



ORIGINAL RESEARCH PAPER

**PLANNING OF SPORT PREPARATION OF A
FORMATION TEAM IN DANCE SPORT:
EXPERIENCE OF THE REPUBLIC OF BELARUS**

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Abstract

While planning the training process in dance sport it is expedient to use a cycle attached to world, continent, and national championships. The official competition schedule of Formation implies one official competition per year in case of a top-team preparation schedule (World championship, usually held in October – November). It can be further changed if a European championship is included. National Formation championship also requires a peak of sport shape for a team, however, demonstrating one's strengths, but not the competition of the equals, if a dialogue model of domination in formation dance sport is developed in a country (e.g. Belarus realized it in 2011). Belarusian Formation must have two-cycle annual preparation, able of transforming it quickly into a three-cycle one. It is expedient to connect this periodization with a life cycle of a team lasting usually for two seasons in case of a top-team. The Formation team preparation macro-cycle will include two year cycles. The sport shape development of athletes is traditionally provided within preparation, competition and transition periods successively replacing each other. They support the phases of acquiring, maintaining and temporary decrease of a quality of Formation routine performance. This approach to the planning and periodization considers the specificity of Formation dance sport, and requires further detailing with meso- and micro-cycles in the preparation process.

Key words: *dance sport, formation, competition, championship, organizer, routine, result, life cycle of formation routine, macro-cycle*

Introduction

The used approaches to periodization and planning of sport preparation are defined in many ways by the specificity of a kind of sport. Depending on the frequency of competitive exercise change (correction), complex coordination sports can be divided into two groups [1]:

- sports, characterized by the content and form stability of the competitive exercise;

- Sports that require a periodic change of the competitive exercise.

Specialists recommend using a four-phase approach to periodization for the second group of sports [1].

The first phase, also called Basic, is oriented to the achieving of such a level of technical preparedness that would be sufficient for a new competitive exercise performance. It is connected with learning separate elements and combinations and the enhancement of their performance. Besides, special attention is being paid to general and special physical preparation (SPP). This phase is responsible for laying the foundation for the new level of technical mastery and athletes' functional abilities which are necessary for it.

The second phase deals with the task of further technical enhancement by shifting the focus from separate elements and combinations to the performance of the entire sport routine. It requires some decrease of loading volumes in means of SPP, while the collected potential is being maintained by the increase of SPP intensity.

The third phase fulfils the task of new technique adaptation to the competitive conditions of its performance. It is achieved by observing the contumacy and adherence in volumes and intensity of means for technical and physical enhancement. This phase is characterized by the maximum loading volume in means of SPP.

The fourth phase covers the complex enhancement of all the sides of athletes' preparedness. The volume and intensity of loading changes: loading volume for strength and speed-strength qualities decreases while that for endurance and flexibility increases.

If one considers kinds of sport within Olympic program, the entire preparation is adjusted to a four-year cycle with one year for each phase.

Dance sport is a unique kind of sport which includes about 15 disciplines. World Dance Sport Federation has more than 20-year experience of cooperation with International Olympic Committee and International World Games Association. Yet dance sport stays beyond the Olympic program while the World Games program presents as a rule not more than three dancing disciplines.

Formation is a team kind of dance sport. It has quite a rich history and high level of development in the world, as well as specificity of training and competitive activity. It suggests a regular renovation of a presented competitive exercise (formation routine).

Formation has never been included into World Games program. In 2013 it was among disciplines included into the first (and the only so far) WDSF World DanceSport Games. For this reason a four-year (Olympic) cycle of preparation described above cannot be used as Formation demands elaborating of the unique approach to athletes' preparation planning.

Material and Methods

The study of world experience and the analysis of dancing formation genesis allows to state that the approaches to planning of dancing team preparation depends to a great extent on the model of organization and functioning of formation in a country.

Considering the level of development in a kind of sport in a world practice, three basic models of formation organization and functioning can be distinguished (Table 1) [2]:

- discursive model (model of absolute competition);
- dialogue model (model of oligopolistic competition);
- Monologue model (monopolistic model).

Table 1

Description of formation organization and functioning models

Type of model		Specific indicators of development	Representatives
Discursive		<ul style="list-style-type: none"> – long period of development and shaped traditions; – high popularity; – big number of teams; – significant number of schools and clubs which participate in development; – big number of tournaments of different levels, annually held in the country; – significant number of coaches for a team; – high public interest and “awareness”; – active participation in organizing the official tournaments 	Germany, USSR, Russian Federation
Dialogue	<i>Parity</i> (no evident leader)	<ul style="list-style-type: none"> – several formation teams; – one or few annual formation teams tournaments in the country; – several schools and clubs which participate in the development; 	The Netherlands (Latin), Czech Republic, Romania, Slovakia, Mongolia
	<i>Dominant</i> (evident leader)	<ul style="list-style-type: none"> – medium level of public popularity; – discrepancy of coach and adjudication boards 	The Netherlands and Hungary (Standard); the Republic of Belarus (since 2011)

Table 1 continue

Monologue	<ul style="list-style-type: none"> – one formation team; – one school (club) which participate in formation development; – absence of national formation tournaments; – only international competitive activity of the team; – significant discrepancy of coach and adjudication boards 	Lithuania, Moldova, the Republic of Belarus (until 2011)
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In many countries formation had an “ascending vector” of development, i.e. from national competition to entering the international rating. Development of Belarusian formation had a “descending vector”. Belarus got its first international experience in 1992 with “Mara” Formation team. The first experience of holding official European and World Championships was in 1999 (Homel, European Championship) and in 2004 (Minsk, World Latin Championship). In 2008 – 2009 there happened a change of the leader (“Univers” Formation team of Belarusian State University of Physical Culture), yet monologue model of formation development in the country has remained. Only since 2011 there have appeared more formation teams in Belarus, which made it possible to hold National Formation Standard Championships. This change can be regarded as the beginning of the development of a more progressive dialogue model with oligopoly of dominance in Belarus. Nowadays there are three formation standard teams in Belarus (with the evident leader). Teams’ preparation is organized exclusively on the expense of the establishments which hold sport clubs and the sponsor help. There is no system of staff reserve for formation teams (no models of “sport school – reserve – national team”). State does not finance formation as a professional sport activity. These factors influence the organization of training process: it’s impossible to plan several trainings a day; and the preparation must imply alignment of the physical readiness levels of all the team members and have a “cumulative” effect, as the competition is very low at the national level and very high at the international level.

Preparation planning for Belarusian formation team is expedient to make, using the cycle attached to the main competitions. According to current rules in dance sport for formation category there are the following annual international competitions that can be held: world championship, continent championship, world cup, continent cup.

For the last seven seasons (since 2011) European formation standard championship was held only in 2015. Formation Latin championships were held more regularly. However, in seasons of 2015-2017 European

championships were also missing. The last cups were held in 1997 (Table 2).

Table 2

Information on the Organizers of the Official Formation
Competitions in 1992-2018

Year	Championship status	Standard		Latin	
		County of organizer	City of the championship	County of organizer	City of the championship
1	2	3	4	5	6
1992	European Championship	Information is not available			Bremerhaven
	World Championship		Stuttgart		Vienna
1993	European Championship		Berlin		Köln
	World Championship		München		Stavanger
1994	European Championship	Information is not available			Dortmund
	World Championship		Braunschweig		Bremen
1995	European Championship		Doetinchem		Bourges
	World Championship		Stuttgart		Berlin
1996	European Championship		Oldenburg		Bremerhaven
	World Championship		Berlin		Vilnius
1997	European Championship		Ludwigsburg		Warsaw
	World Championship		Chisinau		München
1998	European Championship		Chisinau		Budapest
	World Championship		Braunschweig		Gothenburg
1999	European Championship		's-Hertogenboch		Gomel
	World Championship		Elbląg		Vilnius
2000	European Championship		Chisinau		Ostrava
	World Championship		Braunschweig		Wels
2001	European Championship		Usti nad Labem		Bekescsaba
	World Championship		Berlin		Bremerhaven
2002	European Championship		's-Hertogenboch		's-Hertogenbosch
	World Championship		Chisinau		Vilnius

Table 2 continue

1	2	3	4	5	6
2003	European Championship		Chisinau		Usti nad Labem
	World Championship		Stuttgart		Essen
2004	European Championship		Chishinau		Bremen
	World Championship		Braunschweig		Minsk
2005	European Championship		Braunschweig		Bremen
	World Championship		Elbląg		München
2006	European Championship		Chisinau		Vilnius
	World Championship		Moscow		Bremen
2007	European Championship		Chishinau		Dusserldorf
	World Championship		Stuttgart		Bremerhaven
2008	European Championship		Chishinau		Essen
	World Championship		Moscow		Vienna
2009	European Championship		Miskolc		Bremen
	World Championship		Ludwigsburg		Vilnius
2010	European Championship		Ludwigsburg		Bremen
	World Championship		Elbląg		Moscow
2011	European Championship	was not held			Tyumen
	World Championship		Braunschweig		Vilnius
2012	European Championship	was not held			Vienna
	World Championship		Ludwigsburg		Bremen
2013	European Championship	was not held			Vilnius
	World Dance Sport Games		Kaohsiung		Kaohsiung
	World Championship		Tyumen		Bremen
2014	European Championship	was not held			Düren
	World Championship		Braunschweig		Bremen
2015	European Championship		Elbląg	was not held	
	World Championship		Ludwigsburg		Vienna

Table 2 continue

1	2	3	4
2016	European Championship	was not held	
	World Championship	 Pecs	 Bremen
2017	European Championship	was not held	
	World Championship	 Braunschweig	 Vienna
2018 (plan)	European Championship	 Sochi	 Kalisz
	World Championship	 Pecs	no information

Organization of such competitions involves high financial expenses. Moreover, guarantee of audience full house (and getting at least a minimum profit) is possible only if formation dance sport is popular in the country. For this reason the number of organizing countries for such events is not big. So, the list of countries that hosted official standard competitions in 1992-2018 includes only 7 countries (Figure 1).

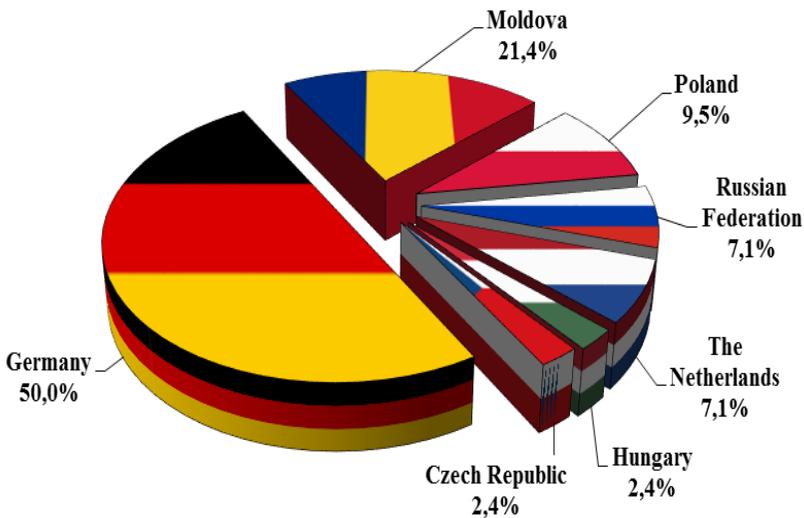


Figure 1. Participation proportion of European countries in organization of official standard championships (1992-2018)

These facts can explain why only world championship is guaranteed annually for formation teams. Another frustrating factor for planning the preparation is that the dates of world and continental championships are announced for the dancing community less than 4 months before the event

takes place (for example, European Championship in 2015, World Championship in 2016 and European Championship in 2018).

Results

Therefore, while planning the preparation of the top formation team in Belarus only one official standard competition, the world championship, usually held in November, can be considered (table 3). Further correction of the preparation process is possible in case European championship is included in the competition schedule.

Table 3

Distribution of main competitions of Belarusian team for a calendar year

Month Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2009		GLook								ECh	WCh	
2010					GLook				ECh	WCh		
2011			GLook								WCh	
2012			NatCh								WCh	
2013			NatCh						VGames WCh			
2014			GLook							GLook	WCh	
2015	Other		NatCh							ECh	WCh	
2016			GLook		NatCh							WCh
2017			NatCh							GLook	WCh	NatCh
2018 (plan)		ECh			GLook						WCh	

Note: WCh – World Championship; ECh – European Championship; VGames – World Games; NatCh – National Championship; GLook – General Look; Other – other tournament.

Another important competition that requires the peak of sportive shape is national formation championship. Such competitions are usually held in spring in Belarus. As the experience shows, the performing quality of formation routine by the top team at such competition is a little lower than at the world championship (previous competition). It is caused to a significant extent by low competition at the national level.

Taking into account the fact, that in 2006-2010 two official standard competitions were held and the dates of their organization were scheduled by World Federation within a month interval (for example, European Championship – October, 14th, 2006 and World Championship – October, 28th, 2006; European Championship – September, 25th, 2010 and World Championship – October, 23rd, 2010), it is more expedient to use “binary” year cycle. If such approach is used, the transitional periods between the first and the second competitions are not scheduled, and the competition period of the previous tournament (European Championship) smoothly

passes into preparatory period of the coming tournament (World Championship) [3, 4].

The season of 2017-2018 is characterized by unusual competition schedule. As the European Championship was scheduled for February, 25th, 2018 (Sochi, Russian Federation), the National Championship which is supposed to nominate teams for the participation in the official competitions for the coming calendar year, was held at the end of 2017. Thus, “binary” cycle for preparation planning is being used for the coming season, but with another sequence of competitions: the World Championship (end of November, 2017) – the National Championship (end of December, 2017) – the European Championship (end of February, 2018).

However, even the effective fulfillment of general and specific tasks of sport preparation within a year cycle cannot guarantee that a formation team will get a high result at the competition if the optimal transitional time for a new competitive exercise (formation routine) is not considered. So it is more expedient to connect the periodization of formation sport preparation with the life cycle of formation routine (LCFR) which implies the time period from the conception and the theme choice till the last presentation of the routine in public [5]. Traditionally LCFR consists of 4 stages: conception (I); creation (II); production (III); perfection of performance skills (IV). In some cases a change of a performer (V) is also possible. As a rule, LCFR of a top-team lasts no longer than two seasons, so macro-cycle of sport preparation in formation will include two year cycles (Figure 2) [6].

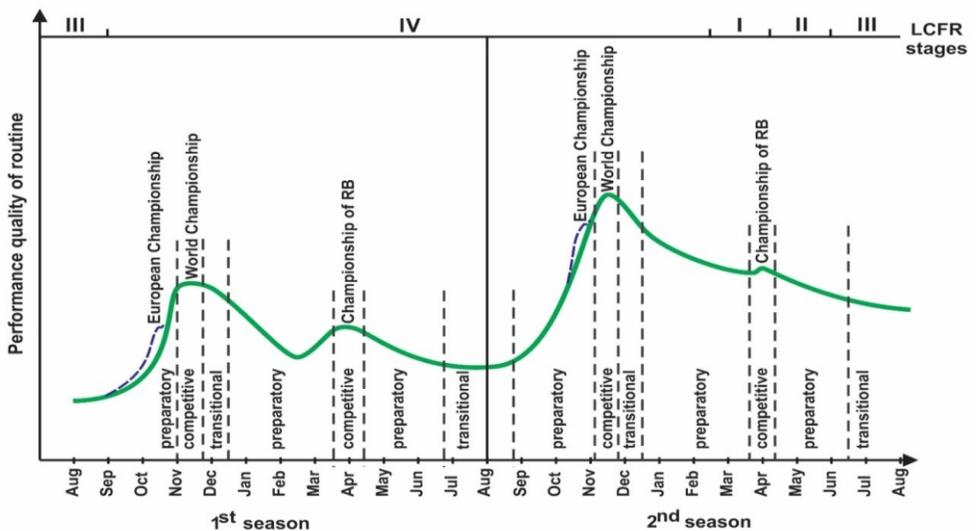


Figure 2. Periodization of macro-cycle for formation team sport preparation in dance sport in the Republic of Belarus

Development of team members' sport shape is traditionally provided within successively changing transitional, preparatory, and competitive periods. These periods support phases of acquiring, maintaining and temporary decreasing of routine performance quality, which are intrinsic for the process of preparation.

Discussion

While organizing the preparation of a formation team, it is necessary to provide the task fulfillment of all the four Olympic macro-cycle phases within distinguished periods of each season.

Transitional period carries out the task of decent rest. Also it maintains the right level of training for being as ready as possible by the beginning of the next cycle [7]. This period usually coincides with the middle of summer season for a formation team, as well as with the end of a calendar year. Its continuation may vary depending on the competition schedule of the coming season, and on the LCFR phase.

Preparatory period is divided into the phases of general and specific preparation [7]. The duration of these phases is various at different stages of LCFR. The phase of general preparation is the longest at II and III stages. This phase may aim at both increasing the level of athletes' physical preparedness with perfection of physical abilities and the production of a new formation routine. The phase of specific preparation (longest at IV stage of LCFR), as a rule, is connected with the stabilization of training load volumes and the increase of intensity by rising technique-tactic means of the training.

Competitive period, carrying out the task of increasing the achieved level of team's specific preparedness on the whole, must help to attain the desired sport results [7]. The early competition phase can be planned considering some invited competition or General Look. Planning the phase of immediate preparation directly depends on the dates of holding the world championship. If the period is binary, swift correction of training process is required regarding the results of "the first" competition. For this purpose it is expedient to use the author's method of management for the formation team's training process, based on bidirectional analysis of competition score (Figure 3) [8].

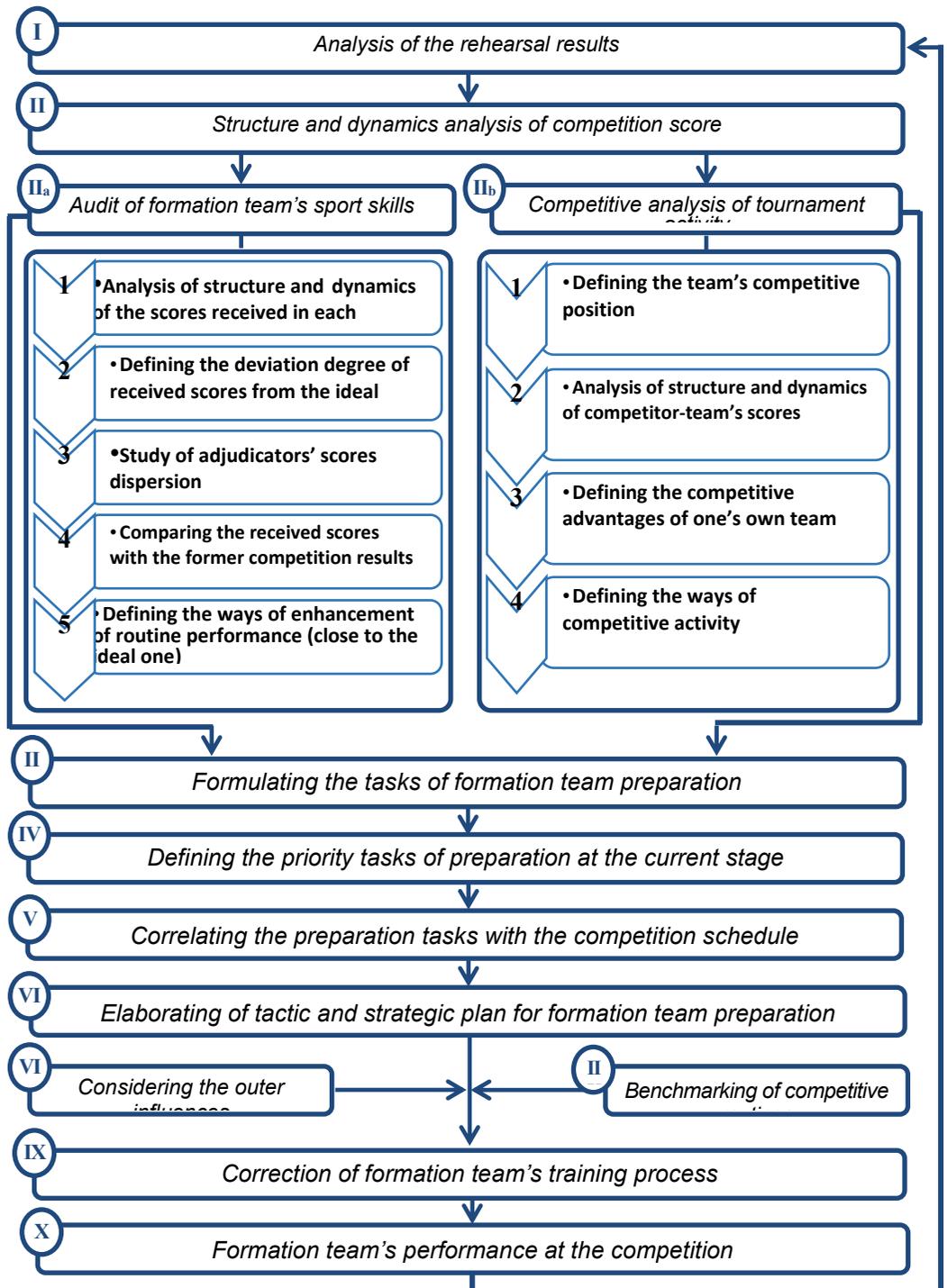


Figure 3. Scheme of management for formation team's preparation process based on bidirectional analysis of competition score

Audit of formation team's sport skills, based on the analysis of adjudicators' score content and structure, informs the coach about the dynamics of formation routine performance quality within LCFR (Table 4), including blind spots in team's preparation.

It is based on the consistent and systematic analysis of a team's competitive results, as well as on collecting the data about the main rivals' and leaders' competitive activity. The author's method of management for the formation team preparation implies that the score, which the athletes got at the competition, indicates the quality of the team's preparation system. A bidirectional analysis of the structure and dynamics for such a mark has been conducted, as well as the detailed study of components that influence the score value has been made.

Table 4

Retrospective analysis of adjudicators' scores
(example of Formation team "Universe", Belarus)

Competition	Dynamics index	Adjudicator's score components				Total Score
		Technical Quality (TQ)	Movement to music (MM)	Team Skill (TS)	Choreography and Presentation (CP)	
World Dance Sport Games, 2013	First performance of the routine	8,375	8,500	8,500	8,500	33,880
WDSF World Formation Standard Championship, 2014	Current adjudicators' score	8,143	8,500	7,857	8,200	32,700
	Growth rate, %	97,230	100,000	92,435	96,471	96,517
	Absolute increase	-0,232	0	-0,643	-0,300	-1,180
	Growth coefficient	0,972	1,000	0,924	0,965	0,965
WDSF World Formation Standard Championship, 2015	Current adjudicators' score	8,957	7,543	8,043	8,3	32,843
	Growth rate, %	109,996	88,741	102,367	101,220	100,437
	Absolute increase	0,814	-0,957	0,186	0,100	0,143
	Growth coefficient	1,100	0,887	1,024	1,012	1,004

At the last stage of audit a list of possible ways of team's performing skills perfection is formulated. These ways may include activities for development of athletes' definite qualities, performance enhancement of separate routine fragments, routine geometry and music corrections, etc.

Competitive analysis of tournament activity allows to determine strong and weak points of main rivals, to define the degree of lead and lag with the closest competitors according to separate indices (Figure 4). It gives the opportunity to focus one's attention on improvement of indices, which have lower level, to find the vector of performing routine quality rise, as well as to determine the ways of a more vivid expression of one's competitive advantages.

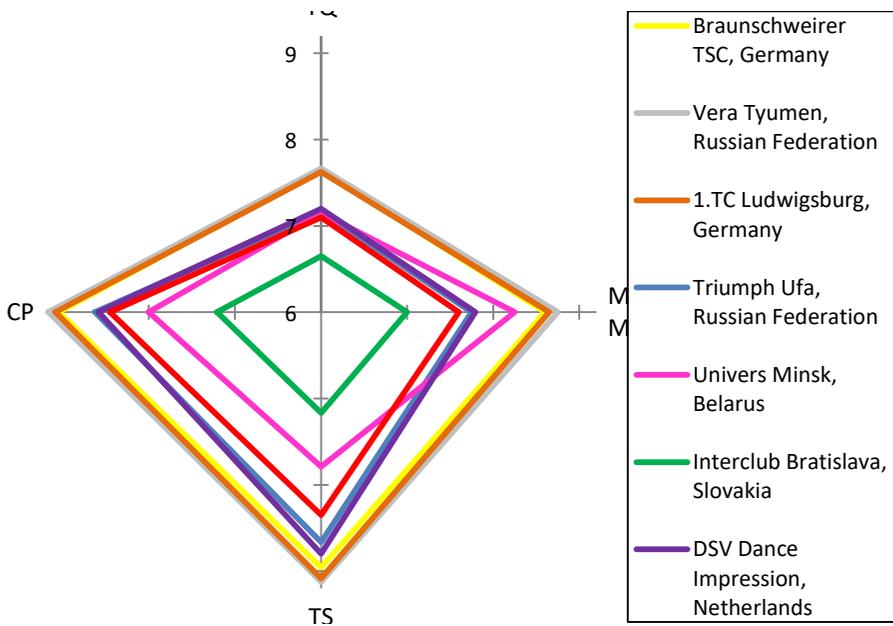


Figure 4. Competitive profiles of teams (example of semi-final results at the World Championship, 2017)

Correlating the results of score analysis with the team's preparation tasks, considering the tasks' priority at the current preparation phase, and estimating the chances of their fulfillment within the competition schedule, the coach is able to build up a formation team's preparation system which effectively corresponds to the current LCFR stage and outer influences. It is important to understand that sport team's success components which are considered for competition score may have different reaction speed to the management influence (Figure 5).

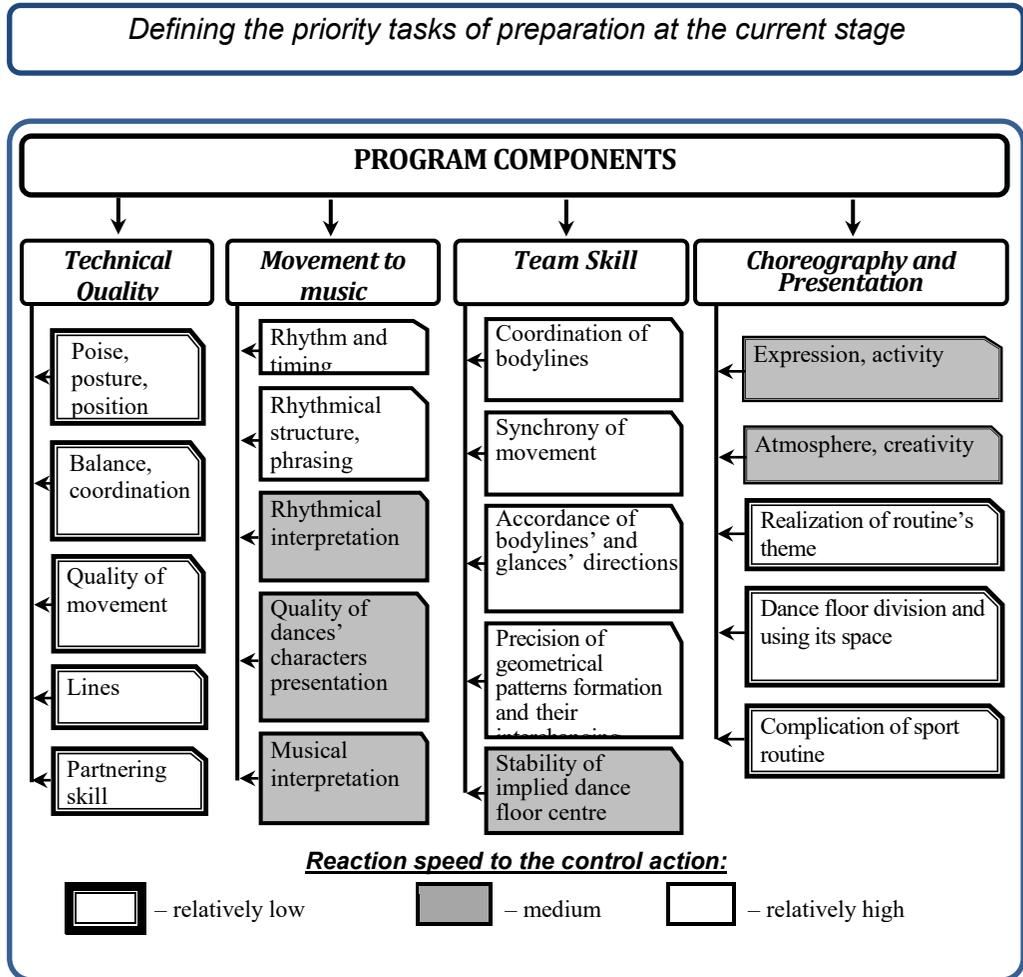


Figure 5. Graph of the method for defining the priority of formation team's preparation tasks

At the same time, the speed of increasing the level of team's performance components considered for adjudicator's score depends not only on the character of the influence, but on the development level of athletes' physical qualities as well.

Questionnaires of coaches and athletes from Belarus, Slovakia, Lithuania, Russia, Germany, China, etc. collected in 2005-2006 and in 2015-2016 helped to define and range the priority qualities of dancers. Coordination abilities and specific endurance are the key qualities of a sport dancer. A large time gap between the researches allows to state that the main combination of a dancer's priority qualities is constant. Exploring the experts' opinions as well as the long experience of the author make it

possible to affirm that formation team dancers' priority qualities must be of a higher development level than those of individual couples [9].

Conclusions

The information base for formulating the key demands for physical preparation of individual dancers and formation teams consists of the author's research of essential peculiarities of formation as a kind of dance sport and analysis of formation functioning models in the world. It includes the analysis of state regulation structure, financing mechanisms of formation in Belarus, and the study of regulatory framework of world and national federations of dance sport. These key demands cover the following issues:

1) the development level of coordination abilities must give the opportunity to adapt quickly to the rhythm, character and tempo of dances which successively change one another, not neglecting the high quality performance of the geometrical pattern of formation routine. Formation routine's duration (6 minutes) and the necessity to perform it several times on the competition day make additional demands to the development level of specific endurance of team athletes. As soon as the adjudicator board who estimate the component of "Choreography and Presentation" is located significantly far from the athletes, it requires a high level of speed-strength abilities;

2) formation is not involved in the system of state providing for sport preparation which results in training in private clubs, absence of state financing for professional sport activity of the national team, and the necessity of combining the training and working (academic) schedules of athletes. These peculiarities require a highly-effective methods of SPP which would allow to organize all kinds of sport preparation within one and the only possible evening training regarding the time limitations and natural tiredness of athletes after a working day;

3) as there is no preparation system of sport reserve in formation the SPP system must provide a quick alignment in physical preparedness level for all the team members;

4) the diversity of physical preparation means must as well provide for the necessary motivation to trainings in conditions of low national and high international competition;

5) as formation teams' schedule is very irregular the SPP methods must assure "accumulative" effect and exact achieving the peak of team's preparedness by the moment of competition.

As a result, a two-cycle planning of preparation with a chance of quick transferring it into a three-cycle one must be used in Belarusian formation dance sport. The offered approach to the periodization must

consider the specificity of formation and it requires further detailing, considering meso- and micro-cycles which are realized in the preparation process. Speaking of the countries that realize oligopolistic model of competition in formation development, it is necessary to use a special SPP method which will provide not only development of unique skills of a formation dancer, but will help the team to accurately achieve the peak of their sport shape as well, as the system of formation is specifically organized and the competition schedule within a year cycle is very irregular.

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Submitted: February 12, 2018

Accepted: December 14, 2018