

# presto

## Parents' manual

instrument



ONLINE MUSIC LEARNING FOR  
CHILDREN – PARENTS' MANUAL

By András Suki PhD,  
Liszt Academy of Music Budapest,  
2022

## INTRODUCTION

Digital music education offers countless possibilities besides traditional methods of learning music. However, it might not be clear for everyone how to use them properly. In many cases, the student might need some help at home in their learning, which can be a challenge even for the experienced parent. The aim of this manual is to make it easier for parents to help their children with digital music education. I offer plenty of advice, and recommend countless methods and devices. Most of the methods can be used not only for digital education (distance learning), but also as a complement for regular education.

First, I discuss the parent's role in music education and the framework of digital music education. Next, I shortly introduce several musical programmes, applications, and databases to help orientation in the world of digital devices. I also examine the applicability of different hardware and software. Finally, I supply a simple example for recording and uploading instrumental or vocal videos.

This manual is tailored to the average parent, and it does not aim for completeness. There can be differences between countries and regions in its applicability.

## THE PARENT AS A TEACHING ASSISTANT

In this chapter, I discuss the parent's role in digital music education. We have to understand possibilities and limits for efficient learning.

In music education, the child, the parent, and the teacher work together for the right development of the child. The child's interest, talent, and hard work are fundamental. The parent supplies the conditions needed for learning, everyday supervision, and help. The teacher gives their proficiency and experience.

In the case of digital education, the child has to get used to learning on their own as soon as possible. In the beginning, the teacher and/or the parent has to teach or plan certain things for the child so that they can work on their own later.

### How to organise learning

Firstly the parents and the close family create the conditions for the child to learn music and improve. It means, among others, to have the right instrument and to create a calm, friendly atmosphere. Parents and family can help children learn how to study and work hard.



Choose the right instrument – it can be very important in your child’s relationship to music. The instrument should sound nicely and be set properly. A digital piano with many different instruments can also be inspiring. Ask for help from the teacher when choosing the instrument! Tablets and other devices should be of good quality and up to date. Apps should be children friendly.

Before starting learning music, it is very important to choose the school, but even more, the teacher well. Children usually have one-on-one classes with their instrument teacher, and can be more attached to them than to teachers who teach groups or classes. You might want to think about choosing a teacher who is familiar both with in-class and digital education.

Creating the right environment is very important. This is mostly the parent’s responsibility. A room of the right size and right equipment (e.g. the child’s room) can be the child’s own world, their little corner. Ideally, there is a desk, a comfortable chair, proper lights, a computer/tablet, the well-organised school equipment, some peace and quiet, and a separate room with a door for instrumental practice. These can have a huge influence on learning. Studying and practising is great mental effort, it needs the right, calm environment.

Parents have to help younger children before online classes, especially in the following: preparing the instrument and its accessories (warming up wind instruments, preparing the reed, tuning the instrument etc.), preparing the music etc. It is also important to correctly set the devices, to launch and configure programmes, to check internet connectivity and bandwidth. You should also shut off noises.

Sometimes it’s best if you are there at the online instrumental classes, sometimes it’s not. Younger children can need more help with technical or other problems in the beginning. It also helps you understand what the child has to practise and how if you are there. For older children, it can be better if they are alone with the teacher. In any case, always discuss and decide it together with both the child and the teacher.



## Daily routine, daily schedule

Planning the daily routine or schedule needs complex thinking and experience. Most young children can't do it on their own, so their parents have to help them plan how to spend their time outside of school. You should tailor it to the child and the family. Children need a stable everyday routine: it is also an efficient tool for parenting and helping them become independent.

When planning the daily routine, think about your own work schedule, where the school is, how many younger or less independent children you have, what their extra school activities are, how much time they need on average for homework and instrumental practice. It can be a demanding task to plan the routine!

*Tip: Devices can be very useful in this process, too. They can notify the child 10 minutes before practice time, or they can show how much time they spent on practising each piece. They can also be motivating if some tasks are set as online group tasks, or if the students have a little competition and see each other's results.*

It is useful to have a regular schedule so both the parent and the child can time their daily tasks accordingly. It can help if you write it down as a chart or table in the traditional fashion. The following is an example for the schedule of an only child of 10–12 years. They learn to play the piano. I assumed that school finishes before 1 pm and the child wants to become a musician.

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
8:00	School	School	School	School	School	Rest	Rest
9:00	School	School	School	School	School	Rest	Rest
10:00	School	School	School	School	School	Practice	Practice
11:00	School	School	School	School	School	Practice	Practice
12:00	School	School	School	School	School	Rest	Rest
13:00	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
14:00	Rest	Rest	Rest	Rest	Rest	Rest	Rest
15:00	Rest	Piano lesson	Practice	Rest	Piano lesson	Studying	Studying
16:00	Practice	Rest	Rest	Practice	Rest	Rest	Rest
17:00	Studying	Studying	Solfège class	Studying	Studying	Rest	Rest
18:00	Studying	Practice	Solfège class	Studying	Practice	Rest	Rest
19:00	Rest	Studying	Studying	Rest	Studying	Rest	Rest
20:00	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner
21:00	Bedtime	Bedtime	Bedtime	Bedtime	Bedtime	Bedtime	Bedtime



In this example, everyday studying, instrumental practice, weekly music lessons and regular rest are all part of the schedule. Further activities would take away time from rest or study/practice. At the weekend, it probably wouldn't strain the child too much, but it would so during the week.

The schedule can be planned differently, but always have enough time for both work and rest: regeneration is necessary during the day. It can even make studying more effective. On occasion, you can do things differently because of extraordinary events, but try to keep to the schedule!

*How much should the student practise a day?* It depends on individual possibilities, goals, and skills. In my opinion, if the child wants to become a musician, minimal practice time should be 30 mins a day at the age of 6–8, 45 mins between 8–10 years, 60 mins between 10–12 years, and 45 mins twice a day between 12–14 years. If the child doesn't want to become a musician, the most important goal is to have them grow fond of music – and, of course, to learn the basics of instrumental technique. So, practice time can be less – always bear in mind the child's own skills and nature.

### **Planning study and practice units**

Deciding on study units and homework is primarily the teacher's job. Daily practice units should be planned accordingly. In many cases, the parents can help optimise the process of practising.

*Tip for teachers: In digital education, you can use simple programmes to make precise notes of homework (e.g. Tonara), which measure time spent on practice or motivate the student by having them collect points. In certain cases, it can be better if both the school and the music school set homework on the same platform (e.g. Google Classroom) so the student can see their tasks all at once. There can also be further digital possibilities to make notes about homework, to plan practice units and make them more effective.*

At the beginning of learning a new piece, it can be useful both for the student and the parent to get to know the piece as *digital material*, too, which can help with the right notes, rhythm, fingering, phrasing, and musical performance. They can also be motivating for the child or may give a more intense experience. These materials show the piece simply: not in an artistic, but in an educational way.



When learning an instrument, it's best if the student practises each piece every day, but not necessarily for the same amount of time. Break down longer sections (e.g. the exposition of a sonata) into shorter parts. Learn and practise a new part every day, then review the others. This can make practicing more efficient. The teacher can help in this process.

After the student got used to planning practice, they can do it on their own. Between the ages of 6–14 years, these units can range between 30 mins a day and 60 mins twice a day, depending on the age of the student.

It's important to have quality practice, which partly depends on the right planning. Make sure there is time for warm-up (scales, finger exercises), technique (études/studies), and performance pieces, too. Usually, the student should spend 10% of the practice time on warm-up (scales, finger exercises), 20% on technique (études/studies), and the remaining 70% on practising pieces. There should be both revision from the previous days and new material. This is, of course, just guidance, you can be as flexible as necessary. The following is an example of a 60 mins practice-session of a 10-years-old student of the piano, who studies in year 3 at a Hungarian public music school, and wants to become a musician:

Time	Type of piece	Example piece
8 mins	Warm-up: finger exercise, scales	Hanon: The Virtuoso Pianist, exercises 10–11 A major scale
12 mins	Étude	Czerny: 125 Exercises for Passage Playing, Op. 261, Nr. 23
15 mins	Bach	Bach: Little prelude in C minor, revise first page, do second page with two hands (New)
15 mins	Sonatina	Clementi: Sonatina in C major, exposition and development with separate hands (New)
10 mins	Performance piece	Schumann: Wild Rider, revision

I don't discuss other instruments in this manual, but each has its own properties and compulsory material according to country, school, and teacher.

## Supervision

Besides planning, parents can have the role to supervise daily tasks and accomplishments. Young children might not be very good at judging their own work. It can be better if, at the end of a practice unit or session, you have them play what they've been practising before to see if they can really play it well. Sometimes, they will realise they haven't learnt the given material properly, and it needs more practising. In the first years of the child studying music, you don't have to be too familiar with music yourself, because lay people will also hear the difference.



## THE FRAMEWORK OF DIGITAL MUSIC EDUCATION

There are different ways of using digital technology in music education for different purposes and outcomes. They can complement or replace traditional (in-class) education. They can be categorised by the place and type of education.

There are traditional classes, the online learning environment, and their mix (hybrid/blended education). Traditional classes are offline, and usually take place in a school.

In the online learning environment, learning takes place on the internet, and it can happen anywhere. Online education can be an excellent alternative for offline classes, when the latter are not possible. E.g. during lockdown or quarantine during a pandemic, if the student and the teacher/school are too far away, if someone lives with a chronic illness which makes it difficult or impossible to leave the house, or, for that matter, teaching an adult prisoner who cannot leave the facility where they are detained. In the mixed type, only some part(s) of learning takes place on the internet.

Learning can be interactive, when the student gets immediate feedback on their questions or solutions, and static, when learning takes place autonomously, for example, with a book or a YouTube video.

In traditional education, interactive learning takes place in a class, usually with the help of a teacher. In digital education, the class can be held online. This is the simplest form for instrumental learning. There are further possibilities for interactive learning in digital education, too, for example, taking tests or solving problems, which the system assesses right away. Assessing certain types of tasks or answering individual questions need to be done by a person, and it can take some time until they do so even in a digital environment.

An example for static learning in traditional education is reading and learning a textbook. In digital education, this can be done by reading a Wikipedia page or watching a YouTube video. But, in the digital environment, a static video can lead to an interactive task, which can make learning more effective.

Static digital material can often be very useful for instrumental learning, too. For example, a beginner student can watch a video recording which shows the piece in a good performance, correct fingering, phrasing, and maybe with some other musical or technical explanations. These static videos can be great complements for traditional education.



	<b>Digital education</b>	<b>Traditional education</b>
<b>Static</b>	YouTube videos, Wikipedia	textbook
<b>Interactive</b>	online learning environment, online class	class

In learning music, we need to distinguish between learning an instrument, hearing development, and learning theory. The digital environment can be great for learning about the history of music with static texts and music complemented with interactive questionnaires.

Static videos can also be great in instrumental learning even as a complement for offline education. But they usually need teacher supervision, which can take place at the same time during an online class, or later (for example, if the student records and sends a video, and gets feedback on it).

Hearing development is also a complex process. This usually also needs teacher supervision or a special programmes. Chamber music and orchestra are special parts of music education – there are now different possibilities on the internet to do it online (e.g. JackTrip, JamKazam, Jamulus). Also, it is possible to record and upload the parts one by one.

Video recordings are part of the advantages of digital instrumental learning. In traditional education, students have to perform the pieces or some sections from them to the teacher in class. It needs intense concentration and mental effort. Regular student concerts also need this mental state, and it must be practised, too. Making a quality audio or video recording can, too, create a similar mental state, so it can help with this practice if the student regularly records themselves – even if only just a part of the piece.

## **DIGITAL MATERIALS AND TEACHING SOFTWARE**

In the past few years, a lot of materials and applications have been developed for digital music education. They need expertise, but they can turn learning music into a great experience and make it much more efficient. They can be important tools for music education, especially for the Alpha Generation.







Figure 1. Using the Music Tutor app in a piano lesson

Learning with instructional videos on the internet (e.g. YouTube) is now very popular. For long-term instrumental learning, it can be very important that a professional compiles and organises the material into a system to make sure demands grow gradually and the student is motivated throughout. It's not always helpful if only the child chooses the piece, because it can mean they learn only certain things, but not others.

There are many music teaching programmes for tablets and smartphones. They can be sorted into different groups by their functions. Some programmes need a laptop or a desktop PC – this I indicate in the following. Reading music is very important in learning music, it should be practised regularly, and there are excellent, interactive, game-based apps for this. There are also apps which can replace a static audio recording of the accompaniment. A metronome app is a must-have for every student of music.

Digital materials and teaching software can be grouped as follows:

- Theory materials (e.g. history of music, music theory, solfège<sup>1</sup>)
- Hearing development
- Practising reading and writing music
- Materials related to instrumental learning
- Other programmes
- Music

In this chapter, I introduce some new digital innovations for hearing development, and for reading and writing music. I also discuss some apps for tablets and

---

<sup>1</sup> [Translator's note.] On music theory and solfège: Although the names suggest these two subjects are theoretical subjects, in fact, they are also about developing skills (reading and writing music, developing and differentiating hearing and musical imagination and anticipation etc.), and about applying the theoretical knowledge in practice.



smartphones, and some programmes and databases for PCs, which can be used in music education.

## Theory materials

You can find materials for the history of music, music theory, or solfège in several languages. Some are in line with local education. It's best to look them up on the internet (with the help of e.g. Google, Bing, Yahoo), because the complete list is too long for this chapter.

## Hearing development

The right musical hearing is the basis for solfège and instrumental learning. There are several excellent apps to develop this ability. Using them regularly can be a great practice between solfège classes.

## MyEarTraining

*MyEarTraining* is a popular app for hearing development. Students can practice intervals, chords, scales, random melodies, chord inversions, cadences, rhythm dictation, short melody dictation, and singing intervals. You can also have courses – like in a solfège class – in which students can learn and practise the basics of musical hearing with gradually increasing difficulty. The downside is that the app is currently available only in English, so understanding the explanations can be difficult for some people. The programme is available for Android and iOS devices for free and with subscription.

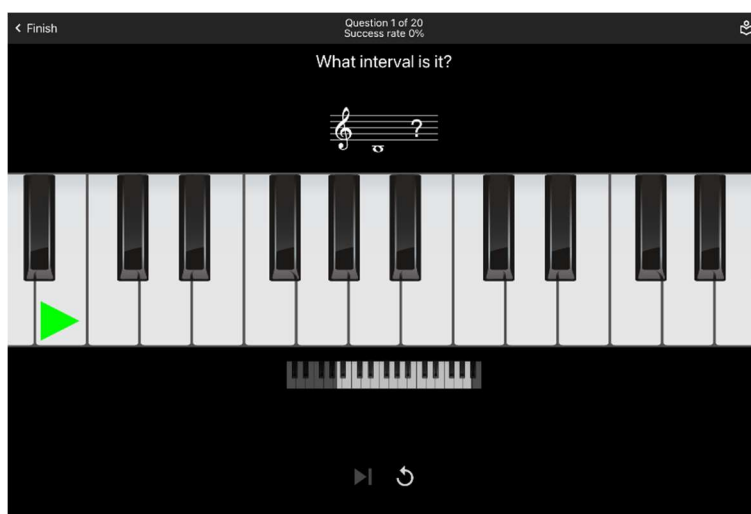


Figure 2. MyEarTraining

## Practising reading and writing music

### Music Tutor

The Music Tutor app helps practise reading music. It shows a note depending on the settings to recognise, and then the user has to tap the name of the note (C, D, E, F, G, A, B) or the right key on the keyboard. If they give the right answer, they get the predetermined point(s), the wrong answer decreases the accuracy, which is shown as a percentage on the screen. The game lasts for 1, 2, or 5 minutes. Because it is interactive and there is a time limit, it motivates the student, and it makes them become faster and more accurate. It's a great programme despite the ads.

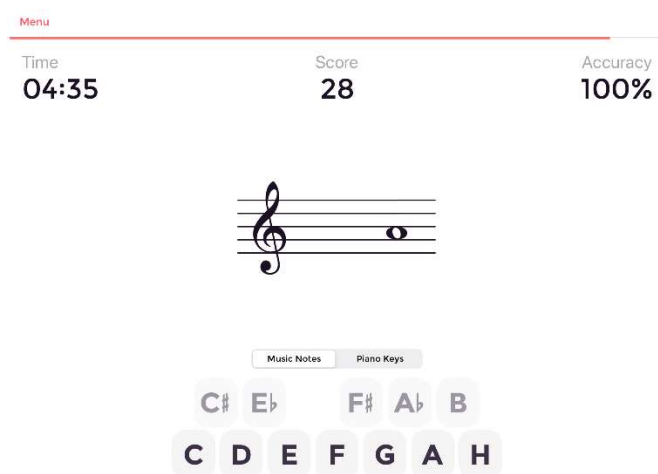


Figure 3. Music Tutor

Video introduction: please, consult the videos of this webpage section.

### MuseScore

*MuseScore* is a free music editor programme, which also has an online database. The look of the score is of high quality. It can be used for solfège or music theory homework, or even composing music. It's best if it's used on a larger screen of a laptop or desktop computer. It can be a bit difficult to use at first, but you can quickly learn it, and there are countless possibilities in the programme.

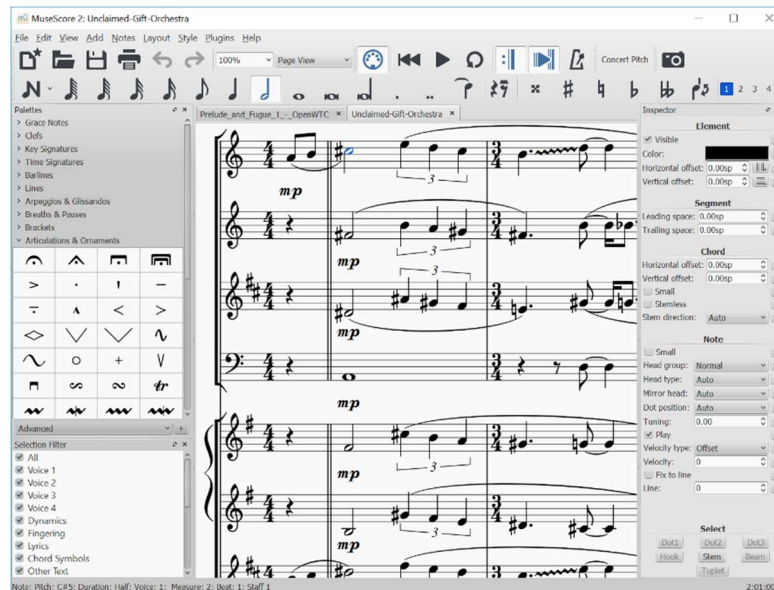


Figure 4. MuseScore

## Materials for instrumental learning

If the student watches a static video (eg. on YouTube), they can listen to the piece they are learning. This helps them remember what they've learnt in class or to know how the piece should sound. In some videos of piano pieces, the student can see the fingers and the keyboard from above, which is very helpful.

A lot of popular classical works are uploaded with the music, so we can see where we are. There are also a lot of other videos by music teachers, which they originally made for their own students, but these are now available for everyone.

Talk to the teacher about which video to watch, because the viewing figures on YouTube don't always mean it's a quality performance. It is also great to talk about what is good about a performance and what is not, so the student can look for and listen to different performances.

- [How to Play Für Elise - Easy Piano Tutorial \(Level 1\) - Hoffman Academy - YouTube](#)
- [Beethoven - Für Elise – Rousseau - YouTube](#)

*Tip: On YouTube, you can play videos slower and faster. Click on "Settings", then set the right "Playback speed". This means it's not necessary to record the given piece in different tempos, because it can be easily slowed down to observe a given movement of the hand.*



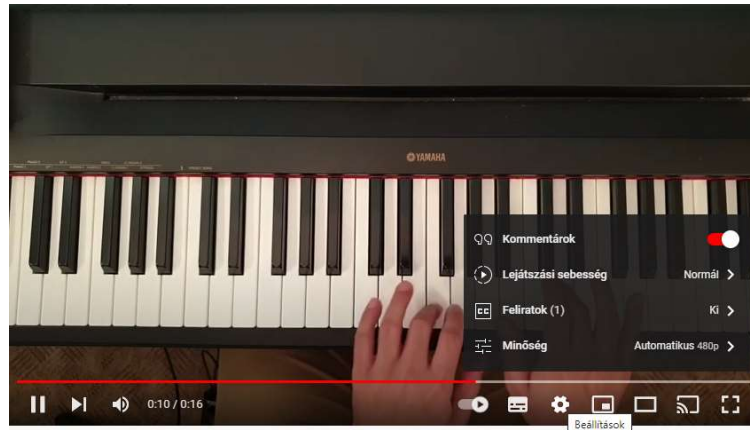


Figure 5. Slowing down YouTube videos

## Metronaut

*Metronaut* is one of the most special applications: it takes over for the accompanist, and it plays the piano or orchestra accompaniment of the pieces. The programme is special because it's constantly monitoring the soloist to adjust the accompaniment. This programme is best used with a subscription, if it has the given piece in its database.

In the video below, I introduce the programme in detail. As a parent, it's useful to learn the programme so that you can help your child.

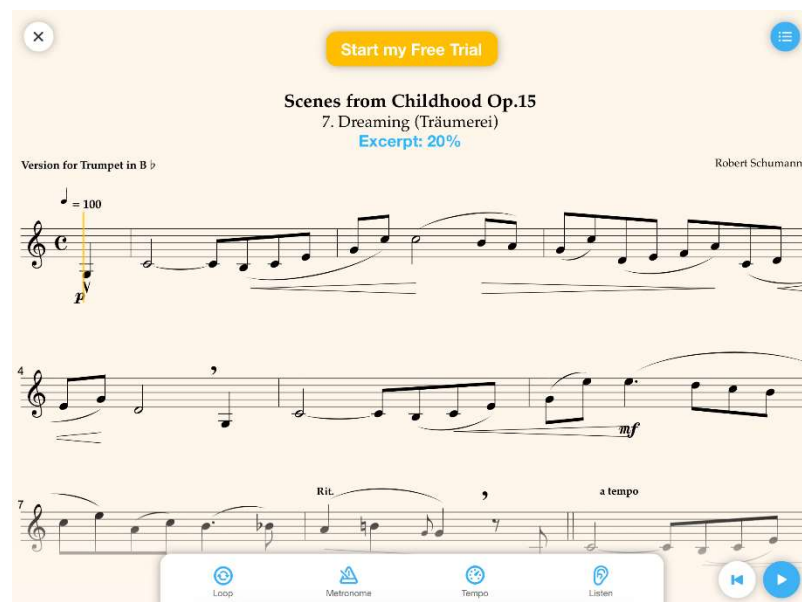


Figure 6. Metronaut

Video introduction: please, consult the videos of this webpage section.

## Other programmes

### Smule

*Smule* is a karaoke programme, the user can sing the melody with the selected accompaniment. The student can record themselves with an orchestra accompaniment, or they can sing a duet together with another user. There are countless songs which you can sing with the original performer, and you can also share your recordings. It's also a great fun even in the free version, on a smartphone.

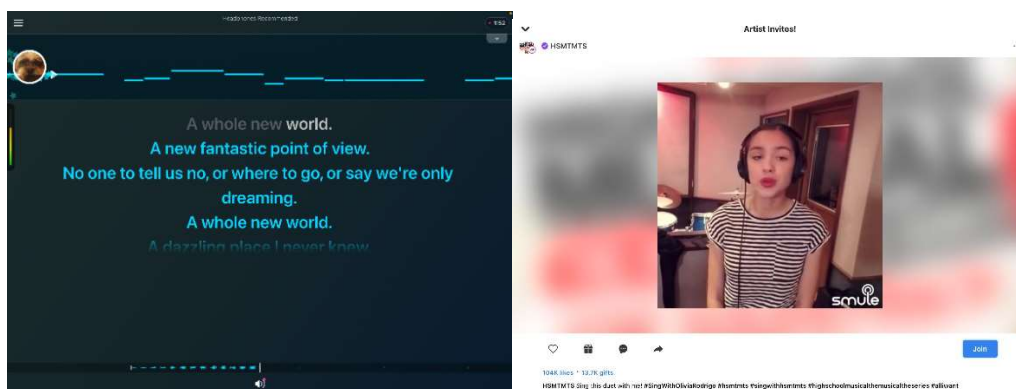


Figure 7. Smule

### iRealPro

*iRealPro* is a useful application for students of jazz and professionals. It contains the accompaniment of countless songs, so singers can have an entire band to sing with, and bass guitarists can practise together with the band by muting their own part. It needs subscription.

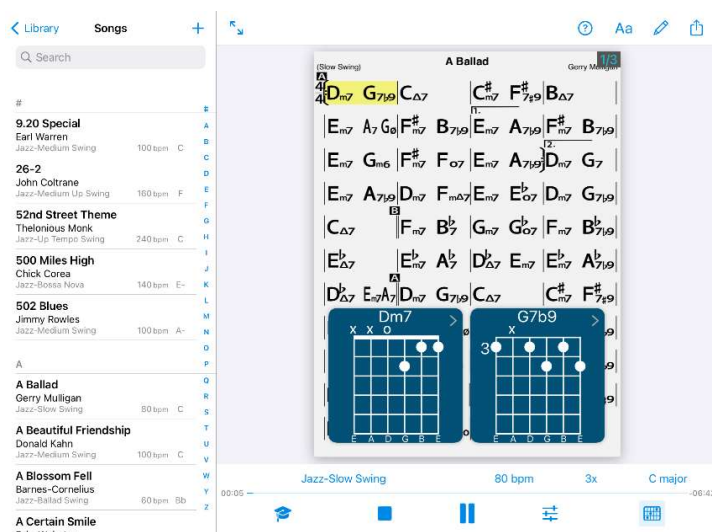


Figure 8. iRealPro

## AudaCity

*AudaCity* is a free audio editing software, with which you can make or edit audio recordings, and you can add effects. With it, the students can learn how recording is done in a real-life studio. Its use and settings can be difficult at first, but there are many professional features in it. It's best to use on a laptop or desktop computer.

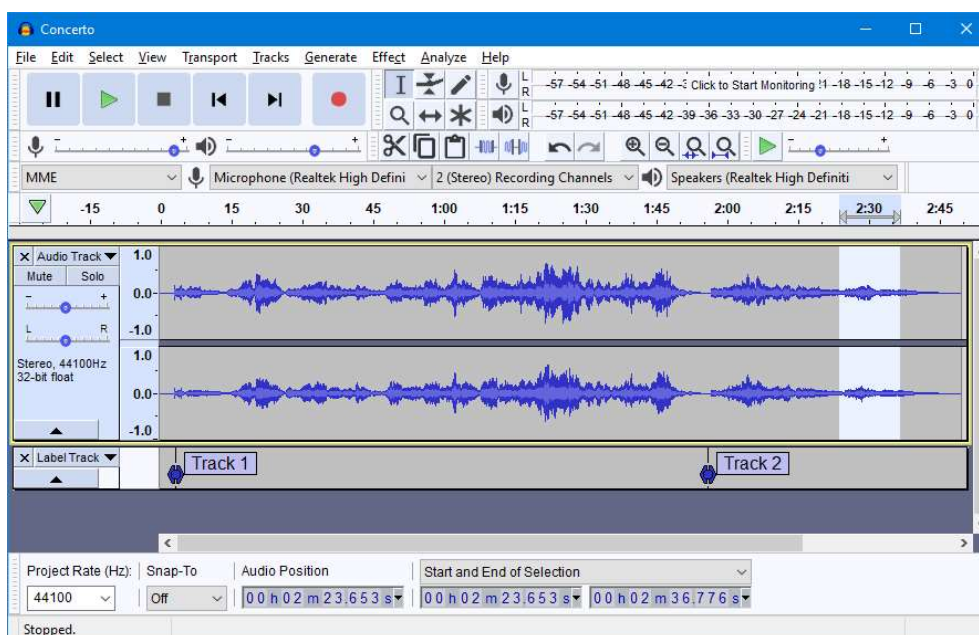


Figure 9. AudaCity

## Useful applications

*Metronome Beats* is just one among the many metronome applications. They help the student keep the tempo with regular sounds. There are tuning programmes to help correctly tune the instruments, and other various programmes to help with studies and entertainment. I believe they should be part of today's music education.

## Downloading and organising sheet music

Sheet music is a basic requirement for the education. They are usually available electronically, too. There are many webpages where you can buy new scores, but you can also download some older editions for free.

## IMSLP

The <http://www.imslp.org> is an online database from where you can download countless scores. This can be an important source for music education. In the

beginning, ask for help from the teacher, because there can be different editions of a piece. In certain cases, you can also find the composers' original manuscripts.

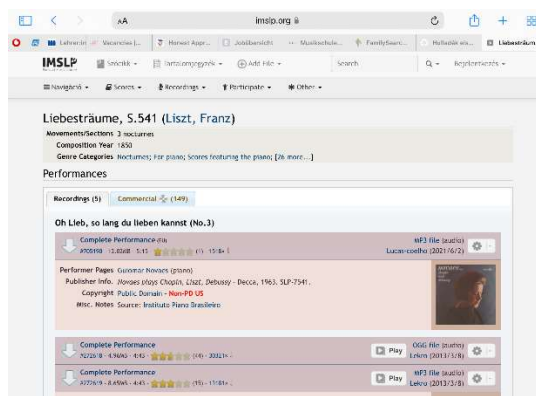


Figure 10. IMSLP

## forScore

*forScore* is an application for iOS/iPadOS/macOS, you can use it with subscription. You can organise your downloaded music, and you can add notes into the scores (fingerings, slurs etc.). If you have a digital pencil, writing into the score can be like in real life.

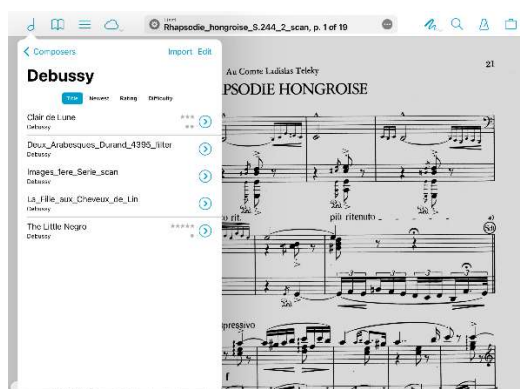


Figure 11. forScore

## THE TECHNOLOGY OF DIGITAL MUSIC EDUCATION<sup>2</sup>

In this chapter, I would like to discuss what kind of technology teachers and students need for digital music education, based on my own experience. We have to distinguish between hardware and software. Every device, application, and programme has advantages and disadvantages: the best choice depends on what we want to achieve.

---

<sup>2</sup> This section is aimed at the families who are able to spend reasonable amounts of money on technology. Its purpose is to help the parent choose sensibly from the existing range of options.





## Hardware and operating systems

In digital music education, the instrument will decide what hardware we need. We might need different devices for instrumental learning and for theory learning: maybe we need a desk and a laptop for studying the history of music, rather than a tablet and sound devices.

Laptops are handier than desktop computers, because they can be moved around, but we can find the place for both on a desk. A well-organised desk in a separate corner of the room can be a good place for the student to study theoretical subjects. But we have to create the best space for instrumental learning with the given instrument in mind.

A piano is not easy to move, so it's best to have some flexible, easy-to-move devices organised around the instrument. We can rearrange them for every situation if there isn't much room.

A desktop computer with Windows is usually not as flexible and easy to move as mobile devices (although every device can be used with some trade-offs). A separate webcam is indispensable.

Smartphones and tablets mostly differ in size for our purposes. A larger screen can be more practical for learning, teaching, and other work, especially if we have to write music. The most common devices have Android or iOS, but most of the apps are available on both platforms.

Android and iOS/macOS devices can be easier to use, but Windows can be better for score editors.

*Tip: The size of the screen is one of the important characteristics of today's devices; but you can also mirror your screen on a TV or connect your laptop/desktop PC with a cable. The easiest solution for an iPad/iPhone is an Apple TV (2013 and later with AirPlay), and a Chromecast for an Android.*





Figure 12. Apple TV



Figure 13. Google Chromecast

Minimally, a student needs a smartphone for digital education, so they can communicate with their teachers and access digital content. It is also practical to have a headset (earphones/headphones with microphone), because, otherwise, the sound coming out of the phone can go back into the microphone, which can make all sorts of problems for communication. If the cable is not long enough, you can also choose a wireless headset. There is a wide range of options for smartphones, but you need at least a medium quality device. Pay attention to securely holding the device with a smaller tripod! They can be even fixed to the edge of the piano – this can be the best position for digital education.

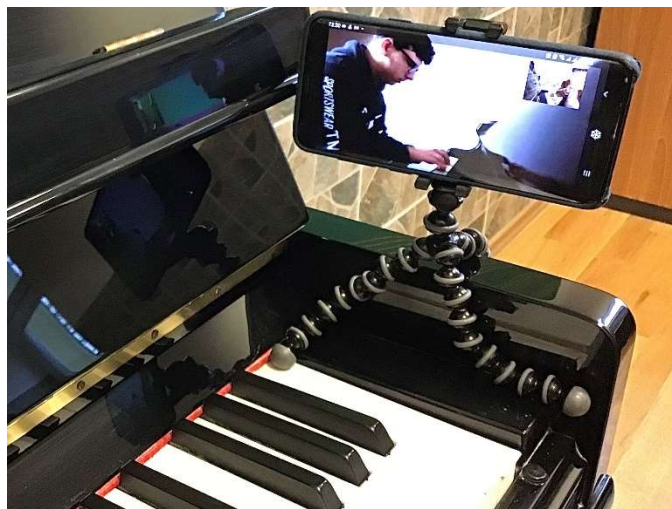


Figure 14. JOBY GorillaPod stand

## Recommended devices:

- smartphone mini stand: Joby GripTight ONE GP Stand Tripod or Hama Flex tripod mini selfie stand

*Tip: a bad sound quality often comes from the fact that the sound coming out from the speaker of the device goes back to the microphone. This can lead to feedback, or the in-built system can mute the microphone for a time, and the sound breaks up. So, it is best to use a headset for simple communication.*

You might also need an external audio card or a mixing board. With them, you can easily connect a digital piano or a guitar amplifier to the computer, and you can get studio quality. For an acoustic instrument (upright piano or other, e.g. wind/string instrument), you also need a good quality instrument microphone and a stand. You might also need a separate speech microphone and good quality headphones. For the speech microphone, a cheaper clip-on mic or a headset can be good choices. The right choice for the headphones is important not only for comfort, but also for the ear. After connecting the cables, you only have to connect the audio card or the mixer to the computer or the mobile device. For a smartphone or a tablet, it's best to have a stand/mount as well that you can set properly, so that you can see the teacher's video correctly. This can be a phone adapter fixed to a camera stand, or a tablet mount fixed to a microphone stand.

## Recommended devices:

- Digital piano: Yamaha P-45 or Roland FP-10
- Mixer and audio card together: Yamaha AG06 or Roland GO:MIXER PRO-X audio mixer for smartphone
- Simpler audio card: M-Audio M-Track Duo USB audio card
- Instrumental microphone: depending on the instrument, e.g. Shure SM57. Minimally: Boya BY-MM1 universal mini video microphone, which can be used for a smartphone.
- Microphone stand: König & Meyer boom microphone stand
- Clip-on speech microphone: Boya BY-M1 for smartphones or Audio-Technica ATR 3350x
- Headphones: Sennheiser HD 200 Pro
- Adapter/mount for mobile phones: Ulanzi ST-07
- Camera stand: Hama Star Pro 63
- Tablet mount for microphone stand: Soundking SIP105



- Cables: usually XLR-XLR cables for connecting the instrument microphone, and usually 6.3 mm jack-jack cable for connecting the amplifier or the digital piano to the mixer/audio card

(This is a list of devices I use and like. They can be replaced by any similar device which is available.)

- Let's see an example of how to connect a digital piano or a guitar amplifier in the best way! You'll need an external audio card to connect the instrument or the microphone to the computer or the mobile device.
- First, connect the instrument or the amplifier to the audio card or the combined mixer-audio card, usually with a 6.3 mm jack-jack cable.
- Then connect the audio card to the computer or mobile device with an USB cable – it usually comes with the audio card.
- Connect the headphones to the audio card.
- Now connect the speech microphone (e.g. a clip-on one) to the audio card with the right cable and/or adapter – it depends on the microphone.
- For a desktop PC, connect the webcam, too.
- If you want to use a different instrument (e.g. a wind or string instrument), the first step is to connect an instrumental microphone to the audio card with the right cable (usually XLR-XLR), and use the stand to set the microphone into the right position.

Video introductions for setting up a Yamaha AG06 and a Roland Go:Mixer Pro-X: please, consult the videos of this webpage section.

*Tip: You can also use a microphone equipped with a 3.5 mm mini jack cable with a TRS/TRRS adapter, because most Android phones can use a headset through the mini jack socket – a headset is head/earphones and microphone together. So, you can connect just a microphone through the mini jack. Note that this means only the microphone is connected to the smartphone, so you can't hear the sound coming out from the smartphones. This method works for recording, but not for communication.*





Figure 15. Rode SC4 adapter

Recommended device:

- Rode SC4 or BOYA BY-CIP

The quality of the internet connection is very important in digital music education. A videocall needs a bandwidth between 300 kbps and 1.5 Mbps, depending on the programme and the quality. In a conference call, it can reach 8 Mbps for download. You should test the real bandwidth of your internet: eg. at [www.speedtest.net](http://www.speedtest.net) (The following data are acceptable: ping under 25 ms, download above 10 Mbps, upload above 5 Mbps.)

If you have a problem during a video call:

- Close other programmes which use the internet (e.g. online music and video players).
- Stop or pause all downloads (e.g. torrent).
- If your wifi is weak, use a cable to connect to the modem/router, because it makes the connection better.

*Tip: On Windows, you can easily test the computer's speed. Press Ctrl+Alt+Del together, and start the Task Manager. On the "Processes" or "Performance" tabs, you can see the actual use of the processor, the memory, the disk, and the network. If any figure is close to 100% for several seconds, the computer will lag. The Task Manager also shows it on the "Processes" tab which programme causes the extra load and on which component. If you close the given programme, it can help reduce or alleviate the load.*

## Software

The development of software and current trends change quickly. Any introduction can become obsolete because of this quick change of the field.

After choosing the device and the operating system, the most important task is to choose the software for communication and learning/teaching. They can be sorted into three groups, but there are transitions between them.

- Software the school uses for administration and grading.
- Systems which support learning (Google Classroom, Moodle, Microsoft Teams).
- Programmes for communication (Google Meet, Messenger, Skype, Zoom).

The software used for school administration might be also used for uploading material, assigning homework, or official communication. But, these programmes are usually less flexible, and their primary purpose is not to support learning. It's better to use software expressly dedicated to supporting learning. Having online classes needs programmes created specifically for video communication.

The software used for school administration might be used for supporting learning if the student can precisely follow homework. If it doesn't work so, and in many other cases, it's best to use a system directly developed for this purpose (Learning Management System, LMS), so the student can access the materials for every subject. The best known such software are *Google Classroom* and *Microsoft Teams*. *Moodle* makes it possible to upload a greater amount of local material. There are other, similar open-source systems, eg. *Canvas* and *Ilias*.

One of the popular communication platforms is *Messenger*, many people use it every day. Thus, it's best if there is a separation between the student's communication with their teachers and conversations with friends. E.g. you can mute *Messenger* so classmates' messages don't disturb the lessons.

*Skype* can be used on every platform, even with an external mixer and a webcam, and you, presently, can have as many as 10 people together in a call. It has a function called *meet now*, which makes it possible to join a video call from the internet browser, without downloading and registering the programme.

*Zoom* also has a similar service, but the free version allows only 40 minutes of conference calls now. It's less practical to use other programmes which don't work on every platform, or need to be registered with a phone number, or can't be used for conference calls.

Video sharing platforms can be used in music education to share concert videos, for example. The best-known platform is *YouTube*, which you can use with a Gmail account. You can usually directly share a video recorded with a smartphone on YouTube by tapping on the share button. An advantage of this method is that the viewers don't have to download the videos, and it's also very easy to re-share them.



## MAKING A VIDEO RECORDING AND UPLOADING IT ON YOUTUBE

Sometimes it can be necessary for the student to record their singing/playing: maybe for an exam, or maybe just to record the current state of the piece. Here is a detailed description of this process:

1. Choose the best place to make the video. It's best if it's tidy and simple, so it doesn't draw the attention away from the performance. Dress appropriately for the occasion.
2. Use the right lighting – this is also connected to the place. Avoid back light (eg. a window in the background), use more light in a closed space to illuminate the topic of the video. Use extra lights if you can, optimally in a three-point lighting setup.



Figure 16. Ulanzi U200 vlogger rig

Recommended devices:

- Ulanzi U200 with a phone mount
- 2 pcs Yonghuo YN 300 Air or Ulanzi VL49

3. Choose the right angle for the recording: show the instrument and the hands of the performer. It's easier to make the recording using a stand for the recording device. Use landscape orientation, this is the general format for videos, except if you specifically want to make an Instagram video or a Facebook story.

*Tip: A mini tripod stand can be tremendous help even for mounting the device on the edge of the piano. It's useful to make a test recording and to check the video settings and the audio quality.*

4. Set your camera/smartphone or other recording device to an aspect ratio of 9:16 and at least HD quality – this is the generally used format. It's useful to make a test recording before the real one and to check the video settings and the audio quality. If you use a mixing board, and the sound is distorted, it might be overloaded. Lower the gain of the microphone on the board.

*Tip: An external microphone usually yields better quality. Use a TRS/TRRS adapter for the smartphone if you already have a good microphone.*



5. Record the video. You shouldn't do more than 3–5 takes for a piece in one go, because you can become too excited. It's better to have a rest or record something else. For longer pieces, record each movement separately if it's allowed.

*Tip: Remember to tune the instrument or prepare the reed before recording. For wind instruments, also warm up the instrument.*

6. Upload the video on your YouTube channel.

If you don't yet have a channel, do the following on a phone/tablet (adapted from Google's support material retrieved from:

<https://support.google.com/youtube/answer/1646861?hl=en>):

1. Open the YouTube app.
2. Tap the profile image  in the top right corner.
3. Tap Sign in.
4. Tap Create account .

On a PC, do the following:

1. Go to [www.youtube.com](http://www.youtube.com).
2. Click on Sign in in the top right corner.
3. Click on Create account.

If you already have a YouTube channel, tap the share button in the gallery of the phone (if you've made the recording with the phone), and choose to upload to YouTube. The other way is to tap the plus icon in the bottom of the YouTube app and upload the videos there.





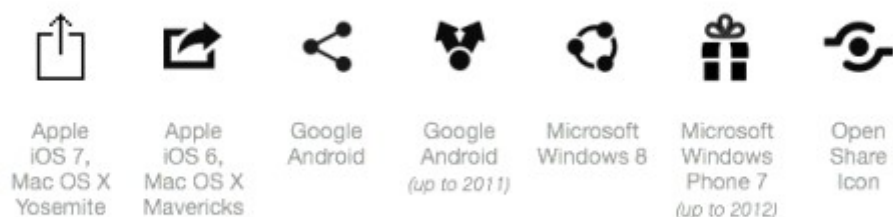


Figure 17. Share buttons in different systems



Figure 18. The bottom part of the YouTube app

It's best to name the video in a logical way: put the performer's name and the title of the recorded piece there (eg. András Suki – Bach: Italian concerto). Be careful about visibility: choose the unlisted/private setting so only those can see the recording who get the link. If you have more videos on YouTube, you can create a playlist of them.

*Tip: Unfortunately, there have been many problems when people didn't keep to YouTube's rules, and the platform removed their videos and channels. Such a break of rules was to show the ID card at the beginning of a video for university admissions. Be careful to avoid these mistakes.*

If you want to upload the video to your Google Drive, tap the share button and select Drive. But you can also upload videos there in the Google Drive app by tapping on the plus button.

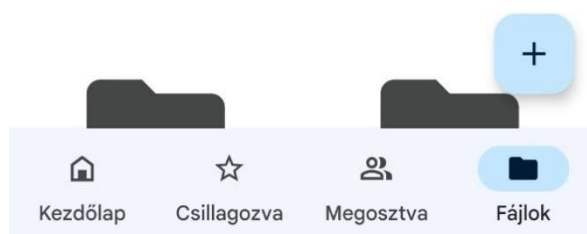




Figure 19. The bottom part of the Drive app

7. After uploading, you can share the link of the video or the playlist in Google Classroom or other platforms.



A playlist is a collection of videos that anybody can create (even together with others), edit, and share. You can also organise separate recordings into one list, not

only your favourite videos. You can upload the complete exam programme piece by piece, then you can put them on the same list and send them together to your teacher or the school.



Creating a playlist on a phone/tablet (adapted from Google's support material, retrieved from <https://support.google.com/youtube/answer/57792?hl=en-GB>):

1. Find the video you want to include in the list.
2. Tap Save  under the video. This automatically adds the video to the last used playlist, or the Watch later list. A window will pop up to inform you about it.
3. If you want to save the video in a different list, tap Modify in the pop-up window, select the right list, and tap Done .

Creating a playlist on a computer:

1. Find the video you want to include in the list.
2. Click on the Save  button under the video, then select the playlist or click on Create new playlist .
3. For Privacy, the setting Private means only you who created it can see the playlist.
4. Click on Create.

Creating a playlist from the Library  on a phone/tablet:

1. In the YouTube app, open the Library .
2. Tap on New playlist  in the "Playlists" section.
3. Select one or more videos from among your history, and tap Next.
4. Give your playlist a title and set its Privacy, then tap Create.

*Tip: In Google Classroom, upload the link under the Assignment so that it doesn't simply end up on the class stream.*

You can find further help and assistance on the internet to complement this manual.



# presto

