HAND MASS: IT'S SIGNIFICANCE IN PIANO PERFORMANCE†††

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Abstract

The art of piano playing is a complex learning process that requires careful study of the movements of the piano apparatus. The extent to which students use the masses of their hands correctly is the extent to which sound and technique change proportionately while playing the piano.

Teachers can achieve this goal with the help of game methodology, as well as using the application of modern technologies, such as the program "Ableton Live". With the help of the program "Ableton Live", using it in pedagogical practice, we will be able to visually see the graphical change of dynamic tones, which will help us (with the help of an electronic piano), visually see the change in the strength of the sound (note) from (0-127).

Thus, the relevance of the study is due to the theoretical and practical importance of the correct use of the mass of the hand in performing art on the piano.

Keywords: *the art of playing the piano, pedagogical practice, proper use of hand weight, exercises for each finger in both hands without touching the instrument, teaching methodology in game form.*

INTRODUCTION:

The importance of hand mass (hand weight) in piano performance has been studied and developed since the time of Bartolomeo Cristofori, who built the first piano in Italy in 1709. The very term "hand weight" or "weight playing" on the piano refers to the pianist's ability to freely use one's body weight while playing the piano (adding weight to the keyboard as needed, or conversely, lightening your touch).

It is very common for physical and emotional constrictions to become intertwined while playing the piano. This occurs when the pianist fails to properly distribute their weight in the keyboard. We can see how to properly use the mass of the hand and achieve the correct sound the art of performing on the piano in the works of such authors as:

E. Lieberman “Work on Piano Technique”, A. Korto “Rational Principles of Piano Technique”, H. Neuhaus “On the Art of Piano Playing”, I. Zolotova “History of Piano Art”, Sh. Apoyan “Armenian Piano Music”, C. Ganon “Pianist-Virtuoso”, V. Yuzefovich “Aram Khachaturian”.

To give an example from the works of the above-mentioned authors, A. Korto “Rational Principles of Piano Technique”, drew the attention of teachers to the necessity of correct sitting in front of the instrument. The normal sitting height, he believed, should be between 40-45 cm for an average player's height.

E. Lieberman's “Work on Piano Technique” repeatedly drew attention to the fact that the foundation of the pianist's technique depends on the feeling of contact with the keyboard, as well as sound production from the keyboard with the weight of the free hand. He believed that contact with the keyboard varies according to the nature of the music, tempo, dynamics and texture.

C. Ganon's “Pianist - Virtuoso”, in all 60 exercises, the two hands play the same notes on different octaves. Ganon suggested “lifting the fingers higher”, but at the same time not forgetting the freedom of the hands, so that they also work smoothly and synchronously despite the technical difficulties.

From the first notes of piano playing - from an early age in music schools, we teachers can facilitate the difficult path into the world of music. There are various pedagogical directions and methods to help the pupil to achieve hand liberation regardless of natural data, the ability to express himself in music with full command of his body.

It is also important in pedagogy for the student to feel joy in the process of learning to play the piano. The above is possible when the process of learning the mass of the hand in students is done consciously. The initial period of hand placement in piano performance in students is very important.

L. V. Nikolaev said: “A pianist's hands should be set in the same way as a singer's voice. The laws of hand placement cannot be individual for each pianist - they are common to all. They are based partly on the laws of physiology, partly on the laws of mechanics, and most of all on common sense and expediency”.

Heinrich Gustavovich Neuhaus wrote: “It is important to know practically that the anatomical structure of the human hand, which from the pianist's point of view is perfectly reasonable, convenient, and expedient, gives the richest possibilities for extracting the most diverse sounds from the piano”.

Anton Rubinstein said: “The piano is my favorite instrument, because it is a musical whole; every other instrument, not excluding the human voice, is only half of it”.

Teachers need to create that model, teaching methodology, of “Proper Use of Hand Mass”, in a playful way on the piano, so that it is accessible - to students of different ages, in music schools, colleges, as well as higher general music education.

We teachers need to compare and find out the weaknesses and strengths of the methodology, with the help of theoretical, practical lessons in musical institutions, and with the help of modern technologies - the program “Ableton Live”, to compare the result of the methodology, and how much the use of modern technologies will help us in the performing art on the piano.

PLAYFUL TEACHING METHODOLOGY

The methods of teaching in game form were conducted in three locations:

- Armenia, Yerevan - A. Spendiaryan Music School,
- Armenia Abovyan - Zare Sahakyants Music School,
- USA- Bellevue School of Music and Arts.

Pedagogical practice was conducted for students of different age groups, with thirty-five students participating in each age group:

- The youngest group of students is three to nine years old.
- The middle group of students ranges from ten to fourteen years old.
- The older group of students are eleven to sixteen years old.
- Students range in age from seventeen to sixty-five years old.

First, before starting the technique of teaching “Proper Use of Hand Mass” in a playful way with students, it is necessary for students to completely release their upper and lower body. Two chairs should be used for this technique. The teacher and the student sit opposite each other; it is very important that the height of the chair is such that their feet touch the floor, and the back of the chair supports the spine of the student and the teacher - while teaching.

Attention should also be paid to the distance between the teacher and the student. The distance should be such that the palm of their hands touch each other without unnecessary tension. It is also necessary to pay attention to the student's shoulders, so that they are free.

Next, the teacher asks the student to keep his (or her) eyes closed at this point in the training, to have the student place his (or her) hands in his (or her) lap, and to completely release the upper and lower body.

Students are usually very tense at this stage. This is noticeable by the fact that their shoulders are raised. Continuing the teaching process, the teacher tells the student to relax his (or her) upper and lower body, without opening his (or her) eyes. With eyes closed at this stage of instruction is more helpful for students to relax their upper and lower body than with eyes open.

Noticing that the student's shoulders are relaxed, not elevated, and have come to the correct position, (i.e., down), and sitting with a straight posture, the instructor tells the student that he (or she) may open his (or her) eyes. At this point, the instructor asks that the student take a deep breath and exhale. The instruction continues without getting up from the chair.

The teacher shows by example that the right hand should be on the right foot and the left hand should be free on the left foot. To find out what is the correct hand placement of the student, we can check it as follows. The location of the fingertips of the hands should be close to the student's knees.

The instructor, in his (or her) example, with his (or her) left hand raises the index finger of his (or her) right hand above his (or her) head without stopping, in a free fall, the instructor's right hand comes down on his (or her) right knee (looking at the first and second photo).

Photo (1)

Photo (2)

Before performing the same action for the left arm, the instructor asks the student what he (or she) noticed, after raising the arm above the head, during the free fall the arm fell quickly, or slowed down in the process before touching his (or her) knee? If they cannot answer this question,

the instructor repeats the same action until the answer is yes, which means that the hand falls on the knee without acceleration, and without deceleration, in free fall.

The teacher, having completed the method of “Proper Use of Hand Mass”, by example, can continue teaching the same scheme with the students. It is necessary to pay attention at this stage in the practical lessons that the hands of the pupils, when they are in a position above their heads, fall to the bottom, in free fall (without deceleration, as well as without acceleration).

The result of the research on the method “Proper Use of Hand Mass” is outlined below. In the younger group of pupils - from three to nine years old, during practical lessons, physical participation of the teacher was necessary. During instruction in the younger group of pupils, hand clenching was observed, in the process, when the hands were in a position above the head and lowered to the bottom.

To help the student release his (or her) hands, and perform the correct movement during instruction, the teacher in the process supported the student's hand when the hands were in a position above the head, also assisting him (or her), before when the hand was to come down in a free fall (without slowing down as well as accelerating).

In this phase of the study, the following questions were posed to the students:

Do their arms, legs, or shoulders move while they sleep?

Are their upper or lower bodies relaxed during sleep?

Can students monitor whole body movement when they are asleep?

In practical lessons in the younger group of pupils, the study showed us that asking the above questions helped them in that the pupils began to visualize themselves while sleeping, and at that time they were more relaxed, both physically and psychologically. The study showed us educators, that after the questions were asked, their hands went down in free fall (without slowing down as well as accelerating). The model of teaching took place in a more accessible way in a game form, (we can also give examples from the fairy tale “Sleeping Beauty” by Sh. Perrault).

The result of the research on the method of “Proper Use of Hand Mass” continues to be outlined below for the middle age group. In this group of students - ten to fourteen years old, during the learning process, in the practical sessions, the teacher only asked the above questions, but did not support the students' hands when they were in a raised state up above their heads.

The practice sessions with the middle group of students showed us that the teaching model needed to be performed several times with the hands in a position above the head - the movement was repeated until the students' hands came down to the bottom in free fall, without deceleration as well as acceleration.

The result of the research on the method of “Proper Use of Hand Mass” for the older age

group and for students of different age is outlined below. In the older group of students - from eleven to sixteen years old, as well as for students of different ages - from seventeen to sixty-five years old, showed us that during the learning process, in practical lessons, the teacher only asked the above questions.

In the practice sessions for the older group of students, and the students of different ages, the teaching model showed us that it was not necessary to repeat the movements several times, when the hands were in a position above the head, and the students' hands went down to the bottom in free fall, without deceleration as well as acceleration.

While continuing to work on the method of "Proper Use of Hand Mass", at this stage, we can also use the method of "Exercises for each finger in both hands without touching the instrument". The teacher and the student sit opposite each other; it is very important that the height of the chair is such that their feet touch the floor, and the back of the chair supports the spine of the student and the teacher - while teaching.

As a reminder, one should pay attention to the distance between the teacher and the student, the distance should be such that the palms of their hands touch each other, without unnecessary tension and pay attention to the shoulders of the student, so that they are free. The student and the teacher have their hands in their laps, in an open position so that they can visually see all their fingers in both hands, (look at the third and fourth photo).

Photo (3)

Photo (4)

The teacher using him (or herself) as an example, without raising the hands and fingers in both hands, raises only the first fingers (thumbs) in both hands to the top. The second, third, fourth and fifth fingers in both hands remain unchanged on their knees. Continuing our teaching, the pupil

repeats, according to the same scheme, the same movements made by the teacher.

At this point in the activity, we tell the students to visualize those fingers that remain on their knees and do not go to the top, to keep them unchanged and visualize as if the fingers were attached to their knees.

Following the same scheme, the teacher, using the same example, raises only the second fingers upwards in both hands (index fingers), but the lagging fingers - the first, third, fourth and fifth fingers - remain unchanged on the teacher's lap in both hands. Continuing our teaching, the pupil repeats according to the same scheme, the same movements that were made by the teacher.

In the same scheme, the teacher, using the same example, raises only the third fingers upwards in both hands (middle fingers). The first, second, fourth and fifth fingers in both hands remain unchanged, on the teacher's lap in both hands. Continuing our teaching, the pupil repeats, according to the same scheme, the same movements made by the teacher.

We continue the method, and according to the same scheme, the teacher, using the same example, raises only the fourth fingers upwards in both hands (ring fingers), but the lagging first, second, third and fifth fingers, in both hands, remain unchanged on the teacher's lap in both hands. Continuing our teaching, the pupil repeats, according to the same scheme, the same movements made by the teacher.

We continue the method, and according to the same scheme, the teacher, using the same example, raises only the fifth fingers upwards in both hands (little fingers), but the lagging first, second, third and fourth fingers, in both hands remain unchanged on the teacher's knees in both hands. Continuing our teaching, the pupil repeats, according to the same scheme, the same movements that were performed by the teacher.

When working with students on the method “Exercises for each finger in both hands without touching the instrument”, we teachers should not forget about their free sitting, i.e. shoulders should be in a natural position (pay attention that they should not be raised).

It is necessary to pay attention during training, when the fingers of students in the process are on their knees, and begins the work of simultaneous lifting the same fingers in both hands to the top (for example, the first), the rest of the lagging fingers on their knees should continue to be without movement, with relaxed muscles of the hands, as well as not strongly pressing the fingers to the bottom.

We, teachers, using the method, “Exercises for each finger in both hands without touching the instrument”, carried out in practical lessons with students as follows:

Practicing with the students was done at a slow rhythm, (i.e. finger movement, going up to the top slowly).

Practicing with the students was done at a medium rhythm (that is, the movement of the fingers, rising to the top not very fast and not very slow).

Practicing with the students was done in a fast rhythm (i.e. finger movement, rising to the top quickly).

The result of the research on the method “Exercises for each finger in both hands without touching the instrument”, in practical work with students of all group ages showed us teachers that it is better to carry out the method in a slow rhythm.

When the technique was conducted at a slow rhythm, the students were more attentive to the learning process. They could observe their movements. The students' posture was in a natural position, and the students were able to use the hand movements in both hands correctly. The muscles in both hands were not tense during the teaching process.

Practical lessons with pupils conducted in medium rhythm (i.e. the movement of the fingers were not very fast and not very slow) and in fast rhythm (i.e. the movement of the fingers were fast), showed us teachers that the muscles in both hands were tense, the shoulders were raised upwards, which made us aware of the pupil's improper posture, as well as the feeling of discomfort in the upper part of the body during training.

We can also, in the same method “Exercises for each finger in both hands without touching the instrument”, use another model of teaching in a game form. The teacher and the student sit opposite each other; it is very important that the height of the chair on which the student and the teacher sit is such that their feet touch the floor, and the back of the chair supports the spine of the student and the teacher - while teaching.

It is also necessary to pay attention to the distance at which the teacher and the student are, the distance should be such that the palms of their hands touch each other without unnecessary strain, and to pay attention to the shoulders of the student, so that they are free.

On themselves, the teacher brings his (or her) right and left hands close to each other so that the palms and fingers of the hands touch each other and are at the same distance (look at the fifth and sixth picture).

Photo (5)

Photo (6)

At this stage, the teacher opens the first fingers (thumbs) in both hands in different directions. Simultaneously, the thumb in the right hand moves to the right side, and the thumb in the left hand moves to the left side, while the other, second, third, fourth and fifth fingers in both hands remain in their places unchanged (without changing the initial position). Continuing in the same pattern, the student repeats the same movement.

Continuing the teaching according to the same scheme so that the palms and fingers of the hands touch and are at the same distance (without changing the initial position), the teacher opens his second fingers (index fingers) in both hands in different directions, the rest of the first, third, fourth and fifth fingers in both hands remain in their places without changes (without changing the initial position). Continuing in the same pattern, the student repeats the same movement.

Continuing the teaching according to the same scheme, so that the palms and fingers of the hands touch each other and are at the same distance (without changing the initial position), the teacher opens his third fingers (middle fingers) in both hands in different directions, the rest, first, second, fourth and fifth fingers in both hands, remain in their places without changes (without changing the initial position). Continuing in the same pattern, the student repeats the same movement.

Continuing the teaching according to the same scheme, so that the palms and fingers of the hands touch each other and are at the same distance (without changing the initial position), the teacher opens his fourth fingers (ring fingers) in different directions, the rest, the first second third and fifth fingers in both hands, remain in their places without changes (without changing the initial position). Continuing in the same pattern, the student repeats the same movement.

Continuing the teaching according to the same scheme, so that the palms and fingers of the hands touch each other and are at the same distance (without changing the initial position), the teacher opens his fifth fingers (little fingers) in different directions, the rest, first, second, third and fourth fingers in both hands remain in their places without changes (without changing the initial position). Continuing in the same pattern, the student repeats the same movement.

“Exercises for each finger in both hands, without touching the instrument”, were carried out

in practical lessons with the pupils as follows:

Practicing with students was done at a slow rhythm, (i.e. finger movements, opened in different directions slowly).

Practicing with students was done at a medium rhythm (i.e., finger movements opened in different directions, not very fast and not very slow).

Practicing with students was done at a fast rhythm (i.e., the movement of the fingers opened in different directions quickly).

The result of the research on the method "Exercises for each finger in both hands without touching the instrument".

In practical work with pupils of different age groups on the method "Exercises for each finger in both hands without touching the instrument" showed us teachers that it is better to carry out the method in a slow rhythm.

When the technique was conducted in a slow rhythm, the students were more attentive to the learning process and could observe their movements. The posture was also in a natural position, the students could use the arm movement correctly, and the muscles in both arms were not tense.

The model of learning slow rhythm was performed by the students correctly, the palms of their hands and fingers of their hands, were at the same distance, without changing the starting position, while opening in different directions only those fingers of the hands that were necessary during learning.

After learning the method, we can move on with our students to learning musical literacy and the piano keyboard. Further, when studying works of small and large form, in practical lessons we applied the method of "Proper Use of Hand Mass".

As we continue our studies, we can compare the result of the methodology, "Proper Use of Hand Mass", with the use of modern technology - the program "Ableton Live", and how much the use of modern technology will help us in the art of performing on the piano.

It's important to note that "Ableton Live" was the superior program to use for our purposes, we compared similar technologies and found that "Ableton Live" provides a clear visual of MIDI input data (velocity and pitch) without needing to composite multiple screenshots to show the midi data. Logic Pro X, Pro Tools and about 2 dozen other programs also show information in a similar fashion but Ableton Live is platform agnostic, working on both Mac and PC devices, and is easier to use than a program such as Pro Tools which requires a lot of niche knowledge of key commands to work effectively.

How to set up Ableton Live for Velocity Demo.

To use Ableton Live as a tool for velocity demonstration there are several required steps that

need to be taken in order to create an Ableton Live Set (.ALS file).

Open Ableton Live. By default, Ableton Live will load with 2 Midi Tracks and 2 Audio Tracks. For the purposes of this demonstration, we want to start by deleting one (1) of the Midi Tracks, and both Audio Tracks. After Ableton opens, press the shift key on your keyboard and select the tracks as shown in Photo (7) below and then press the delete/backspace key on your keyboard, or right click on one of the tracks and select the "Delete" option.

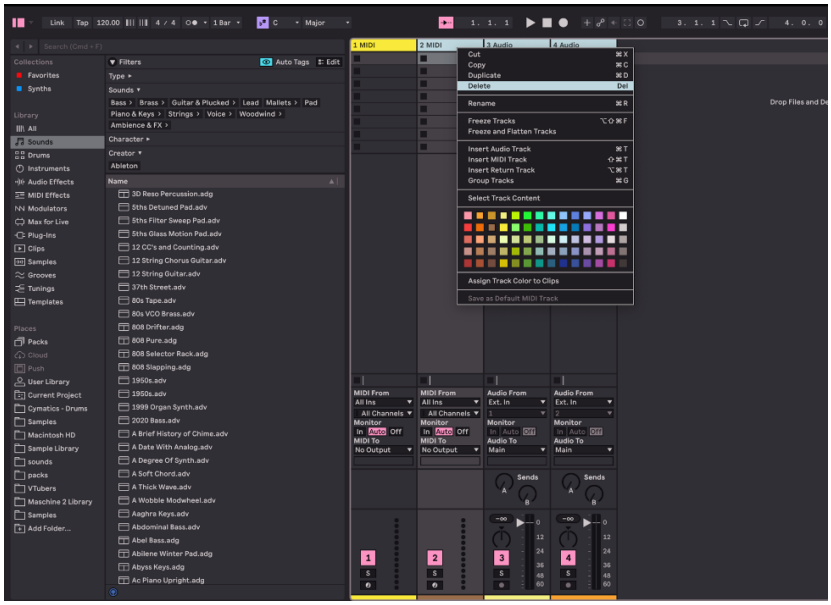


Photo (7)

Now that we have our lone midi track, we will need to add an instrument plugin so that we have a piano sound output for our midi input. Using the content browser on the left side of the window, navigate to the "Instruments" header in the leftmost column, and using the search bar at the top of the content browser type the word "piano". You will be presented with a list of all currently installed pianos (different versions of Ableton Live will have different pianos), we will use the "Grand Piano option" in this example. Double click on the "Grand Piano.adg" option or drag and drop it on to the midi track (yellow box on the right of Photo (8) below).

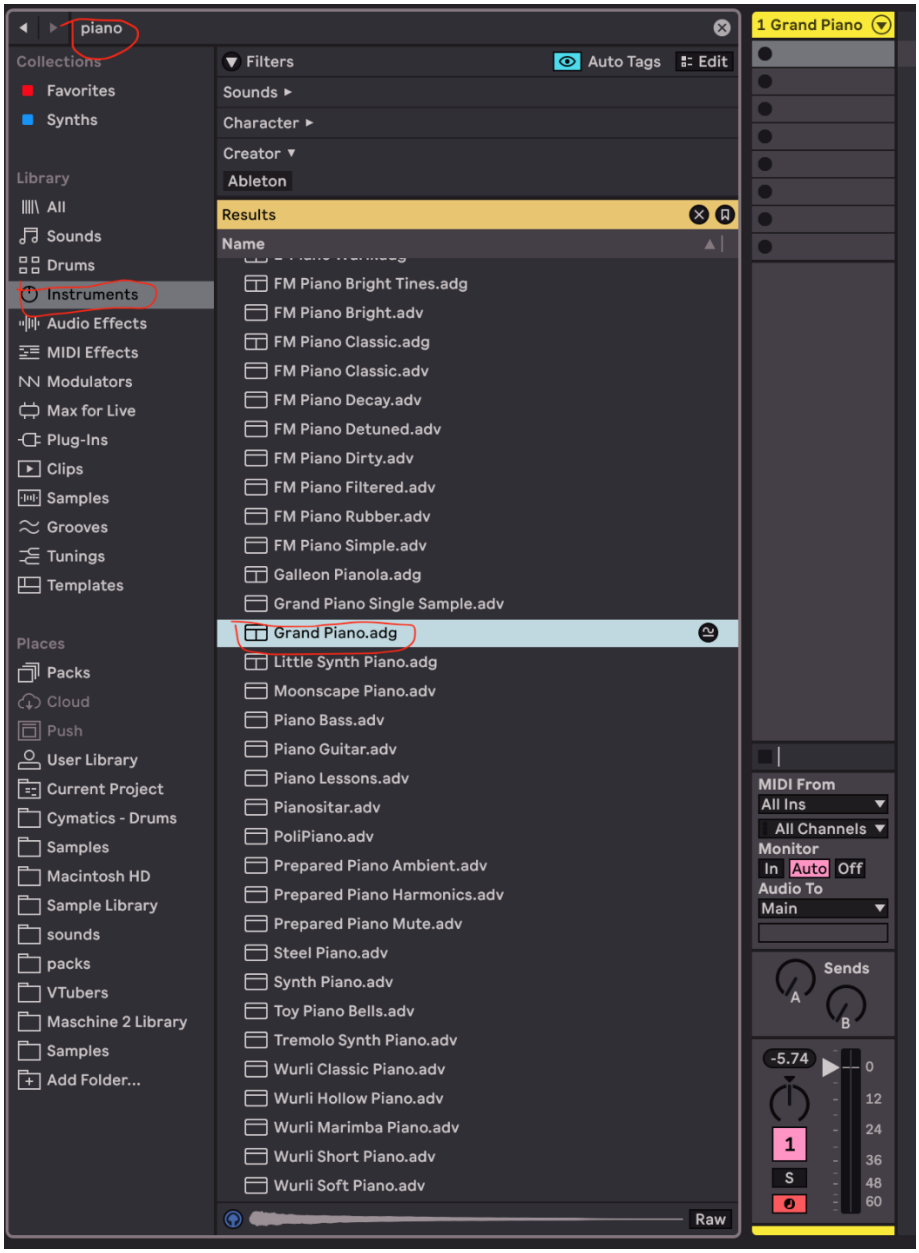


Photo (8)

The track name (text in the yellow header) will change to reflect the assigned instrument, in this case Grand Piano. Usually at this stage Ableton will automatically “Arm” the track, allowing it to accept MIDI input and generate an audio output. If you press a key on your input device and do not hear any audio, you may need to arm the track. In the lower right corner of the above image, you can see the number “1” in pink, and two additional buttons below that number. The lowest button, the red square with a small black circle in the center is the track arm button. If this button is not red like in the above image, click on it one time and it should illuminate. The track is now armed, and you should hear audio output.

Next, we will need to add a “Midi Effect” so that you are able to monitor MIDI inputs in real time. Again, using the content browser on the left of the window, navigate to the header labeled “MIDI Effects” and scroll down until you find an entry labeled “MIDI Monitor”. As we did with

the grand piano MIDI instrument, you will double click on this option to load it on to your track.

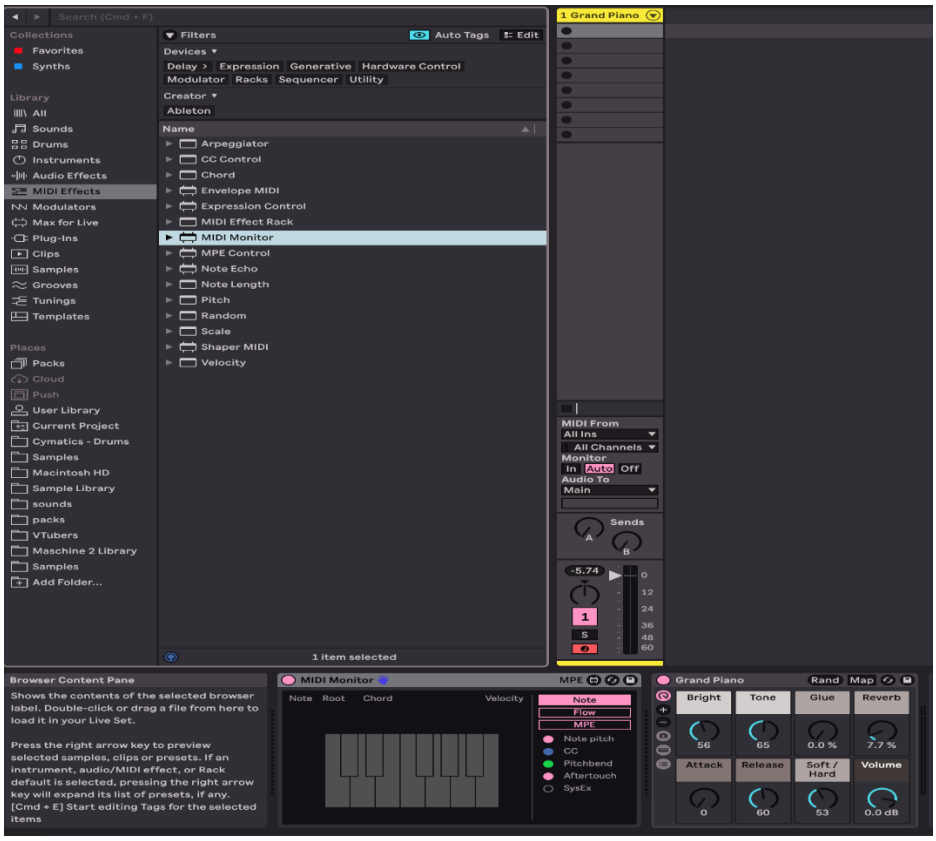


Photo (9)

Double check that the MIDI Monitor is functioning by playing a few notes on your keyboard, you should see the corresponding keys illuminate in the plugin window, as well as a real time display of the note being played as well as the velocity of those inputs. At this point the Ableton session is almost ready to go, but in order to review inputs we will want to press the “Tab” key on our keyboard to change Ableton from “Session View” (the view in all previous screenshots, to “Timeline View”. After pressing “Tab”, your Ableton window should look like the below. Once you have completed this step, you can save the Ableton file in the location of your choosing, and this file will be what you hand off to your students for the exercise.

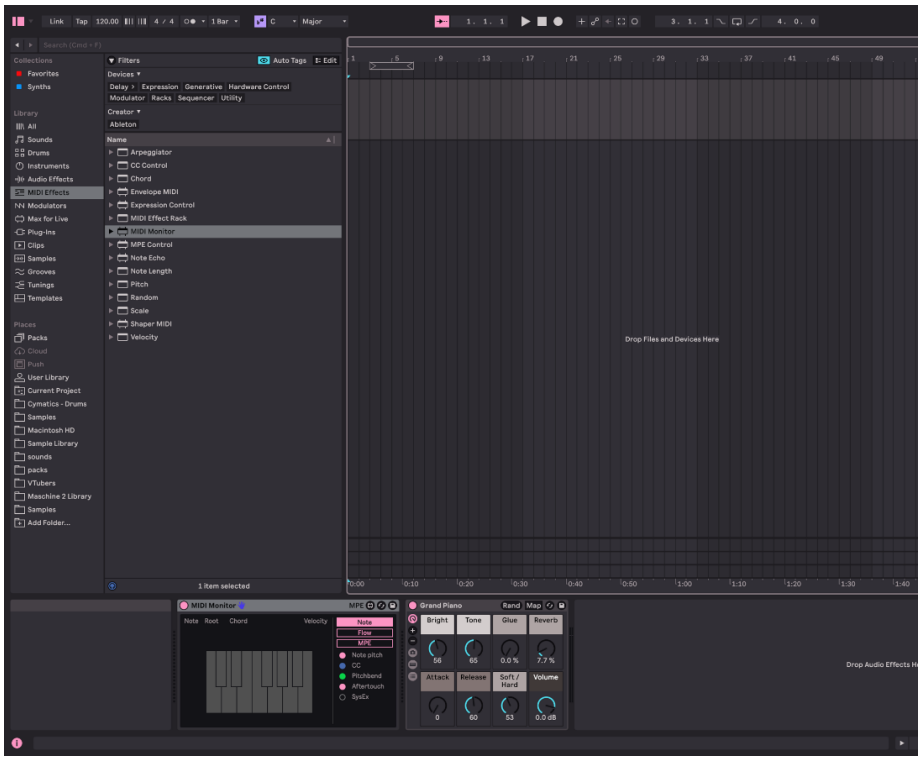


Photo (10)

Using the Ableton Live File for Demonstration

Find your Ableton Velocity Demo Project folder, double click it to open the folder. The folder will contain 2-3 items, the one we are looking for will be labeled Velocity Demo.als and look like the below screenshot (Photo (11). Double click it and the file will open in Ableton.

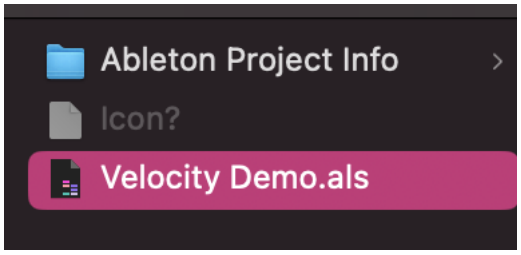


Photo (11)

Because of the set-up work we did in the previous steps the file should be loaded and ready for use in a live demonstration. Play a few notes on your keyboard and verify you are hearing the piano. From this screen the student will be able to clearly see what notes they are playing, and what velocity values are being assigned to the notes they are playing. When doing a real-time demonstration this is all the set-up that is needed. For demonstration of more than single notes, we will need to use the recording function in Ableton, which will show the notes and velocities for all inputs laid out against a timeline.

To use the recording function in Ableton, direct your attention to the upper center of the screen, where you will see “Playhead controls” (Play, Stop, and a black circle which denotes

"Record").

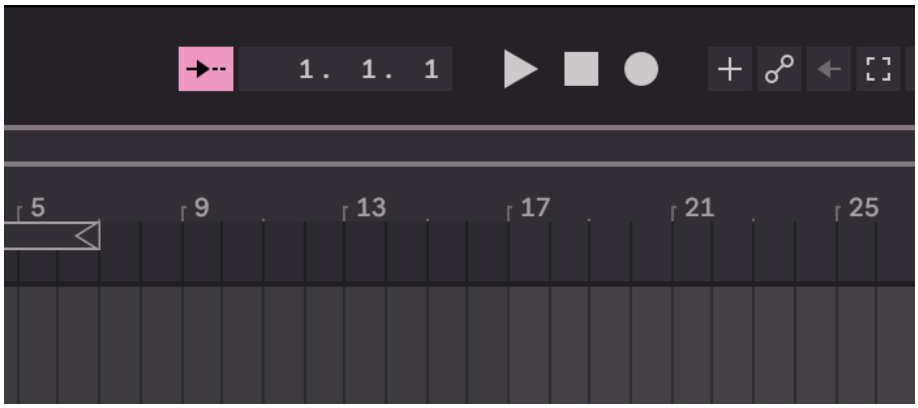


Photo (12)

If you click on the black (or in this case white) circle icon, Ableton will begin recording your inputs. After clicking the record button, it will turn red, and the play button will turn green, creating a "clip" on your timeline. All note inputs will be recorded in this clip and Ableton will continue to record. To stop the recording, press the space bar on your computer keyboard, or if supported, the record button on your midi keyboard. The clip will stop moving and you now have recorded MIDI information on your timeline.

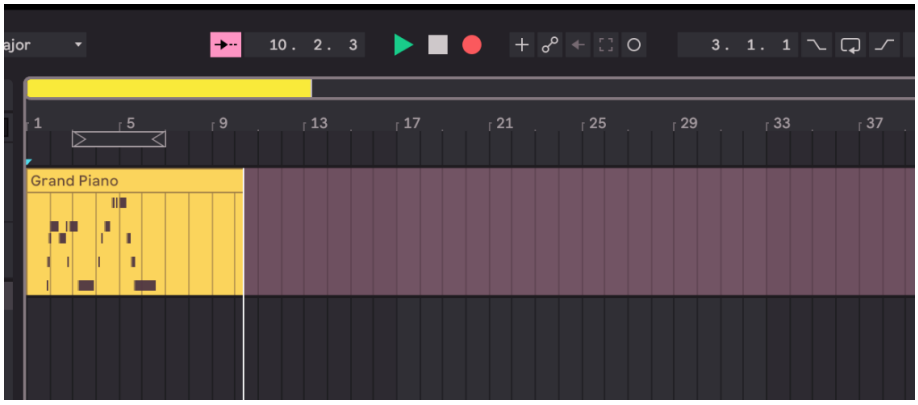


Photo (13)

10. To view the midi information, you will need to click on the name of the clip you just created. In the above example, you would double click on the portion labeled "Grand Piano", this will open the Note Editor shown in Photo (14).

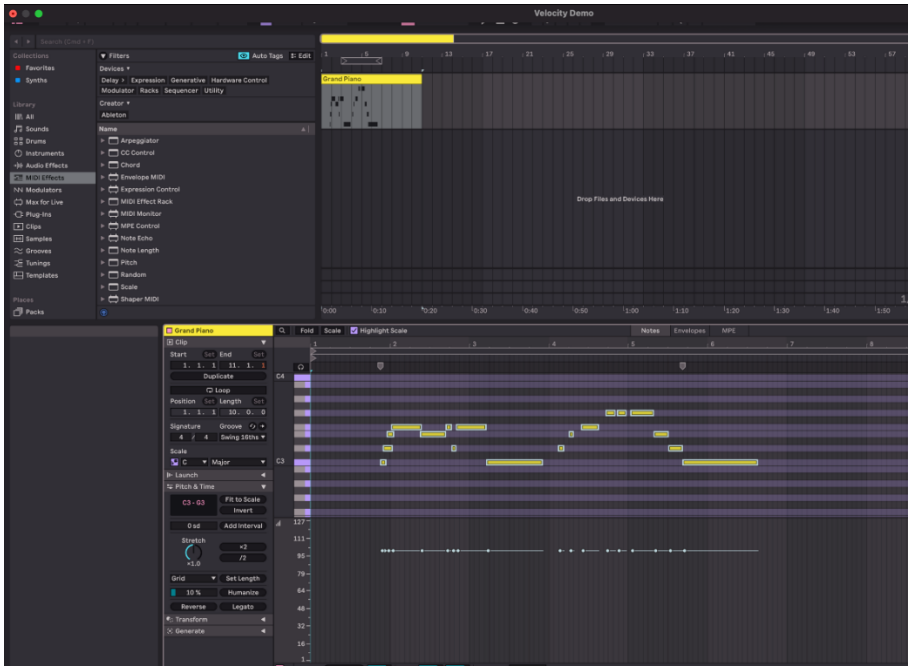


Photo (14)

11. This is the note editor view. The top portion of the window will show MIDI note values (pitch) while the lower half will show the velocity information (numeric values between 0 and 127). By pressing the space bar or the play button at the top of the window, Ableton will play back this recorded information. This view can be used to check the performance of the student against the assigned objective (playing Piano or Forte as an example). The higher the velocity value, the greater the intensity of the note, while lower values would correlate to softer playing.

If you are having your students record multiple exercises you can do all this within the same track. Select an open space to the right of the existing MIDI clip and you will notice a light blue highlight on the timeline. This denotes your “playhead position” which is where the next recording will start from. This can be repeated infinitely as needed. See the screenshot below for reference on what it looks like when the playhead has been moved. Note that Ableton will always default back to this position if you are using the space bar to start or stop playback/recording. If you use the square “Stop” button in between the play and record buttons mentioned in step 8, your playhead will move back to position 1.1.1. or the very beginning of the timeline. Ableton will record over existing MIDI depending on the playhead position, so be mindful of this when working with students so they do not accidentally record over their work. If work is accidentally recorded over, the standard Control + Z or CMD + Z (Mac) “undo” commands will revert to the pre-recorded state.

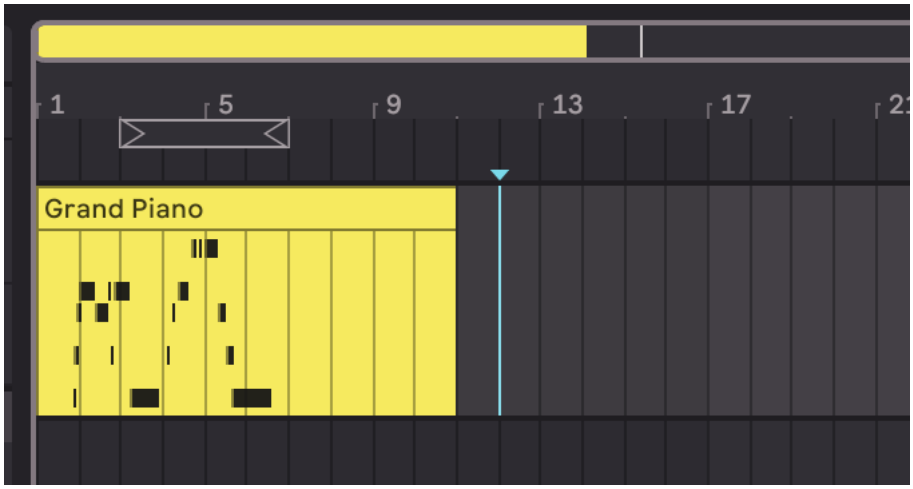


Photo (15)

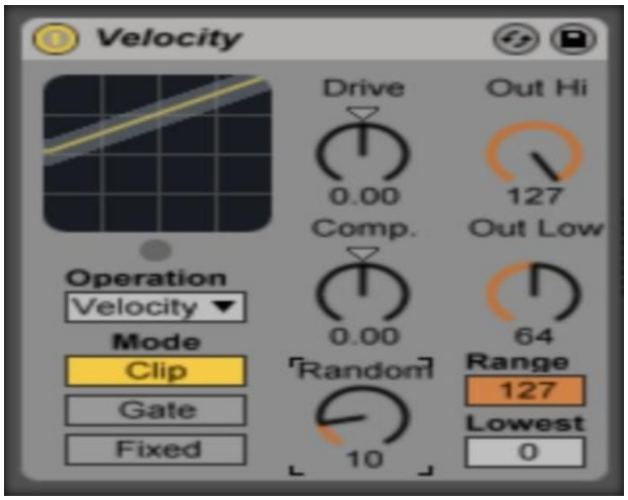
Pedagogical practice was conducted for students of different age groups, with thirty-five students participating in each age group:

- The youngest group of students is three to nine years old.
- The middle group of students ranges from ten to fourteen years old.
- The older group of students are eleven to sixteen years old.
- Students range in age from seventeen to sixty-five.
- The following works were done with the pupils during practical lessons:

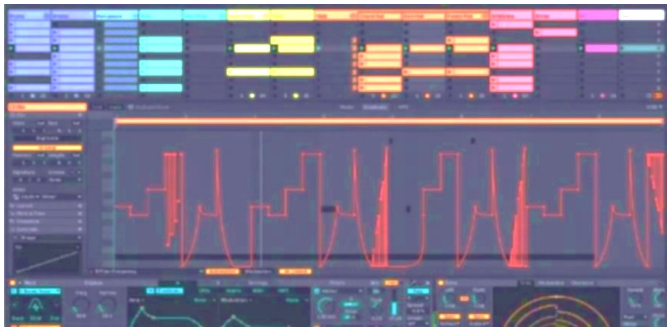
Kabalevsky – “Little Polka”,
E. Gnesin – “Etude”,
I. Philip – “Lullaby”,
B. Bartok – “Peasant Dance”,
L. Mozart – “Bourrée”,
Y. Slonov – “Polka”,
E. Grieg – “Forest Song”,
A. Corelli – “Sarabande”,
P. Tchaikovsky – “Waltz”,
A. Khachaturian – “Andantino”,
G. Handel – “Menuet”,
R. Schumann – “Soldier's March”,
C. Czerny – “Etude”,
C. Prokofiev – “Petya”,
A. Gedike – “Russian Song”,
L. Beethoven – “Sonatina”,
R. Gliere – “Rondo”,
R. Schumann's “First Loss”,
B. Bartok – “Piece”,
W. A. Mozart – “Menuet”.

The result of the study showed us teachers that it was very interesting for pupils to observe the change of sound strength with the help of electronic piano and “Ableton Live” program. Pupils visually saw how the range of sound strength (notes) changes from 0 -127 performing the above-

mentioned pieces.



"Ableton Live" Program

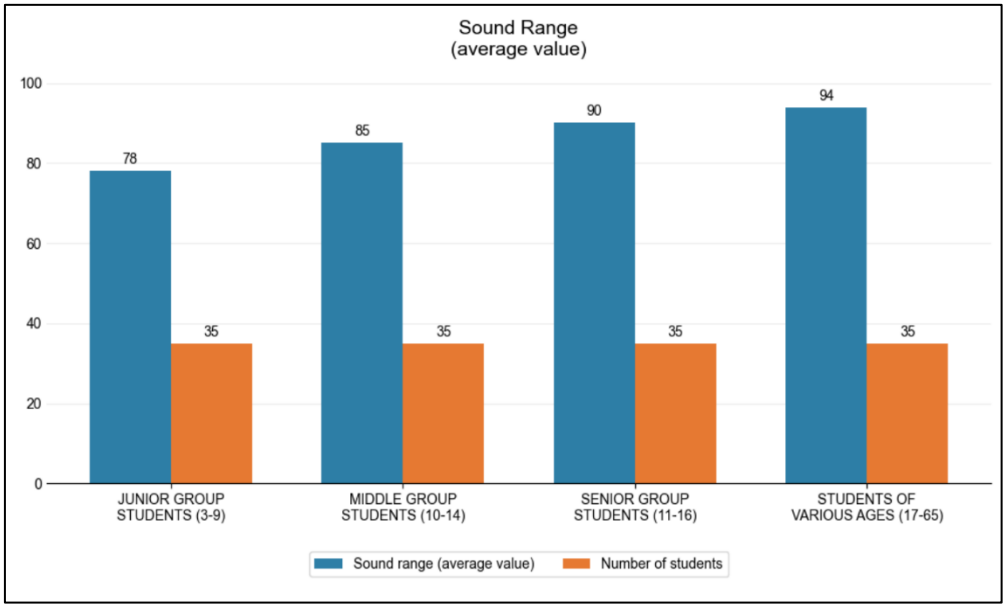


"Ableton Live" Program

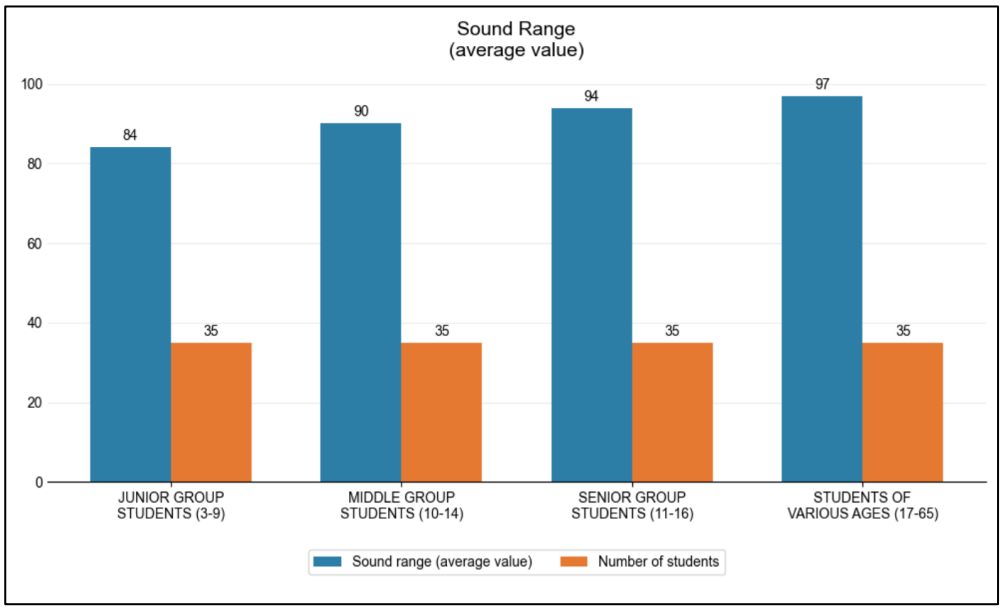
During the research process, we educators concluded that the outcome of the study was positive - for students of all age groups.

The students were taught in a playful way, with great interest. The students were able to observe the changes in dynamic tones in parallel, and they were also able to see the result of "Proper Use of Hand Mass" while playing the piano.

The result of averaging the sound range of the students using modern technology - the program "Ableton Live", as well as the methodology of "Proper Use of Hand Mass".



Sound range (average value recorded at the start of the study).



Sound range (average value after 8 weeks).

The result of the experiment shows a significant increase of sound range for students in all age groups after 8 weeks of practicing the “Proper Use of Hand Mass” methodology.

The students understood and were able to express dynamic nuances. They were able to convey the fold of the composition, the lines of development, the climax, and to express the message to be conveyed in the content of the above works.

We educators compared the result of the study - before teaching the methodology of “Proper Use of Hand Mass” and the program “Ableton Live”, and after its’ training, and concluded that by examining in the same students in all age groups - the result before the training was negative:

Pupils performed works of small and large form with their hands not free.

Students were unable to express dynamic nuances.

The pupils were not sufficiently able to express the climax as well as the thought to be conveyed in the content of this piece.

Pupils did not cope with the technical challenges that arose during the performance of works of small and large form.

CONCLUSIONS

In the beginning the result of the initial study showed us that with the help of the method, "Proper Use of Hand Mass", and the "Ableton Live" program, the students felt more confident when playing piano in small and large pieces. Also, when performing small and large works with free hands, the students were able to organize and hear the compositional intent of the piece at a higher level.

Pupils also managed to move smoothly (without technical difficulties) from one musical structure to another musical structure in works of small and large form.

After 8 weeks, the result of the studies showed us teachers that with the help of the method "Proper Use of Hand Mass", and the "Ableton Live" program, students not only gained hand freedom in the performance of small and large works, but also regularly using the "Proper Use of Hand Mass" methodology, as well as the "Ableton Live" program, helped the students to independently follow the changes in sound strength. In the performance of works of small and large form, the students were able to reproduce, finding the appropriate dynamic tone much more easily.

They were able to independently analyze and follow the process of their work. It was also noticeable that the students improved the physiological position of the hand, hand placement, strength and dexterity of the fingers. By using an electronic piano and the program "Ableton Live", which allowed to record and graphically track changes in the force of the sound, (or the mass of the hand), students were able to hear and visually see their weaknesses and strengths. There was a noticeable improvement in these following techniques:

Performing trills,

Scales,

Arpeggios,

Double notes,

Chord technique,

Wrist technique (horizontal movements, vertical movements)

Students spent more time on the instrument, working on the tasks that needed to be done in order to be able to convey the artistic intent of the piece.

The long-term use of the combined “Proper Use of Hand Mass” methodology and “Ableton Live” program opens up unique advantages when performing on the piano for students of various ages. Giving students a greater opportunity to play music of varying difficulty and genre.

H. Neuhaus “He who is shaken to the depths of his soul by music and works like a man possessed on his instrument, he who passionately loves music and the instrument, he will master virtuoso technique, he will be able to convey the artistic image of the work, and he will be a performer”.

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