

# Walking on the Board for Dynamic Balance

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## ABSTRACT

This study aims to see the ability of dynamic balance elementary school students when walking on the board. Instruments were given to 156 elementary school students from various schools. There are four factors described in dynamic balance instruments that are classified namely; 1) walk forward across the board with both hands stretched, 2) walk sideways past the board, 3) walk forward, hands over the board over the board, and 4) walk forward across the board with both hands folded in front of the chest (alms). Four criteria for student success (Good, Enough, Poor, and Not Good) are determined by the cluster analysis methodology. The results of the study show that the dynamic balance of elementary school children is in the Poor criteria. To see the ability of dynamic balance, it is better for children to be given the opportunity to do the exercises on the board so that it will improve their dynamic balance.

**Keywords:** *Walking on the board, dynamic balance*

## 1. INTRODUCTION

Physical education can develop basic physical abilities of children from an early age, such as; strength, explosive power, endurance, speed, agility, coordination and balance. One of the basic physical abilities that a child must have is balance, because without a good balance, a child will find it difficult to maintain his body position in doing motion activities. Balance is an important ability that must be owned by someone because it is used for daily activities, such as walking, running, jumping most of the sports and games (Tauhidman 2018) (Kesehatan et al. 2015). Balance is a key component in daily activities and sports performance (Maleki, Faqihsolimany, and Mortezaazadeh 2015) (Ayan Sinan, Soyly Yusuf, Bozdal Ozlem 2017).

Balance can also be interpreted as a process in which the body tries to maintain its position while carrying out various activities. Balance involves a variety of movements in each segment of the body supported by the support plane, with the fulcrum will make humans able to move effectively and efficiently. In addition, balance is generally defined as balance in the human body system, such as the balance of the sensory system, the central nervous system, and musculoskeletal systems (Okatiranti 2014). To get a good balance, children must be active in various game activities, not limiting the scope of children's movements and providing sufficient facilities for children to be able to move freely. Once the importance

of balance for children in carrying out an activity, so the balance factor here plays a very large role in children in carrying out sports activities and in daily life.

The definition of balance here is dynamic balance, because in doing dynamic balance there are elements of static balance. Dynamic balance is defined as the ability or effort to maintain stability during weight transfer (Dunsky, Zeev, and Netz 2017) (Wei-Hsiu Lin, Jen-Hao Cheng, Wei-Hsi Hung 2016) (Zulvikar 2016). Besides that dynamic balance is very important in most activities (Listyorini, Shanti, and Prabowo 2015). Balance is influenced by various factors. The most decisive factor is the position factor of an element to another element, as well as the position of the element to the design field (Wijaya 2000). In addition, the notion of dynamic balance is the ability of the body to be able to maintain or maintain its body balance when doing activities, for example when walking, running, and getting up from a sitting position (Tauhidman 2018) (Baxter et al. 2008).

The notion of dynamic balance needed for functional activity is the result of interaction between the ankle joint, knee joint, hip joint and surrounding muscles, and the shoulder joint and surrounding muscles which play a role in maintaining a state of body position (Rafat et al. 2017) (Mahmood and Mayda 2017). A good dynamic balance is considered necessary to achieve the appropriate level of physical activity that is associated with a good quality of life (Clark et al.

2016) (Permana 2013). It is impossible for a child to be able to play games or sports without having a good dynamic balance, therefore dynamic balance is very necessary for children, by having a good dynamic balance, then various forms of activities carried out will greatly facilitate the child to do so.

**2. METHODS**

The method used in this study is the cluster analysis method by grouping it according to the size of closeness or similarity. The sample in this study were elementary school students. Instruments were handed over to 156 students from 3 sub-districts in Bungo District, Jambi, Indonesia. Student identity is completed by researchers, schools of origin, class, and age. Primary school students are low grade students, including class 1, grade 2, and grade 3 whose dynamic balance is still very lacking. The researcher goes to the student concerned to do the test. Students are asked to walk on the board to see dynamic balance abilities.

There are four factors described in dynamic balance instruments that are classified namely; 1) walk forward across the board with both hands stretched, 2) walk sideways past the board, 3) walk forward, hands over the board over the board, and 4) walk forward across the board with both hands folded in front of the chest (alms).

**3. RESULTS**

Dynamic balance results were measured using a board walk test. The distribution of more data can be viewed at the following:

Table 1. Data Capabilities Dynamic Balance.

No	Dynamic Balance	Number of Children	
		Being able	yet
1	Walk forward past the board with both hands stretched	44	112
2	Walk sideways passing the board	42	114
3	Walk forward, hands on hips skirting boards	40	116
4	Walk forward over the board with both hands folded in front of the chest (alms)	38	118

Based on table 1 above it can be described that; when doing the first movement, that is, walking forward past the board with both hands stretched, the result is 44 capable students and 112 students have not been able. The second movement is, walking sideways across the board, the result is 42 capable students and

114 students have not been able. The third movement is to walk forward, hands across the board, the results are 40 capable students and 116 students have not been able. The fourth movement is, walking forward across the board with both hands folded in front of the chest (alms), the results are 38 capable students and 118 students have not been able. These results can be presented in graph 1 below:

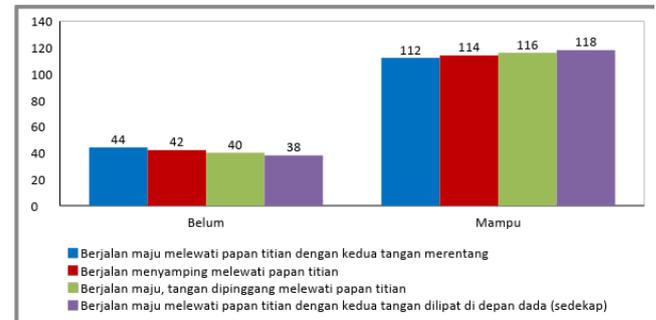


Figure 1. Graph of Dynamic Balance Ability

Based on the description above, there is that students' dynamic balance ability still needs to be improved because most students still have not been able to pass the board properly. Based on the results of the study, it can also be seen the score criteria obtained by students to determine the average in the form of a percentage of the ability to dynamically balance, can be seen in table 2 below:

Table 2. Research Results Dynamic Balance Ability.

No	Score	Dynamic Balance			Remarks
		Number of Children	Number of Scores	Percentage	
1	4	8	32	5,13	1. Average 53.21% 2. Not yet achieving Good criteria
2	3	29	87	13,94	
3	2	94	188	30,13	
4	1	25	25	4,01	
Amount		156	332	53,21	

Based on table 2 above, it can be seen that the dynamic balance of all students while walking on a board with various variations of movement there is a number of scores obtained at 332 with a percentage of 53.21%. This percentage is included in the poor category. So that based on these circumstances become the basis for trying to improve the gross motor skills of students, especially in terms of dynamic balance by

providing opportunities to students through walking on the board.

#### 4. DISCUSSION

The results of the study of dynamic balance when walking on the board, when doing the first movement, namely, walking forward past the board with both hands stretched, the results were 44 capable students and 112 students were not able. Dynamic balance when walking on the board is one of the factors that increase dynamic balance, by walking forward across the board with both arms stretched will give balance to students because by opening the hands of students more freely moves both left and right to maintain dynamic balance so as not to losing control and still moving forward to maintain balance, in this study few students were able to do it well. The second movement is, walking sideways across the board, the result is 42 capable students and 114 students have not been able. Dynamic balance when walking sideways across the board can train students' dynamic balance, because gradually stepping sideways gives different and varied movements, in this study very few students can pass it properly.

The third movement is to walk forward, hands across the board, the results are 40 capable students and 116 students have not been able. Dynamic balance when walking forward, the hand on the edge across the board gives a good impact for dynamic balance, because maintaining balance with the hand at the waist requires high concentration to be able to go further, in this study very few students can do it well. because the fourth movement is, walking forward over the board with both hands folded in front of the chest (alms), the result is 38 capable students and 118 students have not been able. Dynamic balance when walking forward through the board with both hands folded in front of the chest (alms) is very good for improving the dynamic balance of the child, because to step over the board only uses the help of body balance that can be done and requires good concentration, if things this has been done correctly, it can be said that the dynamic balance of children has been said to be good, in this study very few students could do it well.

While the results of the average percentage of dynamic balance scores of all students when doing walking on the board with various variations of the movement there are a number of scores obtained at 332 with a percentage of 53.21%. This percentage is included in the poor category. Based on the foregoing, the dynamic balance of students is still very lacking because teachers limit the movement of students in their activities. If this is not dealt with quickly, students will find it difficult to carry out activities that use more movement.

Students' dynamic balance can be improved by walking on board, this is very necessary to achieve a good dynamic balance, as well as providing plenty of opportunities for students to move, do not limit the movement of students in activities, while we need guidance in conducting movement activities. If this is done correctly, the child's dynamic balance will be achieved by itself (Zulvikar 2016). Therefore the exercise on the board with the aim of increasing dynamic balance greatly gives a positive impact on the child's development in terms of activities that use more walking and running movements so that the child is more active.

#### 5. CONCLUSION

Based on the results of research and discussion, it can be concluded that the dynamic balance of elementary school students is in poor criteria. By giving students the opportunity to make a walk on the board with a forward motion of their arms stretched, walking sideways, walking forward hands at the waist and walking forward hand folded in front of the chest can improve students' dynamic balance.

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