



Three Flute Players' Lived Experiences of Dalcroze Eurhythmics in Preparing Contemporary Music for Performance

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This qualitative study presents an interpretative phenomenological analysis of the lived experiences of three flute players who practice Dalcroze Eurhythmics, an approach to teaching, learning, and understanding music through exploring various music-movement relationships in social, creative, and rigorous ways. Our research seeks to understand how these individuals make sense of their lived experiences of Dalcroze Eurhythmics in learning, rehearsing, and performing contemporary music. Data collected through semi-structured interviews were analyzed and interpreted to create codes and categories in each data set. A cross-case analysis brought to light eight main themes: Body and breath; The body as a 'way in'; Learning through the body overcomes specific technical difficulties; An embodied relationship with the score; Deeper knowledge and connection to music; Clarifying own interpretations; Communication with the audience; A bigger picture beyond the instrument. This study provides new insights into how learning through Dalcroze Eurhythmics can help individuals prepare repertoire for performance. As such, it may be of use to Dalcroze students and teachers, to flute performers and teachers, and to teachers and performers of other instruments who wish to explore the potential of Dalcroze Eurhythmics in learning, rehearsing, and performing contemporary music. The analysis also reveals insights that may be relevant to other repertoires.

Keywords: Dalcroze Eurhythmics, flute, rehearsal, performance, lived experience, interpretative phenomenological analysis (IPA)

INTRODUCTION

Rosalind's Reflection

As a flute player with a particular interest in contemporary music, I am all too aware of the many challenges this repertoire can present: the very high level of instrumental technique and flexibility needed; the brainpower to understand the notation or play it rhythmically; the imagination required to make musical sense of the extended techniques and colors; and the understanding of the music needed to communicate with an audience. When I initially encountered Dalcroze Eurhythmics, I was immediately struck by how free I felt; how expression became something liberating and natural, and how musical understanding somehow came more easily. Instead of my usual intellectualized approach, Dalcroze Eurhythmics taught me to go with my body and with what feels right, influencing the way I prepare and perform flute repertoire, and contemporary music in particular. My experience has inspired this research.

This qualitative study uses interpretative phenomenological analysis (IPA) to develop a richer understanding of how flute players make sense of learning, rehearsing, and performing contemporary repertoire in light of their experiences of Dalcroze Eurhythmics.¹ Whilst it focuses on contemporary flute music, the findings might also be applicable to other repertoires.

Dalcroze Eurhythmics is a practical and holistic approach to music education. It is practical in that it combines “sensing, action, feeling and thinking” (Juntunen, 2016, p. 152). It is holistic in at least two senses. First, as a philosophy of music education, Dalcroze Eurhythmics works to overcome the dualism of mind and body (Juntunen and Westerlund, 2001), with practitioners choosing instead to emphasize and work with “the entire body of the living system (brain and body)” (Schiavio and Van der Schyff, 2018, p. 2).² Second, as a pedagogy, it is experienced not only as music education, but also a means to social integration, personal transformation and well-being (Habron, 2014; Van der Merwe, 2015; Navarro Wagner, 2016; Van der Merwe and Habron, 2018; Van der Merwe et al., 2019). Dalcroze Eurhythmics originates in the pedagogical experiments of composer, pianist, and conductor Émile Jaques-Dalcroze (1865–1950) after he noted that students at the Conservatory of Geneva lacked inner hearing despite their high levels of technical proficiency, and that children, who nevertheless developed good listening skills, struggled to play or sing in time (Jaques-Dalcroze, 1921/1967, pp. ix–x). Instead of teaching music theory in abstract terms, Jaques-Dalcroze prioritized sensing, feeling and listening as “the principal qualifications of the musician” (Jaques-Dalcroze, 1967, p. 2) and developed what we might today call an embodied approach to music pedagogy (Juntunen, 2017). As such, he believed theory should follow practice (Jaques-Dalcroze, 1921/1967, p. 63):

The aim of eurhythmics is to enable pupils... to say, not “I know,” but, “I have experienced,” and so to create in them a desire to express themselves; for the deep impression of an emotion

inspires a longing to communicate it, to the extent of one's powers, to others.

Jaques-Dalcroze stated that “to be completely musical, a child should possess an *ensemble* of physical and spiritual resources and capacities” (Jaques-Dalcroze, 1907/1967, p. 36; italics in original). To this end, he developed an approach based on three main disciplines, each explored through movement: rhythmic, solfège, and improvisation. Founded on the principle that rhythm is closely related to nature and life (Findlay, 1971, p. 1), rhythmic is the study of music through the body, exploring music's connection with time, space, and physical energy (Jaques-Dalcroze, 1967). Besides movement and listening, it includes the use of equipment that extends the body and its expressive potential (such as scarves, balls and sticks), as well as touch and close observation (as in group and mirroring exercises where students may guide each other through movement and touch). Solfège “awakens the sense of pitch and tone-relations and the faculty of distinguishing tone-qualities” (Jaques-Dalcroze, 1914/1967, p. 65). In this discipline, practitioners train the aural sense and inner ear through vocal expression, singing, listening, ‘mental hearing’ (audiation), and exploring connections between movement and pitch relations. Improvisation, instrumentally, vocally and in movement, encourages creativity and is a platform to expand the skills developed through rhythmic and solfège.

These three subjects are networked together constantly throughout Dalcroze lessons and are brought together in an additional area of study, *plastique animée*, which affords expressive freedom in the realization of music through movement (Greenhead, 2009). Altogether, the method relies on the notion that “musical expression and physical motion appear to share similar underlying properties,” for example tempo and dynamics which both “give rise to an internal sense of motion” (Seitz, 2005, p. 426). The radically cross-modal nature of Dalcroze pedagogy has been noted by practitioners (Schnebley-Black and Moore, 1997, pp. 20–21), yet finds theoretical support in current developments in cognitive science, especially an approach that describes musical cognition as embodied, embedded, extended, and enactive (Schiavio and Van der Schyff, 2018). With the so-called 4E model of music cognition, we can consider how Dalcroze pedagogy affords (i) embodied experiences of music involving the body, as participants move, feel, listen, think, and make contact with each other (Greenhead and Habron, 2015). These experiences are (ii) embedded within “the agent's ecological niche” (Schiavio and Van der Schyff, 2018, p. 2), which consists of elements such as space, the acoustic, other people, and the cultural context. Thus embedded, Dalcroze students develop their knowing through an (iii) extended cognition, interacting with other agents (students and teacher) and objects that become part of the musician's “cognitive ecology” (Van der Schyff et al., 2018, p. 7). These objects can include the equipment mentioned above, used to explore the world and receive feedback, and afford knowledge that would not be achievable solely by mental processes. Finally, the (iv) enactive dimension concerns how living systems and their environments mutually shape each other, and is most easily seen

¹In this article the name Dalcroze Eurhythmics is used to refer to the whole method, that is, including rhythmic, solfège, and improvisation.

²Following this convention, when we use the word body throughout, we understand it in this sense.

in improvised settings (Van der Schyff et al., 2018, p. 7). In the Dalcroze class, where improvisation is one of the principal means of teaching, learning, and interacting, these “dynamic forms of negotiation and adaptation” (Van der Schyff et al., 2018, p. 7) are a constant feature as participants adapt to, and influence, sound, space, affect, and the movements of others (Bachmann, 1991).

Dalcroze Eurhythmics can be applied to preparing musical performances, as discussed by Greenhead (2017), who developed an adaptation of Dalcroze Eurhythmics called Dynamic Rehearsal “to enable participants to enter a process of clarifying and refining interpretation and performance, and to improve communication skills” (Greenhead, 2017, p. 153). In Dynamic Rehearsal, performers rehearse silently while using materials, such as a rhythmic gymnastics ball or scarf, to “enact their thoughts, feelings, perceptions and sensations about their repertoire,” prompting them to make creative decisions to determine their intention as they go along (Greenhead et al., 2016, p. 221). Greenhead also encourages students to play whilst standing on a trampoline, or sitting on a ball, as further sensory experiences, which have helped her students to find “color, movement, and fluidity” (Greenhead, 2016, no page). Thus a Dynamic Rehearsal lesson, which requires preparation through rhythmic classes, would start with playing while standing on the trampoline, before showing the music to an audience in silence using the rhythmic gymnastics ball (or scarf, or other material) to represent the music (Greenhead, 2016, no page). It has been noted that this strategy affects the subsequent performance and communication with the audience, improving “the engagingness of the performance, tone-quality, rhythm and the communication of musical structure and, on the part of the performer(s), greater confidence and security” (Greenhead et al., 2016, p. 222).

Schnebly-Black and Moore (2004) have also applied Dalcroze principles to teaching in individual studio-teaching contexts, outside the traditional group exercises. They have connected Dalcroze to specific challenges in teaching technique, music reading, practicing and memorization, and offer exercises to suggest ways of dealing with these challenges. While dealing with issues in preparing music, this work does not explore the lived experiences of students in preparing music for performance. In terms of flute pedagogy in particular, Stumpf (2018) advocates the use of rhythmic and improvisation for students aged 4 and 10, but does not collect data about their experiences.

Qualitative research studies that investigate the experiences of participants in Dalcroze Eurhythmics are relatively few, but are becoming more common. Alperson (1995) used video observation and interviews to explore what happens in Dalcroze Eurhythmics classes for adults. She found that the lessons were student-centered (p. 237) and characterized by a “cyclical and spontaneous flow from idea into action into idea” (p. 242), and realized the “educational ideal of esthetics” (p. 253). Some studies have explored the application of Dalcroze Eurhythmics to rehearsal and performance. In an account of the development of Dynamic Rehearsal, Greenhead’s case study illustrates an account of the lived experience of a violinist who, after practicing Dynamic Rehearsal, said “music makes sense for me and for the audience” (Greenhead, 2017,

no page). A related study (Mayo, 2005) explores Dynamic Rehearsal from the perspective of solo violinists, a student string quartet, and on the author’s own coaching of a young string quartet. Mayo details a change in awareness of body and space, confidence and conviction in performance, and a new appreciation for showing an interpretation physically, noting that Dynamic Rehearsal “forces musicians to show, through movement, exactly what they want to express and then they simply replicate the movement in sound” (Mayo, 2005, p. 11). Habron et al. (2012) explored student composers’ experiences of making music in response to learning through Dalcroze Eurhythmics and noted their enjoyment, as well as influences on their aural awareness, musical understanding, and compositional work.

Recent research has also used phenomenological methods, which seems fitting given Jaques-Dalcroze’s aim, as he expressed himself a century ago, to enable pupils to say “I have experienced” (Jaques-Dalcroze, 1921/1967, p. 63). Van der Merwe (2015) adopted a hermeneutic phenomenological approach to investigate bachelors students’ first experiences of Dalcroze Eurhythmics, finding that it led “to the experience of joy, easier understanding of musical concepts, greater musical expressivity and social integration” (Van der Merwe, 2015, p. 404). Building on this work, Van der Merwe and Habron (2018) used IPA (Smith et al., 2009) to analyze data from Dalcroze teachers about their lived spiritual experiences in the Dalcroze class. The authors present eight themes in their analysis of the teachers’ sense making: Breathing is essential; Giving and receiving energy (physical and emotional); Creating connections through sound and movement; Awareness of self, other, environment, and music; Growth and learning; Meaning and holism; Well-being; and Precious moments of transcending time and space (Van der Merwe and Habron, 2018, no page). In addition, Wentink (2017) interviewed the members of a chamber ensemble who had experienced Dalcroze Eurhythmics classes designed specifically to support their interpretation of certain pieces. Using IPA, she found that the musicians made sense of their experiences in terms of: Heightened awareness of music, time, and space; Beneficial for relationships in the ensemble; Improved musicianship; Enjoyment and well-being; Informing pedagogy; and Social and cognitive challenges (Wentink, 2017, p. 56). The work of Juntunen and Hyvönen (2004) has laid a theoretical foundation for much of this research, especially in connecting the ideas of Jaques-Dalcroze and the practice of Dalcroze Eurhythmics to the philosophies and phenomenological insights of Merleau-Ponty (1962) and Sheets-Johnstone (1999).

Wentink’s (2017) study focuses on the experiences of the participants within an ensemble. Whilst it is nearest to ours, in focusing on the application of Dalcroze Eurhythmics to the preparation of performance, the current study differs from it and the others mentioned above in that it seeks to understand the lived experiences of three flute players and focuses primarily on how they apply Dalcroze Eurhythmics to their processes of learning, rehearsing, and performing contemporary music. The research question that guided the study was: how do three flute players make sense of their lived experiences of Dalcroze Eurhythmics in preparing contemporary music for performance?

MATERIALS AND METHODS

This study uses IPA, a qualitative approach to researching the lived experiences of individuals, to motivate data collection and analysis. Central to IPA are three theoretical perspectives (Smith et al., 2009, p. 4): (i) Phenomenology – studying the lived experiences of participants in relation to a certain phenomenon; (ii) Hermeneutics – the interpretation of an experience, here done by both the participant and the researcher, as the latter makes sense of the participants' sense-making; and (iii) Idiography – attention to individual experience. This approach was chosen because of the study's aim to understand how individual flute players make sense of their lived experiences of Dalcroze Eurhythmics as they prepare contemporary flute repertoire for performance.

The three participants are all flute players with experience of Dalcroze Eurhythmics. They are from Europe and America, and are all female. Despite different educations and backgrounds, they all have had similar experiences in applying Dalcroze principles and practices to flute repertoire, particularly contemporary music. Thus, they represent a purposive sample, which is appropriate in a phenomenological study. Data collection was carried out through audio-recorded semi-structured interviews, which made space for participants to reflect upon and talk through their experiences in detail. The interviews were transcribed by the first author, deepening her understanding of the data, in line with the advice of Braun and Clarke (2006, p. 88).

Since IPA focuses on making sense of individual experiences, each participant's account was interpreted before doing a cross-case analysis. The thematic analysis followed the process suggested by Smith et al. (2009). After familiarization with the data through transcribing and repeated reading of the data, initial codes were identified from each participant, noting what seemed most interesting and meaningful; this entailed writing a list of codes for each participant. Codes were grouped into categories and themes were made within each data item, using mind-maps and color coding, before reviewing each participant's themes and looking for themes across the whole data set. While some themes stood out with a lot of data to support them, subtle tweaking brought together smaller themes. Finally, themes were defined and refined in order to characterize the experience of each participant. Working in this way involved keeping each individual at the heart of the cross-case analysis, helping us "move from the particular to the shared" (Smith et al., 2009, p. 85).

Ethical Approval for this study was granted by the Royal Northern College of Music's Research Ethics Committee on 11 April, 2018 and participants gave their informed consent in writing, including for their words to be attributed to them by name.

RESULTS AND DISCUSSION

Given the idiographic nature of IPA, we begin this section with a summary of each participants' lived experiences. Their data have been analyzed thematically, according to the guidelines suggested by Smith et al. (2009) and appear in **Table 1**, below.

Kathryn

A Dalcroze module, focusing on rhythmic and Dynamic Rehearsal (Greenhead, 2017), came at the right time for Kathryn during her Master's degree, whilst raising a child as a single mother and suffering from a condition that threatened her flute playing. Her first experience of Dalcroze training, these weekly classes offered her a joyful and curious outlet where she could explore, focus, and learn about her body and music; she felt happy when studying Dalcroze and encouraged by the experience, even when things were harder. She would explore the exercises at home, sometimes together with her young child. Kathryn started thinking about her musical body without the flute attached to it, and started finding similarities between her experiences in Dalcroze classes, and technical and musical approaches to playing a variety of repertoires, including New Complexity music (Fox, 2001).

Irene

Irene's first introduction to Dalcroze, in her late teens, made her question her own music education. She observed a class and saw young children demonstrate their musical understanding through Dalcroze and felt embarrassed that she couldn't do the same. Although she was keen and looked for opportunities to learn more, her serious engagement with Dalcroze did not start until she undertook a master's with a module on Rhythmic and Dynamic Rehearsal (Greenhead, 2017). In her opinion, there is a strong focus on the technical aspects of music amongst classical musicians, both in learning and playing, without enough thought for communicating musical meaning. Movement has allowed her greater exploration in developing an interpretation of contemporary music including that of Takemitsu. Not only does she say incorporating movement makes her more decisive and committed, but it has also made her think about the visual aspect of performing, using gesture or even choreography to prepare a communicative performance.

Emma

Emma believes that Dalcroze transformed her career, which is split between being a flute teacher, Dalcroze teacher, and performing flutist. Undertaking her first Dalcroze lesson at the age of 18, she spent 10 years completing Dalcroze training to gain her license. In the past, her dyslexia has caused problems in reading scores, making her feel inconsistent and nervous as a performer. Engaging with all the disciplines within Dalcroze has enabled her to learn kinesthetically and she now feels much more comfortable performing, including technically challenging repertoire and extended techniques. On stage, she focuses on the music, not on herself or on her flute-playing. Together with jazz improvisation, which also has an important place in her working life, movement has allowed her to realize and understand the language of music in a different, more connected way. She believes this makes for a deeper performance.

Table 1 (below) shows the eight super-ordinate themes that emerged from the cross-case analysis alongside each participant's categories that make up the themes. For example, the body as a 'way in' emerged out of data in which participants talked

TABLE 1 | The eight super-ordinate themes alongside the corresponding categories for each participant.

Themes	Kathryn's categories	Irene's categories	Emma's categories
Body and breath	Responsive body; breath support; breath as the phrase.	Better use of body and breath; better sound quality.	Body's relationship to the instrument; sound quality; breath as the phrase.
The body as a 'way in'	A tool to aid focus; learning outside the instrument first.	A useful approach.	Learning outside the instrument and in the body first; helped issues worsened by dyslexia.
Learning through the body overcomes specific technical difficulties	Automatisms; quick response; rhythm; physical movements.	Rhythm; extended techniques; quick response.	Automatisms; rhythm; extended techniques; 'flow-based' flute technique.
An embodied relationship with the score	Body representing the score; embodying the structure; facilitates visual understanding; aiding memorization.	Translating notation; aiding memorization.	Gives meaning; aiding memorization.
Deeper knowledge and connection to music	The music as a whole, attentive to the details.	Knowing more than just theory.	Kinesthetic learning to uncover music's 'truth.'
Clarifying own interpretations	Equipment releases something; exploring; making decisions.	Considered and convincing intention; independent ideas.	Making own decisions; creativity through quality of movement.
Communication with the audience	Theatricality; considering audience's perception.	Stage presence; showing the audience the interpretation.	Moving the audience; 'translating' composer's ideas.
A bigger picture beyond the instrument	Engaging with the world; feeling encouraged; relationship with daughter.	Focusing on the music and meaning, not technique.	Transformed career; joy; music as the leader; more accepting of imperfections.

about how they first approach a new and challenging piece of repertoire through movement. The super-ordinate themes will be explained and discussed, with quotations from the participants, in the section that follows.

Body and Breath

All participants talk about the relationships between body and breath, and how the body can affect sound quality on the flute. For Irene, work on the trampoline in Dynamic Rehearsal reflects this connection: "it makes you have the balance and somehow you breathe better." Kathryn tells of how grounding her weight on the trampoline helps with "engaging and directing the air somewhere, beyond what you would do to play the flute. But there's something extra – an extra energy that goes into the air stream when you know what you're doing." Mayo (2005, p. 9) relates bodily balance and tension to breathing which, if not worked on, "constricts the tone and musical shapes that the musician might otherwise be capable of producing." Mayo (2005) also notes that breath is fundamentally connected to sound quality, while Greenhead (2017, p. 161) states that wind players often feel their breath support "kick in" on an elastic surface, just like the participants on the trampoline. Participants also relate breath to phrasing. Emma says:

the connection of musical phrases to breath, and the connection of music to language and the way that we speak, therefore the underpinning being with the breath and the 'in' and the 'out,' is, for me, such an essential part of what we study.

Participants in the study by Van der Merwe and Habron (2018) also talk about the breath as essential for awareness and the ability to react in the Dalcroze class, and as something that connects profoundly with movement.

The Body as a 'Way In'

All the participants talk about Dalcroze as a way in to understand, or 'own,' the music. In learning contemporary music, Irene finds Dalcroze Eurhythmics to be a way of "approaching it somehow... it was just useful." Similarly, Kathryn describes learning Ferneyhough's *Unity Capsule* (Ferneyhough, (1975–1976)): Dalcroze "gave me, this massive focus in this piece... It's almost like I was given some monkey bars to sort of glide over this thing that's really hard." This sense of overview is paralleled in Greenhead (2017, p. 162) case study, where the participant said she now sees a piece of music as a whole, and "from above."

Kathryn also talks of "abandoning" the flute for long periods of time when there's a problem with technique and, after exploring the music through movement "it's almost like magic or something. The flute comes back, it's in the body and it's possible to do it!" Similarly inspired by her Dalcroze experience, Emma opts to get away from the flute, preferring to explore the music in her "first instrument, which is the body," highlighting the fact that musical cognition is always embodied (Schiavio and Van der Schyff, 2018). Indeed, as human beings, our "first relationship with the world is wholly sensory – [the child's] knowledge is bound to what he sees, smells, hears and touches" (Juntunen, 2002, p. 85). When the participants were faced with complex contemporary scores and needed to find a 'way in,' Dalcroze provided them with a physical and sensory approach to do so. In this way, the musician's "own living and moving body... becomes, in effect, a musical instrument" (Juntunen, 2002, p. 85).

Emma's dyslexia made the theoretical elements of her music education challenging, but she found that solfège trained her ear, body, and mind, and strengthened connections between them: "the use of the body in the solfège... the matching the movement of a melody... changed my whole ability and allowed

me to discover a lot more about how I learn.” The “connection between ear, body, and mind is essential for musical performance and the Dalcroze method encourages students to understand the connection between what they hear, what they feel, what they think and what they do” (Juntunen, 2002, p. 81). It is the adaptability of Dalcroze as a practice, in both its teaching and applications, that provides Emma with a ‘way in’: “the fact that the method is so flexible [means it is] so able to transform how we experience music for ourselves.” As Bachmann puts it, “Eurhythmics is based on the joint mobilization of mind and body – specifically, on those faculties which enable us to act, react, and adapt to the surrounding world in order to cope with it to best advantage. It can therefore work for anyone, at anytime or place, regardless of their age or ability” (Bachmann, 1991, p. 21).

Learning Through the Body Overcomes Specific Technical Difficulties

Dalcroze Eurhythmics helps the flutists grasp extended techniques. Emma notes: “contemporary techniques are mimicking life sounds in a sense... All that stuff is really connected to how you use your body.” New Complexity music goes further with decoupling, where the notation describes performance techniques, or parts of the body, separately; for example, mouth shape and tongue. Dalcroze Eurhythmics helps Kathryn address this challenge by developing skills in dissociation. She relates learning this music to an exercise where the teacher plays on a drum and the class repeats the rhythm physically, using isolated parts of the body:

So there's a lot of layers [in Unity Capsule], there's a voice, there's fingers, there's air column, there's a mouth, there's a tongue... there's all these parts of the body. [I realized] that this is just isolating things like [my Dalcroze teacher] was doing on the drum, like in the warm up.

Writing about how Dalcroze Eurhythmics helps, Schnebly-Black and Moore state: “Music has many dimensions, all of them variable, over which a musician must exert control... For the body to integrate complex movements, the mind must cope with and prioritize multiple messages” (Schnebly-Black and Moore, 1997, p. 32). Kathryn’s dissociation work helps to develop automatism which provide her with a tool to overcome the technical challenges and focus more on communication. As Jaques-Dalcroze put it, rather poetically: “[t]he more automatism, possessed by our body, the more our soul will rise above material things” (Jaques-Dalcroze, 1967, p. 61). Similarly, quick reaction exercises in Dalcroze Eurhythmics train students to “react to *unpredictability*” and teach them “to respond quickly and effortlessly to a musical change” without disrupting the flow of movement (Urista, 2016, p. 17, italics in original).

Irene familiarizes herself with complex rhythms and the language of extended techniques in rapid succession through vocalizations and rhythmics exercises: “[I found noises for each] particular notation... because the changes of extended techniques in very short time made my brain like ‘fllluuuhhh.’ First I just did the noises, then I did it with rhythm... and then together.” Much of Western thinking has been

dominated by the mind-body divide, attributed to Descartes (Juntunen and Hyvönen, 2004, pp. 1–2). As Irene suggests complex scores, rhythms and techniques could initially incite an over-intellectualized approach which Jaques-Dalcroze hoped to overcome: “contrary to the popular idea, the premature development of intellect, and over-specialized studies, far from clarifying the mind, are apt to disturb and unbalance it” (Jaques-Dalcroze, 1967, p. 61). Instead, considering the entire body’s ability to make and respond to music, Jaques-Dalcroze recognized that: “The gift of musical rhythm is not a mere mental affair; it is physical in essence” (Jaques-Dalcroze, 1967, p. 31). In these participants’ experiences, movement aids the learning process of contemporary flute repertoire’s specific challenges, which can include interpreting complex notations.

An Embodied Relationship With the Score

Each participant notes that engaging with Dalcroze helps to memorize a score. For Irene, this is through “choreographies which remind you what is the rhythm, what is the next technique, extended technique. It helps you to memorize, you know the piece better.” Movement work on certain sections changes how Kathryn views the score and understands its structure:

Whenever I see that bar in a performance – “that’s the one where I do this” – I look forward to it. There are a few markers in this piece where I did loads of physical work with the material and those sort of punctate the piece for me and I look forward to those coming up. And I know what it looks like on the page and I know exactly where it is.

With practice, the bodily images developed through physical means can take the place of the score. Like other kinds of memory, musical memory “requires categorical structural representation that reduces the information load to manageable proportions,” such as a shape that we can locate in the musical structure (Sloboda, 1996, pp. 118–119). An efficient way to do this is through active sensorimotor experience (Schiavio and Timmers, 2016). Indeed, the more modalities engaged, the better the memorization will be (Chen and Fu, 2003; Shams and Seitz, 2008).

The participants talk of movement as a way of representing musical sounds and gestures in a way that is radically different from notation, and yet provides rich and personal meaning. Emma explores this further:

I would say that when you look at this visual representation of a score of dots on a page it could mean anything... it’s just a set of symbols. And so giving this non-verbal art form a non-verbal representation in the body makes it something that’s embodied and alive and real. And gives meaning to these dots on the page that is different for you.

Movement can be used to represent and recreate the score visually and kinesthetically. This aspect of Dalcroze education, often called *plastique animée*, has been described by Juntunen as “a ‘living analysis’ of the musical score, a movement composition [that] entails portraying primarily the form, structure, style and/or expression of a musical work through interpretive

movement" (Juntunen, 2016, p. 150). In this way, participants experienced movement as a way to bring notation to life through the body, in time and space, and in relation to other agents. This in turn led to easier understanding, which was also noted by Van der Merwe's (2015) study of university students' first experiences of Dalcroze, and memorization. The latter result can be explained by the fact that "musicians need to be motorically engaged with the music to facilitate memorization" (Schiavio and Van der Schyff, 2018, p. 7). Both understanding and memorization of a score were facilitated through a deep, personal, and embodied engagement with music in the Dalcroze class.

Deeper Knowledge and Connection to Music

Emma refers to her body as her first instrument, noting: "If I step away from my flute-way of learning... if I can actually experience the whole piece in my first instrument. The knowledge I have is just vast compared to before." Juntunen (2002) explores how Dalcroze Eurhythmics can be applied "to deepening the experience and understanding of a musical event or musical concept through bodily movement prior to, or in conjunction with, the development of instrumental or vocal skills" (p. 75) and reinforces the idea of "the body as a musical instrument" (p. 85).

Jaques-Dalcroze incorporated movement in learning "for the purpose of facilitating and reinforcing the understanding of musical concepts" (Juntunen and Westerlund, 2001, p. 210). Each participant talks about finding a deeper meaning of music through movement. Irene says that Dalcroze Eurhythmics helps her to "understand better the piece," and suggests that the Dalcroze principle where theory comes *after* practice enables a profound connection to music: "in my education, it's just sit down and you learn first music notation and how it works. [But] It's not about that! It's not about that!" According to Mayo, Dalcroze Eurhythmics allows access to "higher plains [*sic*] of cognitive understanding in music," and experiencing music through multiple modalities "greatly increase[s] our chances of identifying with the music at a deeper, and more emotionally intense, level" (Mayo, 2005, p. 10). Emma notices a process of musical discovery, facilitated by listening, movement and vocalization: "the truth of music, or the answer that I'm looking for resides through the body in some way." Juntunen (2002, p. 77) describes how Dalcroze Eurhythmics aims to deepen the experience of music and affords a progression from "outer to inner movement." In Emma's case, this inner movement can be understood as the expressive potential of the music.

For Kathryn, movement encourages a more comprehensive engagement with music, leading to knowledge of the different parts within it: "[my Dalcroze teacher] said I could be the solo line, but I could also be the orchestra part... so I would be able to swap between what the orchestra were doing, and then maybe show my line with something else." It also brings to light previously neglected details within the work: "there are certain parts where... I would just probably gloss over it or play quite quickly. Whereas when I was moving with it, I realized it was a place I should, I could actually take more

time." This possibility has been noted by Sloboda, who wrote that "bodily and physical motion, and gesture" can be applied "by analogy" to music, to create a more expressive interpretation (Sloboda, 1996, p. 119).

Clarifying Own Interpretations

The participants' Dalcroze experiences provided them with opportunities to explore music from different angles and experiment freely. This supports Emma's interpretive decision making: "if you're exploring something to know it better, you should explore all the things [the different modalities within Dalcroze practice] because then you can make your choice." Emma finds it helpful to use different materials to inform her movement and interpretation. In rehearsing or performing a piece with materials (such as a scarf or rhythmic gymnastics ball), through Dynamic Rehearsal or *plastique animée*, musicians can find their "own path to a way of expressing [themselves] through the score" and reveal "the strengths and weaknesses of the performance" (Schnebly-Black and Moore, 2004, p. 13).

Participants talk in depth about how engaging with Dalcroze Eurhythmics helps create decisive interpretations. For Kathryn, Dynamic Rehearsal forces her to make her interpretation look convincing and says "You have to make these decisions because you... are holding a ball!" In Dynamic Rehearsal "decisions must be made relating to how the music begins and how and where it moves *as the performer hears it*" (Greenhead, 2016, no page, italics in original). Through such experimentation, musicians can find "a gesture which [feels] right immediately" (Mayo, 2005, p. 29), and leads to a clearer interpretation. This exploration grants Irene a sense of independence. Previously, she would imitate what her teachers did and wanted, but now she thinks consciously about what she wants: "Dalcroze has helped me to have my own criteria to say that's my idea and that's how I want to express it." Participants in Wentink (2017, p. 17 and p. 27) noted similar benefits in musicianship, encompassing self-confidence and clarity of interpretation, as a result of preparing a wind sextet performance through Dalcroze Eurhythmics. Sound and movement improvisation can help the cultivation of a student's own "voice" in performance (Urista, 2016, p. 9).

Communication With the Audience

Dalcroze has affected the way the participants think about, and want to connect with audiences. Kathryn asks "What do you think your sound sounds like to people out there, rather than what does it sound like to you?" Communicating music is central to applications of Dalcroze Eurhythmics, such as Dynamic Rehearsal, and one of Greenhead (2017, p. 160) aims is "to help [musicians] relate to the audience without shying away from this contact." Irene discusses communication with the audience at length, carefully assessing the best way to achieve it. She considers what they can see, as well as hear: "the audience is not blind. On the stage, everything counts." In Dynamic Rehearsal, musicians are encouraged to think about the stage in a new way, performing in a "dramatically articulated space," using the whole stage to explore the music's dramatic potential (Greenhead, 2017, p. 157). Participants talk about telling stories,

communicating, ideas and showing a journey through their performances. Emma explains: "I move [physically] so that I can eventually move my audience [emotionally] while I'm staying still on stage." Irene uses movement to "help the audience understand what you have to say." Dalcroze practitioners aim to help students to become musicians who can carry the audience "on the journey of music" (Greenhead, 2017, p. 158) and "to project their ideas, feelings and intentions about the piece into the dramatic space to co-performers and to the audience" (Greenhead, 2016, no page).

A Bigger Picture Beyond the Instrument

Each participant reveals how learning through Dalcroze Eurhythmics has changed the way they approach music making outside the Dalcroze classroom and in much broader perspectives. Emma describes how it transformed her career while Kathryn tells of how she "tried to put it into my life a little bit," exploring exercises with her daughter at home. Each player says it is more than their flute playing that has been affected by Dalcroze, as Kathryn explains: "I think it's me as just who I am. I feel like it's... unlocked an imagination, and curiosity... and possibilities... and the world." Juntunen and Hyvönen write that "the knowledge we achieve by 'listening' to our body movements is also knowledge about the world; and it comes into being through bodily interaction with the world" (2004, p. 203). Furthermore, embodied knowledge of music also works "to make 'musicking' more personal and connected to one's own self" and contributes to knowing ourselves better (Juntunen and Hyvönen, 2004, p. 210). This change in outlook has had a positive effect on the well-being and careers of the participants in this study. Participation in Dalcroze contexts has had a similar transformative effects on musicians in related studies (Wentink, 2017; Van der Merwe and Habron, 2018), in terms of their personal growth, learning, and well-being.

The participants describe how a focus on technical command can be prioritized over musical communication. Irene describes going to recitals where, despite fine technical playing, she "didn't understand the music. And even sometimes... I can play [a piece] technically but I don't understand it." Preparing repertoire through the Dalcroze approach has changed Emma's outlook:

because of those layers of multitasking and training in that way, I can be more aware of all the parts happening, and more accepting of it because sometimes, yes, you are not able to produce a sound that you always wanted, but... that is just one very small part in the whole picture. And so the ability to see the larger picture of the music that you're performing is vastly impacted by this kind of work.

Jaques-Dalcroze began his pedagogical explorations, in part, because he felt the emphasis on technical proficiency was overshadowing the emotional and felt sense of music-making: "training is directed as much to the heart as to the brain, and [the musician] must try to love as well as understand" (Jaques-Dalcroze, 1967, p. 23). Mayo observes that this is still a pertinent issue. She is concerned that musicians "are engaged in a constant battle against the technical barriers that lie between

their musical minds and the production of beautiful music" (Mayo, 2005, p. 12).

In the past, a technical emphasis has made Emma a very nervous performer, but access to the bigger picture has refocused her mindset: "[I was] caught up in whether I am doing this thing in the 'correct' way. Instead the music is so much the leader of that process [now]. I have access to the larger picture." In this sense, Emma experienced Dalcroze as an 'environmental enabler' for optimal health (Perkins et al., 2017) and a way to avoid the "anxiety and an obsession with playing correctly," noted by Mayo (2005, p. 10). Learning music away from the instrument "allows us to internalize repertoire. So that when we perform we are guided not by our fingers... [but by our] inner ear" (Mayo, 2005, p. 35). As Emma said, "music is the leader."

CONCLUSION

The experiences of these three flute players suggest how Dalcroze Eurhythmics can be useful in preparing music, particularly contemporary music, for performance. The flutists make sense of Dalcroze as a way to connect body and breath, and a way into learning and performing. By approaching music through movement, they felt more connected with themselves, the score, the challenging techniques, their own interpretation, their audiences, and, perhaps most importantly, the music. Participants benefited from a deeper learning process which enabled them to foster a stronger connection with both the music and audience in performance, and to overcome the additional challenges that contemporary music may present. These findings are supported by, and add to, other phenomenologically-grounded research in Dalcroze studies, both empirical (Van der Merwe, 2015; Wentink, 2017; Van der Merwe and Habron, 2018) and theoretical (Juntunen and Westerlund, 2001; Juntunen and Hyvönen, 2004). Further research, building on the current study, could explore how musicians experience the application of Dalcroze pedagogy to a wider array of instrumental teaching, learning, and performance contexts, including different instrumental types and musical genres. This research contributes to our understanding of the experience of Dalcroze Eurhythmics as a pedagogical practice from the point of view of the students. Its insights might help or inspire other learners to explore the relationships between music and movement in Dalcroze contexts, as they approach musical and technical challenges of contemporary music and look for holistic and more personal ways to prepare, rehearse, and communicate it. Furthermore, this research could also contribute to the ways performers and instrumental teachers in a variety of pedagogical contexts might understand the use of movement in the preparation of repertoire with their students, in its learning, rehearsal, and performance.

DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Research Ethics Committee of the Royal Northern College of Music, Manchester, United Kingdom. The patients/participants provided their written informed consent to participate in this study. Written informed consent was obtained from the individual(s) for the publication of any potentially identifiable images or data included in this article.

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AUTHOR CONTRIBUTIONS

RR: data collection and initial data analysis; first draft of article, including introduction, results and discussion; re-drafting and editing article; and final editing. JH and RR: conceptualization of the study and research design; refining data analysis; re-drafting and editing article, including introduction, results and discussion; and final editing.

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Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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