

INVESTIGATION OF TECHNICAL CAPABILITY ON FLOOR EXERCISE IN MEN'S ARTISTIC GYMNASTICS

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Abstract: The technical ability of Central Java gymnastics is an important part of the ongoing gymnastics development process. The aim of this research is to investigate the specific technical abilities of men's artistic gymnastics in Central Java. The research method uses a survey design using the technical capability instrument (TAT) developed from Indonesian Gymnastics Association. The sample used was 20 male artistic athletes aged 8-10 years. The results showed that 10 gymnasts had a score of 2 (poor category) and 10 gymnasts had a score (medium category). The conclusion obtained is that the average male gymnast aged 8-10 years has a score of 2.5 points in the medium category.

Keywords: investigation, technical ability, artistic gymnastics

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INTRODUCTION

The development of the sport of gymnastics cannot be separated from and still refers to the concept of a national sports development pyramid, gradual, tiered and continuous, where the greatest reach of training for the target population is mass activities, then increasing to the level of training and achievement development (Čuk, 2016)(Abuwarda et al., 2024). The achievements of gymnastics in Central Java have not shown significant progress (Carrara et al., 2024). This can be proven by Central Java's inability to improve its ranking in various events at the national level (Visser & Cleophas, 2024). Central Java Province in gymnastics will have quite a big opportunity to compete with other regions if it is supported by complete training facilities and infrastructure, coaching funds, quality of training programs, quality of coaches and quality of athletes. The coaching provided by the Gymnastics Provincial Management still depends on the facilities and infrastructure owned by FIK UNNES and Pati Gymnastics Hall. Apart from that, the low interest of children in practicing gymnastics is an obstacle in supporting the sustainability of gymnastics development in Central Java.

So far, gymnastics has not had a good place in the hearts of the people (Rodriguez-Redondo & Leon, 2024a). This is because the process of coaching gymnastics takes a long time with quite heavy training intensity (Bortoleto &

Schweizer, 2024). This is exacerbated by the lack of gymnastics coaches (Čolakovac et al., 2024). This is because coaching gymnastics requires a lot of funds. So far, the sustainability of gymnastics development has depended a lot on the role of physical education teachers in elementary schools. It should be understood that the development of athletes in gymnastics starts from the age of elementary school students (first grade) (Rodriguez-Redondo & Leon, 2024b). This is in accordance with the movement characteristics and physical ability requirements in gymnastics.

Gymnastics coaching in Central Java does not yet have many gymnastics coaches who have the qualifications that meet expectations. This is because Physical Education Teachers as novice coaches do not have adequate competence in gymnastics techniques and movements, so they experience quite difficulties in carrying out coaching. The consequence of this weakness in competency/qualification is the absence of guidance at school level by physical education teachers. A further impact will be the weak socialization of gymnastics to children in schools so that training to become athletes will experience difficulties.

Central Java is divided into 35 districts. Based on participation in POPDA at the Central Java level in 2024, of the 35 districts that are actively developing gymnastics, there are 18 districts, including; Semarang City, Pati, Kudus, Rembang, Grobogan, Semarang, Salatiga City, Banyumas, Cilacap, Brebes, Karanganyar, Surakarta City, Pemalang, Pekalongan City, Surakarta City, Temanggung, Sukoharjo, and Pekalongan Regency. This shows the low level of public interest in gymnastics. The basic technical skills demonstrated by gymnasts are also not optimal. Of the 4 movement elements that are requirements, athletes can only display 2 movement elements that are requirements in the code of points.

METHOD

The research method uses a survey design using the technical capability instrument (TAT) developed from Indonesian Gymnastics Association. The sample used was 20 male artistic athletes aged 8-10 years.

Evaluation of the quality of movement technique performance is the Quality Score with increments from 0 - 4 points. For better movement quality a half point increase can be given to each skill (e.g. 1.5; 2.5; etc.). The assessment is carried out by a certified men's artistic gymnastics judges. The assessment is carried out from basic techniques in accordance with the guidelines, added to the level of mastery of the movements displayed by the athlete. So from this comes an assessment of the movement skills displayed by the athlete. The following is a description of the value.

Table 1. Assessment Norms

Value	Descriptions
0	Not achieved. The element in question cannot be performed.
1	The element in question is almost impossible to do. Poor technical performance, incorrect body position (posture), or falls.
2	Engineering characteristics can be performed. However, the technique and execution are still poor in steps or jumps.
3	Elements are presented with good technique and execution; controlled. Can be integrated in training and competition.
4	Elements are presented with excellent technique and execution. No landing errors.

Element Quality Score = 3 can be included in domestic competitions and indicates that the gymnast is ready to compete with mandatory or optional exercises containing this element. Only elements with Quality Score = 4 may be included in international competitions.

Table 2. Elements Table

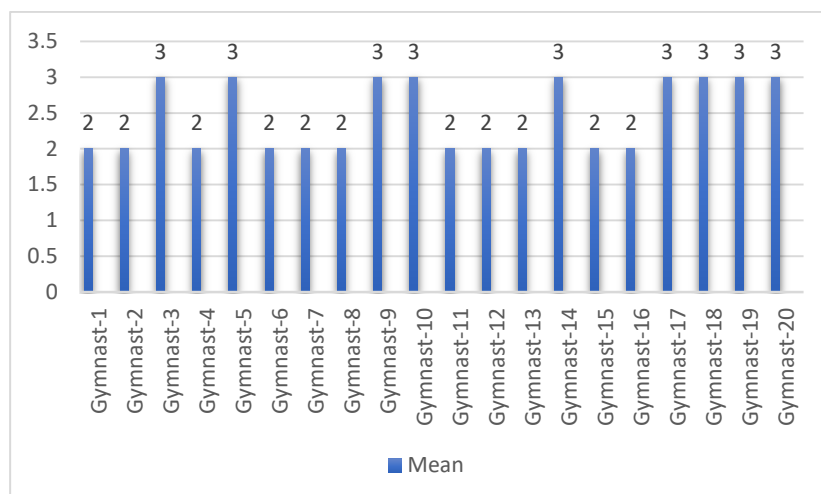
APPARATUS FLOOR EXERCISE	ELEMENT	DETAIL	DIFFICULTY LEVEL (1- 10)	QUALITY VALUE (1-4)	RESULT	TOTAL
1	Acrobatic forward	From board: hurdle step- handspring forward				
2	Acrobatic backward	From board: take off- back handspring- vertical jump and roll bwd				
3	Take offs backward for twisting (Mini Tramp)	Snap down (Korbut) onto Mini tramp and salto backward				
4	Rolls and circles	Stradle roll fwd (Endo) to handstand				

RESULTS

This section presents the results that have been processed based on the type of research used. This section presents the data presented in tables and diagrams and their interpretations clearly. The interpretation in the results section is not just reading out the data that has been obtained, but the data obtained is interpreted clearly and precisely accordingly.

Table 3. Results obtained

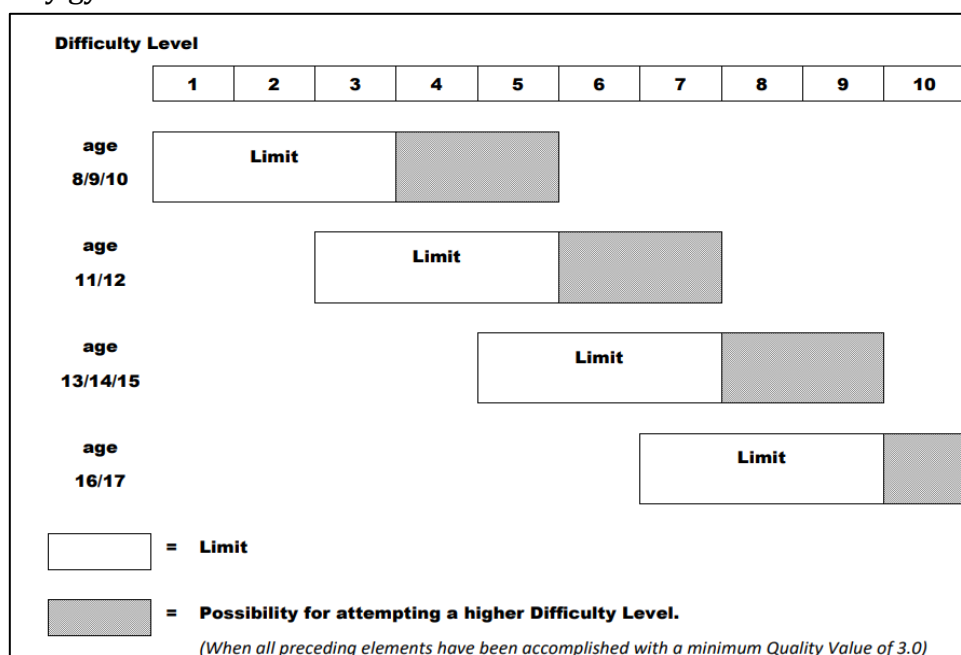
No.	Gymnast	Score
1.	Gymnast-01	2
2.	Gymnast-02	2
3.	Gymnast-03	3
4.	Gymnast-04	2
5.	Gymnast-05	3
6.	Gymnast-06	2
7.	Gymnast-07	2
8.	Gymnast-08	2
9.	Gymnast-09	3
10.	Gymnast-10	3
11.	Gymnast-11	2
12.	Gymnast-12	2
13.	Gymnast-13	2
14.	Gymnast-14	3
15.	Gymnast-15	2
16.	Gymnast-16	2
17.	Gymnast-17	3
18.	Gymnast-18	3
19.	Gymnast-19	3
20.	Gymnast-20	3



Picture 1. Results Graph

DISCUSSION

The research results show that athletes still show an average movement skill score of 2.5 points. This shows that athletes have not been able to improve their movement skills at the next level. This is in accordance with research from (Ikonomi et al., 2024) which shows that athletes have their own timeline when they want to improve the quality of their movements. This is also in line with research from (Campbell et al., 2024) which discusses the athlete's level and the movement skills that can be mastered. Previous research from (Wittmann, 2024) and (Barker-Ruchti, 2024) also shows that the muscles of children aged 8-10 years are still unable to work optimally when trained to master movement skills, especially gymnastics.



Picture 2. Information for the Selection of Difficulty Levels (DL)

CONCLUSION

Average male gymnast aged 8-10 years has a score of 2.5 points in the medium category. The recommendation from the research results is that gymnasts are expected to improve their basic techniques first, then move on to the next technique

Conflict of Interest

No conflict of interest in this research.

Acknowledgment

Wimilia Club Semarang, Indonesian Gymnastics Associations, Central Java Gymnastics Associations.

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