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Author(s): Kivijärvi, Sanna; Sutela, Katja; Ahokas, Riikka

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**SPECIAL ISSUE**

Dalcroze Eurhythmics in music therapy and special music education

Article

A conceptual discussion of embodiment in special music education: Dalcroze Eurhythmics as a case

Sanna Kivijärvi, Katja Sutela & Riikka Ahokas

ABSTRACT

Students with Special Educational Needs (SEN) have difficulties in learning, perception and communication that often pose challenges for participation in traditionally organised music lessons with instruments. Embodied approaches to music education concentrate on utilising body movements to create and enhance learning. As embodied musical activities are drawn from the personal experiences of the students, it is possible to meet the diverse needs of learners efficiently. In this article, we provide introductory remarks on the conceptual content and sphere of embodiment in the context of special music education. We use Dalcroze Eurhythmics as an example, as it is deeply grounded in embodied music making and has a long history of being applied in this area.

KEYWORDS

embodiment, special music education, special educational needs, Dalcroze Eurhythmics

Sanna Kivijärvi is a doctoral candidate at the Sibelius Academy, University of the Arts Helsinki (Finland). She has an interdisciplinary training background with an emphasis in special education, music education and sociology. Sanna is engaged in various international academic research projects that focus on music education with students who have special support needs. Her research interests focus on the ways in which music education can advance equity and social justice at all levels of society.

Email: sanna.kivijarvi@uniarts.fi

Katja Sutela is a doctoral candidate and part-time university lecturer at the University of Oulu (Finland), teaching music and movement and special music education. She has taught music to children with SEN in a special school for ten years. Among her research interests are embodiment, special education, narrative inquiry and the relationship between music education methods and pedagogical thinking. Katja is currently undertaking a PhD regarding the development of agency in bodily musical interactions with children who have SEN.

Email: katja.sutela@oulu.fi

Riikka Ahokas is a music teacher who has specialised in music and movement. She has strong working experience in the field of special music education, especially with students who have autism spectrum disorders. Currently Riikka works with students and children with, for example, reading and/or other language-related difficulties. She is conducting her PhD research in music education at the University of Jyväskylä (Finland).

Email: ahoriik@student.jyu.fi

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INTRODUCTION

Movement is an inseparable part of music. Some approaches to music education, such as Dalcroze Eurhythmics, Orff Schulwerk and the Kodály method, emphasise this by focusing – to varying degrees – on the use of body movements to promote and enhance learning. These *embodied approaches* involve various types of music educational activities, including body percussion, music and movement activities, dancing, singing, conducting and relaxation exercises. Within the traditions of phenomenology and praxialism in music education these approaches are theorised by utilising the concept of *embodiment* (Elliott 1995; Husserl 1917/1991; Juntunen & Hyvönen 2004; Merleau-Ponty 1945/1962; Westerlund & Juntunen 2005). Our aim in this article is to provide some opening remarks on the conceptual content of embodiment in the context of special music education; that is, music education for students with Special Educational Needs (SEN) in which the therapeutic and rehabilitative aspects of activities are also considered. We use Dalcroze Eurhythmics as an example as it is deeply grounded in embodied music making and has a long history of being applied in education or therapy with individuals who have special needs.

In this article, we define SEN as exceptionalities in physical or cognitive functions that affect a student's learning and development. These exceptionalities can be either innate or secondary, originating from illness or disability (Kirk et al. 2005). Students with SEN have difficulties in learning, perception or communication that often pose challenges for participation in traditionally organised music lessons with instruments (Kaikkonen 2016). For such students, conceptual and non-experiential music education can be difficult to internalise and understand. However, as music is learned and experienced in and through the interaction of body and mind, it creates a space for communication with others and the environment. Juntunen (2011), for example, suggests that learning, making and experiencing music are possible by using the moving body as an instrument, regardless of one's musical ability. Embodied music making does not require fine motor abilities or the ability to read sheet music. As embodied exercises are student-centred, it is possible to meet the diverse needs of learners efficiently.

Here we discuss the notion of embodiment from the perspectives of music and special education, as well as examining the benefits of embodiment-based exercises for students with

SEN. Ockelford (2000: 200 and 203) notes that music education for such students should have two distinct strands: music “in its own right” (musical skills, knowledge and understanding) and music “to promote wider learning and development” (motor, communication and social skills). Embodied approaches to music education focus on the basic elements of music by combining these two strands in interactive, bodily music making. Previous research suggests that embodied music making has a positive impact on both of these strands: in music in ‘its own right’ and in improving students’ motor, cognitive and social abilities (Ahokas 2015; Ahokas, Burger & Thompson 2014; Cheung 2012; Zachopoulou, Tsapakidou & Derri 2004). The transfer effects are clear in students with SEN, since the impacts are fundamental in terms of their functioning in everyday life (see also Srinivasan & Bhat 2013).

In this article, we focus on one music pedagogical approach, Dalcroze Eurhythmics, that is based on embodied music making. By embodied (or bodily) music making, we refer to music educational activities that are built on body movements rather than specifically instrumental or vocal tuition. As the conceptualisation of embodiment does not have a well-established, precise meaning within special music education, our objective is to introduce the theoretical underpinnings for this notion and illustrate it through an examination of Dalcroze Eurhythmics in practice. Through this focus, we aim to open up a wider discussion of the theoretical and practical foundations and benefits of embodied approaches within special music education.

EMBODIMENT IN SPECIAL MUSIC EDUCATION

There is a growing interest in the body and its relation to knowledge within different paradigms. For instance, traditional Cartesian mind-body dualism, where the body is differentiated from the mind, has been criticised within phenomenology and praxialism. From a phenomenological perspective, the lived body is the basis of all experience and knowledge: *meaning* is not separate from our embodied experiences or the world around us but rather rooted in our experiences (Husserl 1917/1991; Merleau-Ponty 1945/1962; Waskul & Vannini 2006). Meaning making is a process that engages the whole body through perception and reflection (Merleau-Ponty 1945/1962). As Ferm (2008) puts it, “to move one's body is to aim at things through it” (Ferm

2008: 362). It is the person's mindful body, the whole *self*, that plays the piano, sings, dances, plans a new way of teaching music or solves a problem in a challenging learning situation (Sheets-Johnstone 2011). Hence, as Merleau-Ponty (1945/1962) suggests, embodiment is always lived from a first-person viewpoint. The person's physicality and embodiment condition his or her sense of self and experience (Westerlund & Juntunen 2005).

Praxial music education has for two decades emphasised the meaning of *knowing-through-action* (Bowman 2000; Elliott 1995; Regelski 1996). Elliott's (1995) concept of *thinking-in-action* includes the idea of knowing as constructive musical doing as a music maker, listener and experienter. As Elliott (1995) states: "Finally, if the body is in the mind, then it makes perfect sense (as Dalcroze, Orff, and Kodály specialists maintain) that the kinds of moving involved in music making (including conducting) are essential to improving musical understanding, which I have argued, is essentially procedural" (Elliott 1995: 103). According to (Bowman 2000), music learning is the embodied action of perception and reflection (Bowman 2000). Bowman (2000) considers the body as a starting point in the orientation towards the mind, musical cognition and "self-hood" (Bowman 2000: 45).

Polanyi's (1966) concept of *tacit knowledge* is widely acknowledged in the field of music education. This conceptualisation underlines the embodied nature of knowing: we develop and carry understanding through a constant interplay between body and mind when interacting with the world (Polanyi 1966: 33). Thus, learning takes place through forms of action other than logic or language, for example through bodily experiences such as playing the piano, walking and cycling. Applying Polanyi's understanding of knowledge to bodily skills, Parviainen (2000) employs the concept of *bodily knowledge* to refer to knowledge that develops through an individual's interaction with the world and that is more than an awareness of the body's own functioning. Bodily knowledge can be understood as an improved knowing in and through the body, which has a direct connection to bodily awareness, senses, skills and abilities (Westerlund & Juntunen 2005). Such bodily awareness is the focus of somatic practices, such as Feldenkrais, which seek to help participants develop self-awareness and retrain movement and thinking habits through engagement in directed physical work and careful self-monitoring. Dalcroze Eurhythmics shares

many of these characteristics and has been theorised as a somatic practice (Greenhead & Habron 2015).

Blacking (1977) acknowledges the social and cultural aspects of bodily experience and understands the body as an instrument for human interaction, as well as an expression of it. He believes that feelings expressed and shared as movements of bodies, even without words, are the basis of mental life (Blacking 1977: 21). This view directs our thinking towards the potential therapeutic and rehabilitative value of embodied approaches in music education, which may contribute to the general wellbeing of participants. The bodily functions we are capable of guide our experiences of the world (Rouhiainen 2003). Hence, the nature of embodied approaches in music education may provide new opportunities for individuals with SEN to have experiences of, for example, joint attention, social reciprocity and shared affect despite their verbal or physical abilities and also give them a chance to express their bodily knowledge and creativity. Parviainen (2002) challenges us to consider the following: "If we agree that the knowledge of a disabled person's lived body is epistemically valuable, we should ask what the disabled know about the moving body that the fully-abled bodies do not" (Parviainen 2002: 17). Following this line of thought, the phenomenon of SEN creates a considerable opening in conceptual considerations of embodiment.

Within the fields of special education and disability studies, the body with exceptionalities has traditionally been presented as an object or "passive recipient of social forces" (Paterson & Hughes 1999; see also Goodley & Runswick Cole 2012; Vehmas 2010). Since the late 1990s, scholars have argued for a more phenomenological approach to the body with "impairments", "disabilities" or "special needs" (Hughes & Paterson 1997; Loja et al. 2013; Paterson & Hughes 1999). Current discourses within special education and disability studies often employ the social model of disability, which is to some extent in line with phenomenology. The social approach emphasises that special needs are a socially constructed phenomenon and sets forth a distinction between *impairment* and *disability* (Goodley & Runswick Cole 2012, 2015; Loja et al. 2013). The term 'disability' refers to consequences of exceptional body functions ('impairments'), viz. the restrictions of an individual to participate in activities considered 'normal' in daily life (Goodley & Runswick Cole

2012). However, people with disabilities still encounter social discrimination – ‘(dis)ableism’ – in everyday social life and are obliged to remain constantly aware of their exceptionalities (Hughes & Paterson 1997).

Within music education settings, we must carefully evaluate the situation to ensure that the students do not face (dis)ableism and that any assistive technology they may use enhances, rather than limits, their opportunities to achieve bodily knowledge. Parviainen (2000: 151) states that the potentials and deficiencies of the moving body are an aspect of *kinesthesia* rather than locomotor skills. Hence, the bodily knowledge of a person with a disability is equally as meaningful as the experiences and bodily knowledge of an individual without any special needs. In our view, embodied approaches in music education see the body as the *subject* of experience. Through this phenomenological approach, embodied music making enhances students’ autonomy, self-awareness and efficacy. Thus, we suggest that embodied approaches advance inclusion in a variety of music educational and social settings by offering equal grounds for every learner.

THE CONNECTION OF EMBODIED APPROACHES TO LEARNING AND COGNITION

The benefits of embodiment-based music education for students with SEN are often comprehensive. In addition to music learning, wider advantages are found in the development of bodily knowing and self-awareness that contribute to self-expression and social skills (Ahokas 2015; Berger 2016; Habron-James 2013; Winsler, Ducenne & Koury 2011; Zachopoulou, Tsapakidou & Derri 2004). As embodied musical activities challenge the participants to control their limbs, trunk and head, they help train, in particular, the bodily control and motor performance of the students (Zachopoulou Tsapakidou & Derri 2004). However, as Habron-James (2013) and Srinivasan & Bhat (2013) also addressed in their work, there is a lack of an established, systematic tradition of research on the effects of embodied approaches to music education with students who have SEN. Therefore, we also rely here on studies conducted with students without any SEN where the research settings and findings are applicable.

The importance of motor performance in the development and appearance of cognitive skills has been widely acknowledged (Colomino &

Romero-Naranjo 2014; Diamond 2012; Forss 2000; Hannaford 1996; Kujala et al. 2012; Long 2014; Michel 2012; Piek et al. 2012; Romero-Naranjo 2013, 2014; Thaut 2005). Individuals with deficits in motor performance (for example, coordination difficulties) have limitations in their *executive functions*, which is a neuropsychological umbrella term for higher-order cognitive functions such as working memory (Diamond 2012; Michel 2012; Streen & Strauss 1998). Motor performance correlates with learning abilities and academic skills (Haapala et al. 2013).

In addition to their direct or indirect impact on working memory performance, embodied music exercises also improve the ability to process new information. The effects of a six-month period of music and movement practice were studied with participants diagnosed with dementia (Cheung 2012). The lessons (30 minutes, twice a week) followed a routine that consisted of beginning and ending songs. The training itself concentrated on encouraging the participants to use their bodies in ways demonstrated by the teacher. The research design used props, such as balloons, to prompt physical movement and singing to enhance fine muscle activation. In the follow-up tests (six weeks after the training period), there were significant improvements in memory functions, and the participants’ symptoms of anxiety and agitation were lowered (Cheung 2012).

Winsler et al. (2011), by contrast, concentrated on the effects of music and movement classes on toddlers. Their main focus was on the effects of the training on self-regulation and/or the ability for ‘inner speech’. The children who participated in the music and movement classes were more capable of both self-regulation and ‘inner speech’ compared to those not included in the teaching (Winsler et al. 2011). The direct impact of embodied musical activities on academic learning is revealed by a study that utilised modelled rhythm-based exercises to improve the participants’ reading skills. After participating in the rhythm-based training period, there were major improvements in the children’s reading ages, that is, their level of reading capability (Long 2014).

The wider effects of embodied music educational approaches for students with SEN vary depending on the learner’s body and motivation. Previous research suggests that embodied music activities improve bodily control, and because teaching often occurs in a group situation, they also have a positive impact on students’ group assimilation skills (Ahokas 2015).

Such activities contribute to stronger self-awareness, which supports identity development. This, in turn, improves the students' ability to perform outside the classroom (Ahokas 2015; Forss 2000; Winsler et al. 2009).

EMBODIMENT IN DALCROZE EURHYTHMICS FOR STUDENTS WITH SEN

Movement plays an essential role in Dalcroze Eurhythmics, an approach to music education, general education and wellbeing, based on the idea that (musical) understanding and learning stem from bodily experiences. Émile Jaques-Dalcroze (1865–1950), who worked as a professor of harmony, solfège and composition at the Geneva Conservatoire, explored the possibilities for including natural movements, such as walking, running and skipping, in music learning processes (Jaques-Dalcroze 1921/1980). Through his experiments, he developed an approach to music education with the aim of enhancing musicianship in particular, and self-awareness, sociability, adaptability and wellbeing in general. Leaning on these ideas, Greenhead and Habron (2015) have explored Dalcroze Eurhythmics as a somatic practice at the core of which lie movement, music and improvisation. They suggest that Dalcroze Eurhythmics offers opportunities “for the tuning up the body–mind, and the tuning together of feeling, thinking and doing” (Greenhead & Habron 2015: 105). They highlight the immediacy of touch in improvised music and assert that the touch-like nature of sound develops the awareness of self, others and the environment (Greenhead & Habron 2015).

Dalcroze practitioners are trained to use the principles of the approach, adapting them to the circumstance (Bachmann 1991; Juntunen 2002). The Dalcroze approach is known at every level of music education, from kindergartens to universities, public and private schools, schools of dance (Johnson 1993), drama (Nathan 1995) and within music therapy and special education (Dutoit 1965; Bachmann 1991). As Jaques-Dalcroze did not provide detailed instructions for practitioners on how to present and create exercises, the approach opens up possibilities for teachers to creatively depart from and vary his original structures (Alperson 1994; Stone 1986). However, typical initial exercises in Dalcroze Eurhythmics might include walking to a pulse, whereby learners entrain to the improvised music of the teacher, being afforded a physical sense of pulse

and developing their awareness of (personal) space. By stopping and starting on commands (musical or spoken), the focus might shift to the inhibition and incitation of movement, in other words sensorimotor control of oneself in terms of time, space and energy. Maintaining the stepped pulse without the aid of an instrument is a further challenge aimed at internalising the pulse, whilst showing accents with a gesture in the upper body, or analysing metre using full-arm gestures might develop such activity in particular directions. Dalcroze activities may also include singing games, dances, and relaxation. Various ways of using gestures and postures are applied in ‘story-telling’ with movement or conducting. In all such exercises, Dalcroze practitioners observe the learners and may modify their improvisation, instructions and lesson planning, according to the students' needs and abilities, responding to the speed and depth of their learning and sometimes taking inspiration from their ways of moving. Learners themselves improvise in movement, vocally and using instruments, an aspect of Dalcroze Eurhythmics that allows spaces for individual and group creativity, expression and the use of imagination. All these activities engage the student's musical body and the senses in action. (Juntunen 2002.)

Dalcroze Eurhythmics therefore emphasises individuality and is highly student-centred; the focus on musical interaction is based on each student's personal abilities and needs (Anderson 2012; Juntunen & Hyvönen 2004; Juntunen & Westerlund 2011). Jaques-Dalcroze's philosophical ideas on education reject Cartesian mind-body dualism and seem to correspond instead with the philosophical ideas of Merleau-Ponty (1908-1961) regarding embodiment. Juntunen and Hyvönen (2004) have argued that the body is a “primary mode of knowing, and that what can be known via bodily experience, while often incapable of being expressed in words, is known at a deeper level” (Juntunen & Hyvönen 2004: 200). As well as according with phenomenological (Merleau-Ponty 1945/1962) and praxialist (Elliott 1995) perspectives, the holistic nature of the musical exercises in Dalcroze Eurhythmics is in line with other philosophical theories that have abandoned somatophobic dualism, including Dewey's notion of experience (1934) and Heidegger's (1927/1962) accounts of facticity and “being-in-the-world”.

A Dalcroze-based learning and teaching process focuses on the development of bodily

knowing, which enables students to manage and refine their movements in other music-related activities such as playing an instrument, singing and conducting (Juntunen 2002; Juntunen & Hyvönen 2004). The goal is for students to illustrate the qualities and dimensions of the music through their bodies, by showing what is heard and felt in terms of time, space and energy (Jaques-Dalcroze 1921/1980). Dalcroze Eurhythmics includes three interrelated ways of learning – rhythmics, solfège and improvisation – which are always present during the pedagogical process. For example, in a solfège lesson, students not only sing but also use rhythmic, expressive movements to create a comprehensive understanding of the musical phenomena at hand, such as studying scales by ‘walking through the scale’ or major and minor chords by showing them with hand movements. According to Sutela, Juntunen and Ojala (2016), students with SEN learn musical elements from and with each other by expressing them as concrete bodily activities, such as finding the pulse with the help of ball bouncing. Improvisation is often utilised to deepen the learning process. After imitating and finding their own way of expressing certain movements, spontaneity and self-expression through improvisation exercises strengthen students’ learning and self-confidence in general. Hence, the goal of these musical exercises is to lead students to a more profound response to the expressive and structural aspects of music (Juntunen 2002).

Music provides an “auditory frame of reference” (Ockelford 2000: 200) for movement, which can be particularly significant for those who face difficulties in understanding visual information presented, for example with Western music notation, due to various types of cognitive, physical or developmental disabilities. In Dalcroze Eurhythmics, the movements students make in response to music can be freely expressive or follow the characteristics of the piece in question. However, it is important to start from where the learner is. Particularly when working with students with SEN, the Dalcroze teacher must have sensitivity and patience in regard to each student’s engagement with the musical interaction. By paying attention to students’ backgrounds, abilities and strengths in musical activities, the teacher can create an atmosphere where every student may express themselves freely (see also Sutela, Juntunen & Ojala 2016). Furthermore, the timing of the reflective and conceptual teaching and learning is something the

teacher must consider carefully, taking into account the skill level of the student or group (Anderson 2012; Juntunen & Hyvönen 2004; Kaikkonen & Kivijärvi 2013; Kivijärvi 2012).

As Dalcroze lessons are expected to form a logical developmental process and be characterised by a cyclical and spontaneous flow (Alperson 1994), it gives the teacher possibilities to make divisions between easier and more difficult tasks within one group and thus enable participation of diverse learners. Students may work in pairs (with an assistant or a peer) or in small groups and thus enhance their peer-learning and enjoy the joy of collaboration. Some previous research studies have focused on the application of Dalcroze Eurhythmics with students with SEN. Berger (2016) suggests that Dalcroze-based activities support specifically the sensory organisation of students with autism spectrum disorders. According to her accounts, assistive equipment, for example trampoline or mouth instruments, are useful in adapting the exercises to meet the needs of learners (Berger 2016). Hence, Dalcroze Eurhythmics effectively enhances students’ autonomy (Berger 2016) and agency (Sutela, forthcoming). In Sutela’s study (forthcoming), where development of agency of one adolescent student with Asperger-syndrome in Dalcroze-based lessons was observed and analysed, preliminary results suggest that the student became much more present, active and engaged towards the end of the seven months’ intervention. Bodily musical interaction helped the student to shift his attention from self-stimulation to shared activity with others. He also took responsibility as part of the shared musical activities, including outside the classroom at the end of the intervention (Sutela forthcoming).

In a related study, Habron-James (2013) concludes, based upon multiple case study research, that Dalcroze Eurhythmics has a positive impact on the musical, physical, emotional, cognitive, behavioural, and social development of students with SEN (Habron-James 2013). For example, the interactional and supportive nature of music and movement activities may bring a sense of contentment and freedom for students with SEN as their creativity and curiosity are fostered through the development of independence. In addition, the internalisation of a musical piece may help students to establish body control and advance automatic bodily functions necessary in daily life (Habron-James 2013). Habron-James’s (2013) study suggests recommendations for

understanding the multiple aspects of lesson planning, staff involvement, collaboration with other professionals, communication with students and differentiation in the context of special music education.

Falschlunger (2015), in a study of the value of Dalcroze-inspired activities when teaching children with multiple disabilities, discovered that the approach offered many benefits by enabling a space for creative expression and communication (see also Habron-James 2013). There is indeed a longstanding relationship between therapy-oriented practices within Dalcroze Eurhythmics (Frego 2009; Habron 2014). We suggest that some therapy-oriented practices could successfully contribute to music education for SEN students. This is in line with conclusions by Sutela, Juntunen and Ojala (2016), who suggest that Dalcroze-inspired musical activities enable the reflection of emotions and enhance creativity in bodily expression among students with SEN. In this research, Sutela, Juntunen and Ojala (2016) analysed a wide variety of data and discuss aspects very similar to those examined here. According to the preliminary results, Dalcroze-based musical activities foster levelling opportunities for students with SEN to interact and participate in music making. The results indicate that the application of Dalcroze Eurhythmics has advanced the students' capabilities to develop and display musical knowledge and demonstrate their skills (Sutela, Juntunen & Ojala 2016).

The theoretical and practical implication of Jaques-Dalcroze's thoughts is that the mindful body is relational, experiencing and actively transforming. If we consider the body to be the "absolute source" (Merleau-Ponty 1962: xxii) of being and knowing, we can see that the radical use of movement, characteristic of Dalcroze Eurhythmics, may be the key to a more profound learning in music education settings and thus has the potential to change *thinking-in-action* more generally (Westerlund & Juntunen 2005). As this approach combines all the faculties of the person – the moving body, emotions, senses, imagination, thought and will – it offers the possibility of supporting the learner's own experience and expression, including those students with SEN.

CONCLUSION

Embodiment-based activities offer opportunities for special music education. Instead of concentrating on students' educational needs, the focus in embodied music making is on their

agency. Still, it is important to ask why embodied approaches to music education are beneficial to individuals' learning and socialisation if all music making is embodied *per se*. In this article, we have discussed the conceptualisation of embodiment in special music education by using Dalcroze Eurhythmics as an example. To conclude, Dalcroze Eurhythmics encourages teachers to emphasise the bodily, pre-reflective level of knowing, which is important for students with SEN, as it gives them meaningful possibilities to express their musical knowledge without, or before, conceptualising the musical phenomena, through non-verbal ways, and thus foster their identity as a musician. Due to its high focus on multisensory organisation and the use of improvisation and touch, Dalcroze Eurhythmics can be especially beneficial with students who have SEN. However, these implications must be thoroughly evaluated in future research since similar aspects are emphasised in other embodied approaches to music education as well.

The next step in developing embodied approaches in special music education is to identify and share research with related sciences. In addition to pedagogical implications, the conceptual content and value of embodiment are in themselves significant subjects of research. Moreover, practice and research with students with SEN have the potential to promote innovation in music education in general. Our article encourages professionals in music and special education to recognise and evaluate the importance and possibilities of *embodiment* in teaching and researching students with SEN.

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