

Guest Editorial Preface

Special Issue of Revised and Extended Papers From the 1st Dance With Science International Conference – Brazil (Dance ComCiência)

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Dance Science is the scientific study of any subject related to dance and dancers' performance. This research field developed around the 1970s out of sports medicine, when some physicians became interested in dancers as an exciting population for exercise and movement studies. Typically, the subject areas within Dance Science are similar to those studied in Sports Science, naturally with special considerations on dance specificities. They include physiology, anatomy, kinesiology, psychology, biomechanics, nutrition, and pedagogy. However, unlike Sports Science, Dance Science involves researching topics such as creativity, choreography, musicality, artistry, and somatic techniques. With an incredible variety of dance styles and requirements, it was not a surprise when Dance Science became a field of its own.

Countries like the United Kingdom and the United States are pioneers in this research field, whilst countries like Brazil, although having a considerable number of dancers, are yet to apply the necessary resources to develop this research field. Aiming to increase interest and share research, in 2021, a conference open to the dance public (teachers, dancers, researchers and enthusiasts) was held via videoconferences and online classes to reach a broad number of participants in Brazil and abroad. The main objective was to disseminate the Dance Sciences in Brazil and reflect on the importance of specific physical preparation: considering more outstanding care with the body as a priority for those who wish to have a longer and healthier career, with increased performance and decreased injury rates. Another premise was to focus on education, providing cutting-edge information to assist in the continuous training of dance teachers and dancers, increasing awareness of the human body and its functionality in dance.

The Dance with Science (Dance ComCiência) conference in Brazil aimed to create a dialogue between dance and science and unite the theory of scientific research with dance practice. For the practice field, it aimed to demonstrate how multidisciplinary work should be done in schools and dance companies, considering models and experiences from countries where Dance Sciences are much more developed.

This special issue, *Dialogues Between Dance and Science - Second Edition of the International Journal of Arts, Culture and Design Technologies (IJACDT)*, contains six revised and extended papers from the 1st Dance with Science (Dance ComCiência) Conference Brazil held via Bastidores - Dance, Research and Training Distance Learning Platform (www.bastidorestreinamento.com) - from 21st to 26th of June 2021.

The first paper, “The Effects of a Low Volume Physical Training Program on Functional Movement and Strength in Dancers,” aimed to evaluate the effect of twenty low volume remotely guided training sessions within the daily life of dancers with different routines who practice different dance modalities.

The second paper, “New Notes on the Cardiorespiratory Capacity of Dancers: A Narrative Review,” reviewed the literature concerning the cardiorespiratory capacity, one of the essential components of physical fitness for the general population. It discussed how much this ability is required in dance, duration and intensity of step sequences and choreographies according to the hierarchical position that the dancer occupies within a company. Although the theme is explored in the 1980s, many points still need further investigation, such as the relationship between this capacity and the dancer’s performance and how to include training for this capacity in a dancer’s routine.

“Analysis of Current Tests for Assessing Dance Aesthetic Performance: A Systematic Review” is the third paper in this issue. Dance has artistry and expression as its primary performance goals. In contrast with sports, measuring dancers’ proficiency in the art form involves a subjective aesthetic component, making it more challenging to quantify and score. This systematic review aimed to examine the different test protocols that assessed aesthetic performance in modern or ballet dancers at vocational or professional levels to discuss methodological approaches for future development and application of dance aesthetic performance tools.

Following this, “Should the Heels Touch the Floor During the Plié in Classical Ballet Jumps?” the fourth paper, aimed to review the literature concerning the correct execution of the plié movement in the performance of different classical dance jumps. Studies about jumping techniques (such as countermovement jump, squat jump, and drop jump), the stretch-shortening cycle of short and long duration, classical dance jump and ballet mechanical action description by Agrippina Vaganova and Balanchine raised questions concerning different forms of plié execution preceding small and big jumps.

The fifth paper, “Body Conditioning for Breakers: The Breakalign Method,” described how the Breakalign Method was born out of the research work of the Project Breakalign team. It is a step-by-step conditioning programme that takes the body through levels and was created through the biomechanical and physiological analysis of the Breaking technique.

Finally, the sixth and last paper, “The Implantation of a Dance Workshop on the Quality of Life in the Work Environment: The Paola Rettore Method,” aimed to evaluate the Movement Workshop: a Body-Space Experience (MWBSE) implementation in Company A to promote health and improve their employees quality of life through the Paola Rettore Method (PRM), which was based on the spontaneity proposed by Isadora Duncan to observe nature and the Laban/Bartenieff System.

The authors of these papers are proud to bring this special issue. We hope that reading these high-quality papers will inspire the study and research in the Dance Science field. Also, additional submissions to future Dance and Science conferences in Brazil and the support of the research community at Bastidores – Dance, Research and Training Distance Learning Platform.

May these contributions pave the way for dancing longer and healthier.

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