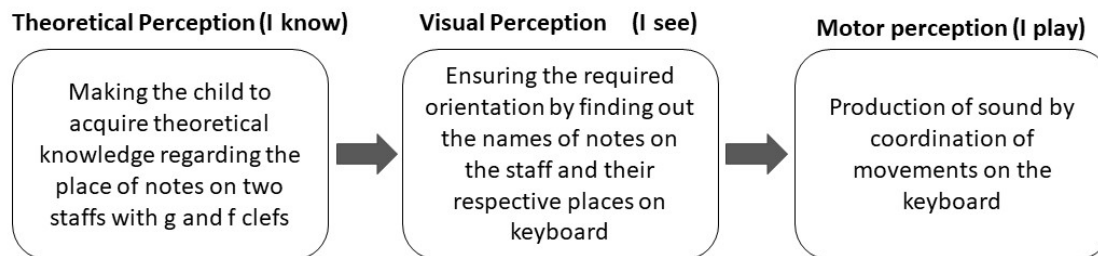


Figure 1. Steps of note-reading by Mangova.

methods applied in early-age elementary piano education; however they did not provide thorough information about the subject. Regarding the methods for teaching how to read notes in elementary piano education, Kurtuldu (2010) covered development of note-reading skills through jingles for primary school children. There are also studies on sight-reading in field of reading notes (Çiftçiabaşı and Şakranlı, 2017; Gün and Öztürk, 2018; Kurtuldu, 2015; Özer and Yiğit, 2011). These studies analyzed some dimensions of note-reading methods in piano education. Nevertheless, they mostly examined development of sight-reading skills in general rather than note-reading teaching methods for early age elementary piano education.

There is a variety of opinions and practices regarding note-reading teaching methods for early-age children. Each of these practices varies according to learning attributes of children, and yields different results in different students and student groups. Thus, review of all these teaching methods altogether and presentation of them to educators in a compilation would be critically important to both facilitate a systematic awareness-raising on this subject and to understand learning differences of students in note-reading and to select a method accordingly.

This study starts with theoretical and pedagogical information and definitions on early-age piano education. Then, it reviews all methods applied for development of note-reading skills at early-age elementary piano education by considering mental, physical and psychological attributes of children at the age group of 4-6 years, with a view to identifying their pros and cons. As a conclusion, it puts forward suggestions regarding which method to apply for which purpose and need by taking into account personal variables of students. In this sense, we believe that this study will provide an overview of note-teaching methods for teachers giving early age piano education, and also will have its rightful place on this field in the literature.

METHOD

This is a descriptive study in general review model. It uses literature review technique as data collection tool. In review researches,

researcher may "...examine the object or subject itself, or integrate the dispersed data he/she can obtain from previously-recorded (written documents and statistics, images, audio and video records and etc.) old data as well as source individuals in the field, with his/her own observations within a system and interpret them accordingly" (Karasar, 2018, p.109). As a result of the literature review, based on the opinion that note-reading is a skill that can be developed through various teaching methods, techniques and materials in early age piano education, examples and suggestions have been put forward regarding this process. The study aims to evaluate teaching methods and materials used in note-teaching process in elementary piano education for children at the age group of 4-6 years based on the existing literature. We consider that this study will contribute to pedagogues rendering early age piano education and can shed light on to further studies.

FINDINGS

Starting age for piano education

Pedagogues have put forward various opinions regarding the starting age for piano education. Fenmen suggests, "Relationship of the new generation with music should start before primary education. Five, six and even four years, depending on the individual, are the first ages to start this relationship" (Fenmen, 1997, p. 35). Bastien (1973) suggested that not every child at preschool age would have the required competence to start piano education considering the physical development differences as it is imperative for the child to be able to use finger, wrist and all hand muscles regularly and masterly in order to play piano. Ability to write with a pencil or at least to draw letters shows that the child can use hand muscles sufficiently. "Some pedagogues, on the other hand, point that education is not a competition, suggesting that children who start instrument education at primary and secondary school are more enthusiastic and make progress faster than those who start at earlier ages; furthermore, overloading could be counterproductive for younger children at early education" (Çimen, 1995, p. 19). The most common opinion on this subject is that the child should start piano education only after a pedagogue approves that physical competences and psychological maturity level of the child are appropriate for playing piano. "The age to start piano education under a program is often the age of 6-7 years

in which the child can display the sufficient maturity and competence to learn this instrument. However, children can also start at younger ages due to personal differences among children. The teacher should observe and find out shortly musical talent, harmony and movement of hands, and development and progress of some technical skills as well as the enthusiasm of the children who start to learn piano at early ages” (Ercan, 2008; quoted by Ersoy, 2010, p. 13).

Developmental attributes of children receiving early age piano education

Early age piano education covers the Intuitive Process Period (4-7 years) according to development periods of Piage. “Children ratiocinate, in this period, based on their intuitions rather than the rules of reason, and try to solve problems intuitively. Children in this age group spend all the time he or she is awake by playing games. Imitating ability is well-developed in these children. Mental thinking has already started in these children. They can distinguish living and non-living things. However, they perceive every object or piece separately. Image is very important for them. These children make their decisions based on appearance of things or objects, and cannot make a higher level categorization. For instance; they can categorize things according to their sensory attributes such as size, colour and shape, however they are not fully aware of their relations. This is because they cannot comprehend yet the cause-effect relationship that makes events happen. Therefore, this stage is called pre-process because children do not have the cognitive competence to make process” (Başkale and Bahar, 2008, p. 135). Thus, in children in this developmental period described as “pre-process” by Piaget, we should apply curricula whose main theme is concrete events or facts. Otherwise, it will be more difficult to get the desired efficiency.

Musical development of children at the age of 4-6 years

As previously expressed, it is extremely important to measure musical interest and talent levels of children at age of 4-6 years before starting an instrument education. Furthermore, measurement of interest and talent levels equally contains difficulties. The following information is available in the literature about understanding the musical interest of children at this age group: “They keep on using the objects in hand as instruments and use instruments in imaginary games. They play percussion instruments. They easily use percussion melody, rhythm and tone instruments. They can relate sounds as strong-light, long-short and high-low. They distinguish the sounds going high, going low and remaining the same as

well as the loudness increasing, decreasing or staying same. Their musical sound memory gets increasingly stronger. They repeat short rhythm patterns. They join the music with proper measure and rhythm beats. They use words for rhythm beats. They timely use basic skills regarding musical dynamism, singing and playing an instrument. They understand that Turkish is a melodic language, and implement it with musical tales and poems” (Uçan et al., 2001, p. 28)

Children should be at a certain mental, physical and psychomotor readiness level before they start early age piano education. Prerequisites for a child to be successful in piano education can be listed as the ability to repeat basic rhythm patterns, to sing a child song he/she has learnt by ear, to have body-hand-finger coordination and, most importantly, to have enthusiasm for this process. In addition, recognition of colours and numbers as well as basic characteristics of sounds will naturally facilitate the process. Teacher-family cooperation is critical in accommodation of all these prerequisites. It will facilitate learning if a member of family observes the class and makes the child do the note-learning drills at home. Important factors also include effectiveness of the method and materials used by the teacher and maintenance of motivation of the child as high as possible.

Before starting piano education, it will be highly useful to know about the competences which children at age of 4-6 years need to have and the musical activities they can make. These skills and activities are: ability to keep a certain regular tempo by singing, hand-clapping and walking; ability to conduct simultaneously the activity pairs such as singing-handclapping, walking-singing; ability to learn concepts such as high-low, strong-light, long-short, and quick-slow; ability to display minimum finger skills and muscle coordination required to play the piano; having the abilities such as identifying direction and space (up-down) and hearing and adjusting distance (step, jump, same spot)” (Çimen, 1995; quoted by Ersoy, 2010, p. 18).

Teaching steps for provision of note-reading skill in early age elementary piano education

The process for children at age of 4-6 years to understand and read note symbols accurately in piano education can be categorized in following steps: introduction of piano keyboard; teaching the function of double-staff and double-clef piano writing; teaching the names of notes; teaching the order of notes in an octave; teaching the guiding notes; teaching how to categorize the notes written on and between lines; teaching how to perceive notes graphically.

These steps aim at facilitation of the note-reading process and reduction of it to the level of students by developing various teaching methods and materials. The

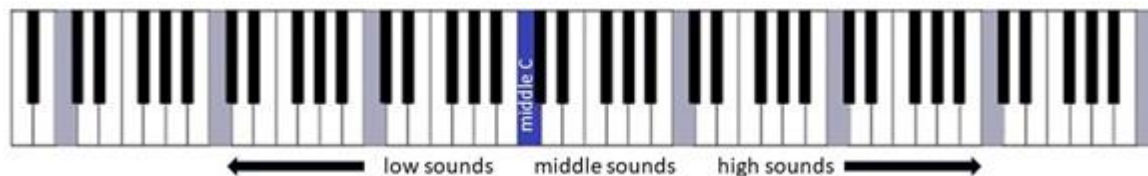


Figure 2. The middle C note on piano keyboard.

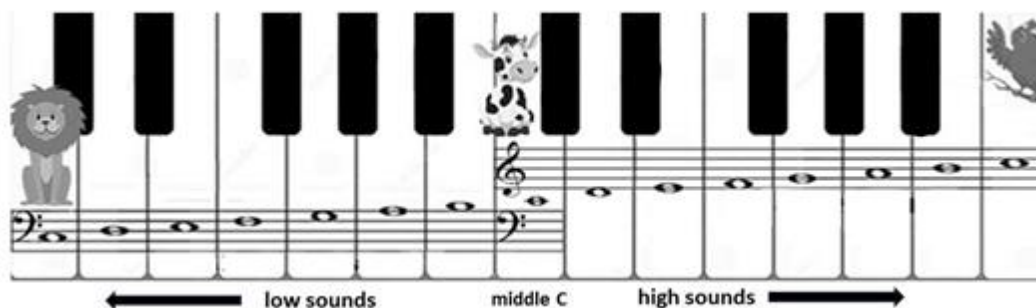


Figure 3. Relating piano sounds according to high-low pitch differences.

indicator showing that the note-reading habit has been acquired is that the child perceives the name and place of note on the staff and translates this theoretical knowledge into the required action on the keyboard. Furthermore, this stepwise process to be followed in development of note-reading skill should be based on game-learning principle by taking into consideration the developmental stages of children.

Introduction of piano keyboard

Before explaining the place of notes on the staff, it is important to make children comprehend the structure of keyboard and to attract their attention to the sounds made by the piano. Furthermore, explaining the purposes of notes would help children give meaning to the learning process. Piano educators, in general, explain the order of the keys on the keyboard by describing the place of black keys according to the white keys. Once the child is explained that the black keys are grouped as two and three keys, knowing that the note “c” is located just to the left of the dual-black key group will serve as a basis to teach the other notes. “Firstly, the teacher can explain that the keyboard is composed of 88 keys in an order, and the first octave “c” note is located right in the middle of the keyboard, as well as the octaves, their names and the notes corresponding to white keys” (Tarkum, 2019, p. 80). Once the child comprehends the place of the “Middle C”, the teacher should ask him/her to find all “c” notes on the keyboard to ensure permanent learning (Figure 2).

Additionally, it is also important for the piano pedagogue to explain the keyboard including the high, middle and low pitches properly in accordance with the level of children once he/she explains the high and low pitches of sound (he/she can illustrate it with high and low sounds of animals etc.). Based on the principle that the child “sees-hears-plays”, the child should relate any new note he/she learns with its place on the staff, high or low tones of the note as well as its place on the keyboard. “Various methods have been tried in order to concretize the abstractness in musical hearing, reading and writing education, and some schools of thought have been formed in this field. In musical teaching methods; symbols, images and similar facilitating elements were used along with symbols indicating high-low pitches and long-short sounds” (Mestan, 2013, p. 302) (Figure 3).

Teaching the function of double-staff and double-clef piano writing

As explained before, note-reading process in piano education requires very specific and detailed accumulation of knowledge. Since piano has a range more than seven octaves, it requires reading notes on both clefs and play them simultaneously (Figure 4). Firstly, the staff should be defined, and it should be strictly emphasized that notes should be read in an ascending order. Furthermore, the child should be taught that the notes on g clef should be played by right hand while the notes on f clef should be played by left hand.

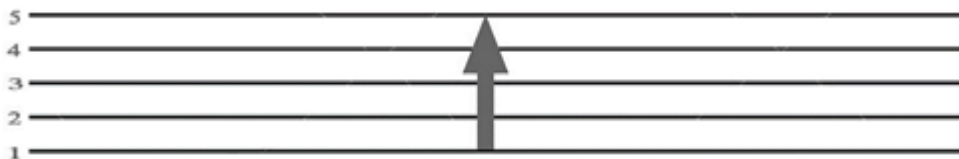


Figure 4. An example of reading the notes on the staff in an ascending order.

Explanation of g and f clefs should be made to the child properly according to his/her level as is the case in all other learning stages. The places of clefs on the staff should be explained in details. The child should comprehend that the g clef is written starting from the second line of the staff and used for high notes while the f clef is written starting from the 4th line and used for low notes (Harnum, 2001; Maureen, 2009).

Teaching the names of notes

Activities involving various methods are implemented for children to learn the names of notes in elementary piano education. In general, it is of great importance that piano pedagogues use attractive and reinforcing teaching methods and materials for a child who has never heard the names of notes and who cannot read and write. As preschool children are in the pre-process period, it is considered that using memory-reinforcing techniques would bring great benefit particularly in teaching the names of notes (Özyürek and Ömeroğlu, 2013). Associating the previously-learned words with the names of notes which will be learned through keywords will enable encoding of the new knowledge. With this method, the previously-learned knowledge recalls the new knowledge via association, and reinforces learning and helps it to be more permanent. The knowledge which is given meaning by means of “keyword” technique as a “memory-reinforcing” method is sent to the long-term memory, which allows a more permanent learning” (Şahin and Kil, 2018, p. 494). “Woolfolk (1993) suggested that knowledge should be symbolized and encoded to be recalled. Knowledge can be symbolized in two ways. The first way is to translate knowledge into mental pictures and images; and the other way is to store it by turning it into verbal symbols” (Açıkgöz, 2003; Korkmaz and Mahiroğlu, 2007, p. 98). The aim of memory-reinforcing technique in learning is to establish an associating bond between the old knowledge and the new knowledge to make it concrete. Such an association will ensure remembering via evoking from the memory. Having a sound bond between two elements will prevent forgetting the existing ones and pave the way for learning new elements.

Making use of the Keyword Technique as a memory reinforcement method in the process of learning the names of notes ensures that children who are just in the

intuitive development period learn the information more easily and comprehend it permanently. The knowledge which is given meaning by means of “keyword” technique as a “memory-reinforcing” method is sent to the long-term memory, which allows a more permanent learning” (Atkinson, 1975; quoted by Şahin and Kil, 2018, p.494). Halvaşı stated that the names of notes should be taught by spelling some symbols with a view to not forgetting them any more (1989, p. 64). It is well-known that piano teachers frequently use the method of keywords evoking the names of notes (Figure 5).

Teaching the order of notes in an octave

In the process of learning the names of notes, the child should be able to count the notes in an octave in both ascending and descending order. To this end, it would be useful to use the method of listing the notes visually in ascending order as a ladder. If the child does not know the order of notes within an octave, it will be difficult for him/her to comprehend the high-low pitch differences and the place of notes (Figures 5 and 6). In the process of provision of the habit to read the notes, the pedagogue should ensure that the child comprehends that the notes are lined up according to a certain order in which notes follow a sequence going from low to high. All these studies may take place first outside the staff by using the ladder of notes, as given in the image above, note cards or any other different creative visual materials. With various activities, the child should understand the name of notes on one side, and the high-low pitch differences on the other side. The child should learn how to read the notes written on the staff first in regular order and then in a skip-sequential manner in both ascending and descending orders. In the event that the child fails to comprehend the notes taught in the previous lesson sufficiently, it is critical to repeat the instructions about the notes that could not be learned by the child, and to stop teaching new notes in order to avoid any possible confusion in the mind of the child.

Teaching the guiding notes

There are many piano methods prepared for preschool children. The most preferred ones are the methods

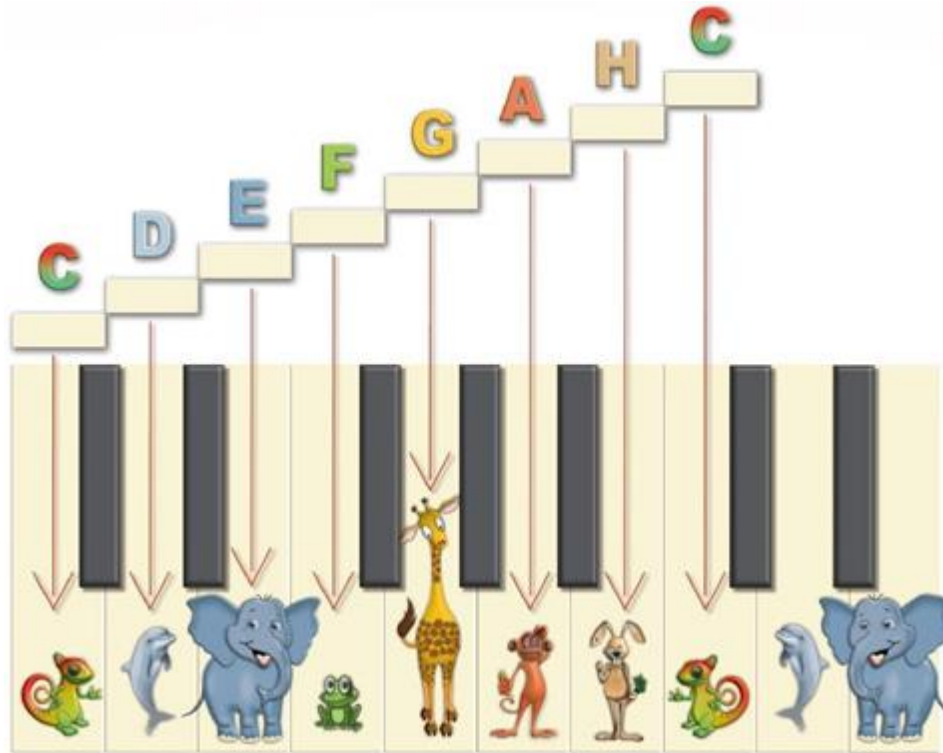


Figure 5. Imaging of names of notes (Mints, 2016, p. 6).

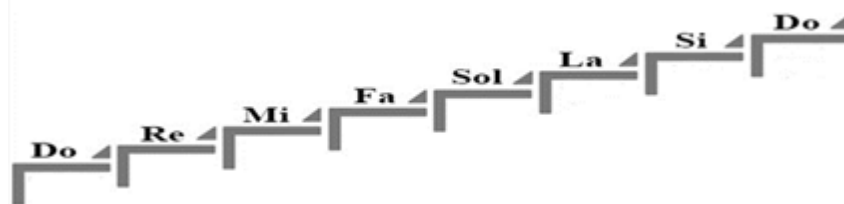


Figure 6. Ladder of notes.

starting with the “middle c technique”. Çimen suggests, “...students who have only recently started to learn piano find it very difficult to use different fingers on two hands, and it also makes it difficult to check the proper hand position which is one of the most important elements of basic behaviours. In the middle c method, having two hands side by side enables proper hand positioning, by which reading the notes and f clef is learnt automatically” (1995, p. 258). In addition to this method, there are also other methods starting with c-g method. In the beginning methods used in the Russian School, they use a method that contains practicing only the g clef (right hand) for a long time. They start to teach the f clef, and therefore playing with the left hand at a later time. Mangova states: “... whatever method you use to start piano education, it is crucial that the child gradually learns, starting from the very first lessons, the place of three main notes in order

to comprehend the sequence of notes on the staff” (2015, p. 5). Permanent learning should be achieved through visual materials and stories fitting to the level of students and repetitions to be conducted in every lesson towards that the g note is written on the 2nd line where the g clef is also written and this note is “guiding” for high notes; that the f note is written on the 4th line where the f clef is also written and this note is “guiding” for low notes; and the middle c note is written between these two staves as a border line between high and low notes (Figure 8).

Categorizing the notes written on and between the lines

It is considered that reduction of this process into three sub-dimensions would help the child to understand better



Figure 7. Teaching skip-sequential notes.

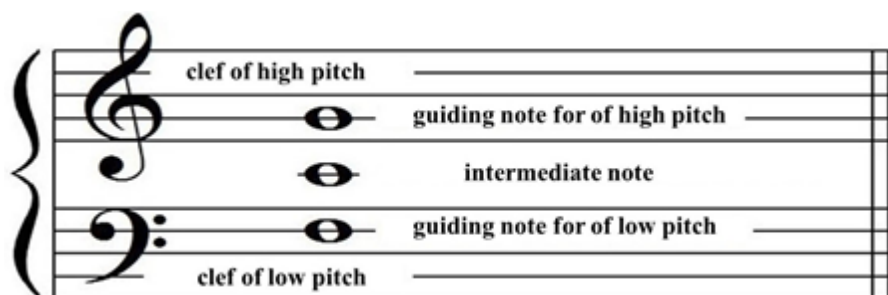


Figure 8. Guiding notes.



Figure 9. Teaching the notes written on and between the lines.

the place of notes of the staff. The first one is to teach the place of notes on the staff visually. The second one is to practice the notes by writing them, and the third one is to repeat this knowledge by saying it (Yakovlevna, 2011).

Writing the notes on and between the lines on the staff visually

“Children start to use the skill to bring together and categorize the similar ones within a group of objects (Avcı, 2004). Categorization can be defined as grouping events or things according to some certain features (Çepni et al., 2007) Children use the skill to categorize in learning the concepts. They learn by generalizing, sequencing and categorizing according to similar and different features” (Üstün and Akman, 2003, quoted by Ayvaci, 2010, p. 5). With this method, children should be learn the idea of placement that notes follow one another as one on the line and the next one on the space

between the two lines when the notes within an octave are written consecutively on the staff. In this method which starts with teaching the middle c note, it should be explained to the child that the d note is written starting from the lowest line of the upper staff, and that the note b is written starting from the top line of the lower staff. Then, other notes written on the lines and on the space between the lines should be taught. This process should run very slowly and with many repetitions (Figure 9). It would be unfair to expect the child to learn all of the notes in early age piano education. It would be enough for the children at this stage to learn the c, d, e, f and g notes respectively on the g clef, and middle c, b, a, g and f respectively on the f clef. However, as previously explained, this process should be arranged according to the personal learning attributes of the child. If comprehension is weak in some students, teaching a new note before the previous one is fully learnt will affect the process adversely. On the other hand, teaching process should be accelerated in faster-learning children.

Argentova (2012) explains the note teaching activities she implements to ensure that children comprehend that notes are written on the lines and the spaces between the lines in an order: First, I write a note on the staff. Then, I ask the child to write the notes on the right and left sides (that precede and follow) of the note I have already written, and to say them. Once I see that the child has comprehended these materials, I continue with teaching the flats and sharps that are the black keys. Furthermore, It helps the children to memorize them more easily if they comprehend the sequence of the notes in a rhyme (2012, p. 9-10).

Teaching the notes by writing: When teaching the places of notes on the staff, it is suggested that the child learns the information by writing it. "Lawwill (1999) stated that writing for learning purposes was an active process. He added that student did not only express but also discover the information when they write it. Writing develops the thinking skill and helps the brain to think about alternatives. We can therefore suggest that writing is a unique tool to feed and improve abstract thinking" (quoted by Karaca, 2011, p. 21). Argentova (2012) states that as a learning activity for preschool children, she used the "Quiz" game for teaching notes to children. In this game, note reading cards are prepared (one note on each card). Cards are shuffled. The student picks up one. After telling the name of the note on the card, he/she writes it on the staff and then hits the key corresponding to that note on the keyboard (2012, p. 9-10).

Teaching notes by question and answer method: Asking questions to the children in note teaching process regarding where the notes are placed on the staff (on the lines or spaces between them) is an important method to determine to what extent learning has been sufficient and permanent. It is important to understand efficiency or inefficiency of learning based on the answers given by children. Thus, the teacher will be able to identify which notes he/she should give more weight in teaching, and complete the missing links by conducting the required repetitions and making relevant explanations. Conducting this activity as a game helps attract attention of children (Yakovlevna, 2011). Asking questions is one of the most important components of learning and teaching processes. By this method, the teacher provides the students with a chance to review, use and expand the knowledge and to generate new ideas. Filiz (2009, p. 169) suggested, "Asking questions is very important about what students and teachers understand as their thinking skills improve." Furthermore, Karaca (2011, p. 22) quotes Beretier and Scardamalia (1987), that "telling the information" and "transforming the information" models regarding writing for learning purposes. In telling the information model, the required information is retrieved from memory and transformed into texts." For instance, when the child tells the names of notes written

on the staff as well as on which line or space they are written, it helps the teacher to get a feedback, according to which the teacher decides whether it is necessary to repeat it or not. "The question and answer method improves thinking skills of students, facilitate their learning, provides feedback about learning and teaching, helps develop a review strategy, ensures making associations between ideas and fuels curiosity" (Filiz, 2009, p. 169).

Teaching how to perceive notes graphically

Graphical method in teaching the places of notes on the staff is based on establishment of visual, cognitive and motor connection. It is important to teach the student how to perceive the note writing graphically. This method ensures fast action on keyboard by reading the notes on both clefs simultaneously, and helps to see the harmonic structure with the harmonic walk. The aim in the process to provide note reading habit is to ensure that the student comprehends the method of perceiving the note writing as a whole (Direktorenko, 2001). Graphical representation of the acoustically-heard harmony helps to perceive and learn it better. The child should be able to easily figure out whether the harmony is ascending or descending simply by looking at the graphical representation of the notes. Musical perception is reinforced through seeing the graph of harmony as a relief on the paper. This is because the note reading speed of the student will increase in time, by which he/she will start to see motifs and sentences as a whole rather than perceiving and conveying the relevant signs separately on to the keyboard one by one. Thus, the examples below will be useful for the entire piano education process as the child acquires the habit to perceive the harmony as a whole during the note learning process in elementary piano education. Aleksandrova (2012) suggests that teaching the places of notes on the staff should start once the child comprehends ascending and descending movements of sound (Figure 10). After the student is asked to play some sounds in ascending order, the teacher writes the round parts of notes on the staff without their sticks showing the note value (duration). The student sees that notes move in an ascending order. The teacher should ensure that the child comprehends that the staff shape that is formed by drawing five parallel lines was used in order to identify the size of the high-low difference between two notes, by which the child can perceive the function of the staff in a more concrete fashion (Aleksandrova, 2012) (Figure 11). From the very beginning of the process of providing the note-reading habit, the student should definitely be taught (initially by a pedagogue) how to combine "musical words" with a look of the eye by graphical representation of notes rather than seeing individual note symbols. For instance, once the child understands first the ascending and descending

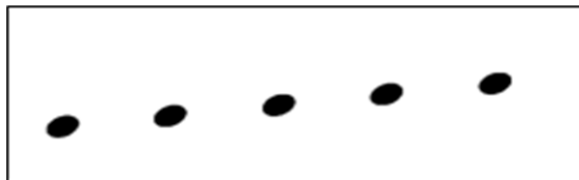


Figure 10. Non-staff graphical representation of notes.



Figure 11. Graphical representation of notes on the staff.



Figure 12. Sequential and skip-sequential graphical representation of notes on the staff.

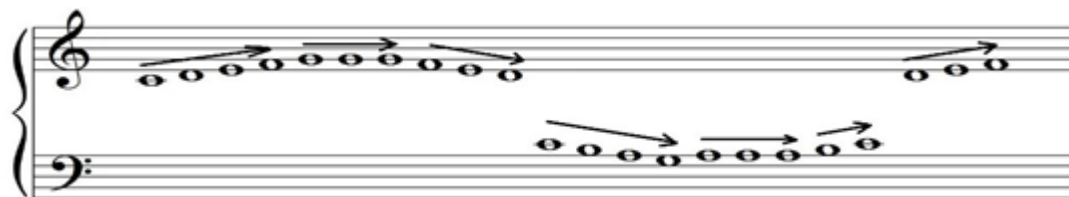


Figure 13. Graphical representation of harmony on the staff.

movements of two consecutive notes, and then the idea of 3 and 4 sequential notes, he/she will learn how to graphically follow non-sequential notes first by skipping one note each time and then with larger note jumps and note sequences (Figure 12). Throughout this process, it will be useful that the child identifies the melody direction by writing them with arrows. Drawing an arrow upwards for an ascending melody whereas downwards for a descending melody and a horizontal arrow for melodies with holding sounds reinforces graphical representation of the melody. Drills defining the direction of melody should be conducted on both clefs. After such drills, the student perceives the “word” as a whole simply by looking at it and immediately reacts to any sequence of notes or skip-sequential notes (Figure 13). Similarly, in following years, we should form the reaction in the student to vertical compounds he/she swiftly recognizes visually as “the graphical representation face” of spaces

and chords (Aleksandrova, 2012, p. 6) (Figure 14).

DISCUSSION

Studies have shown that the note-reading skill regarding performance of the piece consists of the combination of steps of visually perceiving the note symbol (the place of note symbol on the staff), finding the place of note on the keyboard (the key corresponding to the note) and acoustics hearing (tone of note) (Direktorenko, 2001, p. 28-29). Yaliloğlu (2019) found out that introduction of the piano keyboard always started with dual and triple black key groups according to the interviews conducted with expert piano pedagogues teaching piano to children at the age of 4-6 years. Results of the study revealed that an overwhelming majority of pedagogues (72.7%) showed the place of dual and triple black key groups on



Figure 14. Graphical representation of spaces and chords on the staff.
Source. (http://dshi10.ru/images/metod-rabota_muller_chtenie-s-lista1.pdf).

the keyboard only by explaining them verbally while the remaining 27.3% introduced and taught the dual and triple black key groups by telling them as a story. In teaching of the place of the middle c note, as was the case in introduction of the piano keyboard, 72.7% explained it verbally and pointed to its place on the keyboard, and there was a consistency in the teaching method for the same sub-problem.

Many piano pedagogues have conveyed the opinions of children on note education. Popdimitrova and Lyonov (1975) suggested that there were visual, acoustic and motion activities that are independent from one another but develop simultaneously in the note reading process. In practice, it is often seen that they do not develop simultaneously. Suzuki explains the visual-acoustic connection in his own note-reading teaching. He suggests that note-reading should start after we let the students listen to many musical examples enabling acoustic perception. Thus, in the process of providing note-reading habit, it is important to maintain the balance between acoustic-visual and psychomotor activities and to ensure proper realization of musical-cognitive processes in every student (quoted by Direktorenko, 2001, p. 28-29). "Phonemime and the rhythm language are important tools that are used in the Tonic sol-fa method based on some hand signs to show characteristics and durations of sounds in tonality (Tonic sol-fa method was invented by Sarah Glover, a British music pedagogue. Glover used the first letters of the names of notes in her method.)" (Göğüş 2009; quoted by Mestan, 2013, p. 302).

Edna Mae Burnam (1959) explained the places and names of notes with frequently-used letters and asked the children to find these notes. Here, the notes are shown with respective letters as Do: C, Re: D, Mi: E, Fa: F, Sol: G, La: A and Si: B. Almost all piano schools use this technique (quoted by Halvaşı, 1989, p. 64). However, it is considered that this method can be very challenging for children in preschool (intuitive) development period as children at these ages do not recognize the letters yet, and try to solve problems intuitively rather than logically. "They can categorize the objects according to given sensory attributes such as size, colour and shape, but they are not fully aware of the relationships" (Başkale and Bahar, 2008).

Burnam (1959) placed the notes in the shape of fish on

two clefs within an octave (Halvaşı, 1989, p. 64). Şevçuk (2011) suggests that there are some note-teaching methods on playing musical instruments: Playing by notes, colours, numbers and ear. The colouring system which is widely used in Europe is easy for children to play an instrument. The specified coloured marking system (coloured keyboard, plates of metalophone) is fixed for each sound. Children are given melodies composed of coloured circles or coloured notes with specific or non-specific rhythmic durations. Note-teaching is easier with this method (e.g. I see the note written in red colour and hit the red key). However, as the hearing skills are not effectively involved in playing the melody, the child plays the piece without perceiving it acoustically.

The numbering system suggested by N. A. Metlov in 1930s was considered to be effective perhaps in those years. As in note-teaching method with colours, the child plays the melody only by looking at the numbers. Thus, this method continued to be used rarely at later times because it made it difficult to perceive the notes acoustically and the places of notes on the staff visually as required by note-reading. Both methods (colouring and numbering) ensure achieving the goal quickly in elementary piano education of children, but it should also be considered that these methods make it difficult for the child to develop note-reading skills in the future as the child gets used to see only colours or numbers (Şevçuk, 2011, p. 219) (Figure 15).

Kaynak (2004) concluded: "Pedagogues giving piano education to preschool children do not prefer playing by ear, and teaching the children at the age of 5-6 years with colours for a long period of time in piano education is a delaying factor for note-reading..." (Quoted by Ersoy, 2010, p. 53). On the other hand, a piano pedagogue who finds piano education with colours useful stated: "I use colours because colours are the tools that attract the attention of children at this age group most easily" (Ersoy, 2010, p. 50) (Figure 16). "In M. Battke's method; there is a teaching step in which sounds are represented on the staff with graphs. When applying the Battke method, they paid utmost care to make it clear and concrete for children, and they used graphs in the starting activities while they used varying notes, diagrams, vertical and curved sound ladders, and red-coloured tonic staffs at later stages" (Göğüş 2009, quoted by Mestan, 2013, p. 302). "Ptacinski, a Czech pedagogue, who worked with

A SONG OF PENNY CANDY

The image shows a piano accompaniment for the piece 'A Song of Penny Candy'. It consists of two systems of music. The first system is in 4/4 time with a tempo marking of ♩ = 60 - 120. The key signature has one sharp (F#). The right hand starts with a whole note G4, followed by quarter notes A4, B4, and A4. The left hand starts with a whole note G3, followed by quarter notes F#3, E3, and D3. The second system continues the melody in the right hand and accompaniment in the left hand, with various fingerings indicated by numbers 1-5.

Figure 15. Teaching with numbers (Thompson, 1955, p. 15).

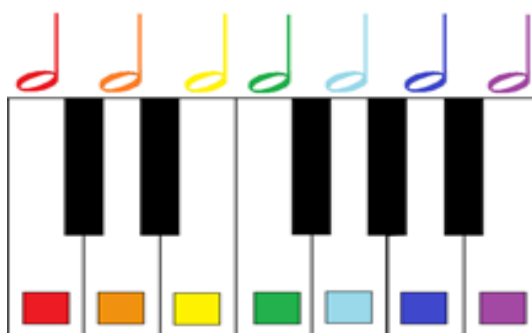


Figure 16. Teaching notes with colours.

this method, used seven different colours for seven notes (not only red for c) during the practices. Exercises are conducted on an eight-step scale ladder. These steps were coloured as do-red, re-white, mi-yellow, fa-brown, sol-blue, la-green and si-purple. First, ear education exercises are conducted with do-mi-sol in red-blue-yellow colours. Then si, re, fa and la sounds follow respectively. In the first year, only the major tone is studied, and minor tone starts in the second year. Wünsch, who is another pedagogue who used the Battke method, only used red, yellow and blue cardboards for do-mi-sol” (Göğüş 2009, quoted by Mestan, 2013, p. 302).

As expressed above, there are different methods applied in piano education such as teaching with colours, letters, numbers and notes. However, although the method of teaching with colours seems to be facilitating for children at the beginning, at later stages when they start to use only black notes, it is considered that it might cause confusion. In the method of teaching notes with numbers, as explained above, children can display the

required behaviour simply looking at the numbers on or under the notes, rather than reading the places of notes on the staff. Thus, it is observed in pieces where there is not any finger number on the notes that the note-reading process does not make progress as properly as desired, which leads to difficulty and reluctance to read the notes.

As a conclusion, the aim of different note-teaching methods applied by piano pedagogues is to provide the children with the note-reading skill effectively. If the note-teaching method applied achieves permanent learning, then it is the most important indicator showing that the note-reading skill has been developed. The note-teaching methods explained above and tried for many years need to be implemented properly in accordance with personal attributes of each child. It should also be considered that the challenging and delaying nature of this process may consequently lead to that the child may get disheartened to play the instrument. Therefore, pedagogues should provide the note-reading skill, in line with the developmental stage of the child, by using from the very

beginning the guiding notes on c and f clefs and based on the principle that “I see-hear-play” when learning the places of notes on the staff. Nevertheless, each piano pedagogue can provide the child with note-reading skill by using different or several note-teaching methods based on his/her experience and materials and resources in a creative and subtle way. The following outputs are presented to make this learning process effective and permanent:

1. In the process of providing note reading habit; comprehension of the triple perception relationship between place of note on the staff (sign) – the place of note on keyboard (key) – tone of note (sound).
2. Acquisition of the habit to read the mono-sounds and dual-sounds on the staff as well as the notes in chords always in an ascending order.
3. Distinguishing the notes written on the lines and on the spaces between lines of the staff.
4. Distinguishing sequential and skip-sequential note movements.
5. Acquisition of reading the notes written on both clefs simultaneously starting from the very first lessons.
6. Perception of concepts regarding “high-low”, “up-down”, “ascending-descending”, and “sequential-skip-sequential” notes.
7. Establishing a causative perception in the child between seeing-hearing-playing actions regarding the fact that notes go high as you climb to upper lines of the staff and as you move to the right-hand side on the keyboard whereas notes go low as you go to lower lines of the staff and as you move to the left-hand side on the keyboard.
8. Seeing the graphical line as a whole by following the ascending and descending movements of melodies and chords.
9. Ensuring hand-eye coordination when playing the notes on both clefs.

CONCLUSION AND RECOMMENDATIONS

The study concludes that a number of teaching methods are applied to develop note-reading skills in early-age piano education, and every piano pedagogue selects the most effective method based on his/her personal experience. It is effective to teach children the notes as a whole of visual, acoustic and psychomotor skill by building up relational perceptions and to implement the process of developing note reading skill in children by using creative game activities and materials properly in accordance with their levels. Note-reading skill in early piano education process should be developed through given stages. Also, it is necessary to implement this process in line with personal perception, development and talent level of every child.

Based on these conclusions, the following

recommendations are presented for further studies and practices:

1. Findings of this study have shown that there are various note-teaching methods applied in the literature and in practice. Thus, it would be useful to raise awareness in teachers through in-service training programs by developing different note-teaching methods and materials. Furthermore, such trainings would also help teacher follow the most recent developments in field of teaching the note-reading skill in early-age piano education.
2. It is considered that piano pedagogues can develop activities and a learning environment in line with the level of children if they possess sufficient knowledge and equipment regarding teaching methods and materials for note-reading.
3. The teacher candidates who would like to be a piano educator as a profession should be taught in detail the methods regarding note-reading skills for children during their undergraduate study, which will enable them to implement effectively the process of developing note reading habit, which is one of the most critical educational steps in early age piano education, from the very first years of their professional career.
4. It is also considered that publication of enjoyable note-reading course-books containing the elementary education methods having more visual materials regarding development of note-reading skills for children receiving early-age piano education could be guiding for piano pedagogues.
5. The field of early age piano education and the literature on this subject will be significantly contributed by further studies with increased number of experimental, quantitative and qualitative researches on effectiveness of note-reading methods that are currently in use.

CONFLICT OF INTERESTS

The author has not declared any conflict of interest.

REFERENCES

- Açıkögöz KÜ (2003). Effective learning and teaching (6th Edition). Izmir: Eğitim Dünyası Publications.
- Aleksandrova ZN (2012). Formirovane navıkov chteniya notno teksta u uchastıysa-pianistov mladşih klasov. Metodicheskaya razrabotka. Chernogolovskaya: Detskaya şkola iskusstv im. professora E. P. Makurenkoy. Available at: https://scholar.google.com/scholar?hl=trandas_sdt=0%2C5andq=МЕТОДИЧЕСКАЯ+++РАЗРАБОТКА+Занина+Наталья+АлександровнаandBtng=
- Argentova İY (2012). Nchılalny period obucheniya igre na fortepiyano. İvngorodskaya detskaya skola iskusstv. Available at: <https://docplayer.ru/26500095-Nachalnyy-period-obucheniya-igre-na-forte-piano.html>
- Ayvacı HŞ (2010). A pilot survey to improve the use of scientific process skills of kindergarten children. Necatibey Faculty of Education Electronic Journal of Science and Mathematics Education 4(2):1-24.

- Başkale H, Bahar Z (2008). A Review on Piaget's Cognitive Development Theory. *Dokuz Eylül University E-Journal of School of Nursing* 2:133-147. <http://acikerisim.pau.edu.tr:8080/xmlui/bitstream/handle/11499/27218/Piaget%E2%80%99nin%20Bilim%C5%9Fsel%20Geli%C5%9Fim%20Kuram%C4%B1yla%20C4%B0lgili%20Bir%20G%C3%B6zden%20Ge%C3%A7irme.pdf?sequence=1&isAllowed=y>
- Bastien JW (1973). *How to teach piano successfully*. USA-Park Ridge, IL: General Words and Music Co. Available at: <https://archive.org/details/howtoteachpianos0000bast/page/7>
- Bektaş T (2019). Teachers' opinions on the problems encountered in preschool piano education. (Non-published Master's Thesis) Pamukkale University, Institute of Educational Sciences.
- Bozoklu F (1994). An Examination of Relationship between the game corners preferred by preschool children at age of four, five and six and their creativity levels. (Non-published Master's Thesis) Hacettepe University, Institute of Health Sciences.
- Burak S, Sezen H, Yalioğlu D (2020). Opinions of expert piano pedagogues on teaching methods applied in piano education of children at the age group of 4-6 years. *Fine Arts* 15(2):127-153. Available at: <https://dergipark.org.tr/tr/pub/nwsafine/issue/53890/707998>
- Burnam EM (1959). *Step by step*. Cincinnati: Willis Music Company.
- Çepni S, Yılmaz A, Yücel C, Semerci Ç, Bayrakçeken S, Köse E, Gündoğdu K (2007). *Measurement and Evaluation* (1st Edition). Ankara: Pegem Akademi Publications.
- Çiftçibaş MC, Şaktanlı SC (2017). Impact of fast-reading techniques education on piano sight-reading skills. *Mehmet Akif Ersoy University Journal of Institute of Social Sciences* 9(18):35-55. doi:10.20875/makusobed.289321
- Çimen G (1995). An overview of elementary piano methods. *Mavi Nota Journal of Music and Arts* 16(23):20-28.
- Demirel Ö (2007). *Curriculum Development in Education* (10th Edition). Ankara: Pegem Publications.
- Direktorenko I (2001). *Pedagogicheskiye predposylki formirovaniya fortepianniyh navyykov u studentov* (Non-published Dissertation). Latvīyskiy Universitet Rīga. Available at: <https://dspace.lu.lv/dspace/handle/7/3035>
- Ercan N (2008). *Principles and Methods in Piano Education*. Ankara: Sözkese Publications.
- Erden M (1998). *Curriculum Evaluation in Education*. Ankara: Anı Publications.
- Ersoy KSG (2010). An examination of methods applied in preparation of six-year old children for piano education. (Non-published Master's Thesis). Ankara University, Institute of Educational Sciences.
- Fenmen M (1997). *A handbook of musician*. (A. Say, Ed.). Ankara: Müzik Ansiklopedisi Publications.
- Fidan N (2012). *Learning and teaching at school* (3rd Edition). Ankara: Pegem Akademi Publications.
- Filiz SB (2009). Impact of question and answer method education on question-asking knowledge and techniques of teachers. *Journal of Institute of Social Sciences* 3(1):167-195.
- Gasmova T (2011). Piano learning and teaching techniques. *Journal of Institute of Fine Arts* 25:99-106. Available at: <https://dergipark.org.tr/tr/pub/ataunigsed/issue/2580/33204>
- Gün E, Öztürk T (2018). Importance, technique and development of sight-reading in piano. *Pamukkale University Journal of Social Sciences Institute* 31:121-128. doi:10.30794/pausbed.414679
- Halvaşı B (1989). *Piano education in preschool children* (Non-published Master's Thesis). Marmara University, Institute of Sciences.
- Harnum J (2001). *Basic music theory: how to read, write and understand written music*. Sol-Ut Press. Available at: <http://books.google.co.jp/books?id=zBpOUw3Y0YUC>
- Işıkdemir B (2017). An examination of elementary piano methods for children at the age of 6-11 years and opinions of piano pedagogues (Non-published Master's Thesis). Pamukkale University, Institute of Educational Sciences.
- Karaca D (2011). Effect of learning science by doing and writing (Isdw) on academic performance and scientific process skills of teacher candidates in general physics laboratory class (Non-published Master's Thesis). Mehmet Akif Ersoy University, Institute of Science.
- Karasar N (2018). *Scientific research method*, Ankara: Nobel Publications.
- Kaynak T (2004). An examination of piano methods for preschool children and identification of their status of use (Non-published Master's Thesis). Gazi University, Institute of Educational Sciences.
- Kılınçer Ö (2013). An examination of learning strategies applied in piano classes according to various variables (Non-published Master's Thesis). Erciyes University, Institute of Fine Arts.
- Korkmaz Ö, Mahiroğlu A (2007). *Brain, memory and learning*. Kastamonu Educational Journal 15(1):93-104. Available at: <https://dergipark.org.tr/en/pub/kefdergi/issue/49108/626699>
- Kurtuldu MK (2010). Usability of note-teaching by jingles in primary-school piano education. *Turkish Journal of Educational Sciences* 8(3):759-775. Available at: <https://dergipark.org.tr/en/pub/tebd/issue/26103/275033>
- Kurtuldu MK (2015). A comparison of learning styles of piano students and their sight-reading playing skills. *Mersin University Journal of Faculty of Education* 11(3):593-602. doi:10.17860/efd.64924
- Mangova İ (2015). *Kak podruzhitsya s basoviyım klüçom*. Minsk: Gosudarstvennoe Utzerezdeniye obrazovaniya gimnaziya Available at: <https://rcmuzyka.com/kak-podruzhitsya-s-basoviyım-klyuchom/>
- Maureen H (2009). *Music and the young mind: enhancing brain development and engaging learning*. MENC: The National Association for Music Education.
- Mestan H (2013). Relationship of music and colours. *Kayı Uludağ University Faculty of Science and Letters* 20:299-304. doi:10.20981/kuufefd.76945
- Mints I (2016). *Hello Piano*. Deutschland: Musicverlag Heinrich Klassen. <https://www.amazon.de/-/en/Irina-Minis-Heinrich-Klassen/dp/3981805917>
- Molla M (2002). A research on early piano education of children (Non-published thesis of proficiency in art). Mimar Sinan Fine Arts University, Institute of Social Sciences.
- Onuray H (1998). Visual exercises accelerating and reinforcing to learn at the beginning level for children at the age of 6-8 years (Non-published Master's Thesis). Gazi University, Institute of Science.
- Özer B, Yiğit N (2011). Development of sight-reading in piano education. *Eskişehir Osmangazi University Journal of Social Sciences* 12(1):39-49. Available at: <https://dergipark.org.tr/tr/pub/ogusbd/issue/10999/131630>
- Özyazıcı F (2019). Pedagogical methods to be applied for the first five years of piano education under the light of selected repertoire and methods (Non-published thesis of proficiency in art). Istanbul University, Institute of Social Sciences.
- Özyürek A, Ömeroğlu E (2013). An examination of effect of memory education program on memory development of six-year old children. *Education and Science* 38(168):30-45. Available at: <http://egitimvebilim.ted.org.tr/index.php/EB/article/viewFile/760/576>
- Şahin H, Kil G (2018). Effect of the keyword method as a memory-reinforcing technique in foreign language education on development and persistency of vocabulary of students. *Abant İzzet Baysal University Journal of Education Faculty* 18(1):493-506. doi:10.17240/aibuefd.2018.-382319
- Şevçuk AA (2011, Nisan). *Sposoby obuçeniya detey igre na detskikh muzıkalnykh instrumentah*. Pashalniye çteniya, paper presented, Gosudarstvenno Gogumanitarnogo Universiteta, Niznevartovsk. Available at: https://konference.nvsu.ru/konffiles/143/Pashalnye_çteniya_2011.pdf
- Tarkum G (2019). An examination of elementary piano education process of preschool and school children. *Balkan Music and Arts Journal* 2:77-84. Available at: <http://dergipark.org.tr/tr/pub/bmsd/issue/51728/623878>
- Uçan A, Sun M, Artan İ, Yıldız G, Öztürk A (2001). *Music education*. Eskişehir: Anadolu University Publication.
- Uçar M (2015). Development of visual materials that ensure and support learning in piano education for children at the age of 5-9 years (Non-published Master's Thesis). Cumhuriyet University, Institute of Social Sciences.
- Ünal İ (2006). Opinion of teachers in institutions rendering piano education on creative drama as a piano education method in elementary stage for children at the age of 6-8 years (Non-published Master's Thesis). Dokuz Eylül University, Institute of Education Faculty.

- Vespremi L (1981). Chteniye not. Rebenyok za royalem, Moskova: Muzyka.
- Yakovlevna M (2011). Naviyk Chteniye S Lista, Evo Znachenije İ Metody Razvitiya Na Natchalnam Etape Obucheniye. Saratov: Detskaya Şkola İzkusv. Available at: http://dshi10.ru/images/metod-rabota_muller_chtenie-s-lista1.pdf
- Yalliođlu D (2019). Opinion of expert piano educators on teaching methods applied in piano education of children at the age of 4-6 years (Non-published Master's Thesis). Burdur Mehmet Akif Ersoy University, Institute of Educational Science.
- Yeşilyurt E (2013). Purposes of teachers to use teaching methods and problems encountered. Atatürk University Journal of Institute of Social Sciences 17(1):163-188. Available at: <http://dergipark.org.tr/en/pub/ataunisobil/issue/2832/38489>
- Yılmazlar E (2004). An evaluation of methods and techniques applied by music teacher candidates in elementary piano education (Non-published Master's Thesis). Selçuk University, Institute of Social Sciences.