

THE EDUCATIONAL POTENTIAL OF YOUTUBE CHANNELS  
FOR TEACHING AND LEARNING MUSIC IN VARIOUS CONTEXTS<sup>1</sup>  
*RAZISKAVA IZOBRAŽEVALNEGA POTENCIALA YOUTUBE KANALOV  
ZA POUČEVANJE IN UČENJE GLASBE V RAZLIČNIH KONTEKSTIH*

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*Abstract:* The aim of the research was to search, select, analyse, and compare YouTube channels with videos dedicated to teaching and learning music. The comparison of the selected channels was carried out by reviewing the characteristics of each channel, detailed analysis of the videos, and assessment of the quality of interpretation, representation, and availability of the content. The obtained data showed the presence of classical music on all channels, in addition to other types of music, such as film, videogame, popular, and traditional music. Music education videos are diverse in form and content, and appropriate for use in various educational contexts.

*Keywords:* music education, tutorial, music learning, video lesson, YouTube

*Izvleček:* Cilj raziskave je bil iskati, izbrati, analizirati in primerjati YouTube kanale z videoposnetki, namenjenimi poučevanju in učenju glasbe. Primerjava vsebine kanalov je potekala s pregledom značilnosti posameznega kanala, podrobno analizo videoposnetkov in z oceno kakovosti interpretacije ter reprezentacije in dostopnosti vsebin. Pridobljeni podatki so pokazali prisotnost klasične glasbe na vseh kanalih in vključujejo glasbene videoposnetke o različnih zvrsteh, kot so pop, filmska glasba, glasba za videoigre, tradicionalna/ljudska in svetovna glasba. Videoposnetki so različni po vsebini in obliki ter primerni za uporabo v različnih kontekstih učenja in poučevanja.

*Ključne besede:* glasbena vzgoja, učenje glasbe, vadnica, video pouk, YouTube

1 This paper represents part of a research carried out within the graduate (master) thesis of Srđan Stanojević, entitled 'The role of YouTube channels in distribution and application of musical educational content' (cro: *Uloga YouTube kanala u distribuciji i primjeni glazbenoobrazovnih sadržaja*), which was successfully defended on September 27th 2023, at the Academy of Music, University of Zagreb.

## INTRODUCTION

It has been almost twenty years since the creation of YouTube,<sup>2</sup> and music was present on this media platform from the very beginning. In the early days, there were mainly music videos (previously recorded and shown on various television channels), and recordings of concerts and/or amateur performances. With the development of the platform, content creators recognized its educational potential, and nowadays there is no field of knowledge that is not present on YouTube to a greater or lesser extent. It is possible to track the progress in the earlier research period regarding YouTube in education in the works of Duffy (2008), Jarrett (2008), Micolich (2008), Mullen and Wedwick (2008), Fralinger and Owens (2009), Bonk (2011), Cayari (2011), Dreon et al. (2011), Snelson (2011), Troy and Kristen (2011), Johnson (2012), and many others. Such authors provided guidelines for YouTube content implementation in classroom settings, as well as independent creation of content, also discussing the legal aspects of content use. However, there was a lack of content-specific research dedicated to the use of YouTube in certain subject areas, including music. Evaluating the impact of YouTube on the teaching and learning process, educational videos are associated with concepts such as informal and self-regulated learning (Lines, 2009; Waldron, 2012), learning environment, blended and situated learning (Crawford, 2016), media literacy (Erstad, 2010), multimodality (Jewitt, 2014), participatory culture (Jenkins et al., 2009; Meek, 2012; Waldron, 2013; Cayari, 2015; Burgess and Green, 2018), personalities of 'YouTubers as teachers' (Young, 2008; Marwick, 2015; Marone and Rodriguez, 2019), and the future of education in general.

A certain number of research papers are dedicated to learning music and performing arts with the help of YouTube videos, addressing the problem in general (Rudolph and Frankel, 2009; Kruse and Veblen, 2012; DeWitt et al., 2013; Lai, 2013), or in more detail, discussing active music listening and music analysis (Webb, 2007; Monkhouse and Forbes, 2015). Dougan's findings show that music students see YouTube as a relevant source of music performance videos, as well as sheet music – while searching for materials, they use it more often than other online sources (Dougan, 2012). Regarding formally educated musicians, Lai (2013) points out that 85% of the students among the research participants use YouTube to acquire knowledge and skills, especially while preparing for lectures or music rehearsals. In another study by Hu et al. (2014), whose participants were students from the University of Hong Kong, the results showed that 97% of the participants use YouTube for learning how to sing or play an instrument. Music students were not included in this study; all the participants were non-musicians who wanted to expand their knowledge and experiences for fun. Whitaker et al. (2014) categorized 1,761 YouTube videos found through 'music education' keyword research. Among the

2 YouTube was founded on February 14, 2005.

educational videos, 65% were tutorials with creators providing useful tips on how to learn and/or create music. However, it should be taken into consideration that the research was conducted a decade ago, and we can assume that there have been some changes in music education content on YouTube regarding its quality and quantity. Reviewing the existing research papers on YouTube in music education, we noticed a lack of research on acquisition of knowledge and skills in some areas, such as harmony, counterpoint, musical forms, music theory, ear training, sight-reading, sight-playing, and sight-singing practice. Regarding this issue, our goal is to analyse, compare, and evaluate the potential of selected YouTube channels and their music education content in the process of transmission and acquisition of knowledge and skills.

#### SYSTEMATIZATION OF YOUTUBE CONTENT FROM A MUSIC EDUCATION PERSPECTIVE

Music education videos are only a small part of the content on YouTube that can be used for music education purposes. An in-depth analysis of the content implies its classification, which is impossible to carry out completely due to the quantity of YouTube channels and videos, and its daily growth. However, the analysis can be limited to only creators and channels from a certain country/continent, a certain period (for example, videos created in the last four years), or a category which includes only a certain type of video. The analysis can be based upon one of the following starting points/perspectives:

- *The scientific perspective* – researching the role, possibilities, (dis)advantages, and other psychological and/or sociological aspects of YouTube in (music) education contexts.
- *The pedagogy/didactic perspective* – assessing the possibilities of organization, creation, and implementation of YouTube content in teaching and learning settings.
- *The content perspective* – dividing YouTube videos into type-specific and content-specific categories.
- *The legal perspective* – researching the legal aspects of YouTube and its use in the teaching and learning process.

We decided to start from the *content perspective* in order to recognize the types of music and music education videos which can be utilized for educational purposes. Firstly, type and content identification gives more insight into the possibilities of video implementation, and secondly, it provides guidelines for the creation of similar content, both by teachers and students themselves. The best way towards the systematization of content is the categorization of YouTube channel owners, i.e. the analysis of users who upload music and music education content (Table 1). *Music lovers and collectors* (the first category)

Table 1

*YouTube channels and types of videos with music and music education content*

| Channel creators/owners                   | Types of videos  |
|---|--|
| – music lovers and collectors             | – sound recordings                                       |
| – music performers and creators           | – <i>sound only</i>                                      |
| – music labels and publishers             | – <i>with visualization</i>                              |
| – cultural institutions                   | – <i>with sheet music</i>                                |
| – television channels                     | – <i>with music analysis</i>                             |
| – education associations and institutions | – music videos   |
| – <i>YouTubers</i> as music teachers      | – music performance videos                               |
|   | – music rehearsal videos and ‘behind the scenes’ moments |
|   | – music shows and festivals                              |
|   | – cartoons and videogames                                |
|   | – movies (including musicals) and documentaries          |
|   | – speeches, discussions, debates, interviews, podcasts   |
|   | – full-length lectures                                   |
|   | – short video lessons <sup>a</sup>                       |
|   | – courses  |
|   | – tutorials <sup>b</sup>                                 |
|   | – master classes   |
|   | – exams and quizzes                                      |

*Opombi:* <sup>a</sup> This can refer to any music education content, especially in the field of musicology and music theory. <sup>b</sup> The type of video that focuses on the practical acquisition of skills (e.g. playing, singing).

are the users responsible for uploading a great amount of the music ever recorded, including works that belong to all periods and styles of music from all over the world. In the last few years, many channels that belong to this category have been banned and eliminated due to violations of YouTube community guidelines and/or copyright violations. Regulation of legal aspects on YouTube happened only recently, and some of the channels existed for many years without any legal consequences.

Regarding the content, we can divide music lovers’ and collectors’ channels into several subcategories: (1) channels with sound recordings only, whilst the visual aspect of the video is reduced to a photo of a vinyl record or CD cover, or a photo of the artist, (2) channels with video recordings of original music performances (concerts, live shows, etc.) and music videos, (3) channels with sound recordings accompanied by sheet music. All the subcategories can be used in various teaching and learning settings, although they were not originally

uploaded for educational purposes. The first subcategory is as valuable as the others, making the sound recordings sufficient for learners,<sup>3</sup> allowing them to focus on the music itself. However, analysing a performance video can also be useful and appropriate in various contexts, whilst recordings accompanied by sheet music will primarily find their purpose in professional music education settings. There are also special subgroups of videos which include visualization that enhances active listening (Smalin, n.d.) or formal analysis of music (Algomus Team, n.d.).

The second category of channels refers to *music performers and creators*, i.e. musical instrument players, singers, bands, ensembles, choirs, orchestras, conductors, and composers. Being aware of the importance of showing their artistic achievements to a larger audience, nowadays almost every music artist or group of artists owns a YouTube channel. The following categories belong to *music labels and publishers* with their own channels, *cultural institutions* (theatres, concert halls, opera houses, etc.), *television channels*, and *education associations and institutions*. When adding all these categories to the previous ones, the range of content expands to cartoons, movies and documentaries, music shows and festivals, videos of music rehearsals and moments behind the scenes, complete full-length lectures, short lessons, courses, tutorials, master classes, and other content. Finally, there is a category of *YouTubers as music teachers*, which we found the most interesting, and it became our research target. This category refers to musicians who are not necessarily teachers by profession, but when creating videos, they prioritize music education content and teaching activities.

#### QUALITATIVE AND COMPARATIVE ANALYSIS OF SELECTED YOUTUBE CHANNELS WITH MUSIC EDUCATION CONTENT

##### *Research objectives and questions*

The aim of this research was to search, analyse and compare YouTube channels created by users who are primarily dedicated to producing and publishing music education content. Consequently, we formed the following research questions:

1. What content and what type of videos are represented on the selected YouTube channels?
  2. Can we apply the content in formal music education settings?
  3. Is the content in the videos comparable to the content of Croatian music schools' curricula (Odluka o nastavnim planovima i programima za osnovne glazbene i osnovne plesne škole, 2006; Ministarstvo znanosti,
- 3 In this paper we use the term 'learners' in the broadest sense of the word, referring to primary and secondary school students, university students (of music or any other discipline), professional musicians, music amateurs, and music lovers.

obrazovanja i mladih and Hrvatsko društvo glazbenih i plesnih pedagoga, 2008)? Can we find content that is not represented in the official curricula for music education in Croatia?

### *Research methodology*

The research was conducted in several phases (Table 2). In the first phase (channel identification), we were searching for YouTube channels using the following keywords: *music education*, *music learning* (also *learning music*), *music teaching* (also *teaching music*), *music composing* (also *composition*), *music theory*, *ear training*, *music improvisation*, *singing tutorial* and *playing tutorial*. The last keyword did not directly lead to the desired data, because the search also resulted in sports activities videos. The search was then expanded with the specific names of musical instruments, such as *piano playing tutorial*.

**Table 2**

### *Phases of the research*

|         |  |
|---------|--|
| Phase 1 | YouTube channel identification (keyword search)                                    |
| Phase 2 | YouTube channel selection according to predefined criteria                         |
| Phase 3 | Content review: watching and analysing videos, transcribing the text, taking notes |
| Phase 4 | Qualitative analysis: reduction, categorization, and comparison of data            |

We set the following criteria for channel selection:

- The contents on the channel are published in English.
- The channel has gained a certain reputation and popularity and has more than two hundred thousand subscribers.
- There are more than a hundred published videos on the channel.
- The channel includes classical music.
- The channel includes music education content that is similar/comparable to the content of the Croatian music schools' curricula.

We did not determine the exact number of channels before the moment of selection in the second research phase, but it was planned to analyse and compare five to ten channels. Finally, we selected six YouTube channels that met our previously set criteria: David Bruce Composer (n.d.), Rick Beato (n.d.), *Inside the Score* (n.d.), *Music Matters* (n.d.), Adam Neely (n.d.), and Nahre Sol (n.d.). After the channel selection, the third phase of the research consisted of a detailed review of the channels' content, which was accomplished by watching and thoroughly analysing the videos over a period of several months, taking notes while watching, transcribing some parts of videos, and describing the

**Table 3**  
*Areas of analysis of the selected YouTube channels*

| Basic information review                                      | Content analysis                 | Channel quality evaluation                   |
|---|----------------------------------|--|
| Quantitative data   | Music represented on the channel | Video quality                                |
| Purpose of the channel  | Music education content          | Didactic approach and presentation of topics |
| Relationship with subscribers and cooperation with colleagues | Other content                    | Availability of the content                  |

selected videos in detail. We divided the analysis of each channel into several areas to compare their characteristics and content (Table 3).

After reviewing basic quantitative data, the central part of the analysis referred to the content itself. We were interested in the type of music that is featured on each channel, and we analysed additional content offered to the viewers. In the fourth research phase, we completed a qualitative analysis, which was realized by reduction, categorization, and comparison of the obtained data. The selected YouTube channels were evaluated regarding the quality of the video production, the didactic approach to the topics and their representation, and the availability of the content. Lastly, we wanted to explore whether there is some educational (or other) material made by the creators which is not represented on their YouTube channels.

## RESULTS

The channel review provided basic information regarding the quantitative data, and it gave us insight into the channel characteristics that we considered relevant (Table 4).

The content on David Bruce's channel is mostly not intended for music beginners, and given the prevailing topics, composers can find it the most useful. Rick Beato's content is aimed at a wide audience, and the same can be said for the *Inside the Score* and *Music Matters* channels. Adam Neely and Nahre Sol create their content primarily for experienced and professional musicians. David Bruce emphasizes contemporary classical music, but his channel also includes popular, traditional, and jazz music. Rick Beato features popular, classical and film music, as well as rock, metal, and jazz. The *Inside the Score* channel focuses on classical and film music, but also includes pop, rock, metal, and video game music. The *Music Matters* channel features classical music from the renaissance to contemporary classical music, along with numerous covers of classical and popular music. Adam Neely emphasizes jazz and popular music; however, in numerous videos he analyses classical music, as well as

Table 4  
*Basic information about the selected YouTube channels<sup>a</sup>*

| Channel               | David Bruce<br>Composer                           | Rick<br>Beato                         | Inside the<br>Score         | Music<br>Matters  | Adam<br>Neely  | Nahre<br>Sol         |
|-----------------------|---|---------------------------------------|-----------------------------|---|--|----------------------|
| Creator(s)            | David<br>Bruce                                    | Rick<br>Beato                         | Oscar<br>Osicki             | Gareth Green,<br>Alex Shore   | Adam<br>Neely  | Nahre<br>Sol         |
| Creators' profession  | Composer (master's degree and PhD in composition) | Multi-instrumentalist, music producer | Composer and music producer | Pianist, organist, composer, music assessment examiner, moderator and trainer (Green) | Bass guitarist, composer (master's degree in jazz composition) | Pianist and composer |
| Launch of the channel | 19 November 2019                                  | 23 May 2006                           | 22 December 2017            | 19 February 2014  | 4 February 2006  | 13 February 2017     |
| First video           | 19 November 2019                                  | 23 March 2011                         | 23 December 2017            | 20 March 2014   | 5 February 2006  | 8 June 2017          |
| Posted videos         | 142   | > 1200                                | 104                         | 540   | 486  | 211                  |
| Views (total)         | > 18 million                                      | ≈ 652 million                         | ≈ 16 million                | ≈ 13,5 million  | ≈ 225 million  | ≈ 47,5 million       |
| Number of subscribers | > 277,000   | > 3 million and 690,000               | > 332,000                   | > 216,000   | > 1 million and 730,000  | ≈ 650,000            |

*Opomba:* <sup>a</sup>Data collected while accessing the channels' pages.

non-European music. Nahre Sol analyses classical (baroque to contemporary) music, and she talks about film, video game, popular, jazz, and world music. All the creators also publish original compositions and covers.

The music education content on the selected channels is rich and diverse. David Bruce covers the following topics: problems of rhythm and metre (e.g. concepts of polyrhythm, negative rhythm, micro rhythm), classical, contemporary, and jazz harmony, formal analysis of musical works, composing, arranging, orchestration, and musicological content. Rick Beato theoretically and practically deals with scales, tonalities, chords and harmonic progressions, as well as contemporary music theory issues and post-tonality theory. A special component of his channel are videos in which he explains the acquisition of certain skills and development of music abilities, such as making progress with relative pitch, developing perfect pitch, mastering intervals and chords, sight-singing, inner note hearing, playing by ear, and applying music theory knowledge while ‘decoding’ music. *Inside the Score* uploads analyses of classical and film music, including various theoretical and musicological aspects, which can be seen on the ‘Discovering Classical Music’ podcast, and the channel’s playlists called ‘Movie Music’ and ‘Art Music’. *Music Matters* offers a lot of music theory and musicological content: a significant feature of this YouTube channel is the possibility of preparation for the exams in music theory, music dictation, and piano, given that Gareth Green (one of the channel’s creators) works at the *Associated Board of the Royal Schools of Music* (ABRSM), one of the leading assessment institutions in Great Britain. Adam Neely also deals with numerous music theory and musicological topics, such as the concept of polytonality, absolute pitch, and music as a ‘universal language’. He also teaches about composing, arranging and orchestration, music acoustics, music production, music aesthetics, music psychology, and the acquisition of skills. Nahre Sol has devoted herself to piano lessons and tutorials, and she discusses composing, arranging, and improvising from a pianist’s perspective. Just like the other creators, Sol analyses classical and popular music, covers various music theory and musicological arguments, and talks about music psychology and acoustics.

#### INTERPRETATION OF THE DATA GATHERED BY CONTENT ANALYSIS AND COMPARISON

A detailed review of the selected YouTube channels gave us the possibility of providing answers to the research questions, which can be answered as follows:

Table 5

*Examples of music and literature mentioned in the video 'The Devil in music (an untold history of the Tritone)' by Adam Neely (Neely, 2017)*

| Music (emphasizing the synchronic approach)   | Literature  |
|---|---|
| – Pérotin: <i>Dum Sigillum Summi Patris</i> , ≈ 12-13th c.  | – Jacobus of Liège (Jacobus van Luik):  |
| – Giuseppe Tartini: Violin Sonata in G minor <i>Il trillo del diavolo</i> (Devil's trill sonata), ≈ 1713.-1740. | <i>Speculum musicae</i> (The Mirror of Music), ≈ 1320.-1330.  |
| – Franz Liszt: <i>Après une lecture du Dante: Fantasia quasi sonata</i> , 1837.                                 | – Johann Joseph Fux: <i>Gradus ad Parnassum</i> , 1725.   |
| – Camille Saint-Saëns: <i>Danse macabre</i> , op. 40, 1874.   | – Paul Hindemith: <i>The Craft of Musical Composition</i> (Book 1), 1942.                             |
| – Erik Satie: <i>Vexations</i> , ≈ 1893.-1894.  | – Vincent Ludwig Persichetti: <i>Twentieth Century Harmony: Creative Aspects and Practice</i> , 1961. |
| – Leonard Bernstein: <i>West side story</i> (musical), <i>Maria</i> , 1957.                                     |   |
| – Jimi Hendrix: <i>Purple Haze</i> , 1967.  |   |
| – Black Sabbath: <i>Black Sabbath</i> , 1970.   |   |
| – Danny Elfman: <i>The Simpsons theme</i> , 1989.   |   |
| – Metallica: <i>Enter Sandman</i> , 1991.   |   |
| – Slayer: <i>Diabolus in musica</i> (album), 1998.  |   |

*What content and what type of videos are represented on the selected YouTube channels?*

The selected channels include various types of videos, and for the purposes of our research, we can divide them into the categories of *educational* and *non-educational* videos. Whilst educational videos can be used in most of the teaching and learning contexts, non-educational videos include other content such as discussions, interviews, reviews, and advice. For example, *Music Matters* published an interview in which the creators of the channel talk about the channel's creation and its technical settings. They also discuss their musical journey, and the most significant professional collaborations, as well as some aspects of music appreciation (e.g. the video called 'What is Colour in Music?'). Rick Beato published interviews with some of the biggest names in pop, rock, metal, and jazz music such as Sting, Tommy Emmanuel, Joe Satriani, Keith Jarrett, and ABBA's Björn Ulvaeus, who talked about making the group's timeless hits.

David Bruce interviewed a few musicians, Nahre Sol also recorded several interviews (e.g. with Andrew Huang, Tanya Gabrielian, and Barbara Berg), and *Inside the Score* features an interview with a video game music composer. Nahre Sol and Adam Neely talk about music software and equipment, and Rick Beato offers numerous tips in the field of music production, such as recording guitar and drums, mixing vocals, and using compression. There are also music reviews on almost all channels (e.g. a review of the video game soundtrack *Zelda: Breath of the Wild* made by Nahre Sol), as well as tips for studying and practicing effectively, creating working habits, staying motivated and developing a musical career. Creators also publish reaction videos, i.e. video responses to the content made by other YouTubers (e.g. David Bruce Composer: ‘The Unbearable Irrelevance of Contemporary Music - a response to Samuel Andreyev’).

Regarding educational videos, YouTube creators problematize the topics in an interesting way, combining academic and less formal teaching strategies. Explanation of music phenomena is both theoretical and practical, providing examples from different style periods and/or music genres, which leads to the conclusion that the creators prefer using *synchronic* over the *diachronic* (historical) approach while teaching. Talking about a certain topic, the creators usually refer to the literature that covers the topic, i.e. the literature they used specifically for the video (Table 5).

Users’ engagement and their comments on YouTube videos demonstrate the importance and the truthfulness of information given by creators, but we can also find some reaction/response videos in which other creators express disagreement in relation to a certain topic.<sup>4</sup> Critically approaching the channels’ content, we noted that creators, while making some of the videos, aim at gaining popularity and getting as many views as possible. That kind of approach is visible to viewers through ‘clickbait’ titles and attractive thumbnails. Since YouTube brings money to the creators, this approach is understandable to a certain extent. However, these videos are only a smaller part of each channel’s content, and creators generally upload high quality material.

In general, educational videos can be divided into the following categories: (1) metre and rhythm, (2) tonal structure, (3) musical form, (4) musicological content, (5) music composition and creation, (6) music performance, (7) development of music skills and abilities, and (8) reflections on music and music education. Within the *metre and rhythm* category, creators explain the concepts of simple and complex metres, rhythmic patterns, and pattern combinations. Some of them analysed the rhythm of a certain artist or a composition alone: for example, on David Bruce’s channel there is a video called ‘Classical composer analyses Kendrick Lamar’, where Bruce talks about the rhythm in Lamar’s song ‘Alright’. In the category of *tonal structure*, creators often

4 Reaction videos to Adam Neely’s content: ‘Is Cb the Same Note As B? (A Response To Adam Neely)’ (channel: 12tone); ‘Adam Neely is Wrong About..... A LOT’ (channel: NA-ETE).

approach the content in an interdisciplinary manner, covering the areas of Ear Training, Harmony, and Counterpoint. David Bruce, Rick Beato, *Music Matters*, Adam Neely, and Nahre Sol teach about the modes, explaining the scale structure, playing, improvising, and composing. The major and minor tonalities were covered by Rick Beato, *Music Matters*, Adam Neely and Nahre Sol, combining the theoretical and practical perspective in a similar way. In one of his videos, Adam Neely practices the diatonic major scale through two octaves in all twelve tonalities for almost five hours, playing ascending and descending intervals and chords. The whole-tone scale is explained by Rick Beato and the *Music Matters* channel, showing how Debussy used it in his music. Interval structure and recognition is covered by Gareth Green on the *Music Matters* channel, while Adam Neely tried to answer some of the following questions: *Is a perfect 4th dissonant? What is the most dissonant interval?* Creators conducted theoretical studies of chords and their practical use, talking also about opposite chord qualities and negative harmony. As a very broad term in music, 'harmony' is not considered exclusively in the context of tonality. The creators talk about the harmonization of popular music, jazz, and many other genres, and pay particular attention to the role of harmony in composing, arranging, improvising, and performing music, discussing also reharmonization.

YouTube creators do not consider classical music superior to other types of music, and they provide analyses of popular, film, and video game music. Their approach to classical and 'non-classical' music is equally professional and detailed: in the series named 'Composer Insights', Gareth Green (*Music Matters* channel) covered popular artists such as David Bowie, George Michael, and Whitney Houston. Analyses of film music (like *The Matrix* soundtrack by Don Davis) are provided on the *Inside the Score* channel. Regarding the *musical forms* category, we can find a lot of videos about the structural elements of music (e.g. the creation and use of motifs on the *Music Matters* channel), as well as forms like the fugue, sonata form and classical concerto. Nahre Sol explains the need for comprehensive musical analysis, working on the *Mazurka op. 59 no. 1* by F. Chopin in one of her videos. In the category of *musicological content*, there are a lot of videos covering style periods and genres, as well as the characteristics of musical instruments and ensembles.<sup>5</sup> In the video 'Why is Mozart a genius?' (*Inside the Score*), we can learn about Mozart's life and his music. Numerous videos are dedicated to composers in a similar way, including Bach, Beethoven, Schubert, Mahler, Brahms, Bruckner, Satie, Shostakovich, Rachmaninoff, Ligeti, Holst, etc. In the series 'How to sound like...' Nahre Sol describes the music of some of the most important composers in history, and at the end of each video she writes and performs a short musical piece in the style

5 E.g. 'A Very Short History of Classical Music', 'Program Music - Is It Wrong to Tell a Story with Music?', 'Percussion: the stars of the show?' (all three by David Bruce Composer), 'What is a baroque orchestra?' (*Music Matters*), 'Why is the organ the future of music?' (*Inside the Score*), and many others.

of the composer. Regarding *music composition and creation*, David Bruce discusses various compositional tools and techniques, and Rick Beato illustrates the process of composing music in a certain style (e.g. in the style of Hollywood music of the 1950s). *Inside the Score* created a series of videos called ‘The Art of Composing’, and there are two interesting playlists on the *Music Matters* channel named ‘Inside the Mind of Bach’ and ‘Inside the Mind of Beethoven’, where Gareth Green explains the techniques of these composers. Adam Neely talks about the use of sounds from space when composing, the use of *Autotune*, and the use of notation software while writing music. He also published a series called ‘Compose something new a day’. David Bruce published two series of videos called ‘5 Composers 1 Something’ and ‘Compositions by David Bruce’. In the ‘Sound Bank’ series, Nahre Sol teaches about the process of composing various musical forms.

Adam Neely, Rick Beato, Nahre Sol and Gareth Green talked a lot about *music performance*, also focusing on the *development of music skills and abilities*. Nahre Sol created many instructional videos regarding piano practice, in which she covers warm-up exercises, fingering and hand placement, playing various rhythm patterns, etc. ‘Online Piano Course for Beginners’ is a playlist on the *Music Matters* channel, and it contains videos aimed at everybody who wants to learn the basics. Rick Beato talks about guitar technique, while Adam Neely dedicated his instructional videos to the bass guitar. Beato’s videos also include tips and exercises for intervals and chords identification, writing musical dictation, playing music by ear, and developing listening skills in general. On the *Music Matters* channel, users can practice music intonation and develop listening skills, learn about music theory, and practice sight-reading as well.

### *Can we apply the content in formal music education settings?*

The content analysis showed that many of the creators’ videos can be used both in formal and informal music education contexts. When talking about formal education settings, we imply that the teaching and learning process is carried out by professional music teachers in an educational institution, i.e. music school, music academy, music conservatory, and/or music faculty or department (of a larger higher education institution). While being primarily focused on traditional classroom instruction, we also consider all the possibilities of hybrid learning (blended online and offline instruction), as well as distance learning in a virtual environment. However, the implementation of YouTube videos in formal music education contexts requires certain adjustments made by the teacher, such as transcribing and translating the text, preparing questions, and creating exercises or content-specific tasks. The teacher shapes the context in which they present the video to the students, taking into account the discipline/subject itself (Ear Training, Harmony, Counterpoint, Musical Forms, Music History, etc.), the students’ age, the teaching and learning environment,

and other factors. Given the fact that most of the YouTube videos are made in an interdisciplinary manner and are applicable in more than one discipline/subject, the teacher must determine why, when, and how to implement a certain video. While presenting the aforementioned video 'The Devil in music (an untold history of the Tritone)' made by Adam Neely (2017), the teacher could demonstrate some of the music mentioned in the video, providing rich educational experiences to their students which include active listening to the entire musical works, detailed music analysis of the works, as well as writing and/or performing music (musical dictation, harmonization, singing or playing). The teacher could also prepare questions and activities (e.g. music theory exercises) connected to the video's content, seizing the opportunity to explain the terms introduced in the video, and translating and interpreting the terms in the learners' mother tongue.<sup>6</sup> YouTube videos are also applicable in informal educational settings, such as self-directed learning (autodidacticism) or homeschooling, where the process of (teaching and) learning takes place outside the educational institutions. The use of videos in these kinds of settings indicates that the learner already has some prior knowledge about the topic and is competent enough to put all the given information in the appropriate context.

*Is the content in the videos comparable to the content of Croatian music schools' curricula? Can we find content that is not represented in the official curricula for music education in Croatia?*

A lot of the content presented by the creators of YouTube videos can also be found in the official Croatian music schools' curricula, covering the topics of rhythmic and tonal structure in music (grouping and metre, intervals, scales, chords and chord progressions), musical form (structural elements and levels of music organization/shaping), and music history (musical periods/eras and styles, including the most relevant composers and their works). However, a lot of the YouTube videos' content goes beyond the scope of the official curricula. For example, the creators give importance to some musical scales that are hardly mentioned in music schools, such as the melodic minor pentatonic scale, Hungarian minor scale, diminished scale, jazz scales, Olivier Messiaen's modes, and the Super Phrygian mode. Within the metre and rhythm category, viewers can learn about various concepts that are rarely (or not at all)

6 Some of the terms mentioned in Adam Neely's 'tritone video' are: interval, melodic interval, whole tone, tritone, augmented fourth, diminished fifth, division of the octave, hexachord, soft/natural/hard hexachord, dissonance, unstable sound, cycle of tension and release, dissonance resolution, expectance of the resolution, tuning, singing in tune, just intonation, equal tempered system, ratios of intervals, simple and complex ratios, frequency, cultural connotation (of consonance/dissonance), musical context, music theory, music practice, counterpoint, system of tonal harmony, dominant seventh chord, diatonic passages, chromatic passages, blue note, and blues chord progressions. For example, the terms could be interpreted in Slovenian or Croatian.

**Table 6**  
*Harmony content on YouTube channels*

| Topics that are <i>included</i> in the curriculum of secondary music schools in Croatia | Topics that are <i>not included</i> in the curriculum of secondary music schools in Croatia |
|---|---|
| four-part harmony (Rick Beato, <i>Music Matters</i> , Nahre Sol)                        | harmonic progressions in popular and jazz music (Nahre Sol, Adam Neely)                     |
| figured bass ( <i>Music Matters</i> )   | advanced jazz harmony (David Bruce), the levels of jazz harmony (Adam Neely)                |
| voice leading and dissonance treatment (Adam Neely)                                     | concepts of jazz-reharmonization (Rick Beato, Adam Neely)                                   |
| harmonic analysis ( <i>Music Matters</i> )  | tritone substitution (Rick Beato)   |
| types of cadences and cadence chords ( <i>Music Matters</i> )                           | negative harmony (Rick Beato, Adam Neely, Nahre Sol)  |
| the Neapolitan chord ( <i>Music Matters</i> , Adam Neely)                               | harmonic analysis of famous rock compositions ( <i>Inside the Score</i> )                   |
| Italian, French, and German augmented sixth chords (Nahre Sol, <i>Music Matters</i> )   | harmonization of human speech (Adam Neely)  |
| the Tristan chord ( <i>Inside the score</i> )   | subharmonic music (Adam Neely)  |
| non-chord tones ( <i>Music Matters</i> )  | harmonic blocks (Nahre Sol)   |
| secondary dominants ( <i>Music Matters</i> )  |   |
| enharmonic equivalence ( <i>Music Matters</i> )   |   |
| melody harmonization ( <i>Music Matters</i> )   |   |
| modulations using common chord ( <i>Music Matters</i> )                                 |   |

included in the Ear Training curriculum. Adam Neely explains the concept of irrational measures and polyrhythm, and he discusses the fastest and the slowest tempo ‘humanly possible’. David Bruce talks about the rhythm in swing music, the use of metric modulation, irrational time signatures and rhythms, negative rhythms, and the rhythms that are ‘impossible to write down’. Regarding musical forms and musicological content in general, YouTube creators do not consider classical music superior to other types of music, and in addition to classical pieces, they provide analyses of popular, film, and video game music. They teach about the process of composing various musical forms (Nahre Sol), as well as using various compositional tools and techniques such as composing with noise or making music with only one note (David Bruce Composer). The subject of Harmony is also represented with various topics that are not included in the official curriculum (Table 6).

Moreover, in their *reflections on music and music education*, creators express their thoughts, and they share some personal confessions, describing their private and professional life path. Nahre Sol talks affirmatively about music education, speaking of Juilliard as ‘the best music school in the world’, wherein she frequented unforgettable lectures, and gained numerous experiences. On the other hand, she argues that the music education system often does not provide a sufficiently broad view on music as an art form. She also advises users on how to listen to classical music, especially regarding the emotional experiences of the listener. Adam Neely is probably the most productive of all the creators

when it comes to discussing various topics. He talks about his continuous fascination with music, considers the role of music in human development, shares his thoughts on the relationship between musical talent and diligence and explains why music needs an audience. He discusses the possibility of reaching virtuosity later in life and gives advice on how to transform fear into mastery on stage. Neely also questions the role of music education institutions in today's era, and he emphasizes the importance of building interpersonal relationships and professional contacts while studying music. He talks about himself as a creator, explaining whether he considers himself more of a musician or a YouTuber, comparing the profitability and sustainability of these professional activities.

#### EVALUATION OF CHANNELS' GENERAL QUALITY AND FINAL THOUGHTS

For the creators, high quality of video production is essential for the implementation of YouTube videos in the teaching and learning process. While recording the videos, the creators mostly use a front-facing camera, except when demonstrating musical performance, in which case one camera is usually placed above the instrument, and the other captures it from the side. When recording interviews, the creators use several (up to three) cameras. A lot of the creators made their first videos with a mobile phone camera, and sometimes they still use it as an additional recording tool. From the didactic perspective, the way in which the content is represented to the viewers is even more important. It can be concluded that all the creators treat the chosen topics in a unique way, informally and casually, although very thoroughly, using both a theoretical and practical approach. The videos are made at a highly professional level, especially the ones created in recent years (since 2020), as they consist of words, images and animations with the aim of improving the learners' level of understanding of a certain topic, and/or to highlight some segments of the video. In this regard, the creators use accompanying texts and subtitles, visuals, animations<sup>7</sup> and memes, sheet music, keyboard display (usually shown at the bottom of the video), film and cartoon excerpts, and clips from other creators' videos. These features make the videos usable in formal educational contexts as supplementary teaching material at the school or university level. The applicability of the content in teaching and learning settings also depends on its availability, and it can be confirmed that all the channels meet this standard – almost all the channels' content is free, with the addition of some free material on creators' personal web pages.

It is opportune to mention that the length of the videos is not always appropriate for a classroom setting given the time frame/limit, i.e. the

7 E.g. *the circle of fifths* scheme.

standard lesson duration of 45 minutes. For example, if the teacher of Counterpoint chooses to use Adam Neely's video 'How to write a Crab Canon' (Neely, 2018), they can demonstrate the whole video or its parts multiple times because of its short duration (5:17). There will be enough time to discuss the topic with the students, to explain some of the key terms and phrases, to make a comparison between music and text/meaning (just like Adam Neely did in the video), and to conduct some of the practical activities that include composing and performing the crab canon.

## CONCLUSION

The analysed videos on the selected YouTube channels, as well as many other similar videos with music education content, can represent an excellent starting point for planning and organizing music lessons in the twenty-first century. This kind of material is useful and appropriate in all educational contexts (formal, non-formal and informal), at all levels of education, and in different teaching and learning settings and environments such as traditional classroom teaching, flipped classroom concept, online/distance teaching and learning, blended learning, situated learning, and collaborative teaching. Unlike textbooks and traditional didactic material in general, this type of content encourages learners to interact and actively participate in the learning process. The accessibility of the content allows self-regulated learning at one's own pace and order, also providing the following possibilities: watching and listening to the content carefully, as many times as necessary, including rewatching, re-listening, thoroughly analysing, and interpreting certain parts of the video. The creators of these videos are a great inspiration for learners on their way to success, whether the motivation for learning music is only personal, or also professional.

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### *Povzetek*

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Cilj raziskave je bil identificirati, izbrati, analizirati in primerjati YouTubove kanale z videoposnetki, namenjenimi poučevanju in učenju glasbe. Iskanje kanalov je bilo izvedeno z uporabo naslednjih ključnih besed: glasbena vzgoja, glasbeno učenje, glasbeno poučevanje, glasbena kompozicija, glasbena teorija, urjenje sluha, glasbena improvizacija, vadnica petja in vadnica igranja. Za izbiro kanala smo postavili naslednje kriterije: jezik, v katerem je objavljena vsebina (angleščina), priljubljenost kanala in število naročnikov, število videoposnetkov, prisotnost klasične glasbe na posameznem kanalu in ustreznost vsebin glasbene vzgoje. Rezultat iskanja je bil izbor šestih YouTubovih kanalov z naslednjimi imeni: David Bruce Composer, Rick Beato, Inside the Score, Music Matters, Adam Neely in Nahre Sol.

Analiza in primerjava vsebine kanalov je potekala s pregledom značilnosti posameznega kanala (osnovni podatki o kanalu, namen kanala, odnos z naročniki in sodelovanje s sodelavci), podrobno analizo videoposnetkov (glasba, glasbena vzgoja in druge vsebine), z oceno kakovosti videoposnetkov, interpretacije in reprezentacije ter dostopnosti vsebin. Pridobljeni podatki so poleg ostalih zvrsti glasbe pokazali prisotnost klasične glasbe na vseh kanalih. Vse zvrsti glasbe veljajo za enakovredne, pristop ustvarjalcev k analizi glasbe pa je profesionalen in podroben. Poleg klasične glasbe izbrani YouTubevi kanali vključujejo glasbene videoposnetke o različnih zvrsteh, kot so jazz, pop, rock, metal, filmska glasba, glasba za videoigre, tradicionalna/ljudska in svetovna glasba, kot so indijska, korejska in japonska glasba ter mongolsko grleno petje. Ustvarjalci kanalov ustvarjajo tudi lastno glasbo in priredbe del, ki pripadajo različnim slogovnim obdobjem, vrstam in žanrom. Glasbenoizobraževalni videoposnetki so strukturno raznoliki: ustvarjalci objavljajo kratke videovsebine pouka, daljša predavanja, (mojstrske) tečaje in vaje. Vsebinsko bogastvo se odraža v široki paleti obravnavanih področij, ki smo jih razdelili v naslednje kategorije: meter in ritem, tonska zgradba, glasbene oblike, muzikološke vsebine, glasbena kompozicija in ustvarjanje, glasbeno poustvarjanje, razvoj glasbenih spretnosti in sposobnosti ter razmišljanja o glasbi in glasbeni vzgoji.

Veliko vsebin, ki jih ponujajo ustvarjalci na platformi YouTube, je vključenih tudi v učne načrte hrvaških glasbenih šol in jih je mogoče poučevati pri individualnem pouku instrumenta ali petja, torej pri glasbenoteoretičnih predmetih, to so urjenje sluha, harmonija, kontrapunkt, glasbene forme in glasbena zgodovina. Omenjeni videoposnetki vsebujejo tudi druge vsebine, ki presegajo okvire obveznih učnih načrtov, kot so intervjuji, razprave, motivacijski govori, karierni nasveti, glasbene (in druge) kritike, nasveti za nakup glasbil in opreme ter glasbena produkcija. Videoposnetki so primerni za uporabo v kontekstih formalnega, neformalnega in priložnostnega glasbenega izobraževanja pa tudi v različnih okoljih učenja in poučevanja, vključno s tradicionalnim poučevanjem in učenjem v učilnici ter na spletu, z mešanim učenjem, s strategijo obrnjene učilnice, situiranimi učnimi okolji in sodelovalnim poučevanjem. Videoposnetki niso namenjeni zgolj profesionalnim glasbenikom, temveč tudi začetnikom in glasbenim navdušencem, saj je podajanje vsebin strokovno, natančno, razumljivo in hkrati zabavno.