

# CHALLENGES IN MUSIC EDUCATION FROM THE ASPECT OF INCLUSION OF STUDENT WITH VISUAL IMPAIRMENTS

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*Abstract:* This research aimed to collect and combine all data on working with a highly visually impaired student in individual piano lessons and to determine a way of adopting new compositions and communication and cooperation between students and teachers. The qualitative method of case study, in which the methods of non-participatory observation and semi-structured interview were applied, concluded that the success of making music depends mostly on the approach and competencies of teachers in teaching such a student and that there are ways to overcome low vision as an obstacle in playing a musical instrument.

*Keywords:* inclusion, visual impairments, student, teacher, piano

IZZIVI GLASBENEGA IZOBRAŽEVANJA Z VIDIKA SLABOVIDNEGA UČENCA

*Izvleček:* Namen raziskave je bil zbrati in povezati podatke o delu z visoko slabovidnim učencem pri individualnem pouku klavirja ter določiti načine sprejemanja novih skladb, komuniciranja in sodelovanja med učencem ter učiteljem. V kvalitativni raziskavi, študiji primera, so bili podatki zbrani z opazovanjem, opazovanjem brez udeležbe in s polstrukturiranimi intervjuji. Ugotovili smo, da je uspeh muziciranja v veliki meri odvisen od učiteljevega pristopa in njegovih kompetenc za poučevanje visoko slabovidnega učenca in da obstajajo načini premagovanja slabovidnosti kot ovire pri igranju instrumenta.

*Ključne besede:* inkluzija, slabovidnost, učenec, učitelj, klavir

The term “visual impairment” refers to individuals who are classified as blind or partially sighted (Davis, 2003). The latest report from the World Health Organization from the 2019 *World Report on Vision* speaks of at least 2.2 billion people with visual impairments or blindness, of which at least one billion have a vision impairment that could have been pre-

vented or has yet to be addressed. According to the *Report on Persons with Disabilities in the Republic of Croatia* from 2019 (Hrvatski zavod za javno zdravstvo, 2019), there are 27,092 persons with some kind of visual impairment in Croatia. Visual impairments in children can generate a number of disorders that affect their general development as they are unable to experience the world in the same way as those who can see, “both in terms of cognitive functions (thought processes, understanding and memory, development of imagination) and in the field of perception, cognition and knowledge, acquisition of skills and abilities, and social adjustments” (Zuckerman, 2016, p. 147). Visually impaired children and youth are prevented from participating in many social activities with their peers, such as playing sports or simply playing with other children, which can lead to social isolation and emotional problems (Augustad, 2017) as well as anxiety, depression, and feelings of inferiority in relationships as opposed to non-visually impaired people (Bhagotra et al., 2008). There are many different visual disorders that can be more or less complex. When we add to this the differences in family life, economic status, education, etc., it is evident that each visually impaired person has different, characteristic experiences, which indicates that their adjustment is personalized (Schinazi, 2007).

A child with a visual impairment is forced to build concepts of the world based on other senses and experiences (Mačesić-Petrović et al., 2010). Hearing and tactile stimuli become their primary senses and it is therefore not surprising that music is particularly appealing to them. “It is a well-known fact that visually impaired people are very closely associated with music” (Sah et al., 2012, p. 3), because music is an art that is perceived by hearing and as such provides them with successful equal interaction with other peers who can see, with very little limitation (Clark & Murphy, 1998). There are many examples that suggest a close connection between music and visually impaired individuals, from the centuries-old European tradition of blind church organists (Sacks, 2012) and the tradition of blind biwa players (a traditional Japanese instrument) in Japan who until the end of the 20<sup>th</sup> century performed rituals for the deity of earth and fire and played an important role in the life of the rural population (Khalmirzaeva, 2017), all the way to famous blind performers of popular and classical music who have left an indelible mark on the world music stage, such as Andrea Bocelli (Bocelli & Pugliese, 2002), Stevie Wonder (Ribowsky, 2010), Ray Charles (Evans, 2005) or Art Tatum (Encyclopaedia Britannica, 2021).

Furthermore, there are numerous studies focused on blind and partially sighted people and their extraordinary abilities in comparison with people with no visual impairments in the areas of sound localization (Lessard et al., 1998), auditory attention (Gougoux et al., 2004; Liotti et al., 1998), echoic memory (Röder et al., 2001) and voice recognition accuracy (Bull et al., 1983). In addition, in visually impaired persons, and especially in congenitally blind persons, the presence of absolute pitch is a very common occurrence (Dimatati

et al., 2012; Hamilton et al., 2004). The reasons for this superiority are attributed to brain neuroplasticity (Bach-y-Rita, 1990; Good et al., 2014; Merabet & Pascual-Leone, 2009; Silva et al., 2018), or the brain's ability to access new pathways in search of overcoming visual constraints using mechanisms of cortical reorganization (Silva et al., 2018). In other words, when one of the senses malfunctions or has no function at all, other modalities become more effective and improved and thus take on its role, to compensate for the missing information (Good et al., 2014). Such sensory modifications, in fact, compensate for vision loss (Jan et al., 2013). The concept of compensation has been known for a long time and has been the subject of many, primarily philosophical, debates in the past. One of the first mentions of sensory compensation (Jourdain, 1916, as cited in Miller, 1992) appears as early as 1749 in the philosophical treatise "Letter on the Blind" by the French educator and philosopher Denis Diderot. The "Letter on the Blind" is the first written work to discuss the education of visually impaired persons and it lays the philosophical foundations for the education of visually impaired individuals (Holbrook et al., 2017). It represents a milestone in the education of blind and visually impaired individuals.

#### INCLUSION OF PERSONS WITH VISUAL IMPAIRMENTS

As already mentioned, visually impaired people often establish a special cohesion with music. In most cases, their hearing is more developed than the hearing of people who see, thus creating desirable preconditions for the practical use of music which can ultimately play an important role in the developmental path of a visually impaired person (Rostohar, 2006, as cited in Park, 2017). In this sense, there is a need for quality formal education of children and constant implementation of inclusions that will open new opportunities for development and progression for visually impaired people within the wider community (Baker & Green, 2016).

"For more than ten years, the term inclusive education has been one of the most important aspirations when it comes to modern education." (Marković, 2016, p. 61) Inclusion implies equal opportunities and possibilities for all students at all levels of education (preschool, primary, secondary and tertiary) that will give everyone the opportunity to realize their full potential (Martan, 2015), and in pedagogy this approach and understanding is described by the phrase "pedagogy of success for all" (Matijević, 2005). Interest in artistic expression and participation in activities related to music, for many children in Croatia, is achieved by enrolling into and attending music schools. Children with developmental disabilities, as well as those without them, can express such interest, and therefore it is necessary to implement inclusive practices both in general education and in music schools. "Music education should, in addition to its traditional goals (mastering music skills and knowledge), help

every child through music in his or her optimal development, so that he or she can grow into a freer, more inventive, sensitive, cultured, and humane person and become a more complete human being, regardless of his or her future professional orientation.” (Bačlija Sušić, 2015, p. 585)

Although there is no exact data on the number of children with disabilities who are attending music schools in Croatia, it seems that this number is low. However, music can have a very positive effect on the overall development of children (Mawby, 2018), and many music computer technologies open up new opportunities for professional education of children with disabilities and facilitate the implementation of inclusive pedagogical processes in schools (Gorbunova & Govorova, 2018). It is to be expected that the number of such children will grow from year to year, which represents new challenges for teachers in these schools and generates a need to adjust teaching processes accordingly.

Students in music schools, in addition to classical classes where they learn about, e.g., solfeggio or harmony, can or must also participate in large group activities such as choir or orchestra, but the particularity of music schools lies in the individual approach to teaching instrument playing or singing. According to Sabljar (2019), the nature of teaching and what teachers do while teaching the playing of musical instruments is such that it is simply impossible to educate in a group properly and well, and this is supported by the fact that students attending elementary music school have different goals, levels of motivation, interests and abilities (Schmidt, 1992).

Furthermore, the teacher in such classes must assess the scope and difficulty of the teaching content, as well as the pace and methods that will be applied to each individual student. Such work requires certain knowledge, skills, and competencies that teachers will have acquired mostly through their formal education or professional development. But have these teachers also gained knowledge about working with students with disabilities and do they feel ready to work with such students?

Therefore, starting from research that confirms inclusive practice and enables blind students to learn effectively and independently (Flavel et al., 2002), the problem of this paper is focused on students with severe visual impairments in the context of music education, or more precisely, individual instruction in instrument playing.

## METHODOLOGY

### *The Aims of This Study:*

1. Collect and consolidate all data on work with a student with a severe visual impairment in piano lessons.

2. Determine the way of learning new compositions and communication and collaboration of the student and teacher in individual piano lessons.

### *Research Questions*

1. How is the inclusion of a student with severe visual impairments implemented in the teaching processes in music schools?
2. What are the experiences and satisfaction of a highly visually impaired student with forms of work in a music school?
3. What are the experiences of teachers working with the student with severe visual impairments?
4. What is the student-teacher relationship and how is it realized through shared experiential learning and reflective practice?

### *Methods*

The study subjects are Marko (17 years old, pianist), a third-grade secondary music school student, Marko's mother, and his piano teacher at the music school.

The research was conducted using the Case Study method, which is realized through non-participating observations and semi-structured interviews. Semi-structured interviews with open-ended and multiple-choice questions were conducted with the mother (February 11, 2021), teacher (February 22, 2021), and the student (March 2, 2021), and were documented in textual form. The descriptive method was used to describe the case of a student with a severe visual impairment from his birth until the age of 17, as well as the interaction and collaboration with his teacher, and the challenges the student encounters in piano lessons at the music school. The research was conducted with the oral and signed consent of the parents, student, and teacher, guaranteeing the anonymity of their identities in accordance with the Code of Ethics, and therefore we replaced the real name of the student with the code name Marko.

The observation took place in piano lessons at a music school where notes were kept on students' skills and interactions with the teacher and the methods used by the teacher in direct work with a student with a severe visual impairment.

### *Case Report*

Shortly after his birth, Marko was diagnosed with strabismus (eyes not parallel, eye position error) and mild nystagmus (uncontrolled blinking or twitching of the eyes), and later with hypoplasia of the optic nerve, i.e. underdevelopment of the optic nerve in both eyes. However, Marko is not a completely blind person. The very limited vision he currently possesses (approximately 2%)

allows him to distinguish light and darkness and shape at a very short distance, which characterizes him as a person with a severe visual impairment.

Even as a newborn, Marko showed great affinity for music. His mother testifies he was a very restless child and only music could calm him down:

He has been showing interest in music from an early age. He didn't really like to sleep and the only way he'd fall asleep was with music. We had "Zagrebački mališani" on tape that would play all night long. (Mother)

When he was older, Marko was also very attached to and interested in music. He started kindergarten at the age of four with other children who could see normally. The kindergarten teachers did not know what to do with him or how to approach him.

He couldn't participate in any of the activities with other children, but that wasn't a problem because he wasn't pushy, bothersome, or hysterical. He was actually a very good child. He had a habit of taking some sort of an object, it would most often be a piece of paper that he would crumple up, and hit his arm with it in a certain rhythm, at the same time humming something. The faster he picked up the pace, the happier and more excited he became. (Mother)

Like most visually impaired children, he regularly went for check-ups at the Vinko Bek Education Centre in Zagreb, where he underwent various tests by psychologists, speech therapists and special education teachers. Most of the results indicated a larger learning lag compared to his peers who saw normally, so his parents decided to enrol him in a Montessori kindergarten in Zagreb at the age of 5.

This kindergarten was attended by all children, both healthy and those with developmental difficulties, and they had a special education teacher, speech therapist, and an occupational therapist who worked with them on a daily basis. (Mother)

After a year and a half of attending the Montessori kindergarten, Marko achieved the highest results on re-testing and received a certificate for regular enrolment in the 1<sup>st</sup> grade of primary school.

Marko also had his first contact with a music educator at the Vinko Bek institution, where they noticed he was showing an exceptional interest in music and suggested to his parents that they enrol him in their preschool music programme. Marko started attending this programme at about 5 years of age until the end of the first grade of primary school, and it included one hour of solfeggio and piano per week, which was carried out in a group.

He attended his piano classes with three other students at the same time. (Mother)

The teacher who taught him solfeggio recommended that he enrol in elementary music school, so at the age of 8 (2<sup>nd</sup> grade of general education) Marko started 1<sup>st</sup> grade of elementary music school, piano department. Like all students, he got his own piano teacher with whom he started working, but due to her excessive teaching load, Marko switched to a then newly hired teacher who explains:

I thought about what to do. How would I approach this child and will I even know how to teach him... I was completely unprepared, but I had a feeling, and something told me that I could do it, that I should take him on and that I would find a way to work with him. (Piano teacher)

At the very beginning, the teacher was looking for teaching methods that would bring the content closer to Marko in the most appropriate and simplest way. Other students who see normally learn in a way by which the teacher gives them a demonstration by playing a certain musical content/text, and then they repeat it. However, students who are blind or have minimal vision that does not allow them to follow musical notation can feel the actions of demonstrators by touching body parts or objects involved in the actions (Smith, 1998, as cited in Downing & Chen, 2003), and this can be accomplished by tactile modelling. Modelling is a general action in which observers try to reproduce another person's responses (Lirgg & Feltz 1991) and their actions and movements. Having this in mind, the teacher would play simple melodic phrases to Marko in simple rhythmic movements, and Marko would, after the teacher put his hand on the first tone of the phrase, repeat them. Marko still remembers his first piano lessons:

The teacher would take my hand and that's how he would show it to me, and what I learned in class, I practiced at home. (Marko)

In their work with visually impaired students, teachers often have to physically show the musician the correct position of the fingers, hands, arms, and torso and the use of appropriate muscles (Baker & Green, 2016). The tactile approach is a very important form of work with visually impaired students and in addition to tactile guidance of the hands as the main means in performing music on the piano, it also applies to the other parts of the body involved in the action, e.g. playing the pedal, which the teacher elaborates on:

I knelt under the piano, took Marko's leg in my hands and as he played, I pressed his foot on the pedal. (Piano teacher)

Considering that at the beginning exercises and compositions were not too long, and thanks to very developed hearing and a distinct musical memory, Marko learned all the compositions by ear.

Marko had a fantastic memory. I would play something for him in class and he would immediately repeat and remember it, while his

peers would spend a lot of time reading the musical notation. Marko acquired the content twice as fast as the others because he was not burdened by the musical notation. (Piano teacher)

Marko learned in this way until the 4<sup>th</sup> grade of elementary music school, and very successfully at that. He also played more demanding compositions such as C. Debussy: Children's Corner, J. Haydn: Variations in C minor, F. Kuhlau: Variations in G major and W. A. Mozart: 12 Variations on a French Nursery Theme "Twinkle, Twinkle, Little Star" KV 265. He often performed publicly and participated in various piano competitions in Croatia, Slovenia, Serbia, and Italy, where he would win 1<sup>st</sup> and 2<sup>nd</sup> prizes. However, in the upper grades of the music school, the compositions became longer and more complex, which significantly slowed down Marko's and the teacher's progress. The teacher continues:

I didn't know what to do next. The classes became more and more exhausting. The learning was taking a lot of time and we simply started to get lost in all of it, because there were too many notes in one class. I could say that at that moment I hit a wall that I felt I couldn't overcome. (Piano teacher)

In these situations, teachers must be able to encourage students to overcome obstacles and try to continue (Cohler & Galatzer-Levy, 1992, as cited in Power & McCormack, 2012). It is extremely important that with their persistence, creativity, and commitment to the teaching itself, they try to utilize alternative teaching strategies to provide effective and accessible instruction (Downing & Chen, 2003). The teacher then suggested they record the compositions they were currently working on with a voice recorder, thus making it easier for Marko because he no longer had to remember everything he learned in class. Instead, he could listen to smaller parts of the composition several times at home and practice. Recording in this case did not only mean just playing one part of the composition by the teacher, but it also implied a more demanding action that looked like this, according to the teacher:

I would first play a portion of the right-hand part from a certain composition. First, I'd record the melody and in addition, I'd verbalize the tones I'd play. After that I would once again record the right hand, this time explaining the fingering, and then I'd repeat all of that for the left hand. At the end, I'd record both hands playing together at a very slow pace to hear which note goes with which. (Piano teacher)

Marko would then practice at home what they had recorded in class. I'd play the part I wanted to learn, as far as I can memorize it. I'd stop the recording, repeat it several times until I learned it and then I'd connect. (Marko)

This is how the teacher and Marko still work. Based on the non-participatory observation during the recording of one part of the Ballad in F major by Frederic Chopin, it was noticed that the teacher strictly follows the written articulation marks and phrase so that the performance on the recording would be as expressive as possible.

Marko has a very well-developed piano orientation. He is technically very skilled, and, as the teacher claims “is naturally very agile, fast, with great motor skills, and can technically play anything”. Therefore, he is having no issues with any type of disassembled chord or composition of a faster tempo, such as the 3<sup>rd</sup> movement of Beethoven’s Sonata Op. 13, No. 8, played by Marko at a very fast tempo, extremely accurately, without wrong notes and technically very precisely. However, the teacher’s biggest challenge is to convey to Marko the atmosphere required by a certain composition, which is manifested in the correct stylistic performance of a composition belonging to a certain period, and in the process of achieving a certain tone. Phrases such as “light tone”, “dark tone”, “deep tone”, “shallow playing” or reaching for images to express an abstract concept can often be heard in piano lessons (Power & McCormack, 2012). Therefore, with a visually impaired person, one needs to be careful when describing concepts, events, or conditions with the aim of achieving the desired atmosphere required by the composition, because the experiences of those who see and those with impaired vision differ greatly, especially if the impairment is present from birth. Marko is a person with a severe visual impairment, but he can, at a very short distance, see what is in, e.g., a picture, and therefore, his experience is much richer than, say, a completely blind person. For this reason, the teacher suggested that they perform the above-mentioned Chopin’s Ballad in F major. “I think such a song could help him express himself” (Piano teacher), because ballads are compositions that are permeated with a lot of emotion and colours and require great sensitivity when performing, and that is exactly what Marko needs to work on the most. The teacher adds:

A ballad is a composition that has a story and that seeks particular feelings that Marko will try to achieve by shaping the tone through the learned movements. (Piano teacher)

Analogously, the teacher also tries to evoke sound to Marko through compositions that are not of a programmatic nature and whose titles do not imply provoking certain feelings (love, fear, alienation, happiness, etc.) and creating an overall musical experience. In order to play the Prelude and Fugue in C minor by J. S. Bach faithfully and in the spirit of the Baroque style, Marko had to listen to the Prelude from the Cello Suite in G major by the same composer and transfer this style to the piano. The teacher asked Marko to give more importance and weight to the first tone in the characteristic sixteenth-note style, similar to the heavier movement of the bow in the above-mentioned Cello Suite, and then he played it the way it should sound. However, “giving more

importance and weight to the first tone” is very abstract to Marko, as are the previously mentioned terms “light tone” or “darker tone”. That is why Marko would often interpret the “significance and weight” with a strong forte. The teacher continues:

Then I started demonstrating on his shoulder or arm what pressure I wanted and how he should perform. It turned out to be effective because I was able to evoke the feeling and pressure needed to get a certain tone. (Piano teacher)

The teacher used this method with Marko for the first time in the 2<sup>nd</sup> movement of the composition *Children’s Corner* by C. Debussy in the 3<sup>rd</sup> grade of elementary music school. “I warned Marko that I would now perform on his shoulder like on a piano” (Piano teacher). In some cases, this kind of learning through touch may seem awkward or inappropriate (Baker & Green, 2016). However, while teaching by touch is unknown and may be uncomfortable for most people who see, it is necessary for students who are blind or have minimal vision (Downing & Chen, 2003).

Furthermore, since Marko wants to enrol in the Music Academy – “he would definitely try to enrol in music pedagogy or musicology” (Piano teacher) – the question arises as to how independent he is in his work, that is, how he will read the music notation by himself if he now works only by ear. Marko says that he learns solfeggio and harmony using a computer programme for writing notes: “there is a magnifying glass you get with the computer operating system, so I increase it as much as it suits me. 600% is the best; then I see everything.” He learns general education subjects with magnified materials as well, and as his mother shares, “he has whole textbooks on a stick in PDF that we put on the big screen at home, and he can follow it that way.” As for the piano lessons themselves, the teacher would, in the past, print large-print music materials that Marko had to read and practice at home. In addition to the materials being enlarged, Marko also used a magnifying glass which helped him read each note more easily. According to the teacher, “that was a huge pile of paper that he would always carry home to practice, and secondly, he worked much slower because it took him a lot longer to read the sheet music”, and even Marko himself says, “it takes too long, and I work too hard.” However, the teacher is aware that Marko, if he wants to go to the academy, must become more independent and try to read the music himself: “I started giving him sheet music again, which he has to read at home by himself” (Piano teacher), but this time the materials are in digital form so Marko should be able to read them better and faster. Neither Braille nor Braille notation are foreign to Marko and he learned them at the Vinko Bek institution, but “they said there this was not necessary because he could see enough to follow large print” (Mother), and Marko himself would resist learning Braille, saying, “Why are you forcing me, I’m not blind!”

Based on previous research and knowledge we have gained about people with visual impairments, it is obvious that such people have predispositions that allow them to participate equally or above average in activities related to music and the art of music. Marko and his teacher prove that alternative strategies, such as tactile modelling, physical guidance, demonstration of technique (Downing & Chen, 2003) and communication skills can enable people with visual impairments to achieve the same accomplishments as those with normal vision. According to Baker, strong traditions associated with the perceived relationship between blindness and musicality contribute to parents being more encouraging about taking up music (Baker, 2014). So, when we observe the situation in the context of inclusion and the *pedagogy of success for all* model, it is to be expected that in the near future people with visual impairments will start developing an increased interest in wider music education and will become increasingly involved in music schools.

Although he was completely unprepared – “at the academy, we never even mentioned working with such children” (Piano teacher) – with his responsible approach, perseverance, creativity, and alternative solutions, Marko’s teacher found a way to bring music closer to Marko. Ergo, the lack of information and incompetence of teachers are just some of the elements that stand in the way of music education for visually impaired people. Furthermore, Gorbunova and Govorova (2018) state that one of the key tasks of modern inclusive music education is solving the problem of reading sheet music for people with visual impairments, and as the new music computer technologies are emerging as an indispensable tool, they are becoming one of the main means of solving this problem. Therefore, teachers who work or will work with such students need to be provided with formal education and professional development opportunities that will enable them to work with such individuals in the future.

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Teoretična izhodišča utemeljujejo inkluzivno prakso, ki slabovidnim učencem omogoča učinkovito in samostojno učenje (Flavel et al., 2002). V kvalitativni raziskavi smo v študiji primera obravnavali učenca z visoko slabovidnostjo v kontekstu učenja in poučevanja klavirja. Glavni cilj raziskave je bil opredeliti proces usvajanja nove skladbe pri individualnem pouku klavirja ter način komuniciranja in sodelovanja med učiteljem ter učencem. Za razliko od normalno videčih učencev visoko slaboviden učenec pri usvajanju nove, daljše skladbe ne more uporabljati standardnega notnega zapisa. Uči se na osnovi slušnih in tipnih dražljajev, torej taktilnega modeliranja, fizičnega vodenja in demonstracijskih tehnik učitelja klavirja (Downing & Chen, 2003). Preučevali smo, ali je visoka slabovidnost ovira za uspešno pridobivanje, pomnjenje in izvedbo skladbe, ki zaradi kompleksnosti ni zapisana z Braillovimi glasbeni simboli. Zanimali so nas alternativni modeli poučevanja, ki visoko slabovidnemu učencu omogočijo usvojitve potrebnih tehničnih znanj in interpretacijo skladbe skladno z njenimi stilnimi značilnostmi. V trimesečno študijo primera je bil vključen 17-letni dijak z visoko slabovidnostjo. Njegov proces učenja nove skladbe pri individualnem pouku klavirja je bil spremljan z opazovanjem, opazovanjem brez udeležbe in s polstrukturiranimi intervjuji. Z videozapisi in sprotnim beleženjem smo spremljali njegov slušni spomin ter prostorsko zavest v povezavi z instrumentom. Posebno pozornost smo namenili njegovi komunikaciji z učiteljem klavirja pri pouku. Dijak je tudi sam podrobno opisal proces učenja nove skladbe in domačega vadenja. Ugotovili smo, da je uspešnost izvajanja skladbe pri visoko slabovidnem dijaku v veliki meri odvisna od učiteljevega pristopa in njegovih kompetenc. Model »pedagogike uspeha za vse« (Matijević, 2015) je prenosljiv tudi na individualni pouk klavirja in dijaku z visoko slabovidnostjo pomaga premagati ovire, s katerimi se sooča pri igranju instrumenta.