

MIDICULOUS SOFTWARE: ONLINE PIANO LEARNING MEDIA SOLUTION IN THE ERA OF SOCIETY 5.0

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ARTICLE INFO

Article history:

Received September 02, 2023

Revised September 10, 2023

Accepted October 2, 2023

Available online November 30, 2023

Keywords: midiculous software, piano, era of society 5.0

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Abstract. The development in the era of society 5.0 presents various applications of piano learning media based on digitalization and technology. Midiculous software is a software that can be used as an alternative and solution for piano tutors, teachers, and educators who find it difficult to create a piano learning system in online classes. Problem solving is revealed by descriptive qualitative with the process of data collection based on observation. Followed by the stages of preparing a lattice of interview instruments for the speakers (tutors, teachers, and educators) to be triangulated by experts and analyzed with the stages of collection, reduction, presentation, and conclusion drawing. As a result, midiculous software can be used and utilized by piano tutors, teachers, and educators in terms of understandability and usefulness as an online piano learning media. The students of each piano tutor, teacher, and educator are also clearer in receiving piano materials. However, there is a need

for strong connectivity between the used devices, such as OBS and Zoom so that piano learning can also be optimized.

INTRODUCTION

Nowadays, the development of human civilization cannot be separated from technology and digitalization. Rapid civilization certainly adapts to the needs of times which have now penetrated industry in the 5.0 era. One of them is that the latest technological developments lead humans to enjoy and adapt where the process of interaction and communication is not limited by physical space but virtual space (Ramli et al., 2022). Era 5.0 is also known as the era of society 5.0, when viewed from an educational perspective, technological developments also open up great opportunities in it (Irawan et al., 2023). This great opportunity is also related to 21st century skills, which requires the people to be able to improve critical, innovative and constructive thinking skills (Sabri, 2019). Examining the Era of Society 5.0 in the realm of education and learning, especially in piano learning at course institutions and educational institutions that have piano learning curricula/schemes, are starting to adapt developing technology. Moreover, considering the COVID-19 pandemic phenomenon that has hit various countries, the era of society 5.0 has become a nadir in which it can be adapted as a change with positive impacts. For example, various learning meetings can still be found in online learning by utilizing various platforms, software and other technologies as media and implementation (Novebri, 2021). Therefore, adaptation is needed in learning processes or activities that were originally carried out outside the network/directly to become online/indirectly (online). It is

interesting to ask whether online learning can also be used in learning with a practical system (Widana, 2022).

Please note that piano learning uses a system and practice model to carry out its activities. In the problem, it was revealed (Simanjuntak, 2020) that the implementation of early childhood piano learning can increase because it is based on imitating and receiving stimulus from the tutor. However, online learning creates negative points because it reduces direct interaction between tutor and student so that learning does not run properly (Santra, 2021). Even though tutors as educators have a vital role in the learning process until they obtain the title of central figure (Anggraini et al., 2023). Apart from that, learning piano also helps develop levels of concentration in other learning (Phanichraksaphong & Tsai, 2021). The era of society 5.0 and the Covid-19 pandemic have also marked the benefits of piano learning because tutors and students can develop creativity and innovation by using technology (Anisa & Karyono, 2021). Through technology and networked systems, practical learning model must still be experienced so as not to lose direct cognitive touch; which creates its own problems, namely (TTSOJT, 2021):

"The suspension of direct learning in educational institutions has had an impact on concerns regarding the quality of cognitive knowledge, vocational skills and social skills possessed by individual students; inconsistent delivery of material, difficulty in asking teachers directly, as well as internet network system problems."

This paradigm only opens the image that online learning is not always implemented effectively and vice versa. Online learning has a weakness in direct student supervision, which affects the understanding level of each student differently and results in decreased learning outcomes (Andriana, 2021). Meanwhile, the weak side in offline learning is related to the Covid-19 pandemic due to restrictions on gatherings and the lack of creativity and innovation that can be formed when learning is still carried out offline. There are strong and weak sides to the character of each type of learning provider (Sumandya et al., 2022).

The weak and strong sides of online and offline learning characteristics make this article examine *midiculous* software as a media solution for online piano learning. The term slow learning which is an obstacle to online learning, especially piano, can also be overcome through *midiculous* software. Various features will be studied along with testimonials and interview results to strengthen this article. Previously, *midiculous* software included a type of midi controller system that could visually display keyboard functions, especially in notation placement and naming notes and chords. Reporting from the gospel musician website (Musicians, 2023), the *midiculous* version allows learning by displaying virtual instruments on the YouTube platform as well as displaying music widgets on OBS and Zoom software for virtual lessons. *Midiculous* software needs to be connected to Zoom as an online learning tool and OBS software as a streaming device which can be integrated with several other software such as Zoom, *Midiculous*, and internal and external camera devices (Satrio, 2022). The *midiculous* software scheme as a piano learning medium can ultimately be implemented optimally if it uses several devices that need to be connected and integrated into it; *midiculous* is created in one landscape or frame with OBS along with a camera device or keyboard controller which is then connected to the zoom device via camera display or share screen operations (Juseniah, 2021). The use of *Midiculous* software as a media solution for online piano learning was also inspired by YouTube creator David Josade Hutabarat (Hutabarat, 2020) who reviewed *Midiculous* as a midi controller which apparently can be connected to an OBS device.

Piano learning media in this writing refers to online learning as a result of the initial Covid-19 restrictions. Learning, which was originally carried out in person, was changed because there were regulations limiting the number of gatherings. Several tutors and owners of piano course institutions have used online learning with the zoom platform, as is the case at Purwacaraka Music School (Pasaribu, 2022). Of course, special methods are needed so that online learning remains optimal (Napitupulu & Indrawan, 2022). Various methods are also used, not only with piano learning strategies and methods, but also by creating piano teaching media with video tutorials displayed on the zoom platform (Aniisa & Karyono, 2021). Those give rise to tutor creativity and innovation in maximizing piano learning, especially online learning media.

Based on the phenomenon of online-based piano learning, it became interesting to write topics based on this phenomenon. It is hoped that Midiculous software can be a solution and alternative to piano learning media that is integrated with Zoom and OBS. This interest and hope arose because we saw that several factors in piano learning were not running optimally. The results of observations made by the author on several piano teaching show that piano tutors are still not optimal in carrying out piano lessons, especially when online classes are implemented. The understanding received by course students is also always less than optimal because of the finger positioning, especially on beginner pianos. Therefore, this midiculous software can later become an alternative with the descriptive qualitative explanation used by the author to reveal the stages of this software. The success of using midiculous software has been tested on Aria Music Course students; they are 7 beginner pianists who gave testimonials on their perceived progress in online piano learning. The presentation of this data empowers the author to describe and share the results of this trial with tutors, teachers and piano learning educators so that piano learning in the classroom can be facilitated and made easier. The problem formulation in the research is 1) what is the form of piano learning media through midiculous software?; 2) What is the process of operating Midiculous software in its integration with the Zoom platform and OBS streaming software?; and 3) how does midiculous software become part of technology in the era of society 5.0?

METHOD

The description of research problem uses a descriptive qualitative method framework. The qualitative method framework is taken based on its complex nature, more descriptive in nature, and deeper inquiry by directly quoting someone's ideas and experiences (Sutisna, 2018). Meanwhile, descriptive uses qualitative as a situational approach in which the description of the situation is explained narratively (Sukmadinata, 2011). Clearly descriptive also refers to descriptions with explanations of the object being studied; where the researcher is the representative and presenter of the research object (Muliawan, 2014). Descriptive qualitative details in this research were carried out to explain the flow of using Midiculous software as a media solution for piano learning and find out opinions about the understanding of tutors, teachers and piano educators on Midiculous software in its application in piano learning.

The research subjects were piano tutors, teachers and educators at different educational institutions. The course institution in question is Fermata in Bantul, a piano teacher at Brilliant Music School Purworejo, and a basic piano lecturer at the Performing Arts Education Study Program, FKIP, Tanjungpura University. The data collection technique used observation and in-depth interviews with research subjects by taking a grid of research instruments: 1) piano learning media used online; 2) identify supporting software as a midi

controller; 3) identification of midiculous software; 4) testimonials on the use of midiculous software; and 5) usefulness and success in learning piano. The results of data collection were then tested for validity using the triangulation model. The used triangulation is time and resources with experts in the field of piano learning and educational technology academics (Sandi, G., 2021). The data was valid, then data analysis was carried out using the Miles and Huberman type, such as by collecting various data from informants and secondary sources from articles and then reducing it according to the research topic, namely understanding midiculous software as a piano learning medium. Next, the data is presented narratively with connections based on answers to the problem formulation and classified to then be concluded and verified. The steps during the data collection process in the pre-field and field stages, preparing research instrument grids, testing data validity, and data analysis are described as follows:



Image 1. Descriptive Qualitative Research Flow Regarding Midiculous Software as a Piano Learning Media

RESULTS AND DISCUSSION

The results of this research show that Midiculous software can be used as a piano learning media solution, especially in the era of society 5.0. The tutor at the Fermata music course asked questions when the researcher conducted a workshop with church organists using midiculous software. Apart from that, teachers at Brilliant Music School also asked the same question regarding midiculous software, is it used as a medium for online piano learning? In joint research with basic piano lecturers from the Performing Arts Education Study Program, they also asked whether midiculous software could also be used in online piano learning? and how is it used on online platforms? These questions ultimately led to the introduction of Midiculous software as one of the piano learning media efforts, especially when the Covid-19 pandemic was hitting. Tutors, teachers and educators (lecturers) also complain about alternative piano learning media that are effective and efficient. As an opening explanation of the midiculous software, we explain the appearance of this software which can be used as a piano learning medium.

Display of Midiculous Software as a Piano Learning Media

Previously, no one discussed Midiculous software as an alternative piano learning medium. Midiculous or MIDICulous is an application for learning music with an audio focus, learning chords, or recording by creating an accompaniment. This application is legally owned by Gospel Musicians LLC which is located at Narcoossee Rd Suite 2-503, Orlando Florida 32832. Copyright regarding midiculous software has also been coordinated with the EULA (End User Level Agreement) that by installing, copying, or using midiculous, means agreeing to be bound by the terms of EULA. At first glance, the seriousness with which this software was created means that it has an undoubted display quality. Here's what the midiculous software looks like:

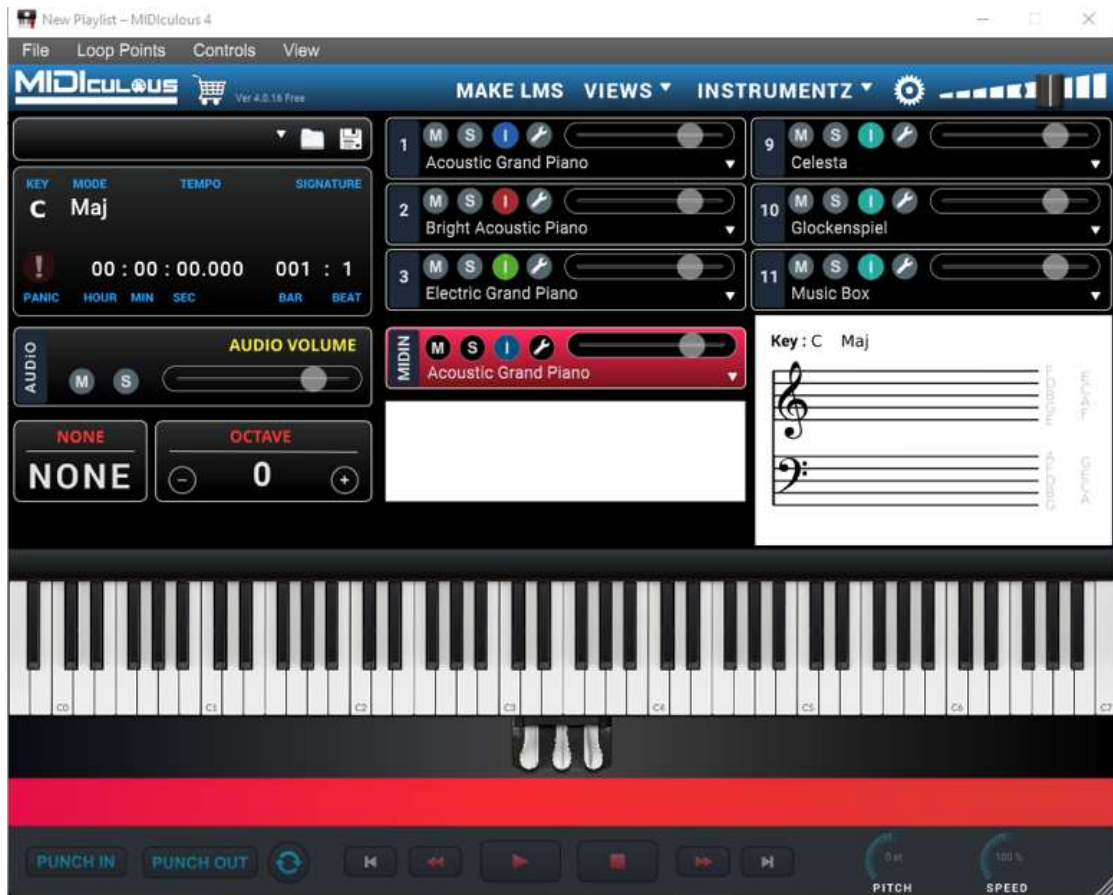


Image 2. *Midiculous Software Display*

The midiculous software display offers various main facilities in piano learning media, students can see 88 black and white piano keys (boards). Apart from that, there are also three damper pedals on the piano. The chord indicator (note arrangement) is also displayed on the key board where there is a staff line with treble clef (g key) and bass clef (f key). Chord sequences can be seen when the piano keys show the elements of a note such as the C Major chord and the note descriptions are C-E-G simultaneously. Time Signature (sukat) can also be adjusted when using a metronome (tempo control) when playing songs on the piano. The types of piano sounds can also be adjusted according to your choice. In this display, it is shown that there are sound options for acoustic grand piano, bright acoustic piano, and electric piano. The octave settings in the piano keys on the midiculous software display can also be adjusted; this is to adapt teaching materials to piano learning. In order for Midiculous to run smoothly, you need to enter the license code in the file taskbar then select preferences. The following is a picture of the settings in Midiculous:



Image 3. Display of Midi License and Source Settings in Midiculous

Midiculous software can be played in two ways, namely with a qwerty keyboard on a laptop and a workstation keyboard/midi controller keyboard that has a midi cable connection or USB Type B cable. Effectively, a midi controller cable can be used because the sound produced from midiculous audio does not suffer delay sound when using a workstation keyboard/midi controller keyboard. However, if USB Type B is used, the sound produced when playing will pause for a split second. Before a workstation keyboard device is connected to Midiculous, it is hoped that you need to identify the type of workstation keyboard being used. For example, the Yamaha PSRS-770 keyboard type, first you need to install the Yamaha keyboard series drive and then install it. After that, based on the Midiculous software display, you can select the file tabbar and then select preferences (settings). The preferences menu in Midiculous provides various displays where you can select MIDI SRC/MIDI source to select the Yamaha keyboard drive installation. After that, the workstation keyboard will work and connect to Midiculous.

Midiculous Software Operation with OBS and Zoom

Midiculous software can be integrated with OBS and Zoom. The midiculous display is then used as a screen capture window in OBS. Apart from that, you can add piano learning material in the OBS frame by adding the screen capture window to the desired material page. Next, the layout arrangement on the OBS frame, which enlarges the image in the midiculous window by maximizing the edge of OBS frame with the number of keys on the midiculous. After that, also set the resolution and image size in the desired piano material window by placing it above the piano keys in midiculous. The arrangement of OBS screen capture window can be seen in the following image:

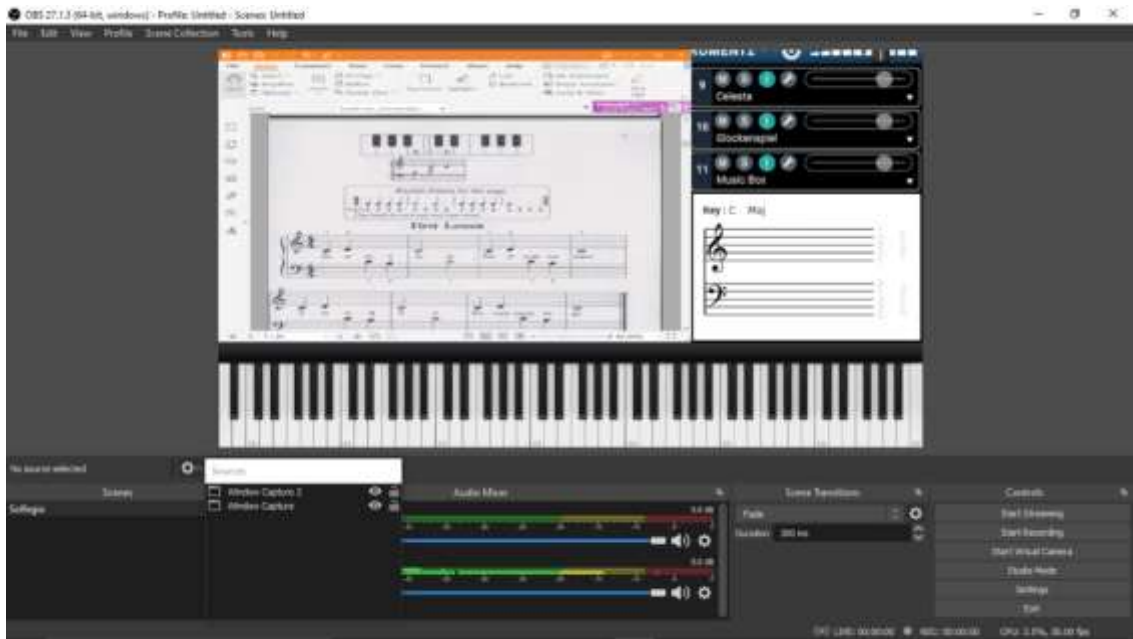


Image 4. Window Screen Capture Display in OBS

You can also add other materials such as an internal camera on a laptop or an external camera. The camera can be placed at the top of the chord indicator, so that tutors, instructors and educators can interact as if directly with students in online classes. Then, the steps for operating the midiculous software don't just stop at setting in OBS but need to be linked to the Zoom platform. There are two steps and ways to link OBS in Zoom, the first step is to make OBS as a screen capture in the Zoom screen share. The second step is to display OBS as a virtual camera and use it as the main camera setting in Zoom. Regarding audio settings, it can be adjusted using the first or second step, however, when the second step is selected, displaying OBS as a virtual camera automatically requires an audio connection between OBS and Zoom. This connection requires external installation as an OBS audio connector that can be read on the microphone system in Zoom. Here's what the midiculous software looks like in OBS and Zoom:



Image 5. Share Screen Zoom Display in Midiculous and OBS Display

Piano keys that are pressed on the keyboard workstation will automatically be displayed in a midiculous image which can help students learn the piano easily. Some of the connection processes require a device capacity (laptop) with a minimum quality of RAM (Random Access Memory) of at least 4GB so that there are no bottlenecks during operation. Apart from that, attention is also needed to the used internet network (signal access). The hotspot strength on the device (cellphone) needs to be taken into consideration when prioritizing the use of Wi-Fi devices.

Midiculous Software as a Networked Piano Learning Media Solution and in the Era of Society 5.0

Based on the interview results from tutors, teachers and educators related to piano learning, it was found that Midiculous software can be used effectively and efficiently in piano classes. Previously, piano tutors, teachers and educators simultaneously used the facilities available on the Zoom device by providing a screen share of piano material and giving an oral explanation of the location of piano fingerings by looking at the piano fingers on the camera. However, after the presence of midiculous software in OBS and Zoom tutors, piano teachers and educators can provide instructions via the display of piano keys on the Zoom share screen along with the teaching material. Apart from that, piano tutors, teachers and educators also agree on the benefits of midiculous software to be applied in online classes where students also understand the provided material clearly. They also stated that students did not lose cognitive touch with the teaching material because the piano learning material could be explained comprehensively. Chord explanations, freasering explanations, and explanations of the use of fingers on the piano can also be directly explained through midiculous.

Even though it only moves learning media to the internet network (pseudo-classroom), it can be proven that Midiculous software can prepare students to carry out piano learning optimally (Nawal et al., 2021). The era of society 5.0 in the realm of education can answer problems in society, including ICT-based education, students optimally improve critical, constructive and innovative thinking skills (Widana & Ratnaya, 2021). Another reinforcement is that the seamless learning model can be adapted to piano learning where learning activities in the context create learning experiences using mobile technology (Sudarmanto, 2021). Being creative in creating ideas for piano learning media in the era of society 5.0 does not mean not using new technology but requires habits and efforts with the same goal, that is to make the life of the nation and state smarter.

CONCLUSION

The era of society 5.0 marks a new civilization for humans to adapt to developments in technology and information in every line, including education. Especially in piano learning media for online classes, midiculous software can be used effectively by tutors, teachers and piano educators for their students. This solution is presented by midiculous software which is an integrated part of the OBS streaming software and the Zoom online learning media platform to explain piano materials with aspects of fingering positions on the piano, phrasing, and the location of the targeted note without having to explain it orally to students. This alternative can be packaged and developed further into a practical application, especially for piano learning.

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