

New Methodologies for Teaching Trumpet and Music Theory to Children in Basic Courses

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Abstract

The recent regulation of the Italian Conservatories have finally established and activated "*ad hoc*" courses aimed at the didactics for the youngest students (ages 5 and up) named "Basic Courses". The main aim of these training courses is to introduce students to music and get them to study it from the earliest age and to provide them with the fundamental bases of the instrument. It has been seen that the exposure of children to the study of music produces benefits in lots of fields such as the socio-familiar one (stimulating social interaction, cooperation, etc.) and the educational-training one (stimulating the memory, creativity, auditory perception, ability to listen, expressive capacity, movement coordination, sense of rhythm, etc.) Unfortunately, it happens, in the vast majority of cases that requests for attendance at these courses are directed toward the study of "best known and tested instruments for this age group", such as piano, percussions, violin, flute, etc. Lots of the most feared instruments, such as the trumpet do not see suitable participation. The reasons related to this issue may be of various kinds: 1) difficulty for younger students to approach to the study of the instrument; 2) lack of visibility and spread of the instrument; 3) limited instrumental repertoire; 4) shortage of methods and suitable books for the teaching of the instrument; 5) lack of knowledge of suitable tools for the support of children's didactics, to avoid physical problems caused by the excessive weight/size of the instrument and from the early studying of it; 6) shortage of properly prepared teachers, educational and methodological practices for the youngest ones. The main target of this project consists of stimulating and encouraging teachers to re-evaluate the teacher's role by experimenting with "new" inclusive teaching methods focused on playing and on cooperative learning. The methodological approach to each activity must be playful and must promote 1) dynamics of musical thought; 2) creative process, elaboration, and improvisation; 3) integration and inclusion; 4) metacognition and critical sense; 5) the construction of an imaginary path that may combine every day, the unusual, the traditional and the innovation; 6) the development of a proper basic approach for the trumpet practice [breathing, sound emission, posture, balance, etc.] this path will stimulate students curiosity and bring them to study the trumpet from an early age, channelling them to proper training courses.

Keywords music theory; trumpet practice; creative processes; cooperative learning; social inclusion

Introduction

After the Reform implemented by Law 508/99 “Reform of the Academies of Fine Arts, the National Academy of Dance, the Academy of Dramatic Art, the Higher Institutes for Artistic Industries, the Music Conservatories and the Music Institutes of the Equal Classes” the Conservatoire, on the basis of Article 2 of the same law, which refers to Article 33 of the Constitution on autonomy has opened up musical training in Italy also for Primary School students, through the so-called “Basic Training Courses” or “Pre-Propedeutic Courses” which, although not yet institutionalised, allow those who wish to enroll in the propedeutic courses to prepare themselves adequately for the entrance exam. What has happened, which has already existed in the rest of Europe for some time, is certainly a great novelty for musical training in Italy.

Basic courses are also open to students over school age who wish to start from scratch on a musical training pathway for reasons not necessarily related to professional training and who wish to enroll on free instrument courses without being obliged to take all the complementary subjects related to them. In the Basic Courses, students are led to acquire the knowledge related to the first two years of solfeggio in addition to the elementary knowledge of the instrument.

The teaching offer is based on the principle of collective learning of the musical subject.

The training areas covered during the course can be divided into five:

- 1) perceptive area: development of skills relating to sense-perceptive functions;
- 2) rhythmic-motor area: knowledge and experimentation of bodily possibilities and development of rhythmic skills;
- 3) melodic-harmonic area: awareness and deepening of the sound possibilities of the voice and the use of melodic instruments;
- 4) listening and analysis area: promotion and development of critical and analytical skills;
- 5) instrumental and vocal practice area: acquisition of skills related to instrumental and vocal practice.

1. Objectives, skills and methodologies in Music Theory – Basic Courses

With regard to the 2-year music theory and solfeggio courses, students are able to tackle simple and compound tempos as well as simple sung solfeggios without modulations. In addition, an eight-beat test of non-modulating melodic dictation and the recognition of chords and harmonic and melodic intervals within musical structures or semi-structures is provided. The Basic and Propedeutic Courses, precisely because of their nature and the variety of users they cater for, in order to update the training offer and to attract school-age students, have implemented new teaching methodologies that enrich the learner by including special attention to the following activities:

- The use of new technologies to aid teaching (synthesisers, sound synthesis softwares, metronomes, loop stations, online rhythmic programmes, metronomes, intonators and simulators, real books);
- The study of embellishments in relation to existing musical repertoires;
- The use of historical ancient and contemporary musical repertoires instead of the classical spoken and sung solfeggios that were tackled previously, and which often proved to be stylistically far removed from the actual practice of vocal and instrumental musical repertoires;
- The broadening of musical repertoires (enhancing all repertoires, including jazz, ethnic, pop and contemporary classical music);
- The reference to the practical study of the instrument, with regard to solfege and music theory;

- Education of the melodic and harmonic ear through frequent practice of sung solfeggios in two voices;
- The implementation of the spoken word to solfeggio and rhythmic in relation to music and singing;
- The elimination of mechanical note division in the spoken reading of solfeggios;
- The deepening of the execution of musical phrasing and phraseology as an integral part of musical speech;
- The generation of melodies aimed at melodic dictation and sung solfeggios from Markovian chains, Artificial Intelligence algorithms and Deep Learning (through applications developed on Max/MSP);
- Overcoming the net conception between musical parameters;
- Education in the intonation of micro-intervals;
- The introduction of elements of musical acoustics;
- Rhythmic dictation and two-part and multi-part rhythmic solfeggios;
- The introduction of elements of word processing (Finale or Sibelius);
- The use of technologies and methodologies favoring musical learning in users with learning disabilities, dyslexia or syndromes linked to the autistic spectrum;
- The use of musical bases for solfeggio and dictation (technology implemented and improved following the integrated and distance learning experiences during the lockdown).

1.1. Supporting teaching in the Music Conservatories

For decades, primary and secondary schools have tackled the issue of assisting all types of educational problems with support teaching and with the figure of educators, guaranteeing learning for all schoolchildren and increasingly refining the integrative instruments of support and assistance to the learner. It is only recently, however, that AFAM institutions, equal to the university, have addressed the issue of equal guarantee to all students, including those with disabilities or with different types of learning. Dyslexia, in fact, is a very frequent situation even in university or higher artistic education and is often difficult to detect except following specific tests. While in compulsory schooling, however, the issue has begun to surface, in the academic or pre-academic sphere there has not yet been an adequate legislative accommodation to address the problem, all the more so bearing in mind that musical training, unlike purely university training, requires early and constant study on the part of the student and considering that music in itself performs in some cases a therapeutic and formative function that does not necessarily imply professional artistic training. Unlike university faculties, in fact, Conservatories do not only take in students who have completed secondary school. What is more, the Conservatories of Music, unlike the Academies of Fine Arts, take in primary school students from the age of 7, due to the very nature of music studies, which require a 10-year study period to complete the study of the instrument or compositional subjects in a professional manner.

1.2. Development of specific skills through methodological reforms

In order to be able to read music fluently, in fact, two distinct skills must be developed in parallel: the rhythmic skill that develops the ability to read figures of duration and the melodic skill that leads to reading the staff, but above all develops the ability to read by intervals. Furthermore, it is fundamental to develop in the learner the ability, already present in word reading, to anticipate or predict the next note, or the next group of notes, and that of immediately identifying entire structures of musical phrases such as scales, arpeggios, progressions or successions of equal intervals, in order to speed up reading and immediately tackle the analysis of simple musical pieces at first sight.

Melodic ability, in fact, developed immediately in the basic courses, allows one to inwardly hear the notes and reproduce them with the voice.

The methodological reforms stipulate that in the Basic Courses rhythmic skills are developed through the production of simple rhythmic phrases from words and verses. This, however, does not mean that one should only arrive at melodic reading after having tackled all the difficulties related to single or multi-part rhythmic solfeggio. On the contrary, the two parts of the course should be pursued in parallel, alternating lessons on rhythm with lessons on singing over the course of an hour and a half or so.

Of course, the progressive order of the topics is indispensable, as is the alternation and integration with the classical and progressive texts of spoken and sung solfeggio (Pozzoli and Manzi method). Sometimes it is essential to classify rhythmic cells and phraseological structures and identify variations in them, in order to be able to predict rhythmic-melodic trends in the reading. Examples: simple and dotted rhythmic cells, rhythmic constructs with and without subdivisions, variations and transcriptions of melodies from simple to compound tempos and vice versa, etc.

In some cases, the sequence of melodic-rhythmic texts taken from the repertoire is only one of the possibilities provided. In fact, it is important to be able to vary the presentation of exercises containing different movement units other than the semiquaver or the minim. Similarly, in contrast to the old methodologies, it is desirable to introduce sung solfeggios from the repertoire in keys other than C major or A minor as well as to introduce the ancient modes immediately, if not also some non-European melodic modes.

1.3. Exercises for skill development

Suggesting these different sequences of melodies and rhythmic combinations is undoubtedly the instrumental repertoire or jazz repertoire from the real-book. In addition, more emphasis is placed on the melodic material through in-depth solfeggiated and sung reading of the studies that the student delves into during the instrument study hours, in order to make the old solfeggio, a practical and workshop subject directly related to the requirements of instrumental study.

Valuable exercises are still those related to the mental reading of the score as a whole and the development of the ability to read at first sight, which allows the learner to immediately discover the major difficulties related to rhythm and intonation of intervals, if not also to the precise subdivision and perception of the metre and musical phraseology, in order to deepen the study of certain aspects in particular and to perfect the reading.

Exercises prepared with the aid of video writing and rhythmic and polyrhythmic loops also allow the learner to assimilate and train the indispensable ability to anticipate notes or entire musical constructs in the reading.

The identification of syntactic-musical constructs enables the student to grasp sets of notes rather than single notes and thus to speed up and refine rhythmic reading, thus bringing musical reading closer to that of a written text.

In order to best read a melody, it is also required to play the first and last notes on the instrument but to close the instrument immediately afterwards, so that the melody can be sung in mind with the correct phrasing before performing it. In order to avoid reducing the performance exercise to the mechanical repetition of what the instrument plays, one therefore avoids having the entire piece to be sung performed on one's instrument. However, it is a good idea to get the student used to checking the intonation of the last note with it in order to refine the melodic playing exercise.

Fluidity of sound is also an indispensable requirement of any good musical performance. It is therefore necessary, through rapid and expressive reading techniques, to maintain the continuity of the voice during both spoken and sung readings, thus avoiding marking

subdivisions, which was common in the past and which made solfeggio's reading so distant from instrumental performance.

Another thing required of the student in the basic courses is to learn to avoid stopping and correcting themselves when they make mistakes, going backwards in their reading. The aim is to immediately accustom the learner to avoiding jammed and tiring reading as much as possible. To do this, it is indispensable to identify the wrong step and repeat it several times, trying to make them understand the mechanism and the reasons of the error.

Finally, it is necessary to repeat all the exercises considered at different speeds with the use of the metronome and to grasp the different expressive effects depending on the speed of execution.

Each notion is proposed moving from practical, vocal, musical and listening experiences.

The aural culture exercises, almost completely absent before the methodological reforms, are based on audio-perceptual education and serve to distinguish and recognise musical facts audibly and to fix them in the mind before learning to read them.

Dictation is a gradual exercise that starts with the recognition of intervals and arrives at the recognition of a repertoire melodic phrase, passing through more or less symmetrical phrase structures. The exercises in the keys have the mere function of teaching reading by intervals, before identifying all the notes on the staff.

The single and multi-part rhythmic and melodic readings are taken from the instrumental and vocal repertoire of every historical period from the Middle Ages to the present day. Using an anthology of authors from the Western tradition and ethnic music is, in fact, the basis on which the musician's preparation is built. Furthermore, these repertoires constitute an immense "data bank" of themes that can be used to construct variations or rhythmic-melodic dictations, which will also serve the student in the years following the basic and propaedeutic preparation.

Absolutely indispensable are then the improvisation exercises on styles and rhythmic-melodic cells, inspired by the Orff methodology, which allow the student to memorise in an active and creative manner the musical graphic signs and the main rhythmic-melodic constructs that will be identified from time to time in the repertoire.

Not least is the exercise of rhythmic and melodic ensemble readings because they are preparatory to collective musical activity and the exercise of synchrony. Undoubtedly, such exercises must be supported by a fruitful and focused listening of short musical pieces that contain the difficulties encountered and at the same time illustrate the main theoretical concepts.

1.4. Application of new technologies in teaching

In connection with the application of new technologies in basic music education, it is also possible to make use of software for ear training, such as PymMusic for microtonal performance and intonation of Middle Eastern maqamats (Willems method), OpenMusic, Percussion Studio 3, and generate codes with object-oriented programming through Max/MSP for the creation of oscillators that, by controlling the pitch of pitches and harmonic and melodic intervals, guide the student, also through midi interfaces, in the reproduction of musical cells and fragments.

PymMusic makes it possible to draw the melodic line as if it were a line and to visualise the micro-divisions of the interval, thus stimulating education in the smallest interval differences even below a semitone. The differentiated color of the notes that make up the intervals also helps dyslexic students who inevitably reflect this learning disorder also in their music reading, impairing their ability to read at speed. OpenMusic, thanks to its functionalist

conception of music and note sequences, helps to visualise melodic and musical structures effectively and to apply computational thinking to music. Percussion Studio 3, on the other hand, proves to be a creative guide to the construction of polyrhythms, allowing complex rhythmic structures to be reproduced, assimilated and intuitively heard through production. Lastly, Max/MSP, thanks to its extremely intuitive interface and block programming, makes it possible to generate sounds, frequencies and rhythmic sequences by relating them to each other and helping students to understand the musical phenomenon by creating it starting from its fundamental components: the sound, the harmonics it contains and the melodic (understood as directed segments) and harmonic (understood as patterns) intervals between the sounds that compose them.

2. Objectives, skills and methodologies in Trumpet – Basic Courses

With regard to the study of performance practice and interpretation on the instrument, the basic courses, which can be considered as the “cradle” of the propaedeutic courses and the first and second level academic courses, have the primary objective of providing the student with the first fundamental foundations of the instrument. Access to the basic courses generally does not involve any selection or aptitude test. The purpose of the entire course is in no way selective but rather inclusive, assuming that the educational and training value of music-making should be considered first and foremost as a right and an irreplaceable opportunity for growth from all points of view. It is aimed at providing a first solid musical training with a twofold purpose:

- 1) to offer a fundamental educational opportunity;
- 2) to gradually introduce the acquisition of the musical content and skills required for access to the AFAM pathway.

In particular, with regard to the study of the trumpet, we start with the setting with the setting (breathing, sound emission, posture, balance, etc.) and aim to deepen these primary factors that are fundamental for the correct development of instrumental technique. Subsequently, the first technical/melodic and repertoire studies will begin.

2.1. Specific learning objectives and application methodologies

At the end of the course, students acquire the following Specific Learning Objectives:

- relationship between gestures and sound production;
- use of notation systems and a gradual familiarity with fundamental morphological musical notions (dynamics, timbre, rhythm, metrics, agogics, melody, polyphony, harmony, phrasing, etc.);
- essential study and memorisation methods;
- basic knowledge of the history and technology of the instrument used;
- mastery of the essential elements of instrumental technique.

The instrumental course must provide for the use of differentiated teaching methodologies to best accommodate the student's 'talent' and direct it towards professionalising perspectives. The methodological approach to each activity must be playful and must promote 1) dynamics of musical thought; 2) creative process, elaboration, and improvisation; 3) integration and inclusion; 4) metacognition and critical sense; 5) the construction of an imaginary path that may combine every day, the unusual, the traditional and the innovation; 6) the development of a proper basic approach for the trumpet practice [breathing, sound emission, posture, balance, etc.] .

The literature provides us with a large number of methodologies, including:

- Bruner's scaffolding teaching: development of intuitive thinking and learning by problem solving (the student must ask questions, not learn answers) allows, through the help of the teacher (Tutor), to solve problems related to learning;
- Spiral teaching allows new knowledge to be put into practice on pieces already acquired in the repertoire (starting from concepts familiar to the student, progressing towards other knowledge);
- Kodaly didactics: allows the development of the ear and the acquisition of a vocally related musical expression;
- Bloom's didactics: Mastery Learning enables everyone to achieve mastery in the subject through aptitude and perseverance;
- the didactics of Fergus McWilliam: development of basic skills for self-study through self-listening and kinaesthetic sense.

During the course of study, activities can be planned for the development of vocal characteristics, breathing, musical ear and melodic phrasing:

- Exercises relating to posture, gestures and breathing;
- Exercises relating to sound production;
- Exercises relating to vocality, exercising the musical ear and developing musicality.

Exercises related to breathing develop the control of facial muscles and the correct use of air for playing. These exercises, like those related to correct posture, improve the emission of sound and its beauty.

The exercises related to lip vibration must be performed with the mouthpiece of the instrument in order to focus the study on breathing and the lip area. They are very useful exercises for warm-ups and can be accompanied by audio backing tracks or the piano to improve the intonation of the notes produced.

Exercises related to the production of harmonics with the trumpet are fundamental for strengthening the acquisition of adequate flexibility and mastery of the instrument.

Exercises related to vocality, the exercise of the musical ear and the development of musicality make it possible to develop musical expressiveness, to acquire the ability to breathe musically within phrasing, and to develop the musical ear, i.e. the ability to hear and differentiate the different pitches of sounds.

During the instrumental lessons, instruments and technologies such as:

- Even elementary recording system (smartphone, microphone, pc, etc.) for self-listening to musical products;
- Online sharing platform for e-learning;
- Metronome and tuner for self-checking of metrics and intonation;
- Audio playback system (mp3, smartphone, PC, etc.) for listening to compositions from instrumental literature.

Below is a list of some recommended methods and texts for studying the trumpet divided by educational specificity:

1) Methods for studying technique (breathing, sound emission, articulation, etc.):

- J. B. Arban: Arban's famous method for trumpet
- M. Benterfa: Le site des vibrations
- G. Bonino: Tecnica essenziale per la tromba
- V. Cichowicz: Long tone studies

- V. Cichowicz: Flow studies (book 1)
 - V. Cichowicz: Flow studies (book 2)
 - H. L. Clarke: Elementary studies per Tromba
 - H. L. Clarke: Technical studies for the cornet
 - W. Guggenberger: Basic plus
 - N. Latorrata: La mia tromba
 - L. Maggio: System for brass
 - M. Reuthner: Le basi della tromba
 - M. Schlossberg: Daily drills and technical studies for trumpet
 - J. Stamp: Warm-ups
 - J. Thompson: The buzzing book
 - S. Verzari: Studi di tecnica per lo sviluppo degli armonici della tromba
 - S. Verzari: Esercizi giornalieri per tromba
 - J. Wallace: Scales and arpeggios for trumpet
 - Supplementary materials provided by the teacher
- 2) Melodic and transport studies with the instrument:
- M. Bordogni: Melodious estudes for trumpet
 - R. Caffarelli: 100 studi melodici per il trasporto nella tromba e congeneri
 - G. Concone: Lyrical studies for trumpet
 - D. Gatti: Metodo teorico e pratico per tromba e congeneri
 - S. Hering: Fifty recreational studies (for young trumpeter)
 - S. Hering: Forty progressive etudes for trumpet
 - S. Hering: Thirty-eight recreational studies for the progressing trumpeter
 - C. Kopprasch: 60 studies for trumpet (book 1)
 - J. Snidero: Easy jazz conception
 - J. Snidero: Intermediate jazz conception
 - J. Snidero: The essence of the blues
 - E. Veldkamp: All jazz
 - Supplementary materials provided by the teacher
- 3) Concertos for Trumpet and Piano, Duets, Trios and Quartets for Trumpet:
- A. Biond: Swing jazz duets
 - M. Bordogni: Melodious etudes Bordogni (book 1)
 - M. Bordogni: Melodious etudes Bordogni (book 2)
 - M. Bordogni: Melodious etudes Bordogni (book 3)
 - M. Bordogni: Melodious etudes Bordogni (book 4)
 - M. Bordogni: Melodious etudes Bordogni (book 5)
 - C. Cowles: 10 great solos
 - R. De Smet: 100 solos trumpet
 - V. Grassi: Just for two
 - T. Morrison: Solos for Trumpet (23 recital pieces with piano accompaniment);
 - K. Snell: Belwin master duets
 - P. Sparke: 15 easy classical solos.
 - P. Sparke: 15 intermediate classical solos.
 - P. Sparke: Skilful duet (40 progressive duets)
 - K. Thielemann: Easy concert pieces (book 1)
 - K. Thielemann: Easy concert pieces (book 2)
 - K. Thielemann: Easy concert pieces (book 3)
 - P. Wedgwood: Trumpet "all sorts" (easy pieces for trumpet and piano)

- E. Williams: Famous little classics for trumpet
 - Supplementary materials provided by the teacher
- 4) History, organology, evolution and physics of the instrument:
- G. Cassone: La tromba
 - A. Baines: Gli ottoni
 - P. Bate: The trumpet and trombone
 - G. Bonino: La tromba nella storia
 - Supplementary materials provided by the teacher

During the trumpet training course (basic course) the student will acquire the following specific skills divided by year

- to know the constructional characteristics of the instrument
 - develop an adequate facial posture with particular regard to the natural setting of the mouthpiece on the lips;
 - develop a relaxed posture and correct breathing functional to the management of sound and intonation;
 - develop adequate lip muscles through the use of "buzzing" with or without the mouthpiece;
 - develop the technique of emission and production of natural and harmonic sounds;
 - develop sound quality through the study of harmonics;
 - develop and master the low and medium-high register;
 - develop legato, staccato and legato-staccato;
 - develop autonomy in the daily study of the instrument.
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- know correct fingering;
 - develop proper control of breathing and air emission;
 - develop control of sound quality and intonation;
 - develop instrumental extension and appropriate sonority;
 - develop control of legato, simple staccato and articulation;
 - develop the musical ear through the intonation of the single interval, phrase and musical period;
 - develop the technique of harmonics, flexibility, legato and simple staccato;
 - know the techniques for maintenance and routine cleaning of the instrument;
 - know the various types of musical notation;
 - develop reading at first sight;
 - develop memorisation of musical themes and phrases.
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- know the correct body posture in standing and sitting positions
 - develop control of the sound and attack of notes through awareness of the breathing process;
 - develop correct coordination of finger and right hand movements;
 - learn the nomenclature of the instrument and the use of instrumental positions;
 - develop proper control of the air and one's own respiratory capacity;
 - develop control of sound quality and intonation.

In conclusion, we can affirm that the birth of the basic courses has filled the training gap that had been created within the Conservatories, giving very young musicians the opportunity to approach a path that gradually leads them towards increasingly rich and complex training

courses, moving from the propaedeutic courses to the attainment of first and second level Academic Diplomas.

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