

The international judging system in dance sports, adapted to online competitions

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Abstract

Background. As in any other branch of sport, in dance sport, as a result of competitive activity (increasingly intense in recent years), winners are designated, rankings, hierarchies, tops are made, based on more or less objective decisions of the adjudicators, who judge several aspects. In its early stages, judging in dance sports was achieved by comparing pairs that evolved simultaneously on the ring. Following this comparison, using an algorithm for processing the individual evaluations of the adjudicators (Skating system) it was decided who goes further in the competition or the places obtained by the athletes in the final. With the increase in the number of the couples participating in competitions, this comparative evaluation system was overwhelmed, requiring a modern evaluation system based on scoring the evolution of pairs, thus giving rise to a judging software that solves the shortcomings of the initial models.

Aims. Our paper wishes to present a judging program derived from the latest judging systems developed by WDSF. This has been successfully adapted to online competitions held in the last months of 2020, in the context of the Covid 19 pandemic, through which the dance sport phenomenon remained alive, motivating athletes to prepare and further improve.

Methods. The judging program is an application consisting of JavaScript files running in Chrome, using php programming language and MySQL database. We also wanted to point out that the use of this judging system brings an extra objectivity in the evaluation, constituting at the same time a tool for optimizing the training of the athletes.

Results. Most of the participants in our survey confessed that they were not at all satisfied with the old system of judgment (%); it was very opportune to create such a program (%), and the information provided by the software will help them "a lot" in their professional activity. The benefits of the new judging system are the following: more objective evaluation, provides information on artistic and technical training factors, creates the possibility to identify some gaps in the training of dancers, a better image of sport dance.

Conclusions. The purpose for which this judging system was created, namely the increase of the objectivity in the evaluation of the dancers, has been achieved. The adjudicators have more time than in a live competition to review the participating pairs and their evolution for a more objective evaluation.

These aspects have had a positive impact on the image of dance sport. This system permitted the survival of competitive activity also during the pandemic.

Keywords: dance sport; judging system; online, competition.

Introduction

As in any other branch of sport, also in dance sport, as a result of a competitive activity (increasingly intense in recent years), winners are designated, rankings, hierarchies, tops are made, based on more or less objective decisions of the adjudicators, who judge several aspects. The competition, in dance sport, represents the quintessence of the athletes' training, but also the way of evaluating and ranking the pairs. It is an approach in which the pairs present themselves with their hypothetical performance objectives, carry out their

rigorously prepared activity, are analyzed based on internal variables of training (the specific performance capacity), but also based on the external variables (the level of competition, the value of other pairs, competition conditions, etc.), specific to the respective competitions. The results are compared with the proposed, hypothetical objectives, and the conclusions can be a confirmation or a refutation of the training model, and depending on these, the new training objectives will be reset (Năstase, 2011). A dancer's success is determined by technical and tactical skills (Laird, 2009), morphological

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and motor abilities (Prosen et al., 2013), psychological preparation and aesthetics of movement (Lukić et al., 2009; Čačković et al., 2012). Furthermore, efficiency in DanceSport has been suggested as a determining factor for a judge to award marks for the dancers' performance (Bijster, 2013a; Bijster, 2013b). Judges are responsible for quickly and accurately discerning the quality of technical elements and overall aesthetic appearance of a dancer's performance based upon their perception of the presentation. Prior to the introduction of a new judging system in 2013, the judging system in DanceSport had not been changed for many years, in contrast to many other aesthetic sports like gymnastics, figure-skating, etc., where changes had been made during the last decade (Boen et al., 2008; Dallas & Kirialanis, 2010). There have been some criticisms of the old judging system in DanceSport by dancers, coaches, and judges with unsubstantiated suggestions that some dancers were favored over others (Bijster, 2012; Hurley, 2012; Malitowska, 2013; cited by Premelč et al., 2019). In this context, it is imperative that the arbitration, the evaluation systems in competitions to be as rigorous as possible, in other words the judging should be done according to well-defined criteria and as objective as possible.

In its early stages, judging in dance sports was done by comparing pairs that evolved simultaneously in the ring.

Following this comparison, using an algorithm for processing the individual evaluations of the adjudicators (Skating system), it was decided:

a) in the preliminary phases of the competition - which of the pairs promotes in the superior phases of the competition;

b) in the final - what place is assigned to each pair in the final ranking.

Starting from the premise that the level of sportive and artistic performances of the dancers has increased a lot lately and their delimitation becomes more and more difficult, and the comparative system is quite empirical and subjective, no longer meeting the modern requirements of evaluation, the need to develop a judging software emerged, in order to solve the shortcomings of the previous systems.

To these aspects is added the desire of all those who are part of the phenomenon called dance sports for this sport to enter the gallery of Olympic sports, so that, using some examples belonging to related sports, such as rhythmic gymnastics, figure skating, gymnastics, WDSF decided in 2017 to develop a modern evaluation system based on scoring the evolution of pairs.

The initial version was called The absolute system of judging 2.0, after which it was upgraded to The absolute system of judging 2.1 and, finally, in The absolute system of judging 3.0 (1), whose adaptation used our purpose, namely, the evaluation of pairs in online competitions.

„A comparable judging scale (0 to 10) is used in figure-skating, where the description of each level includes the content of the performed elements along with technical and artistic descriptors. The quality of required elements is specifically defined, which also includes possible mistakes in a performance (2). Potentially DanceSport should define a similar scale to that used in skating, where descriptors of quality for each criteria and sub-criteria are defined.” (Premelč et al., 2019). In this context, it is imperative that

the arbitration, the evaluation systems in competitions to be as rigorous as possible, in other words the judging should be done according to well-defined criteria and as objective as possible. According to Hughes & Franks, 2007, cited by Gomez et al., 2020, the development and implementation of new technologies for measuring individual or team performance (e.g. tracking systems such as local positioning systems, LPS; video tracking, or observational video analysis systems) with multiple practical applications have intensified the focus of performance analysis in sports.

Hypothesis

In this paper we want to present a judging software, based on the one used mainly in the international competitions, which has successfully served the optimal conditions of online competitions, in the last part of the 2019-2020 competition season, in the pandemic context that characterized this period.

The implementation of this judging system leads to the objective evaluation in dance sports, being, at the same time, a useful tool for coaches and athletes, to whom it provides information about possible gaps in training, depending on the evaluation criteria.

Material and methods

Ethics Statement

This study was approved by the Ethics Committee of the Department of Physical Education and Sport at the University of Bucharest. All subjects gave written informed consent in accordance with the Declaration of Helsinki. The study objectives and methods were explained to each participant, to their parents, before a written, informed consent was obtained.

Research protocol

a) Period and place of the research

Both the arbitration system and the online platform to which it is subordinated were presented to the Federal Bureau of the FRDS, being proposed as viable solutions for resuming the competitive activity blocked by the pandemic.

From September to December 2020, we organized 3 online competitions in which we implemented this arbitration system and we want, in the future, to use this arbitration system in live competitions, when the pandemic situation will allow their organization.

b) Subjects and groups

The subjects were RDSF athletes, members of various sports clubs affiliated to RDSF, as well as judges accredited by it, and athletes and judges from other foreign federations as in the case of Bacau Dance Open.

Our survey was conducted on a number of 30 experienced coaches and dancers in the adult category, having as a main tool the questionnaire, applied online, in December 2020

c) Applied tests

In October 2020 TOP DANCE FESTIVAL was organized, an international online event attended by over 150 couples and solo girls.

- Bacau Dance Open
- Hobby Dance Cup

In November 2020, the Dance Online platform was used to organize the HOBBY DANCE Cup, competition in which more than 250 couples and solo girls participated.

In December 2020, the Dance Online platform was used for the international BACAU DANCE OPEN, competition in which couples and judges from 9 countries took part.

In these online competitions, the athletes were evaluated according to all 4 judging criteria and were awarded grades which, following the automatic electronic processing generated by the platform, resulted the general grades and the final ranking.

The subjects know the refereeing system, they know very well the problems it has and that is why their opinion counts for a progress of the evaluation of the athletes in competitions. For a valuable feedback of this judging system, we made an investigation based on the questionnaire, which contains four closed questions with option answers and one open question.

The purpose of the questionnaire, as a research tool, is to measure behavioral or attitudinal characteristics of subjects (Niculescu, 2002). The analysis of the responses is both quantitative and qualitative.

The questionnaire is an “Opinion Questionnaire of specialists on software implemented for online sports dance competitions” made by the group of authors of this article and includes 5 items, of which an item with open answers from the respondents.

1. Are you satisfied with the old judging system?
2. Do you consider it appropriate to create such a software/program?
3. Do you consider that the information provided by the software will help you in your professional activity?
4. Which are, in your opinion, the benefits of the new judging system?
5. Do you consider that this judging system deserves to be implemented in the future in competitions (online or classic) at any level?

d) *Statistical processing*

Data were tabulated and processed using statistical and mathematical method and presented using the graphical method. For this we used the Microsoft Excel program.

The description of the judging system

The software program that is the object of our paper is based on 4 judging criteria (Mihaiu & Mihaiu, 2014) (Fig. 1):

- a) Technical Quality
- b) Choreography
- c) Movement to Music
- d) Partnership

Results and discussion

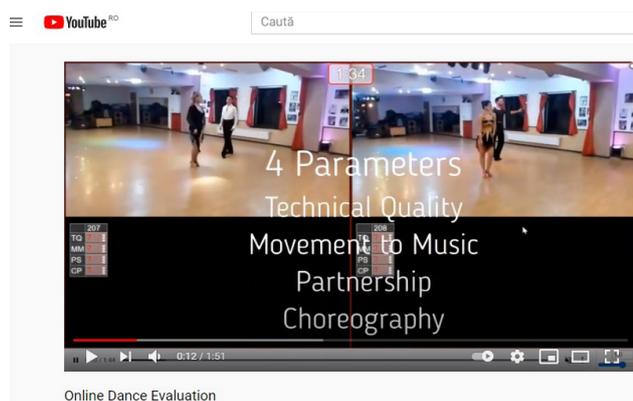


Fig. 1 – Judging criteria.

Table I

Judging parameter 1- technical quality.

Subcomponents	
Latin Dances	Standard Dances
Posture	Posture
Dance Holds	Dance Holds
Balance	Balance
Latin Actions	Centre
Foot Actions	Foot Skills (Action and Placement)
General Actions	Body Actions
Preparation-Action-Recovering	Preparation to Move
Spins and Turns	Drive Action
Isolation/Coordination	Isolation/Coordination
Skilled Figures	Rise and Fall
Dynamics	Swing
Lines and Extended Lines	Pivot/Pivoting Action/Continuous Spin
	Skilled Figures

Table II

Judging criteria 2 - Choreography and Presentation.

Subcomponents
Structure and Composition
Non-verbal communication - NVC
Positioning on the dance floor and the ability to use the space
The character of the dance
Energy
Atmosphere

Table III

Judging criteria 3 - Movement to Music.

Subcomponents
Timing/Shuffle Timing
Rhythm
Musical structure

Table IV

Judging criteria 4 - Partnership abilities.

Subcomponents
Physical communication
Overbalance/Counter Balance/Drops
Using the space
Timing
Consistency

In fact, this arbitration program is an integral part, a module of a platform for organizing online competitions, an application that allows the adjudicators, on the computer, to analyze the evolution of pairs participating in the competition, the great advantage over the normal competitions being that they can resume registration, can play choreography in slow motion, so that the evaluation is even more objective.

Each adjudicator is assigned a username and a password, after logging in he selects the competition for which he was appointed to judge (Fig. 2), gives the corresponding marks and then presses the “confirm” button to complete the evaluation process.

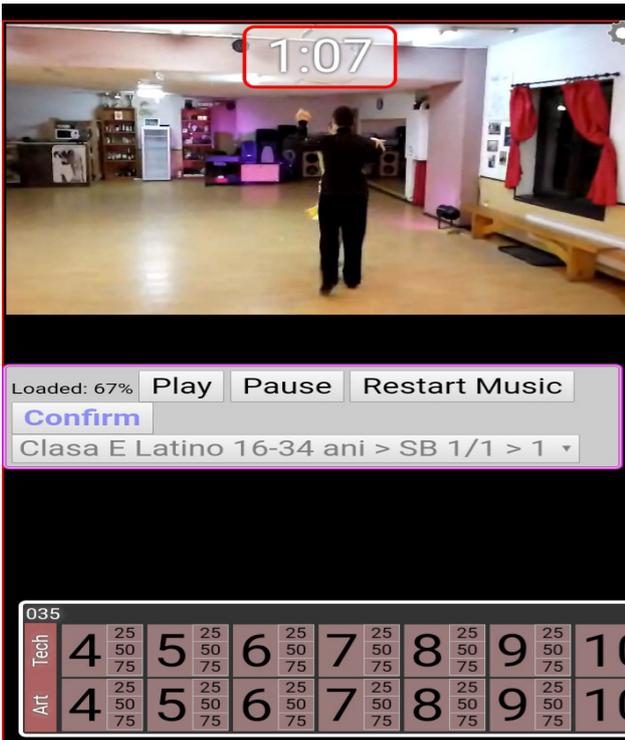


Fig. 2 – The judge panel.

The adjudicator gives a grade between 4 and 10 with intervals of 25 hundredths depending on the level of performance achieved by each pair for the parameter assigned to him (Fig. 3).

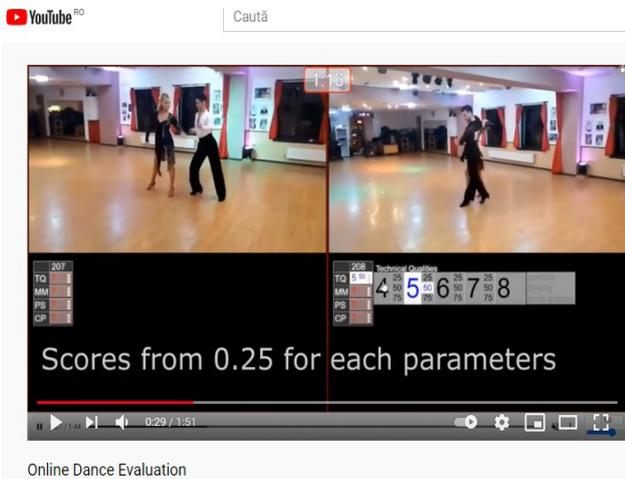


Fig. 3 – Scores for each parameter.

Also, depending on the decision of the organizer and the competition director, only two criteria can be judged: technical skills and artistic skills (Fig. 4).

Subsequently, using an algorithm, based on arithmetic mean, which takes into account all the grades obtained by the pair, the program calculates the final grade.

At the end, the program generates the final ranking, for each pair being specified, besides the occupied place, the notes corresponding to each criterion, for each dance.

The judging program is an application consisting of JavaScript files running in Chrome, using php

programming language and MySQL database (Duckett, 2011; Suehring, 2013). We also wanted to point out that the use of this judging system brings an extra objectivity in the evaluation, constituting at the same time a tool for optimizing the training of the athletes.



Fig. 4 – Two parameters of judging.

To our knowledge, before the pandemic, a similar application was created (Nicoară et al., 2017), experimentally implemented at the level of several national competitions, which is based on awarding scores for several criteria and sub-criteria. It was found, by comparing the results offered by this application and the judging system used by FRDS in those competitions, that the ranking in the final was not affected, but the hierarchy after the 7th place underwent changes following the use of that arbitration system. In any case, like the evaluation system implemented by us, this application also aims to increase the objectivity in the evaluation of dancers.

1. Being asked if they are satisfied with the old judging system the majority of the participants in our survey admitted that they were not satisfied at all (71%), 23% considered themselves satisfied to some extent and only 6% were satisfied very much (Fig. 5).

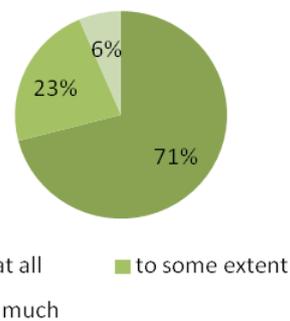


Fig. 5 – Item No 1.

2. To the question “Do you consider it appropriate to create such a software/program?”, a large part of the respondents (67%) answered that it was very opportune to create such a program, a few (30%) considered this aspect important to some extent, and only 3 percent did not see the opportunity of such software/program (Fig. 6).

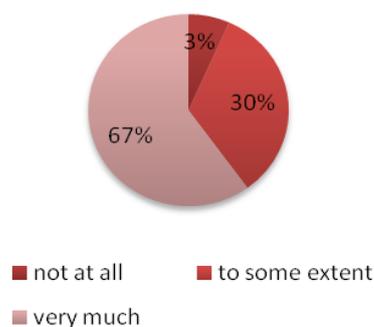


Fig. 6 – Item No 2.

3. When asked if the information provided by the software would help them in their professional activity, “very much” was the answer of the majority (60%), 33% considered that the information obtained was valuable to some extent and only 7% appreciated that this information was not useful at all (Fig. 7).

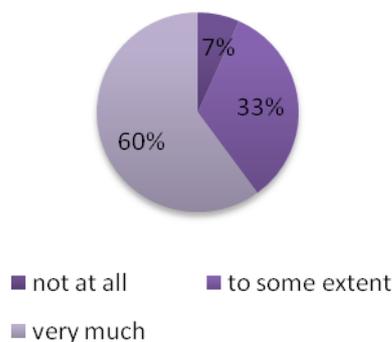


Fig. 7 – Item No 3.

4. Being asked about the benefits of the new judging system, at the top of the answers were:

- a) More objective evaluation – 83%
 - b) Provides information regarding the level of training/performance on various training factors - artistic, technical - 62%
 - c) Increases the level of accountability of the judges - 41%
 - d) Offers the opportunity to identify some gaps in the training of the dancers - 37%
 - e) Brings image benefits to the dance sport - 33%
- (Fig. 8)

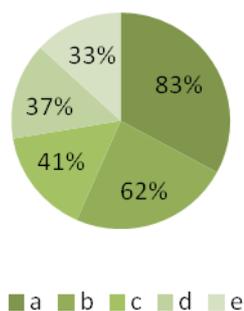


Fig. 8 – Item No 4.

5. To the question “Do you consider that this judging system deserves to be implemented in the future in competitions (online or classic) at any level?”, an overwhelming majority believes that this judging system must be implemented in any type of competition, 20% appreciate this aspect important to some extent, and 7% do not believe at all in the opportunity of using this system in dance competitions (Fig. 9).

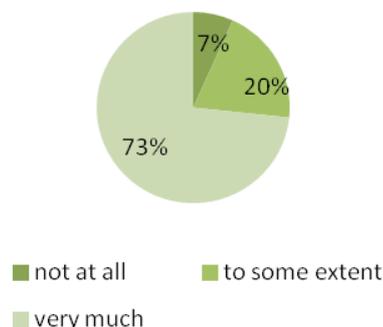


Fig. 9 – Item No 5.

Conclusions

1. The feedback of the interviewed specialists leads us to believe that the purpose for which this judging system was created has been achieved, namely the increase of the objectivity in the evaluation of the dancers, on the background of a greater accountability of the adjudicators.

2. Because the judging does not take place live, the adjudicators have enough time to review the participating pairs and their choreographies, whenever they need to score each criterion with maximum correctness and objectivity.

3. These aspects have a positive impact on the image of the dance sports that carried the stigma of subjectivism in evaluation, compared to other related sports, such as figure skating, rhythmic gymnastics and gymnastics.

4. Finally, yet importantly, this system allowed the development of the competitive activity, in the online version, being in this pandemic context a motivation for the athletes to continue training and competing.

5. In the future, we intend to monitor the evolution of the pairs that participate in other online competitions, in which this arbitration system will be used, in order to identify the progress at the level of the training factors that are subject to evaluation.

Conflict of interests

There is no conflict of interests.

Acknowledgments

The software was created in September 2020, through the significant contribution of Paul Potolea, Iustin Istrate, Mihaiu Costinel, Gheorghe Raducan, members of FRDS, and was implemented in several online competitions, between September and December 2020.

Authors contributions

All the listed authors made a substantial, direct and creative contribution to the paper and approved it for publication.

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