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PROFILE OF FUTURE TEACHERS THROUGH THE DIMENSIONS OF THEIR MUSIC PERCEPTION SKILLS AND THEIR READINESS TO APPLY MUSICAL ACTIVITIES IN THEIR PEDAGOGICAL WORK [12]

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Abstract: *Students enrolled in the Preschool and Primary School Education program at the University of Ruse Angel Kanchev are introduced to the Profile of Music Perception Skills test, which helps them acquire knowledge in Music Theory and Musical Diagnostics in Preschool and Primary School, thus enhancing their practical training. Through this test, students gain valuable insights into their own musical abilities and learn how to apply these insights in their future teaching careers.*

This research presents the results of musical receptivity among students—non-professional musicians—which serve as the foundation for engaging in musical activities. Understanding the expressive elements of music, along with its educational and therapeutic functions, empowers teachers to make meaningful interdisciplinary connections with music in both Kindergarten and Primary school. The integration of music into other disciplines serves several purposes: to awaken and stimulate aesthetic perceptions; to motivate and cultivate positive emotions; to encourage the development of creativity; to inspire self-improvement; to promote personal awareness and psychological well-being and to foster the growth of children's and students' inner worlds.

Additionally, the study includes a survey of students' opinions on the usefulness of the Profile of Music Perception Skills test. The findings from this survey can be used to enhance the professional training of future educators.

Key words: *musical diagnostics, digital resources, music education*.

INTRODUCTION

This research focuses on the challenges facing higher school teacher in preparing students for music disciplines, especially given that a significant portion of these students lack formal training in music. It is essential that university programs are tailored to the needs of non-professional musicians, ensuring that the knowledge and skills they acquire are practical and well-suited for their future roles as Kindergarten and Primary school teachers.

EXPOSITION

The musical education of future kindergarten and elementary school teachers is a key research priority for universities worldwide, including the University of Latvia, Australian Catholic University, Akdeniz University in Antalya and University of Madrid, among others. Numerous studies highlight the challenges faced by students in Bulgaria, specifically limited prior opportunities to study music theory or learn an instrument, reduced hours for music disciplines in teacher training programs, and the presence of specialist musicians in schools, which can limit the role of generalist teachers in music education (Carroll, Ch., Harris, J. (2022). Stramkale, 2024 argue that prospective teachers may struggle to provide high-quality music education without prior music training (Stramkale, 2024). Reserchers further explores this claim, examining the musical aptitude of future kindergarten and elementary teachers, their confidence in using music in the classroom, and their willingness to integrate music into other subject areas. This research forms part of a broader profile of future educators trained at University of Ruse "Angel Kanchev".

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This study presents a profile of 225 students (95% women, 5% men), aged 20 to 56, who completed their studies in Preschool and Primary School Pedagogy (Bachelor's and Master's degrees) and Modern Educational Technologies in Kindergarten and Primary School (Master's degree) at Angel Kanchev University of Ruse, including its affiliates in Vidin, Silistra, and Razgrad. In courses such as Theory and Methodology of Music in Kindergarten, Methodology of Music Education in Primary School, and Diagnostics of Musicality in Preschool and Primary School Age, students engage with topics on the psychological foundations of musical development, the formation and nurturing of musical abilities, and the structure and essence of musicality. These areas are central to the profile presented in this article. The study was structured around three main tasks: (1) discussions with students on their perspectives on musicality, following three prevailing trends in music psychology; (2) administration of a Music Perception Skills Profile test and (3) student evaluations of digital learning resources used in their courses. These tasks were incorporated into the training sessions for the aforementioned subjects.

In our exploration of musical diagnostics and the development of musical abilities, we examine students' musicality and their capacity for music perception to assess their attitudes and readiness to integrate musical art into their teaching. Many students describe themselves as 'non-musical', often sharing that they possess only limited musical knowledge or skills. At the start of the course, they express both enthusiasm and curiosity about the subject, alongside some anxiety due to their lack of experience in music instruction. This apprehension is similarly noted among future primary teachers at Australian Catholic University (Carroll, Ch., Harris, J., 2022) and at Akdeniz University in Antalya, Turkey, where educators recognize the importance of teaching music but feel underprepared to do so (Burak, 2019).

In lectures and seminar exercises, we explore the general theory of abilities and a fundamental question in psychology: the relationship between biological (innate) and social (acquired) factors in human development. Researchers tend to approach this issue from two main perspectives: biological and sociological. Within these frameworks, views on musicality also diverge. Proponents of the biological perspective see musicality as an innate, inherited trait unaffected by training. Conversely, those from the sociological perspective view musicality as a product of social conditions, arguing that all children are born with similar natural potential and that musicality is entirely shaped by training and educational methods. A third perspective, developed by researchers who recognize the impact of both biological and social factors, suggests that the social environment builds upon the natural potential an individual inherits.

During the discussion, students shared their support for one of the three perspectives on musicality. Responses were collected in real time via an electronic survey using the Mentimeter platform and were discussed to deepen understanding of musicality and the development of musical abilities. As shown in Figure. 1, more than half of the students favor the perspective that combines both biological and social influences on musicality. Students' alignment with a particular perspective reflects their attitudes toward incorporating musical activities and examples from the musical arts in their future teaching. The preference for the sociological and combined perspectives indicates that students recognize the importance of environment and training in developing musical abilities, rather than relying solely on innate talent. Consequently, they demonstrate a positive attitude toward using musical activities to support children's personal growth and express a willingness to integrate musical arts into their teaching, as they shared during lectures and exercises.

The educator's role in fostering musical education and training for children in Kindergarten and students in Primary school operates on three levels. The first level is diagnostic: gathering information on the musical development of children or students, which then informs the teacher's work at the subsequent levels – organizational and methodological. This initial diagnostic phase involves using tools to assess the musical skills and abilities of children or students, a longstanding area of interest for researchers across generations (e.g., Seashore, Teplov, Vetlugina, Gordon, Wing). While these early tests provided a foundation, they have generally become outdated and were labeled as such over a decade ago (Law, L. N., Zentner, M., 2012).

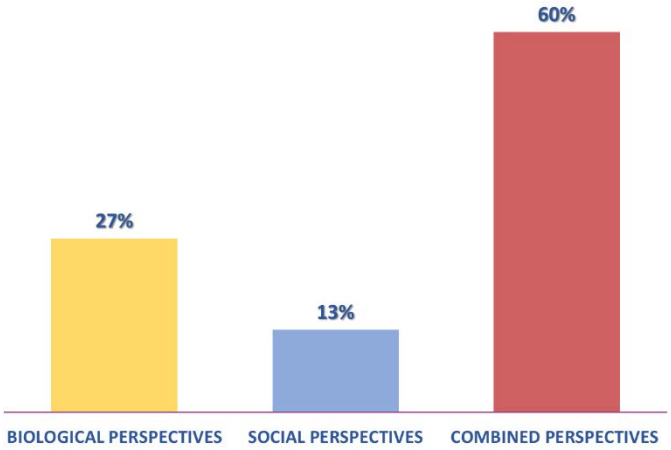


Fig. 1. Which of the Three Perspectives in Music Psychology Do You Support?

To address the need for updated, versatile assessment tools, the Music Emotion Assessment and Personality Lab, part of the Department of Psychology at the University of Innsbruck, developed the Profile of Music Perception Skills test. This test meets four essential criteria:

- it is suitable for listeners with varying degrees and types of musical training,
- it is more comprehensive than existing tests in assessing various components of music perception,
- it evaluates each perceptual component with maximum specificity,
- it adheres to modern standards of validity and reliability in test design.

The test is a new music assessment battery designed to objectively measure music perception skills across various categories – melody, pitch, timbre, rhythm, metrical accent, tempo, and loudness (Zentner, M., Strauss, H., 2017). Test takers listen to musical excerpts in each category and evaluate whether the examples are the same or different. Each excerpt consists of two identical performances, followed by a third performance for comparison. Listeners then indicate whether the third performance is the same as or different from the initial pair, selecting from the following options: *definitely different*, *probably different*, *don't know*, *probably the same*, or *definitely the same*.

As part of their training, students assess their music perception skills using a version of the test known as Mini-PROMS, which includes musical excerpts from the categories of Melody, Timbre, Rhythm/Accent, and Tempo. Engaging with the test helps students consolidate their understanding of musical elements – such as pitch, rhythm, meter, timbre, and tempo – while also familiarizing them with a method for diagnosing musicality. For students, Mini-PROMS serves as a valuable digital learning resource that not only enhances their comprehension of core concepts but also provides insight into the tool's functions and potential applications in future teaching practice.

At the end of each test, students receive a score indicating their level of musical perception, classified as Exceptional, Excellent, Good, or Basic. As shown in Figure. 2, most students fall within the Good to Excellent range of musical perception, with a few scoring at the Basic or Exceptional levels. After completing the test, all participants reported an increase in confidence regarding their musicality. These results suggest that they are well-prepared to incorporate musical examples into their teaching practice effectively.

The connection between the presented results and the concept of musicality, as shared by other researchers, is emphasized in the view that musicality refers to a person's ability to perceive and reproduce music. These researchers also support the idea that musicality is not limited to musicians but can be developed by anyone (Khalass et al., 2019). Despite the students' inherent musicality, which enables them to engage successfully in musical activities, their lack of confidence in areas such as rhythm, musical ear, emotional responsiveness, singing ability, musical thinking, and memory seems to stem from limitations in their cognitive and natural abilities. However, these

limitations could be addressed through appropriate training and exposure to practical examples, which would be valuable in their future roles as teachers in Kindergartens and Primary schools.

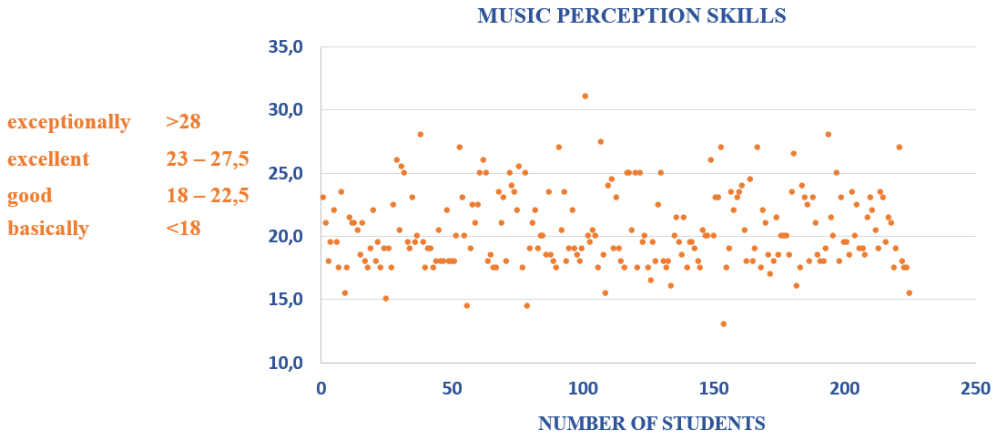


Fig. 2. Results of the Music Perception Skills Profile Test

All learning resources, both traditional and digital, used to present course topics to students serve several key purposes: to introduce current digital tools used by specialists in music theory, music psychology, and music pedagogy; to facilitate easier and more accessible knowledge acquisition in their studies; and to provide insight into the functions and applications of these digital resources for future teaching practice. These resources also offer ideas for expanding the toolkit that future teachers can use to structure their educational work.

Students engage with various resources during lectures and seminars, including video lessons, presentations with active links, e-textbooks featuring embedded examples, the Music Perception Skills Profile test, and digital educational music games. The third component of this study, presented in this article, is students' assessment of the usefulness of these tools and their preferences for incorporating them into their future work as kindergarten and primary school teachers. To gather data, an electronic questionnaire was created using Google Forms. Students' feedback on these digital educational resources, as shown in the following graphs, serves as an indicator of their confidence in the knowledge and skills acquired through their studies.

Figures 3.1 to 3.6 illustrate students' evaluations of the Test Profile of Music Perception Skills, focusing on its accessibility and usefulness in gaining knowledge, enhancing digital skills, stimulating interest, and potential in their future teaching practices. The findings indicate a positive perception of this digital resource.

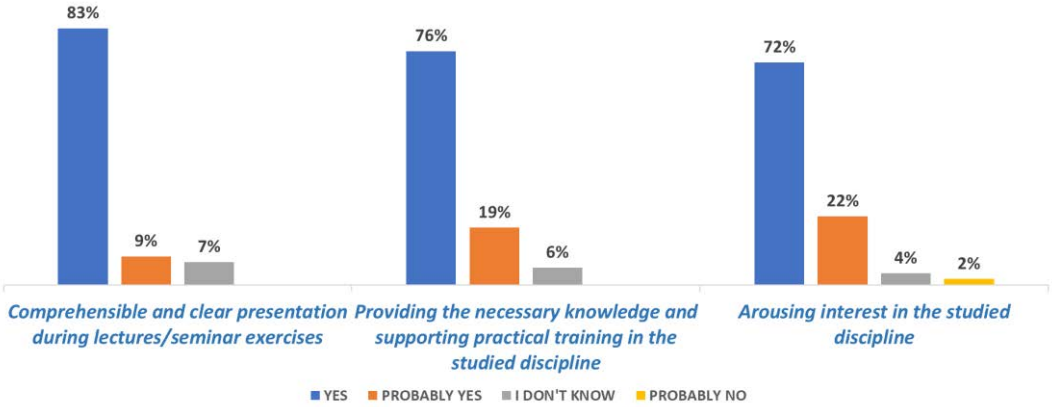


Fig. 3.1, 3.2 and 3.3

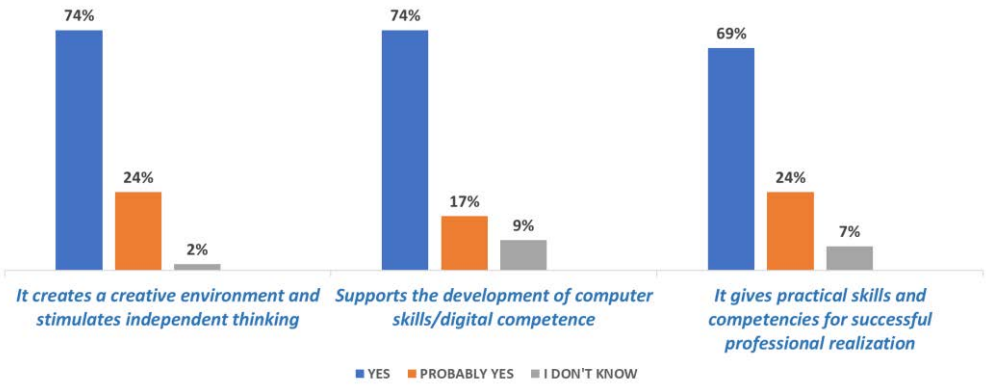
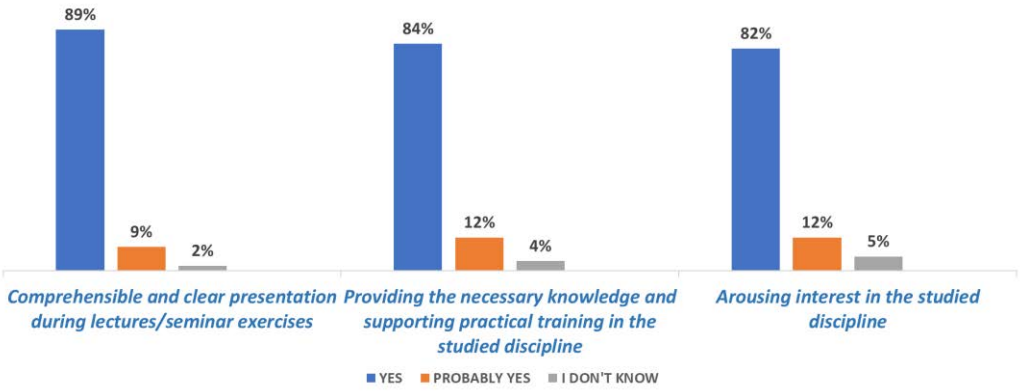


Fig. 3.4, 3.5 and 3.6

Digital educational music games offer an interactive and internet-enabled approach to reinforcing students' knowledge of music theory. Unlike traditional textbooks and manuals on musical elements, these games provide a richer, more creative, and fun environment during lectures and seminar exercises. Figures 4.1 to 4.6 illustrate students' perspectives on the use of digital music education games in their course preparation. The majority of students find these tools helpful.



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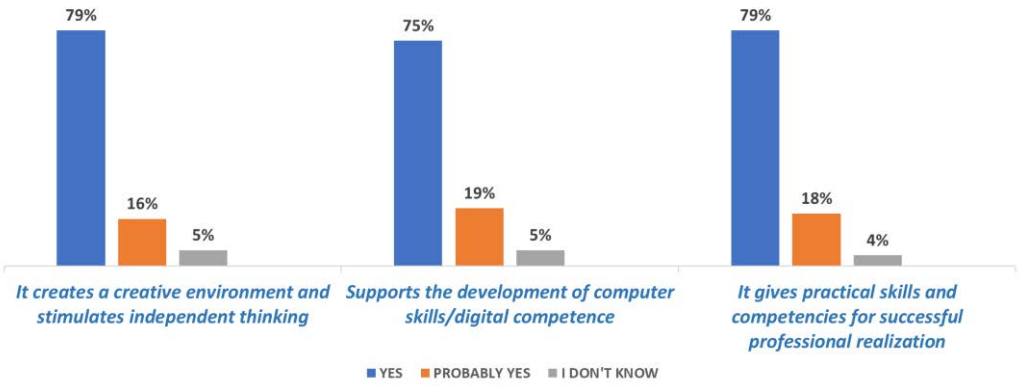
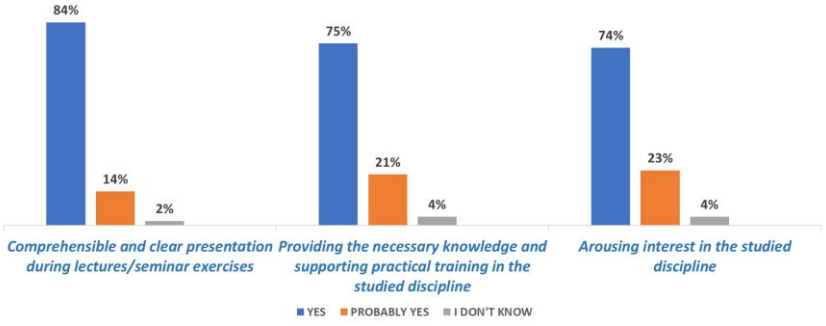


Fig. 4.4, 4.5 and 4.6

Technological advancements enable modern teachers to teach using electronic, interactive, multimedia, and internet-connected textbooks suitable for both face-to-face and remote learning environments, whether synchronous or asynchronous. Music e-textbooks and knowledge books include a variety of features such as built-in short video lessons, interactive tasks and tests, virtual tours, animations, song recordings, riddles, artworks, texts and exercises in foreign languages, photo and picture galleries, and dictations. In this modern educational setting, learning becomes more

enjoyable and effective. Figures 5.1 to 5.6 reflect a positive student assessment of the e-textbooks and knowledge books used in their courses.



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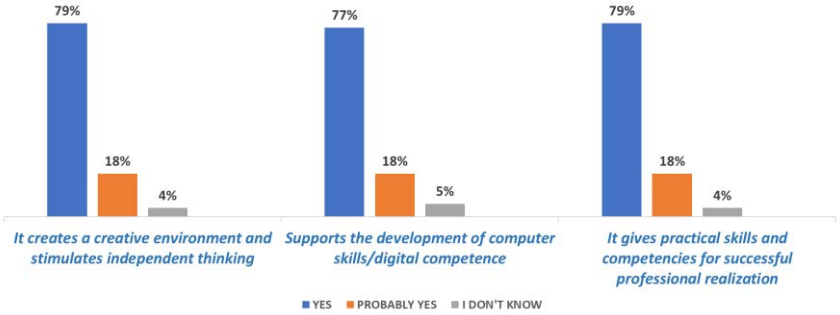
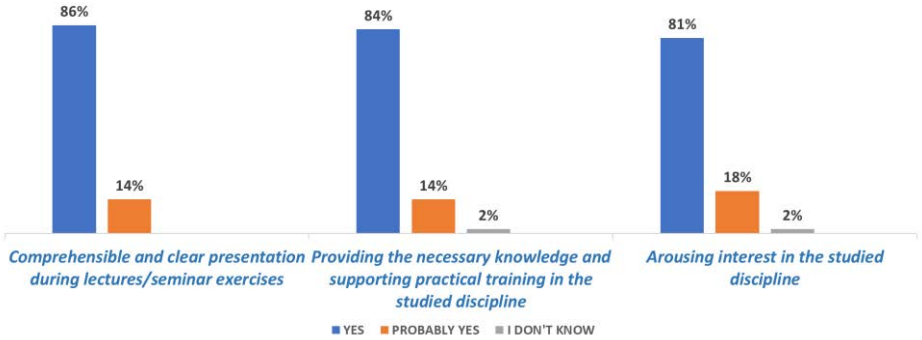


Fig. 5.4, 5.5 and 5.6

The online availability of videos plays a crucial role in preparing future teachers, as they showcase best practices in contemporary teaching methods and approaches. Watching and discussing these videos can enhance students' interest and expand their ability to use digital tools in real-life educational settings. Graphs 6.1 to 6.6 present students' evaluations of the video lessons, which support learning and reinforcement of music theory and methodology.



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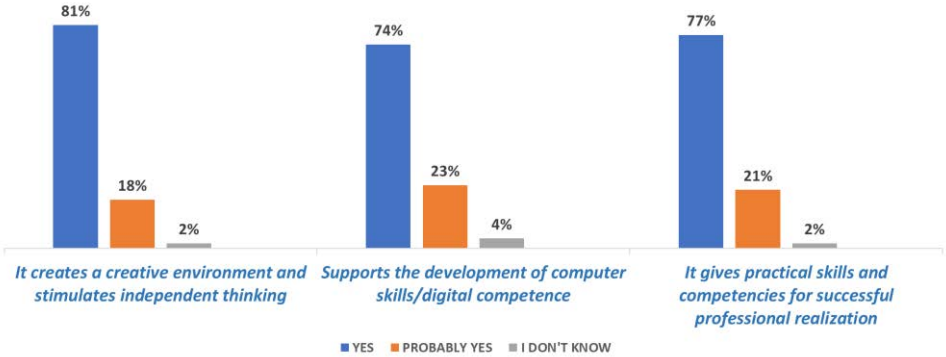

Fig. 6.4, 6.5 and 6.6

Students regard the educational digital resources as highly valuable, noting their modern educational approaches and excellent organization. They find these resources to be extremely useful, offering diverse learning methods that are always accessible, thus facilitating independent study and preparation. Additionally, they are seen as highly beneficial for professional development, providing practical skills and competencies along with a wealth of supplementary information (Ivanova, G., Velikova, M., 2024).

CONCLUSSION

Following positive musical experiences and encouragement to incorporate interdisciplinary connections with music, students report an increased motivation to teach through musical activities and integrate musical arts into their practice. After completing the Profile of Music Perception Skills test, all participants noted an improvement in their confidence regarding their own musicality and expressed greater self-assurance in using musical elements in their future teaching. Initial feelings of anxiety and apprehension about their lack of formal musical training have transformed into a positive attitude toward music as both an art form and a subject area. They have also acquired foundational knowledge and skills in music, which they can build upon. Future research will explore the types of activities—musical and otherwise—that students are inclined to integrate across all educational areas in kindergarten and primary school settings.

REFERENCES

Burak, S. (2019). Self-efficacy of pre-school and primary school pre-service teachers in musical ability and music teaching. International Journal of Music Education, 37(2), 257 271. https://doi.org/10.1177/0255761419833083

Carroll, Ch., Harris, J. (2022). Because I'm not musical: A critical case study of music education training for pre-service generalist primary teachers in Australia. British Journal of Music Education. 1–16. doi:10.1017/S0265051722000274.

Ivanova, G., Velikova, M. (2024). Application and assessment of digital resources in the education of future pedagogues. Strategies for Policy in Science & Education, Volume 32, Number 5s. 197 - 206. ISSN: 1310-0270.

Khalass, N. et al. (2019). Musicality: A game to improve musical perception. In: Gentile, M., Allegra, M., Söbke, H. (eds). Games and Learning Alliance. GALA 2018. (pp.39-48). Springer, Cham. https://doi.org/10.1007/978-3-030-11548-7_4

Law, L. N., Zentner, M. (2012). Assessing musical abilities objectively: Construction and validation of the Profile of Music Perception Skills. PloS one, 7(12), e52508. https://doi.org/10.1371/journal.pone.0052508.

Stramkale, L. (2024). Future Teachers' Musicality and Their Competence in Integrating Music into the Classroom. Proceedings of The World Conference on Education and Teaching, 3(1), 1–12. https://doi.org/10.33422/etconf.v3i1.474.

Zentner, M., Strauss, H. (2017). Assessing musical ability quickly and objectively: development and validation of the Short-PROMS and the Mini-PROMS. Annals of the New York Academy of Sciences, 1400(1), 33-45. http://dx.doi.org/10.1111/nyas.13410.