THE INSTITUTIONAL ORGANIZATION OF NATIONAL GYMNASTICS FEDERATIONS AND THE OFFER OF COACH EDUCATION PROGRAMS FOR GYMNASTICS FOR ALL: AN INTERNATIONAL ANALYSIS

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Abstract

Coach education programs by National Gymnastics Federations (NGF) can provide in-depth and specific discussions and contribute to the development of gymnastics in different countries, as they address the specific interests and the people involved with it. For these actions to take place, a certain level of organization of the institutions is required and the existence of specific committees or commissions can contribute to this process since they possess the knowledge of the area and are familiar with organization of relevant actions. This study aims to explore the provision of coach education programs for Gymnastics for All (GFA) and the organization of NGF worldwide. In total, 44 NGFs were consulted about the existence of such committees or commissions and the promotion of coach education programs for GFA and other gymnastics modalities. We used an online questionnaire hosted on the Google Forms® platform, in four languages. The answers were processed by simple statistics and analyzed according to the research context. The responses obtained show that 36 NGFs have Technical and GFA Committees in their organization, while eight do not have such bodies (smaller institutions and still poorly structured). 30 NGFs claimed to have GFA Committees, a meaningful number. Additionally, 30 NGFs conduct coach education programs for GFA. The analysis of the data showed that there is a correspondence between the existence of Technical Committees and GFA Committees and organisation and promotion of coach education programs.

Keywords: professional education; committee; National Gymnastics Federations

INTRODUCTION

The initial education and subsequent continuing coach education are considered essential for maintaining and improving the quality of sports development and body practices (Cushion, Armor & Jones, 2003). In an attempt to support this educational education process. coach systems worldwide are in a constant process of and reconstruction (Mallett, renewal Trudel, Lyle & Rynne, 2009).

Coach education can guarantee the development quality of professional (International Council Coaching for Excellence [ICCE], 2013). Although it is not possible to control people's experiences throughout their lives, institutionalized learning opportunities can be significantly important in promoting social relationships that support effective learning processes and result in conscious co-constructions about the role of teaching sports and body practices.

Legislations of different countries define and regulate the role of each institution in this education. In some locations, mandatory university-level education in Physical Education or Sports ensures the central role for universities. However, in other countries, volunteers, part-time paid professionals or full-time paid professionals can act as coaches (ICCE, 2013); this increases the offerings provided by other institutions, such as national sports federations. A mix of these two coach education systems is also observed.

Coach education is a responsibility of national sports federations; in a political aim to increase context they modernization and professionalism in this field (Piggott, 2012) or mediate the relationships between managers coaches (Jones & Thomas, 2015; Vygotsky, 1997). Their importance will or will not be taken into account, depending on how each program is developed; nevertheless, it is in the interest of studies assessing coach education, in our case, in gymnastics and GFA, to learn more about the current situation of such programs.

Considering the above, this study had three objectives: to learn more about the requirements of each country participating in the research and assess the mandatory education to work in gymnastics and GFA; to investigate the organization of NGFs and the existence of Technical Committees, and to recognize NGFs that offer coach education programs. Also, this study provides reflections on these findings in an attempt to correlate data obtained in the analysis.

METHODS

This is an applied qualitative study using an exploratory and descriptive approach (Lakatos & Marconi, 2003; Triviños, 1987), in which a comprehensive

analysis was conducted with a complete collection (Flick, 2009).

All NGF members of the International Gymnastics Federation (FIG - Fédération Internationale de Gymnastique) in January 2016 and NGFs included in the Continental Unions were invited to participate in this study, totaling 136 NGFs. After formal invitations made in four languages (Portuguese, Spanish, French and English) by email and/or through the official social media page of each institution, 44 answers were received. The only inclusion criterion in this study was that the institution had to be an NGF representing a country, a nation, or an administrative group.

The study participants included: 8 countries in Africa (South Africa, Algeria, Benin, Cape Verde, Libya, Mauritius, Mozambique, and Namibia), 10 countries in the Americas (Argentina, Aruba, Barbados, Brazil, Canada, the United States, the Cayman Islands, Paraguay, Trinidad and Tobago, and Venezuela), 6 countries in Asia (Bangladesh, Qatar, Singapore, Hong Kong, Republic of Korea, and Mongolia), 19 countries/locations in Europe (Germany, Andorra, Austria, Azerbaijan, Denmark, Slovakia, Estonia, Finland, Gran Canaria, Great Britain, Ireland, Iceland, Italy, Kosovo, Luxembourg, Monaco, Norway, Portugal, and Sweden), and one country in Oceania (Australia).

This study used one instrument, i.e., a standardized questionnaire, with open- and closed-ended questions. The questionnaire was available in the four languages mentioned above. The questionnaire was distributed to NGFs in two ways: using the Google Forms® platform, preferably, and in a Word® file, for NGFs that requested it.

This study analyzed the following issues:

- a) requirements of each locality/country regarding mandatory education to work in gymnastics and GFA:
 - "Does the Gymnastics Federation you are associated with require higher education course to work as a gymnastics coach/teacher (all disciplines)? If yes, what kind of higher education course is

- required? Is this a federation's requirement or a national law for all sports?"
- "Does the Gymnastics Federation you are associated with require any specific training in gymnastics to work as a gymnastics coach/teacher (all disciplines)? If so, what kind of training is required?"
- b) organization of NGFs, considering the existence of Technical Committees:
 - "Does the Gymnastics Federation you represent have Technical Committees for specific disciplines? If so, which disciplines have a specific Technical Committee?"
- c) provision of coach education programs by the institution:
 - "Does the Gymnastics Federation you are associated with offer coach/teacher education programs? If so, for which disciplines and practices?"

Data from this stage were analyzed using simple descriptive statistics. This analysis allowed an exploratory analysis of data, ensuring a numerical form to qualitative characteristics (Lakatos & Marconi, 2003).

This research project was submitted to and approved by the Research Ethics Committee of Faculdade de Ciências Médicas da Unicamp, with registration on Plataforma Brasil and Certificate of Submission for Ethical Assessment (CAAE) no 1.400.398.

RESULTS

Questioning the NGFs about higher education courses required to work in gymnastics resulted in the answers shown in Table 1.

Among the types of higher education required, the following were mentioned: a degree in Physical Education and Sports by 3 NGFs (Bangladesh, Benin, and Brazil); a degree in Physical Education complemented by NGF courses required by one NGF (Paraguay); higher education – not a specific course – required by four

NGFs (Azerbaijan, Qatar, Mongolia, and the Republic of Korea); higher education in the field of gymnastics by 2 NGFs (Algeria and Kosovo), and NGF or FIG programs by 5 NGFs (Andorra, Argentina, Gran Canaria, Luxembourg, and Monaco).

In addition, we asked if this is a specific rule of the NFG or a national law for all sports. Of 15 countries/localities that require higher education, 9 (60%) reported it was a national regulation for all sports and body practices (Algeria, Andorra, Azerbaijan, Brazil, Republic of Korea, Kosovo, Monaco, and Mongolia) and the other 6 (40%) (Argentina, Bangladesh, Benin, Qatar, Gran Canaria, Luxembourg, and Paraguay) reported it was a specific rule of the NGF.

We asked the NGFs about specific technical education in gymnastics: 30 out of 44 NGFs (68.1%) answered they required specific education in gymnastics (South Algeria, Africa, Germany, Andorra. Aruba, Australia, Argentina, Austria, Bangladesh, Barbados, Benin, Canada, Qatar, Singapore, Slovakia, Estonia, Gran Canaria, Great Britain, Hong Kong, Ireland, Iceland, Libya, Luxembourg, Mauritius, Monaco, Mongolia, Paraguay, Portugal, Trinidad and Tobago, and Venezuela) and 14 (31.9%) did not require it.

Regarding the type of specific education in gymnastics required by NGFs, we received the following answers (Table 2). Other responses included: Barbados requires the FIG Academy course; Canada requires that all coaches complete a training with the Canadian Gymnastics Federation called Gymnastics Canada; Ireland requires certification in discipline-specific coach courses that contain pedagogical content, and Portugal requires, according to the country's legislation – Law No 40/2012, coach education courses offered by the Portuguese Gymnastics Federation or an equivalent higher education course.

Table 1
Requirements of higher education courses to work in gymnastics

Answer	Number of countries (%)	Countries
Require higher education courses	15 (34%)	Algeria, Andorra, Argentina, Azerbaijan, Bangladesh, Benin, Brazil, Qatar, Gran Canaria, Kosovo, Luxembourg, Monaco, Mongolia, Paraguay, and the Republic of Korea
Higher education courses not required	29 (66%)	Aruba, Australia, Austria, Barbados, Canada, Cape Verde, Cayman Islands, Denmark, Estonia, Finland, Germany, Great Britain, Hong Kong, Iceland, Ireland, Italy, Libya, Mauritius, Mozambique, Namibia, Norway, Portugal, Singapore, Slovakia, South Africa, Sweden, Trinidad y Tobago, United States, and Venezuela

Table 2

Type of specific education requirements

Answer	Number of countries (%)	Countries
Technical-pedagogical courses	19 (63.3%)	Algeria, Andorra, Argentina, Australia, Austria, Estonia, Germany, Gran Canaria, Great Britain, Hong Kong, Iceland, Libya, Luxembourg, Mauritius, Singapore, Slovakia, South Africa, Trinidad and Tobago, and Venezuela
Academic courses	7 (23.3%)	Aruba, Bangladesh, Benin, Qatar, Monaco, Mongolia, and Paraguay
Other types of education	4 (13.3%)	Barbados, Canada, Ireland, and Portugal

Next, we asked the NGFs about their organization. As expected, most of them have at least one Technical Committee or GFA Committee in their organization, as detailed below

- 34 NGFs (77.2%) reported a Technical Committee for women's artistic gymnastics and a Technical Committee for men's artistic gymnastics;
- 32 NGFs (72.7%) reported a Technical Committee for rhythmic gymnastics;
- 30 NGFs (68.1%) reported a GFA Committee:

- 24 NGFs (54.5%) have a Technical Committee for aerobic gymnastics;
- 23 NGFs (52.2%) have a Technical Committee for trampoline gymnastics;
- 17 NGFs (38.6%) have a Technical Committee for acrobatic gymnastics;
- 6 NGFs (13.6%) have a TeamGym Technical Committee:
- 2 NGFs (4.5%) have a Technical Committee for rope skipping;
- 6 NGFs (13.6%) reported other committees: Technical Committee for aesthetic gymnastics (Finland); fitness and wellness (Italy); group training,

children's gymnastics and youth activities (Sweden); resources and research (Hong Kong).

Finally, we asked the NGFs if they provided education programs for gymnastics coaches. Seven (16%) of 44 NGFs do not offer coach education programs and 37 (84%) NGFs offer such programs (South Africa, Germany, Algeria, Andorra, Argentina, Australia, Australia, Bangladesh, Benin, Cape Verde, Canada,

Qatar, Singapore, Denmark, Slovakia, the United States, Estonia, Finland, Great Britain, Hong Kong, Cayman Islands, Ireland, Iceland, Italy, Kosovo, Libya, Luxembourg, Mozambique, Mongolia, Namibia, Norway, Paraguay, Portugal, Republic of Korea, Sweden, Trinidad and Tobago, and Venezuela). The figure below shows the disciplines and practices covered by the education programs.

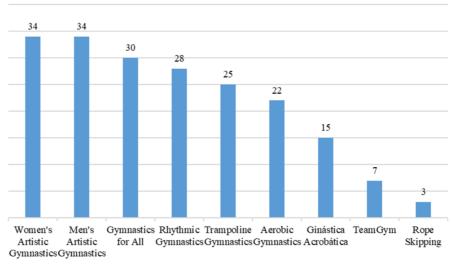


Figure 1. Presence of committees in the organization of NGFs.

Also, 4 NGFs claimed to provide education for other practices: aesthetic gymnastics (Finland), freestyle gymnastics, cheerleaders, gymnastics for preschool children and gymnastics for people with disabilities (Great Britain), various ball games, health and dance activities (Germany), and gymnastics for children and choreography (Sweden).

DISCUSSION

Only 8 NGFs reported they required a university course to work as a gymnastics coach, despite the academic literature recommending university education as the appropriate training for this occupation (Milistetd, 2015). Recent studies have contributed to the dissemination of pedagogical opportunities for coach education in universities (ICCE, 2013;

Jones, Morgan & Harris, 2012; Milistetd, Morgan, Jones, Gilbourne & Llewellyn, 2013). However, problems are observed in this type of education, including the short time dedicated to the acquisition of knowledge required for coach-related activities, and the type of pedagogical strategies adopted (Milistetd, 2015; Morgan, Jones, Gilbourne Llewellyn, 2013). Therefore, although universities are considered important potential coach training centers, further reflection and subsequent implementation of approaches to development and learning are required, so that the reality reflects the highlighted potentialities. Hence, situation found in this study attributes even more importance to learning opportunities provided by NGFs.

The fact that university education is mandatory for gymnastics coaches in Brazil

indicates that federal organizations can influence the organization of content, pedagogical strategies, training hours, and other variables of university courses. Such influence, allowed by regulatory laws, can be positive if these organizations promote a more active and effective education for coaches. Among the important factors we emphasize the possibility that NGFs encourage social relationships between learners and themselves and responsible mediators so that the learning processes can be established in a meaningful way.

On the other hand, the fact that the mandatory university education in Physical Education and Sports is a norm among some NGFs leads to two conclusions: this initiative can either be an opportunity to shed the responsibility for offering training programs, or an interesting way of placing NGFs closer to university courses. If NGFs only require such training but do not monitor whether minimum knowledge for proper performance is provided to coaches, and if they still do not provide opportunities for continuing education, the situation of coach practice remains without in-depth reflections. Thus, we can consider that teaching sports and body practices will provide few opportunities for specific mediations regarding this subject in the university environment. Also, further discussions are still required about the responsibility of each of these institutions in coach education.

The results indicate that specific training in a sport or body practice is valued in relation to general, broader training. This information attributes to technicalpedagogical courses the importance of discussing not only specific aspects, but also other general topics that are essential for coaches' work. These topics include interpersonal knowledge; referring to the social context and established relationships, and intrapersonal knowledge, such as work philosophy (ICCE, 2013). These learning opportunities should favor more active social relationships that allow for the exchange of experiences between those involved in order to encourage coconstruction of new knowledge and reflections required for sport development.

In addition, we highlight here the initiative to ensure equivalence between university courses and NGF programs indicated by the NGF from Portugal. This process considers the education obtained as the standard, regardless of the responsible institution, while allowing coaches who opt for general training in higher education to obtain the minimum level of specific education in gymnastics as traditionally offered by the NGF. Such equivalence favors apprentice coaches who want a more complete university education, as it facilitates the licensing for professional practice. It can be an interesting possibility, as it allows universities to offer specific education for each type of sport or body practice, facilitating the co-construction of knowledge.

Ten NGFs do not require any type of education to be a coach. Some of these NGFs may have an institutional structure that is not fully established, which can lead to fragile regularization of the coach profession and small number of institutional education opportunities in the countries. The respondent from the Cayman Islands reported: "I would also like you to note that we are a very small country/island and our federation is managed by a group of three volunteers with limited capacity."

On the other hand, the situation of some NGFs represents the gymnastics culture experienced in their countries, allowing institutions to believe that specific professional education is not necessary. This is the case of Scandinavian countries such as Denmark, Finland, Norway and Sweden. These countries are known for their culture of gymnastics practice, as they have promoted gymnastics since the 18th century (Patrício, Bortoleto & Carbinatto, 2016). In these countries, coaches are mostly volunteers. Unquestionably, the knowledge acquired through experience as a former gymnast contributes to the performance as a coach. At the same time,

we recognize the need for conscious reflection and co-construction of scientific concepts for such practice. These learning processes are provided by conscious mediations, which include institutional and informal opportunities. In addition, we highlight Piggott (2012), who considers the institutional participation in learning opportunities as 'rites of passage,' providing coaches with knowledge that ensures security and prestige in their role.

In general, data obtained in this study show the required educational levels for gymnastics coaches. However, based on this discussion, we can associate the provision of such programs with the regulatory guidelines for teaching sports and body practices and the organization of such NGFs. This way, we try to find any relation between promoting mediations that are developed through the existence of programs and the quality and specificity of such mediations, so that we can finally analyze how they take place

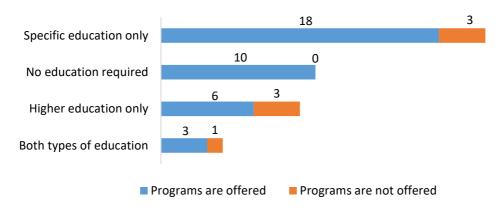


Figure 2. Relation between the education requirement to work as a gymnastics coach and the provision of coach education programs.



Figure 3. Relation between the offer of coach education programs and the existence of Technical Committees and GFA Committees.

7 NGFs out of 44 do not offer educational programs, 3 NGFs (Brazil, Azerbaijan, and Aruba) require only university education, which relieves them of their legal responsibility to provide continuing education for coaches. Additionally, 10 NGFs offer coach

education opportunities although they do not require any education for gymnastics coaches (Cape Verde, Denmark, the United States, Finland, Cayman Islands, Italy, Mozambique, Namibia, Norway, and Sweden). While the concept of not requiring any type of mandatory education

was seen as a negative factor, understand that **NGFs** do provide opportunities for their coaches that allow targeted access to these mediations. A similar situation is observed with the six NGFs that require higher education and also offer educational programs: Bangladesh, Benin, Qatar, Kosovo, Mongolia, and the Republic of Korea. Despite that, the efficiency of these programs, although not studied objectively, can be relativized with the analysis that will be presented later in this study.

Another case refers to NGFs that do not provide coach education programs but require specific education in gymnastics (Barbados, Mauritius, and Monaco), or both higher and specific education (Gran Canaria). The Barbados NGF reported that they recommend obtaining an approval from the FIG coach education program and the FIG Academy, which shows its importance for the development gymnastics in this country. Other answers shed light on the NGFs in Mauritius, Monaco and Gran Canaria. The NGF in Mauritius requires that their coaches obtain support from other programs to participate in education programs, and the Monaco NGF stated that the required education follows the rules of the French education system. Similarly to Monaco, the Gran Canaria NGF follows the educational requirements of Spain.

Finally, we highlight the NGFs that offer such programs and require both types of education – higher education and specific gymnastics (Algeria, education in Luxembourg, Paraguay) and those that only require specific education (South Africa, Germany, Andorra, Argentina, Australia, Austria, Canada, Singapore, Slovakia, Estonia, Great Britain, Hong Kong, Ireland, Iceland, Libya, Portugal, Trinidad and Tobago, and Venezuela). Notably, these NGFs agree with our expectations that coaches' education needs to be regulated and provide programs for this purpose, thus offering an opportunity for mediated and intentional learning processes for coaches (Vygotsky, 1997).

The existence of Technical Committees and GFA Committees can enhance the learning processes of coaches as they support the development of educational programs by experts and people who are interested in certain areas of gymnastics, allowing for mediations at macro, medium and micro levels by experts in the field (Vygotsky, 1997).

Similarly, the provision of gymnastics coach programs shows emphasis on women's and men's artistic gymnastics. This highly relevant presence in NGFs -75% of all programs offered – is consistent with the broad dissemination of this gymnastics discipline around the world, as it is traditional and secular (Nunomura et al., 2016; Quitzau, 2012; Soares, 2012). Another relevant factor is GFA, which is the third most recurrent type of gymnastics in the education programs for coaches. This is an interesting finding of this study since this is the main objective of this investigation and underlines the importance of studies related to this practice.

One of the aspects to be highlighted is the importance given to the practice of essentially non-competitive gymnastics, which is what GFA stands for when compared to other competitive and even Olympic disciplines. GFA, although it can be interpreted in different ways, is generally considered a practice focused on leisure and inclusion of people of different technical levels and motivations with no specific (Fiorin-Fuglsang sporting goals Paoliello, 2008). Thus, the offer of coach education programs based on this approach gymnastics practice highlights the interest of administrative institutions in the dissemination of gymnastics possibility of making this practice a pillar of NGFs; this paves the way to development of other gymnastic disciplines as a starting point to sport careers. From a perspective, pedagogical potentially use pedagogical strategies that allow for the development of fairer social relationships. The dissemination of this practice seems to be a positive aspect for the social groups involved.

After women's and men's artistic gymnastics and GFA, the most common gymnastic disciplines in coach education programs are Olympic, rhythmic, and trampoline gymnastics, followed by those organized by the FIG, i.e., aerobic and acrobatic gymnastics. Another aspect observed in the results is the offer of programs for other gymnastic disciplines and practices, such as TeamGym and rope skipping, which are popular in some localities and have received varied attention in different countries and regions. Other practices mentioned, such as aesthetic freestyle gymnastics, gymnastics, cheerleading, gymnastics for preschool children and gymnastics for people with disabilities, ball games, health and dance activities, gymnastics for children, and choreography show the gymnastic practices that are most valued by each NGF.

CONCLUSION

This study presented the first and unprecedented effort to analyze education requirements to work in gymnastics and the provision of educational programs for coaches. As a result, we found that, in general, NGFs offer education programs for coaches, regardless of whether their respective legislations stipulate specific education in gymnastics as mandatory.

Therefore, we conclude that relationship was found between the Technical existence of and Committees and the organization of education programs for coaches, since the NGFs with these committees almost always offer such programs. This hypothesis can be verified on the example of GFA: the NGFs that offer GFA programs are, in general, those that have GFA Committees. It has been established that most NGFs require specific education in gymnastics or do not require any training at all.

Brazil, for example, can provide a mirror to what might happen in other countries. especially nations regulatory institutions are in a consolidation process. In the last year in Brazil, many presentations and debates about the practice and its events were carried out in a virtual space, and this led to changes in the data found in the research. Notably, the growing number of GFA Committees in state gymnastics federations in Brazil, when comparing the current data with those obtained by Carbinatto, Toledo e Massaro (2016), may represent an advance in the promotion of continuing education programs in GFA in this country, as well as encouraging other actions at the national and federal levels.

Finally, our study highlights the relevance of education courses offered by NGFs, the great potential for the development of gymnastics in their respective countries and localities, and the importance of internal organization of the institutions to enhance the efforts focused on gymnastics.

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