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Assessment in the Dalcroze pedagogy

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Abstract

This chapter addresses the target areas, criteria, forms, practices, and tools of assessment in Dalcroze pedagogy, also known as Dalcroze Eurhythmics—education in, through, and for music that integrates body movement (rhythmics), ear-training (solfège), and improvisation and recommends that music is effectively experienced, expressed, understood, and studied through the interaction of sound, sound perception, and neuromuscular response. The chapter also describes in short the aims, content areas, principles, and applications of Dalcroze pedagogy. It brings out the complexity and challenges of assessment in Dalcroze teaching and invites practitioners and Dalcroze training centers to work toward shared assessment guidelines, particularly essential in teacher preparation, while simultaneously acknowledging the importance of context and student-specific assessment target areas and criteria in a variety of (music) educational settings.

Keywords: assessment, Dalcroze, pedagogy, eurhythmics, Émile Jaques-Dalcroze, music and movement, rhythmics, solfège, improvisation, plastique animée

Foreword

In this chapter, we first present a brief description of the Dalcroze pedagogy, history, interrelated branches, and practical applications. Next, we discuss target areas, forms, practices, and tools of assessment in Dalcroze teaching, accompanied by practical examples. We end by describing some of the challenges of assessment and providing various suggestions for future assessment practices. This chapter was informed by Dalcroze teachers who kindly shared their ideas and experiences regarding assessment in Dalcroze teaching.

General definition of the Dalcroze pedagogy

The Dalcroze pedagogy – education in, through, and for music – is an approach that integrates body movement (rhythmics), ear-training (solfège), and improvisation into the learning process to facilitate, establish, and reinforce musical perception, understanding, and expression. The Dalcroze pedagogy builds on an idea that music, listening and inner hearing, and body movement are intrinsically linked.[1] It suggests an ideal path and practical guidelines for musical growth that aim to acquire possession of those qualities deemed essential for a musician, both professional and non-professional (Juntunen & Westerlund 2011). The Dalcroze pedagogy enhances, shapes, and strengthens overall musicianship and musical independence while working to support and complete other music studies. This teaching philosophy, practice, and approach promotes student-centered learning and shaping the whole person through music. It focuses on the (simultaneous) integration of all learning modalities (visual, auditory and tactile/kinesthetic) for a well-rounded, holistic education that provides a strong sense of musical awareness.

Dalcroze teaching practice enables a participant to act as a musical agent through the moving body. One can actively create, feel and experience music, and participate in collaborative music making through movement of the whole body. Reciprocally, the body movements express what the participant hears, feels, understands, and knows (e.g., Juntunen & Hyvönen, 2004). Through an innate connection between sound, perception, and neuromuscular response, the body movement enters an intensive dialogue with music (Greenhead & Habron, 2015) since, in the exercises, body movements either match, reflect, or contrast the music presented. The aim is to develop kinesthetic awareness of the properties of musical sounds (Mead 1994, p. 200). Yet, body movement in this context is not only a means of musical perception, thinking, and expression, it

also brings about bodily transformation and therefore better musicianship (Juntunen & Westerlund, 2001; see also Westerlund & Juntunen, 2005).[2]

The first steps of the approach

The Dalcroze pedagogy was initiated in the late 19th century by Émile Jaques-Dalcroze (1865–1950), a Swiss composer and professor of harmony and solfége at the Geneva Conservatory. He created and developed his pedagogical ideas based on the problems he identified in music education practice at the time. While analyzing the traditional classical teaching methods used at the Conservatory, Jaques-Dalcroze became concerned with why music theory was generally being taught as abstractions disconnected from students' aural perceptions, sensations, and experiences and why students seemed to perform mechanically without expression, understanding, or sensitivity. He was also concerned with the lack of exercises for the development of aural faculties (Jaques-Dalcroze 1921/1980, p. 2). He concluded then that the methods of training musicians focused mainly on the thinking mind and did not allow the students to experience the elements of music fully (Jaques-Dalcroze, 1935).

Jaques-Dalcroze began to dispute the philosophies and teaching methods of his time and started experimenting with combining body movement and solfége exercises. He noticed that the students could sing more musically when incorporating rhythmic gestures (Jaques-Dalcoze, 1935). He also noticed that rhythmic musical sensations "call for the muscular and nervous response of the *whole organism*" (Jaques-Dalcroze, 1921/1980, p. viii, italics original). Thus, he started to work toward instilling into his students a sense of rhythm by making his students "react physically to the perception of musical rhythms'" (p. viii), i.e., making use, not of theoretical explanations, but rather of sensory experiences.

Jaques-Dalcroze first experimented with professional music students, but soon extended his ideas to the teaching of young children. He began to apply bodily movement to make musical experiences and understandings more rooted in perceptions and bodily, lived experiences. He started to look for ways in which the body and mind were integrated, while also involving the person as a whole in aiming to enhance and refine the development of one's faculties, especially the ones used to engage in music: the aural, visual, tactile, and muscular senses. In the beginning of the 20th century, demonstrations of his ideas throughout Europe were well received. Public recognition encouraged him to set up courses for teachers and gradually, Jaques-Dalcroze began to concentrate on training teachers (Spector, 1990).

Branches of the Dalcroze pedagogy

The approach includes three interrelated branches: rhythmics, solfège (ear training), and improvisation. "Plastique animée"—the realization of music in body movement—can be regarded as a branch on its own or as an attendant discipline. Though the different branches can be taught separately, which is often the case in Dalcroze teacher education, Dalcroze teaching commonly incorporates all of them within one teaching process, in which they intermingle and interact. Depending on the context, teaching can also focus on one or two of these branches.

Rhythmics

In rhythmics, which is one of the most applied branches of the approach, gesture and whole body movements are applied to explore and express various qualities of music, especially those related to rhythm. Rhythmics builds on an idea that that it is most natural to develop a sense of rhythm through body movement. During the teaching process, students are encouraged to become aware of the rhythms of their natural body movements, to recognize those rhythms in music, and

then to realize and express those rhythms in deliberate movements thereafter. This awareness supports and reinforces an individual's ability to read, notate, and create rhythms both mentally and physically (Jaques-Dalcroze, 1921/1980). The basic idea is to have students experience first before any analysis so that theory, when needed, follows practice (Jaques-Dalcroze, 1921/1980).

Musical activities are first introduced with a focus on simple non-locomotor and locomotor movements that naturally occur in daily experiences (e.g., walking, stepping, clapping, and gesturing). Gradually, the movement vocabulary is enriched as more attention is paid to the style and expressiveness of whole-body movements. To develop a sense of time, which is particularly important, students are often guided to experience a steady pulse by walking freely through space. Through awareness of walking, one can experience many elements of music including the pulse, accents (e.g., by bending the knee, changing direction, or tapping), various rhythmic meters, etc. From the very beginning, following musical cues, exploring space, changing tempo, and dynamics of movement are all incorporated into the exercises. Because walking can be automated easily, other tasks, such as clapping or conducting, can then be incorporated simultaneously beginning at the primary level. In addition to various rhythmic elements, other elements of music, such as the harmony, form, or style, as well as the nuances of dynamics, can be realized through the body. Through practice using bodily involvement, one can learn to discriminate between even the subtlest nuances in all the expressive qualities of sound.

According to Jaques-Dalcroze (1921/1980), the relationships of body movements, involving *time, space,* and *energy*, have counterparts in musical expression. Thus, in the rhythmic-movement exercises, students explore space, duration, weight, and speed through whole-body movement experience (Le Collège de l'Institut Jaques-Dalcroze, 2011) and become aware of the time and energy needed for certain spatial movements; and come to understand how these elements

relate to those of music. There is an idea that practicing the use of the body as a musically responsive instrument gradually results, for example, in the speed and accuracy of the body to pulse, rhythm, and phrasing and that this approach is transferable to other situations as "body-smart behaviors" (Shehan Campbell & Scott-Kassner, 2014, p. 160-161).

Often in teaching, the instructor asks students to express freely in movement what they hear in the music that is presented. Based on interpretation and past experience, a diverse set of movements can arise as students direct their attention and listening toward certain aspects of the music. It is important to note that not all music lends itself to movement and there are never fixed movements for a specific piece of music or musical idea. Movement is primarily a spontaneous and natural response to the music, reflecting a student's listening and individual experience in the moment. In general, the approach avoids promoting stereotyped and mechanical movements, while also encouraging individuality and diversity in movement. Other kinds of exercises, applied also in other branches, include, for example, follow, internalization, and quick reaction exercises (that develops inner feeling and inner hearing), echo, canon, and replacement (Juntunen, 2016; Boyarsky, 2009; Schnebly-Black & Moore, 2003; Abramson, 1997, 1998; Mead, 1994).

Below are some examples of basic rhythmics activities at the elementary level (see also Mead, 1994):

- Students walk while the teacher improvises music based on their movements, following the walking tempo (movement inspires the music). Eventually, children are encouraged to walk to the beat of the improvised or composed music, matching what they hear (music inspires the movement).
- Experience different ways of walking (on toes, heels, etc.) and at various speeds (fast/slow, accelerando/ritardando).

- Respond to different rhythmic patterns of music using non-locomotor and/or locomotor movements, such as walking, running, swaying, galloping, skipping, hopping, jumping, sliding, etc.
- Show the length of a musical phrase, for example, by drawing a circle in the air or using materials, such as stretchy bands.
- Use different types of energy, weight, and/or dynamics when moving through space (accompanied with different music): strong/weak, light/heavy, crescendo/descrescendo, etc.
- Use imaginative movements (telling a story in movement) to show, for example, different articulations in music (e.g., when the music is played legato, paint a wall with a brush, and when played staccato, splash painting with fingers).

Solfège

The term *solfége* refers to ear-training exercises and studies that aim to develop the capacity of hearing, listening, responding to, singing and playing, remembering, identifying, and notating any combination of sounds. Solfége also aims to develop the "inner ear" (or "inner hearing", also called audiation), which is the ability to mentally produce (i.e., "hear") exact sound images without the help of the voice or an instrument. Jaques-Dalcroze particularly sought to develop this capacity so that students would be able to mentally hear rhythms, intervals, phrasing, and dynamic lanuances of music when reading music; that is, in advance of and therefore as a guide in performance, composition, and improvisation.

Developing listening skills is at the center of Dalcroze teaching. Body movement is used to reinforce musical hearing, making it concrete and visible by forming a dynamic partnership between the body and the ear and thus transforming auditory perception into a holistic bodily experience. In this partnership, listening inspires movement expression, while moving both guides and informs listening. The goal is also to create a strong connection between hearing and

understanding. This approach to solfége strengthens the aural and kinesthetic counterpart to written music and music theory.

The Dalcroze solfége[3] applies a *fixed do* system. The solfége approach in this work trains the ear to develop a sense of absolute pitch. However, today, many Dalcroze teachers use *movable do* ("relative solfa") or some other note- and function-naming system. Usually, pitches used in the beginning exercises are not limited but use the entire diatonic scale and modes. Intervals and harmonies are studied within the context of the scale through singing and bodily response. In teaching, any musical material is used and teachers also invent new songs and melodies, when teaching both solfége and rhythmics (Johnson, 1993). Learning songs and melodies by ear particularly aids in practicing musical memory and inner hearing. All solfège exercises are presented with the highest level of musicality requiring attention, alertness, concentration, and nuance.

Below are some examples of solfége activities (at the elementary level):

- Show the pitch levels of music by using high and low hand placements; OR walk forwards when the melody moves up and walk backwards when the melody moves down.
- Sing a chosen melody or scale repeatedly (and walk the beat). When the teacher says "HOP"[4], change the tempo to twice as fast (diminution) or twice as slow (augmentation). In the next "HOP", return to the original tempo (quick response exercise).
- sing a melody, and react (clap, snap, etc.) on certain notes (e.g., on each "g", or on half notes) or leave out (do not sing) certain notes (to develop inner hearing).
- half of the students move to the treble part and the other half to the bass part of a piano score; or some students follow in movement the different instrumental parts of the score (violins, brass, etc).

Improvisation

In Dalcroze teaching, students improvise by moving, singing, and playing an instrument. In rhythmics, "show what you hear" or "find another way" are common calls by the teacher. The

possibility of doing things differently, to improvise, is present almost in all exercises as students respond to music in a variety of ways (FIER, 2011). Overall, Dalcroze practice offers abundant possibilities for improvisation and spontaneous expression. Improvisation motivates students to express their own ideas, stretches students' imaginations, and brings about a sense of accomplishment and satisfaction (Mead, 1994). Through frequent improvisation activities, students come to perceive creative production as a natural and important part of music making and learning.

In Dalcroze teaching, many forms of movement improvisation are applied. Improvisation in movement develops imagination, initiative, communication, trust, responsibility, spontaneity, and the ability to lead and follow (e.g., following in movement the music or the leader's movements, creative movement inspired by images, emotions, stories, or pictures, etc.). Musical improvisation offers a way to apply and give sonorous form to things learned (e.g., various rhythms, forms, harmonies, and dynamics), to reveal musical understanding, and to develop creative facility. Also, the teacher can assess what students know by listening to what they can invent on the spot.

Dalcroze teacher candidates practice and learn to improvise music since they are expected to be able to improvise music for movement exercises in their lessons. Improvisation is designed to initiate a response in movement; it is the main means of dialogue with the students. When the students respond to the music and the teacher responds, in turn, to the students through the music, there is a spontaneous interaction for which recorded or notated music does not allow. The music is constantly changing according to the students' responses; the music is being created at the same time that the movements are being enacted.

Plastique animée

Plastique animée aims at expressing music in movement, embodying all shades of it, and making it visible. Often in exercises, students make movement-compositions to music, initiated by movement improvisation, which is associated with choreography. It is considered a process of exploring and discovering, understanding, and revealing a piece of music. Plastique can be viewed as a culminating experience where all the braches of the Dalcroze work unite and help individuals to make more meaningful and musical connections. Plastique differs from dance in that it is meant to be a representation of the music as perceived through listening. As a "living" and visual analysis of the music, a movement-composition, including the use of space, entails portraying the form, structure, style, dynamics, phrasing, the interplay of parts, the texture, the relationship between voices, and/or expression of a musical work through interpretative movement. The internal experience—sensitivity toward music and its expression—is more important than the qualities of external performance. At the elementary level, the plastique animée exercises may include making an easy choreography or dance to show the form of music (AB, ABA, rondo, etc). It can also imply choreographing the different lines or parts of the score.

Practical applications

The Dalcroze approach is applied mostly in music education practices (including training of professional musicians) and teacher training programs. The ideas of Dalcroze pedagogy can be applied at all levels of music education, including early childhood education programs, primary and secondary schools, colleges and universities, music schools, private lessons, and community settings. From newborns to older adults, the approach influences the ways music is taught. The approach is also successfully applied in theatre, dance, cinema, somatic, and special education,

therapy, and gerontology (Mathieu, 2010). In the performing arts, Dalcroze techniques and ideas grounded in its theories and practice are applied to enable musicians, dancers, and actors to become better performers in their field.

The Dalcroze approach can be applied by teachers of various educational backgrounds (also as a result of differences in Dalcroze training developed for historical reasons), often leading to a diversity of practice among the teachers and countries implementing the Dalcroze work. The approach can be studied in various programs and courses offered primarily by universities, conservatoires, and Dalcroze societies all around the world (see Fier.com; Dalcrozeusa.org). There are over 40 Dalcroze-training centers in 20 countries over four continents (Dalcroze.ch). In this chapter discussing Dalcroze teaching, we also include teaching practices for teachers who are not necessarily certified Dalcroze teachers, but have enough knowledge, skills, and understanding of the approach to apply it in their own teaching.

In Dalcroze teaching, students are offered possibilities, primarily through body movement, to experience, interact with, and express music. The teacher's role is to lead students through a series of meaningful actions and experiences, to create conditions for exploration, interaction, knowledge construction, learning, etc. The teacher is viewed as guiding the learning process rather than transmitting knowledge – a principal that is foundational to the constructivist conception of learning. This approach helps students to make their own discoveries through a movement based learning process rooted in "doing", in line with Dewey's ideas[5].

In Dalcroze teaching, often a lesson is designed around a musical subject or idea – tempo, meter, phrasing, harmony, or form – which is explored through movement and other musical activities such as singing, listening, and improvising. A subject is first introduced by fostering the most natural movements of pupils and building from those basic experiences. It is typical for a

Dalcroze teacher to present the same musical subject or concept to different age groups but vary the complexity of the exercises based on current knowledge, ability, and past experiences of each group. Without offering a specific order of sequenced exercises or teaching phases, most of the exercises presented are meant to reinforce previous learning – moving from the known to the unknown – and to build off of one another with increasing complexity, in line with Bruner's Spiral Curriculum (Bruner, 1960). Therefore, the exercises implemented are usually an extension of previous work but also include the presentation and manipulation of new material strengthening the foundational learning that is needed to make future and more elaborate connections. Since each group will respond differently, the course of the lesson will be shaped according to the response of each class starting with the students' present abilities, then proceeding progressively according to their subsequent responses (see e.g., Juntunen & Westerlund, 2001). All of this takes place in a supportive environment, which also enables and encourages students to take risks in the classroom. Teachers usually create their own ideas, exercises, and materials and should be prepared to adapt them to fit both the curriculum and each teaching situation (see Juntunen, 2002).

On a general level, Dalcroze teaching always aims to enhance participants' artistic expression. During the learning process, Dalcroze teachers often find ways to define what artistic expression means by first providing students with kinesthetic and artistic experiences. Expressive elements may then be described differently and can vary from one educator to another based on a variety of factors including background, culture, education, etc. However, keeping these areas at the forefront of instruction, regardless of interpretation, is at the core of the Dalcroze work. Dalcroze teachers often expose students to a variety of both live and recorded performances, as well as composed and improvised music to introduce students to varying styles and interpretations. These experiences help to shape and enhance overall musicianship and influence the musical

choices students make in their future experiences. Dalcroze teaching holds musicianship at the forefront of the classroom and, because of that expectation; teachers recognize artistry as a primary focus in Dalcroze education, especially in training for musicians.

In the exercises, sensing, perceiving, reacting, moving, improvising, thinking, feeling, and interacting are integrated (Juntunen 2004). Since joy is considered the most powerful mental stimulus for learning, many of the exercises are shaped as musical games (such as follow, quick-reaction, etc.) according to set guidelines in which students play, both with and against the changes of the music, but without competition among one another. Additionally, the teacher endeavours to make things as interesting and enjoyable as possible and accelerate the difficulty of exercises. The learning process challenges and invites students to overcome problems and use their creative potential, thus obtaining a sense of achievement and self-confidence. Singing games, songs with movement, folk/ethnic/historical dances, creative exercises as well as exercises integrating various art forms can also be applied. All of these are expected to form a logical developmental process in which different learning modalities – the sensory channels or pathways through which individuals give, receive, and store information – appear to be at work: the visual (seeing), auditory (hearing), kinesthetic (moving), tactile (touching) and intellectual. By providing experiences in such eclectic ways, various forms of assessment can easily take shape, providing valuable feedback to both the student and teacher.

Dalcroze teaching takes place mostly with groups in a learning environment intended to be positive, relaxed, and warmly encouraging. Students work both individually and collaboratively, in both small and big groups. A Dalcroze teacher continuously observes and assesses the class while exercises are being executed in order to make appropriate decisions for additional instruction and supplementary activities (reflection-in-action). Once activities are experienced, teachers may

invite participants to share their thoughts and/or watch one another complete the task at hand. This collaborative approach to musical discovery is an integral part of the social aspect of the learning process and the Dalcroze work in general. Working in groups is considered to be an effective and fun way for individuals to improve their skills since they see others responding and inventing new ideas. A student is seen as an active agent, construing knowledge as a result of (inter)action, communication, and experience, which reflects social constructivist views (Vygotsky, 1986).

The content-specific learning objectives as assessment target areas

In effective assessment, target areas are in line with learning objectives. The National Association for Music Education (NAfME) Standards provide teachers with learning targets for music instruction and are presented in a grade-by-grade sequence. (NAfME, 2014). In addition, the assessment target areas of Dalcroze teaching may be defined and vary according to the teaching context, though certain target areas (certain skills, qualities and values) can be considered inherent in the approach (see Table 2). Educators wishing to provide Dalcroze experiences can use these suggested inherent target areas as points of reference. In a school context, the curriculum guides the selection of the subject matter and learning objectives (and consequently assessment target areas) that can be approached through, or enriched by, Dalcroze exercises. For example, a song can be learned through body movement, a study of music history/ethnic culture can be enlivened by a dance, or the style and rhythmic feel of music can be introduced through movement. In primary grades, Dalcroze-based games and activities (such as games of quick reaction, follow, echo, with a partner, in a circle, etc.) can also be applied as an introduction or addition to other musical activities. In music education settings where the approach is integrated with other

activities in the classroom, learning objectives (and assessment target areas) are selected according to the context.

When applying Dalcroze pedagogy in a school context, the learning goals are often of the elementary level. It is considered essential that the Dalcroze teaching offers the opportunity for each student to enjoy music through body movement and listening, enhanced with perception and understanding; express one's own ideas, feelings, and experiences; explore and become familiar with music from various times, places and people; and learn and interact socially with other students (Juntunen 2016). In music schools and professional training of musicians or teachers, the objectives of Dalcroze teaching and learning are naturally more detailed and demanding, covering a wide range of skills (see e.g., Music.cmu.edu/dalcroze). Internationally, the Dalcroze teacher training units have somewhat shared assessment target areas, although, assessment practices vary widely between training centers worldwide.[6]

In addition to the learning objectives and content areas already discussed above, the goals of Dalcroze teaching concern musical, bodily, social/emotional, psychological, and educational objectives. In teaching, these different areas of development are strongly intertwined and integrated; consequently, it can also be a challenge to separate them in assessment.

Musical goals include, for example, the ability to experience, recognize, know, understand, and express musical elements and phenomena, active listening, musical literacy (including improvisation), development of musical imagination, expressivity, musicality, artistry, etc. Often teaching focuses on rhythmic elements, such as pulse, tempo, meter, form, note values, melodic rhythm, subdivision, cross rhythms, polyrhythms, anacrusis, augmentation/diminution (twice as fast/slow), or other musical elements, such as melody, harmony, phrasing (breath/flow), dynamics, articulation, nuance, etc.

Bodily goals imply developing general bodily skills, awareness, and knowing, including fine and gross motor skills, coordination, association/dissociation, balance, mastering various qualities of movement and spatial relationships (including time, space, and energy), automation, relaxation, free use of the body, etc.

Social goals include social integration, as well as the ability to work with different people and in various combinations, to adapt, to collaborate, interact and communicate, to learn with and from others, to respect others, etc.

Other objectives, such as psychological or mental benefits, include attention/attentiveness, concentration, engagement, memory, self-confidence, curiosity, ability to follow directions, react and process information, ease in performance, and flexibility. Additionally, there are other educational goals that concern holistic growth of the human being, such as joy, imagination and creativity, the body-mind balance, and overall well-being. These areas are a large part of the educational process, and an important aim for the teacher is to build and enhance them in lessons. However, the learning goals related to musical and bodily skills are usually the ones selected as assessment target areas since they are more concretely connected to the study of music although the social and other objectives determine the effectiveness of the musical and bodily ones.

Current formulations of learning outcomes/assessment target areas of Dalcroze teaching for teacher training (the Dalcroze Society of America, see Table 1; Le Collège de l'Institut Jaques-Dalcroze[7], see Table 2) serve as the basis for defining context specific assessment target areas for any specific level of Dalcroze teaching.[8] These formulations can also be linked to the National Association for Music Education Standards[9] (NAfME, 2014) and/or any other school, district, state, regional, national, or international standards with a focus on creating, performing, responding, and/or connecting in music.

Table 1. Goals of Dalcroze Education as suggested by The Dalcroze Society of America (2015, pp. 10–11)

Dalcroze Education addresses the following:	
MUSICIANSHIP	• Musical expression and understanding • Active listening and inner hearing • Music literacy • Aural memory • Visual memory • Sight reading and dictation • Choreography as related to music composition
THE BODY AS AN INSTRUMENT OF LEARNING AND EXPRESSION	• The senses: aural (musical and verbal), visual, tactile, proprioceptive/kinesthetic • Kinesthetic memory • Motor control: coordination, balance, posture, flexibility • Spatial awareness • Weight, quality, and intention as it related to musical meaning, precision, and economy • Movement vocabulary and technique
IMPROVISATION	• Imagination, creative expression, and adaptability • Spontaneous synthesis and exploration of learned materials: music theory in action • Multiple contexts that espouse joy and the spirit of play through social interaction • Musical (piano, voice, or other instrument) • Solo, ensemble • Movement • Pedagogy: teachers improvise on their lesson plans based on the students' responses

Table 23.2 .Assessment target areas for Dalcroze teacher training suggested by Le Collège de l'Institut Jaques-Dalcroze (2011, p. 23)

SKILLS AND KNOWLEDGE	● Inner hearing and feeling ● The capacity to pre-hear and pre-feel what you are about to do ● The development of muscular memory and of neurological control ● Construction of the motor image ● A secure sense of pulse and tempo ● The sense of metrical emphasis and meaning ● The sense of duration (pulsed and unpulsed) and timing ● The sense of rhythm ● The sense of phrase, phrasing and form ● The sense of touch and articulation ● The capacity to perceive and express Anacrusis/Crusis/Metacrusis of various types (auditory, motor, visual etc.) ● The development of the dynamic range ● The development of the use of space ● The ability to express skills and knowledge through whole body movement ● Association/dissociation and economy of gesture ● The ability to enter into direct communication with pupils ● The ability to vary the ways of teaching a subject ● The ability to construct balanced lesson plans that can be modified according to passing states in the student group ● The ability to articulate verbally the theory and principles of the Dalcroze method
VALUES AND QUALITIES	The assessment will take account of: ● Originality, creativity, artistry ● Adaptability, receptivity, decision-making ● Observation, discernment and judgement ● The ability to make connections laterally ● Respect for others and self-control ● Instinct and intuition ● Self – confidence and the ability to risk ● The ability to create an environment in which people can succeed ● Conceptualization, consciousness, awareness, understanding

Forms of assessment in Dalcroze teaching

Objective versus subjective assessment

Assessment is often described as either objective or subjective. Subjective assessment draws upon the teacher's awareness of quality developed through professional experience while objective assessment focuses on measurable outcomes. Though objective assessment is usually considered more reliable and fair than subjective assessment (often considered biased), in music the measurement practices are mostly subjective since human judgment is necessary when assessing musical performance. Even when the target areas and criteria are clearly defined, there are very few areas of musical learning that can be assessed truly objectively. We can argue, for example, that in Dalcroze teaching, accuracy of time, tempo, rhythm, note values and articulation can be assessed objectively; but even then, assessment is based on human observation, which is never strictly precise. Whereas assessing creativity, expressivity, and interpretation–all of primary focus in a Dalcroze experience–can be assessed only subjectively. Moreover, thinking that accuracy can be assessed more objectively than "artistry", and thus "better", can lead to emphasizing accuracy of student performance also in teaching, yet they are both important and affect each other in performance. Consequently, the challenge and the aim in Dalcroze teaching is to make subjective assessments more reliable. This can be done, for example, by defining and using assessment rubrics.

Holistic versus analytical assessment

In *holistic* assessment, different aspects of evaluation are intertwined. The assessor employs all his professional skills as the master teacher and makes a comprehensive

interpretation in an assessment situation. The assessment is based on intuition and tacit knowledge developed through many years of experience in the professional practice.

The challenge of holistic assessment in Dalcroze studies is that in the evaluation situation, the assessor may react too comprehensively rather than analytically. The problem arises, for example, in exam situations in which a student does not pass and is not told why or gets very critical feedback but receives a high grade. It can also be a problem if the evaluating teacher does not have the required competence and understanding – in this case of the Dalcroze approach – or is not fully aware of the assessment criteria. Moreover, if the criteria are not clearly articulated, one teacher may focus more on the bodily skills while the other is paying attention primarily to musical expression, for example. In holistic assessment there is also a danger that knowledge of student's talent or overall skillfulness has an effect on assessment.

Analytical assessment, in turn, is based on known and shared target areas and criteria; in contrast to the holistic assessment, analytical assessment is rational and progresses systematically. In this form of assessment, the assessor makes separate qualitative conclusions over a limited number of qualities. The same criteria are used to assess each student's performance.

Analytical assessment improves the uniformity and objectivity of grades since the assessment process is broken up into smaller scale conclusions, such as a clear articulation of the required skill for a certain letter grade or numeric value. The assessment process is transparent to students and may encourage them to participate in formulating the assessment criteria, in which case the criteria direct student learning. The analytical assessment allows for some degree of uniform assessment, because the quality of student work is compared to pre-defined criteria and standards instead of the preceding level of achievement, the performance

of other students, or the teacher's personal taste and preferences. However, the criteria should rise out of context and not from any supposed absolute situation (Sadler, 2009). Furthermore, in Dalcroze context, pre-defined assessment criteria may not make explicit all learning outcomes. Since learning takes place through bodily, holistic, and interactive exploration, students often learn more, sometimes different and certainly a bigger variety of things than originally stated as primary learning objectives. Thus, all criteria cannot be pre-set and learning outcomes do not only correspond to the learning objectives, but also emerge from the student work (Sadler, 2009) and expand far beyond the initial goals set by the teacher.

Diagnostic, formative and summative assessment

Diagnostic assessment, also known as pre-assessment, can be used to diagnose strengths and areas that need work, as well as to gather information about student's prior knowledge, skills, and possible misconceptions before beginning a learning activity or course of study. It provides evidence, for example, of the degree to which a specific set of skills has already been mastered. This assessment is critical as it provides essential feedback that informs the context and content of the teaching to follow, as well as helping the teacher to adjust her expectations and formulate more specific learning goals, choose appropriate exercises and processes, etc. In some occasions, educators need to examine the prerequisite knowledge or experience that is required for students to be successful in the classroom. If the diagnostic assessment identifies a need for review, time should be spent revisiting the fundamental elements that preface the higher-level skill set. This process helps students continue their learning in a systematic way and influences educators to design teaching that corresponds to students' existing skills and knowledge in both a challenging and rewarding way.

Often in Dalcroze-teaching, diagnostic assessment takes place during the first lesson(s) of the course. The following are some examples of exercises for diagnostic assessment from Dalcroze teachers are presented.

Introductory level:

Students

- walk from one arbitrary place in space to another place in space; first without music, then following the music played by the teacher to examine:
  - students' ability to listen, concentrate, interact socially, and follow the nuances of music
- walk around the room and participate in various introductory movement tasks to examine:
  - how they walk, and how they start and stop walking (preparation – anacrusis, point of arrival – crusis, follow through – metacrusis)
  - level of movement, fluidity of movement, and movement vocabulary;
  - capability of walking to the beat of music and following the changes in tempo or dynamics
  - ability to use space (walk around the room without bumping to each other)
- do basic movement exercises alone, with a partner and change partners to examine:
  - social relationships and dynamics of the class, for example, by observing how finding or changing a partner will work out
- react to a set of quick musical cues or directions to examine:
  - listening skills, attention, concentration, and reaction time (input vs. output)
- sing back a melody, sang by the teacher to examine
  - listening and vocal skills, musical memory, ability to connect voice with hearing

University level:

- step a given rhythm or that of a melody to examine:
  - skills in listening and rhythmic movement
- sing 'question and answer' melodic phrases to examine:
  - ability to sense the key, phrasing, etc.
- sight-singing tasks to examine:

- skills in solfége and the ability to hear patterns in music

Formative assessment, or "assessment for learning," subsumes a range of formal and informal assessment procedures conducted by teachers during the instructional processes in order to modify teaching and learning activities to improve student achievement and progress (Fautley 2010). It is the most common form of assessment in the Dalcroze pedagogy. In Dalcroze teaching, the informal assessment happens primarily through observation (which will be discussed later in the text). In each teaching situation, the role of the teacher is to be in continuous communication with the students. When providing instruction, performing, etc., teachers must observe closely the movement-related intricacies of both individuals and the entire class. There is a constant assessment cycle happening in which the students' responses guide the teacher's further decision making and actions.

Two major challenges for Dalcroze teachers are deciding whether to guide a student's performance verbally or not to comment at all and articulating feedback to students in ways that encourage their further participation but also advance their performance. A teacher may also call students to become aware of other students' responses in relation to their own, which serves as a form of feedback and guides them to improve their performance if needed. Formative assessment may also take place individually or in a group after the lesson by discussing experiences and challenges of learning, areas that require improvement, etc. The formal formative assessment may take place through tests or by repeating some exercises to check what students have learned and what the possible challenges are, etc. The formative assessments can occasionally be graded but are mainly conducted to check for development and to identify areas that may need improvement.

One way of doing formative assessment is raising questions related to the observed shortcomings in student performance so that students can become aware of their performance

and/or change their approach in some way. Among the very few readings in the area, Campbell and Scott-Kassner (2014) suggest the following questions for teachers when considering formative assessment for movement in the elementary music classroom:

> 1. In the case of action songs and singing games, are you rhythmically on time with your gestures, steps, and other means of physical movement? Or are you performing out of sync with the song, the game, and fellow players?
> 2. In the case of rhythmics, are you able to capture the musical feature (pulse, meter, rhythmic pattern, melodic contour, form) in your movement? Or are you drawn to some other musical feature than the one prescribed? Why?
> 3. In the case of creative movement, are you able to move in a way that feels good to you, with thought given to the use of space, time, and energy in your own personal way? Or are you simply following someone else's ideas? (p. 160)

Summative assessment, or "assessment of learning", seeks to monitor educational outcomes; it aims to describe or measure how well a student has met the previously established learning objectives and often takes place at the end of a course or semester. It provides information and feedback that sums up the teaching and learning processes. In other words, summative assessment summarizes the level of achievement and tends to make systematic conclusions about the level and value of it (Fautley 2010, p. 7). Summative assessment target areas and criteria should be in line with defined learning objectives and are often developed around a set of standards or expectations set at the district, state, and national level, such as the National Core Arts Standards. These standards are met when educators provide assessments that in some capacity, require students to successfully create, perform, present, produce, respond, and/or connect in the field of music. Movement itself can also be an artistic end product of instruction (and the basis for summative assessment) especially with children with whom movement is used as a pedagogical tool for achieving music understanding and a means for demonstrating music perception and

cognition and who thus learn to connect their ears, minds, and bodies in expressive ways (Shehan Campbell & Scott-Kassner 2014, p. 159).

Types of summative assessment in the Dalcroze classroom can include:

- summative assessment of learning outcomes in the end of the semester in relation to articulated learning goals through repeating the previous exercises and observing students' performance.
- practical examinations in rhythmics and solfege with a small written or oral component. The latter may include, for example, a rhythmic or melodic dictation.
- tests on various topics and skills (e.g., ability to walk to the beat, change direction at the new phrase, work collaboratively, etc.) through observation and note taking (with an outside observer). Students may come in one by one, two by two, or in a small group and do various rhythmics and creative exercises. This structure enables students to receive more detailed and individualized feedback.
- exams in college level Dalcroze course:
    - a final plastique-animée which integrates students' in-class work
    - an exam that includes 'follow' tasks, conducting (different meters), subdivision of the beat (2, 3, 4, 5, 6), cross rhythms (3 vs. 2), simple polyrhythms, following treble and bass lines in the piano – one line corresponding to hands and the other to feet, etc.
    - an exam that includes group work, creative work, interpretation, etc.
- exams in professional teacher training: formal examinations in rhythmics, solfege, improvisation, plastique animée and pedagogy. As an outcome, students may receive grades (or pass/fail) and a written report for each subject area.

Assessment practices and tools

Observation

Assessment in Dalcroze teaching take primarily place through observation of student behavior since students' participation in music and movement activities can be argued to make explicit various skills and capacities (e.g., listening, bodily, social, and creative skills,

understanding, concentration). For example, the teacher interprets the student's body movements as indicating how (s)he perceives, senses, feels or understands music or specific aspects or elements of it. A teacher can also aim to interpret a student's creative and expressive capacities through observing his/her actions. Observation, as an assessment tool, is used in Dalcroze-pedagogy both in teaching situations as formative assessment and in exams as a summative assessment. Also in many studies examining the Dalcroze-pedagogy practices, observation is used as a method of data collection (Alperson, 1994).

When assessing learning through observation, the teacher focuses on the quality of the students' movement as it reflects their listening and understanding. The observation guides how the lesson evolves as the teacher modulates the process and the level of difficulty of the exercises in response to her emerging understanding of students' abilities and needs. Since observation informs teacher's further decisions and actions it includes reflection-in-action (Schön, 1983).

In teaching situations, assessment through observation generally includes comments, musical cues, or teacher demonstrations that guide students to pay attention to and improve certain qualities in their performance. It aims at encouragement and support, helping students to succeed. The ongoing, often wordless, dialogue between the tasks suggested by the teacher through music (often improvised vocally or on a drum or keyboard) and students' responses – each influencing the other – is actually an essential feature of the whole approach (Bauer & Silverberg, 2004, Abstract; also Schnebly-Black, 2003). In such dialogue, the teacher can also test, challenge, accompany, question, or even contrast through her music based what she would like the students to execute at any point during the class. Criteria vary between different exercises from accuracy, according to some particular parameter, such as experimentation, expressiveness and creative responses. The teacher also provides verbal guidance and feedback as an outcome of observation.

Feedback and comments should offer explicit information on how to close the gap between where the students are now and the standard they are trying to reach (Hattie & Timperley, 2007, pp. 81–112). Such feedback is usually given indirectly to the whole group, not to an individual participant. In this way, the teacher might make a general comment addressed to the whole group and then repeat the exercise thus giving students an opportunity to refine or improve the movement response. This setup serves as valuable practice time for the students to implement the suggestions provided by the teacher and perhaps gain a stronger feeling and understanding of the task at hand.

Students can also be guided to observe each other. One student (or a couple of students) at a time may be asked to repeat her response or the exercise, which reinforces the learning of the demonstrating student and allows other students to observe and rehearse mentally while watching. Watching another student perform or becoming aware of the movement of other students can influence perspective and enhance individual interpretations and overall performance, just like listening to different interpretations of the same piece of music. It is helpful for students if the teacher is able identify any possible “problem” in student performance and suggest a change that can help improve a musical or physical response (e.g., "use more space for the longer note values when clapping a rhythm"). It is also important to note students’ success individually and inform them about it often.

In a group teaching situation, however, observation is challenging; this is especially true when working with large groups. It is a challenge for the teacher to be able to watch everyone carefully while simultaneously being responsible for the teaching activities; and often also for the musical improvisation or accompaniment. Furthermore, since the exercises are so wide-ranging and multi-faceted, it is not always easy to monitor progress in all the various areas of work through

observation. It is also difficult to know how long it may take for a student to acquire certain skill. Hence, as Bauer and Silverberg (2004) note, we should also question whether the actions that students perform in a Dalcroze teaching provide a reliable indicator of the students' ongoing processes of perception and understanding, as well as of their rhythmic and bodily skills and the inner, kinesthetic understanding of them. Moreover, in Dalcroze teaching everyone should have an opportunity to explore, experiment and make mistakes, follow one's own speed of development and progress, feel comfortable and safe without being afraid of making mistakes or being assessed all the time. Accordingly, the teacher should know when to allow students to explore freely, solving problems by themselves, and when to help them solve problems.

Observation-based assessment is also applied as summative assessment in exams, usually included in professional studies of music or teacher training. In professional studies, students' musical, bodily and mental abilities are tested as indicating a direction of growth of musical competence, and for the purpose of informing students themselves or other teachers of student development. In teacher training, students must meet a certain level of performance in each subject area in order to obtain a teacher degree (certificate, license or superior diploma). Requirements are proper for each subject area and level tested. A higher level of skillfulness and fluency are expected at higher degree levels, as well as more developed understanding and ideas. In tests, observation is often guided by precise target areas that help focus on various areas of performance (analytic assessment). These target areas correspond to the learning objectives. It also recommended that the criteria for assessing performance in each target area are clearly defined.

Self-assessment

In self-assessment, students (or teachers) are guided to become aware of, reflect on and assess their own actions, performance, experiences, and learning (or certain aspects of it) so that

they start to think critically, develop analytical skills, and organize their thoughts about their own (musical) development. The goal is that students recognize their own strengths and abilities and mark their own progress but also conceive the shortcomings and objects of improvement. It is helpful to use a Socratic approach by asking the students questions about their performance or experience. This approach encourages students to think about their execution of a specific task and guides them in the reflection process. The following questions can guide this kind of formative self-assessment (for learning): Where am I going? (What are the goals?), How am I going? (What progress is being made toward the goal?), and Where to next? (What activities need to be undertaken to make better progress?), (Hattie & Timperley, 2007, p. 86).

Self-assessment can be applied in different ways. For example, at the end of a lesson, students can be asked to describe something that went well and something that could be improved, or to answer the following questions: Where did you succeed? What did feel good? What did you learn? What could you do better? How? Students can also assess themselves by viewing a video recording of the lesson and answering questions regarding their performance or experience (Butke, 2014). This type of reflection also includes keeping a journal of experiences discussing the difficulties being worked through and progress being made. When reflecting on past experiences, it is important to specify the "what" and the "how" goals moving forward.

Self-assessment is an important and valuable skill to foster. It helps students to understand learning objectives and to set own ones, which in turn supports self-knowledge, motivation, empowerment, and independence (Butke, 2014). Providing students with the tools necessary to critically assess themselves in an honest way helps them to become their own best teachers. Self-assessment is a key practice also for teacher development. For music educators to be successful at music performance assessment, they should be not only prescriptive in evaluating their individual

students and ensembles, but also willing to assess and improve their methods of teaching and communicating (Wesolowski, 2012, p. 37). For example, if most of the students in a classroom are not able to complete a task, the activity chosen may be too difficult or the instructional process being used may be ineffective.

Peer assessment

In Dalcroze teaching, peer assessment primarily implies activities in which students assess each other's performance during a lesson. This may involve working in pairs, observing the other student's performance, becoming aware of certain qualities of it, offering feedback or advice, and possibly being able to articulate and discuss them (critically). Students can also be asked to give constructive commentary on performances of others in a group.

When students are being observed during peer feedback, they have to own what they are doing because it is being witnessed, compared, and contrasted with another performance and/or preconceived notion. Peer assessment helps students to understand feedback from another person's point of view and become more aware of their individual performance. This works particularly well in professional and higher education level contexts in which students are already skilful, have a strong identity, are prepared to evaluate each other's performances, and are knowledgeable enough to give constructive feedback. Yet, peer assessment can also be practiced in more elementary ways as well. Using questioning techniques during peer assessment will help to guide students to think critically about another individual's performance. During peer assessment in performance, or any assessment in general, it is easy for individuals to continuously focus on the things that need to be improved upon. It is worthwhile to encourage students to provide areas of feedback for their peers that include specific elements that went well and things that could be

improved. By focusing on these two areas of feedback, students can find comfort in hearing something they are doing well, and feel motivated to continue to work through the challenges.

Exams and tests

A series of graded exams (based on student performance or pen-and-paper tasks, such as dictations) as summative assessment that evaluate specific skills have been developed and are applied in Dalcroze programs (Vann, 2013). Also, a plastique animée assignment can serve as an exam. Dalcroze teachers stress that assessment tasks in exams should be similar to those practiced in the lessons and students should know what kinds of tasks to expect in an exam. Teachers or groups of teachers design the most of the tests; however, some teachers also use commercially prepared tests to investigate the effectiveness of learning musical interpretation and notation skills.

Each teacher training program uses a set pattern of tests and exams for examining teacher candidates mainly in the areas of rhythmic movement, ear-training, improvisation, and pedagogy. When evaluating teaching exams, great attention is paid to the presence of Dalcroze principles, musical qualities, lesson structure as well as candidate's overall pedagogical abilities. In addition, plastique animée, a research paper or other written work, portfolios, and compositions may be required.[10]

Grading

Grading is a typical form of summative assessment and here means scoring, that is, placing the achievement on a certain assessment scale. Numeric to letter grade scale conversions generally vary from country to country, system to system and between academic disciplines. In the United States, grading commonly takes on the form of five letter grades (A, B, C, D and F, A being the best) whereas in Europe, numeric scales (e.g. 1–5, 4–10) are often used.

Because of the personal, experiential, and exploratory nature of the Dalcroze approach, many teachers are opposed to grading. Whether grades motivate student participation is disputed as well. For some Dalcroze teachers, grading is not a requirement as their jobs are affiliated with after-school music classes, pre-college programs, and other extracurricular activities. Classes such as these have a stronger focus on progress versus product and assessment is more informal, formative, and qualitative. For those teaching in public, private, charter, or other school systems, there is an accountability factor for demonstrating student achievement. In the case of applying Dalcroze pedagogy as a part of music instruction in schools, student achievement in these types of activities can be documented and discussed at the diagnostic, summative, and formative levels. Since letter and numerical grades describe very little about student learning outcomes, it is advisable that all grading in a Dalcroze class is accompanied by written and/or verbal feedback when possible.

With children, "grading" often means giving descriptive, verbal evaluation being placed in a category affiliated with a certain level of proficiency, such as *meets expectations, requires practice,* or *needs improvement*. The use of four levels of ranking rather than three is an appropriate choice because the tendency is to use the middle level most often (DeVault, 2013). Butke (2014, p. 25) suggests using four categories: *unacceptable, progressing, satisfactory* and *outstanding*.

Often assessment categories require scoring rubrics. Rubrics use a set of scoring criteria which determine the achievement level of a student's performance on assigned tasks and thus increase objectivity in the assessment (Weslowski, 2012, p. 37). According to Butke (2014, p.27), using assessment rubrics "establishes both validity and importance to the experience". It is important that teachers make students aware of the rubric criteria in the beginning of studies. Becoming familiar with the rubric guides student efforts and learning, enables them to prepare for

the assessment, and makes them more aware of what constitutes a high-level performance in music. Butke (2014, p. 25) offers a set of rubrics for the aforementioned assessment categories in music performance in the Dalcroze Classroom for Elementary and Middle School levels (Tables 3 & 4). In college and university levels, grades A, B, C, D and F are often applied (see Table 5).

Table 23.3. Criteria (student learning outcome) for various grading categories, Elementary level (Grade 2) Dalcroze studies: Plastique Animee (using the music *Fossils* from *Carnival of the Animals* by Saint Saens), (Butke, 2014, p. 25)

Grading categories/ Plastique rubric	Unacceptable	Progressing	Satisfactory	Outstanding
Rhythmic integrity	Incorrectly demonstrates beat, tempo, and rhythmic patterns	Demonstrates some inaccuracies in beat, tempo, rhythmic patterns	Demonstrates beat, tempo, rhythmic patterns clearly and consistently most of the time	Consistently and clearly demonstrates beat, tempo, rhythmic patterns
Legato/ staccato	Shows legato and staccato unclearly, or shows them in the wrong places	Shows legato and staccato inconsistently in terms of both articulation and placement	Usually shows legato and staccato in the appropriate places	Clearly shows legato and staccato in the appropriate places
Appropriate creativity	Demonstrates no creativity in movement - uses minimal body parts, similar movements at same height level	Demonstrates a few creative (personal and authentic) elements involving body parts, movement, and space	Demonstrates some creative elements involving body parts, movement, and space	Demonstrates many creative elements involving body parts, movement, and space
Expressivity	Rarely demonstrates flow, balance, extension, nuance. The quality of the movement does not match the quality of the sound	Inconsistently demonstrates flow, balance, extension, nuance. The quality of the movement sometimes matches the quality of the sound	Usually demonstrates flow, balance, extension, nuance. The quality of the movement usually matches the quality of the sound	Clearly demonstrates flow, balance, extension, nuance. The quality of the movement clearly matches the quality of the sound

Table 23.4. Criteria (student learning outcome) for various grading categories, Middle School Level (Grade 6) Dalcroze studies: Plastique Animée (using the music, *Oblivion* by Astor Piazzolla), (Butke, 2014, p. 26)

Grading categories/ Plastique rubric	Unacceptable	Progressing	Satisfactory	Outstanding
Rhythmic integrity	Incorrectly demonstrates beat, tempo, and rhythmic patterns	Demonstrates some inaccuracies in beat, tempo, and rhythmic patterns	Demonstrates beat, tempo, rhythmic patterns clearly and consistently most of the time	Consistently and clearly demonstrates beat, tempo, and rhythmic patterns, throughout the performance

Instrumentation	Does not show the different instrumentation at all	As a group, lacks clarity showing the different instrumentation	As a group, sometimes shows the different instrumentation	As a group, clearly shows the different instrumentation
Dynamics	Demonstrates few dynamic changes	Demonstrates some of the dynamic changes	Demonstrates most dynamic changes	Clearly demonstrates all dynamic changes
Appropriate creativity	Demonstrates no creativity in movement - uses minimal body parts, similar movement at same height level	Demonstrates few creative (personal and authentic) elements involving body parts, movement, and space	Demonstrates some creative elements involving body parts, movement, and space	Demonstrates many creative elements involving body parts, movement, and space
Expressivity	Rarely demonstrates flow, balance, extension, sensitivity. The quality of the movement does not match the quality of the sound	Inconsistently demonstrates flow, balance, extension, sensitivity. The quality of the movement sometimes matches the quality of the sound	Usually demonstrates flow, balance, extension, sensitivity. The quality of the movement usually matches the quality of the sound.	Clearly demonstrates flow, balance, extension, sensitivity. The quality of the movement clearly matches the quality of the sound.

Table 23.5. Criteria for various grading categories, College level Dalcroze studies (Nicole Brockmann, DePauw University)

Grade	Assessment criteria
A	Grades in the A range show that the student has mastered all or almost all of the given material with both technical skill and clear musicality. Rhythmic work is done with near-perfect accuracy and the student is able to precisely and correctly execute musical tasks modeled on ones that have been practiced in class. The student shows open-mindedness and enthusiasm, thinks carefully about each exercise, and works well with other students in partner and group settings.
B	Grades in the B range may reflect either an incomplete mastery of the material or an insufficient level of engagement in class activities. Rhythmic work may have some significant errors, or minor errors that recur. Though effort is made, the student does not always attend carefully to accuracy or expressivity in movement, or “tunes out” from time to time in class. Some problems in executing musical tasks.
C	Grades in the C range usually show that there is both incomplete mastery of material and an insufficient level of engagement in class activities. Rhythmic work has notable and/or persistent errors, and work shows a failure to master movement and musical concepts. Students may show an inability or disinclination to control the precision of their movements, and progress in these areas may be slow or non-existent. Significant problems executing musical tasks.
D	Grades in the D range generally indicate that basic problems in rhythmic understanding are impeding the student’s ability to master simple movement exercises, though this grade may also be earned through a failure to maintain the requisite approach to participation in the class. Serious problems with musical tasks exist and persist.
F	A grade of F reflects serious difficulties in mastering simple rhythmic and musical tasks and/or an inability to perform up to the minimum standards of the class. While it is rare for music majors to earn an F for strictly musical reasons, the influence of attendance and participation on an otherwise passing grade may drop that grade to an F.

Concluding comments

As in all assessment, it is important that target areas and evaluation criteria are defined, articulated, known by all participants, and in line with long term Dalcroze learning objectives and instructional goals in relation to each specific class. The assessment target areas and criteria should be created after goals and objectives are solidified, which in turn forms the basis for selection of assessment tools and practices. Most assessment experts recommend designing instruction and assessment guidelines at the same time so that they are consistent and reinforce each other (Hale & Green, 2009, p. 28). The transparency of the assessment is crucial: When students become familiar with the target areas, criteria, rubric and types of assessment – what and how they are being evaluated – they get a stronger sense of how to prepare for a given class, experience, assignment, or exam and become more aware of what constitutes a high-level performance in a given context. Similarly, the more teachers know about individual student learning and the effectiveness of their own instructional goals and teaching strategies, the more effective they can be in their work and the more meaningful the teaching and learning process becomes for everyone involved.

Assessment in Dalcroze-pedagogy is challenging since the approach does not offer ready-made assessment practices, target areas, or evaluation criteria though certain skills, qualities, and values are universally understood as inherent in the Dalcroze approach and are often used as the basis for creating learning objectives. Assessing learning achieved through Dalcroze-teaching is especially difficult in music classrooms where the approach is integrated with other activities and methodologies. Since learning in Dalcroze is holistic and individual, a combined approach makes it difficult to differentiate and specify what learning outcomes are direct results of Dalcroze

exercises. Currently, in the United Stated, there are few shared assessment target areas, criteria, and activities aligned with a National or International Dalcroze curriculum. The Dalcroze teacher training units share similarities in the essential areas of the approach; however, assessment practices and requirements affiliated with the training centers vary, for example, based on the faculty and their backgrounds. Many Dalcroze teachers have developed their own personal assessment tools for use in their classroom but seldom are those tools created or set through a National or International assessment expectation. It would be worthwhile to provide training centers and school teachers with a basic outline of resources, example rubrics, and/or suggested guidelines for assessment and grading in the Dalcroze work. The Dalcroze Society of America has published a training manual[11] outlining requirements for credentials, but has yet to develop anything specifically for teachers using Dalcroze principles in the music classroom. On the other hand, when using Dalcroze ideas as a way of teaching, it is an advantage that the target areas of learning and assessment are flexible and can be designed or modified for each specific context, yet in line with the curriculum.

Defining explicit assessment criteria is a challenge as well. For example, Dalcroze teachers may talk about and have an implicit understanding of "good movement" without being able to explicitly describe and articulate the qualities of it. The clarity of criteria often depends on the teacher's ability to show and articulate the qualities she expects from her students. Educators should ask themselves whether they are accurately assessing the intended skill set and/or set objectives initially created for the class. Though some educators may feel that defining assessment criteria limits creativity, defining clear expectations can give students a platform from which to be creative and flourish. This specificity can be challenging in Dalcroze teaching because lesson plans often function more like flow charts and class topics can shift based on the performance level,

ability, and creativity of the class at any given moment. For example, based on the flow of the class, a lesson focused on metrical concepts might easily evolve into a lesson in musical form.

The additional challenge for assessment in Dalcroze is that student's personal experience plays a crucial role in learning. A student's experiences as well as their personal reflections, interpretations, and meaning-making of those experiences are often considered primary compared to a student's observable progress or transformation of performance. Furthermore, each individual gets something different out of shared educational processes, learning and observable learning outcomes take time, and certain skills develop at a slower rate than others. Students themselves may become aware of their learning and make valuable connections long after participating in these classes. Many teachers maintain that learning in a Dalcroze class is so complex and holistic that assessing a specific variety of skills separately does not speak to the depth of the actual learning that takes place. Thus, self-reflection and self-assessment are advisable assessment tools for bringing out the experiential nature of the learning and for making students' experiences explicit, known, and part of assessment processes (Juntunen, 2016).

Despite the various challenges, according to our survey, Dalcroze teachers consider assessment an important element of teaching and learning: students should be notified of where their learning or development lies on the continuum and what elements might need more attention moving forward. However, many teachers (outside of the Dalcroze teacher training context) support qualitative assessment methods alone and would prefer not to give grades but are often required to do so. This is understandable since in Dalcroze pedagogy qualitative assessment plays a crucial role and issues of quality are difficult, sometimes even impossible, to convert into numbers or grades. Yet, in today's data-driven educational climate, the effectiveness of teaching and learning is often demonstrated by measurable outcomes (Fisher 2008). Student learning, and

consequently the quality of teaching, is widely evaluated by standardized tests, and schools are judged effective based on observable outcomes. However, standardized tests often limit or even preclude creative work and as Abrams (2016) notes, constant testing does not make students learn better, takes a large amount of time, and directs the focus of teaching at obtaining high test results. Instead, if teachers are trusted as autonomous agents, they will gain a sense of ownership and maintain their precious inner motivation and passion for teaching (Sahlberg, 2011, Juntunen 2015).

[INSERT ACKOWLEDGEMENTS HERE]

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[1] This connection continues to be pointed out by several scholars, especially in the field of neuroscience (Altenmüller, 2015; Altenmüller & Scholz, 2016; Hodges & Gruhn, 2012; Seitz, 2005a, 2005b).

[2] For the background, development and principles of the Dalcroze method, see also Greenhead 2015.

[3] See also FIER, 2013.

[4] Instead of "HOP", other signals, such as "change" or "switch", can be used as cues to prompt students to respond quickly, to perform a pre-defined change in musical behavior.

[5] Dewey discusses the intricate relationship between doing, experience, and learning as follows: "To 'learn from experience' is to make a backward and forward connection between what we do to things and what we enjoy or suffer from things in consequence. Under such conditions, doing becomes trying; an experiment with the world to find out what it is like; the undergoing becomes instruction-discovery of the connection of things" (Dewey, 1916, p. 164).

[6] In the U.S., each Dalcroze training center sets its own standards for teacher certification and administers its own examinations. The Dalcroze assessment practices in the United Kingdom, regarding the training of adults, are shared by Canada, Italy and Australia and used in Thailand, Singapore, Hong Kong, Indonesia and increasingly widely. The UK has also formulated assessment practices for children.

[7] Le Collège de l'Institut Jaques-Dalcroze was founded by Emile Jaques-Dalcroze to protect and promote the development of his method.

[8] For assessment target areas (of a test) for conservatory level music studies, upper grades (Seattle Conservatory of Music as an example), see Schnebly-Black, 2003.

[9] Educators can use the National Association for Music Education Standards as a basis from which to create assessment target areas and practices. These standards emphasize conceptual understanding in areas that reflect the actual processes in which musicians engage**.** They aim to cultivate a student's ability to carry out the artistic processes of creating, performing, responding, and connecting in music at various grade levels; all areas that are strongly present in a Dalcroze classroom. Curriculum choices can be defined and solidified in these areas based on specific teaching contexts.

[10] Guidelines of the examination structure for the Dalcroze teacher training programs, see The Dalcroze Society of America, 2015, p. 26.

[11] The manual is available on the website for members of the Dalcroze Society of America.