

The Influence of Traditional Games on The Motor Development of Students with Disabilities

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Abstract: The purpose of this study was to examine the effect of the application of traditional games on motor development in students with disabilities. The method used in this study is the experimental method. The sample that participated in this study in this study was 25 students with disabilities taken from three special needs kids schools with an average age of 12 years. The sampling technique used by the writer was purposive sampling. The data collected in this study used a preliminary test and a final test using a standing broad jump, long jump, and throwing test. The conclusion of the research shows that traditional games offer a significant difference in the motor development of children with disabilities.

Key Words: traditional games, gross motor development, disabilities, physical education

Abstrak: Tujuan dari penelitian ini adalah untuk menguji pengaruh penerapan dari permainan tradisional terhadap perkembangan motorik pada siswa penyandang disabilitas. Metode yang digunakan pada penelitian ialah metode eksperimen, sampel yang berpartisipasi dalam penelitian sebanyak 25 orang siswa disabilitas yang diambil dari tiga sekolah SLB dengan usia rata-rata siswa 12 tahun. Teknik pengambilan data yang digunakan ialah *purposive sampling*. Pengumpulan data dalam penelitian menggunakan tes awal dan tes akhir dengan menggunakan tes *standing broad jump*, *long jump*, melempar. Simpulan penelitian menunjukkan bahwa permainan tradisional memberikan perbedaan yang signifikan pada perkembangan motorik anak disabilitas.

Kata kunci: permainan tradisional, perkembangan motorik kasar, disabilitas, pendidikan jasmani

INTRODUCTION

Physical education is a formal discipline of study in schools based on physical learning activities and includes assessments based on program standards. Curriculum and teaching of Physical education are based on K-13 standards which are sequentially designed to develop healthy active motor skills, knowledge and active life behaviour, physical fitness, sportsmanship, self-efficacy, and emotional intelligence of students (Lengkana & Sofa, 2017). As a school subject, physical education is focused on teaching children through science and physically active methods (Haerens, Kirk, Cardon, De Bourdeaudhuij, & Vansteenkiste, 2010). This activity allows students to be more involved in physical activities that are in accordance with developments specifically designed for children to develop their fitness, motor skills, and healthy lifestyle (Stodden, True, Langendorfer, & Gao, 2013; Sudirjo, Susilawati, Lengkana, & Alif, 2019; Vlahov, Baghurst,

& Mwavita, 2014). Gentier et al. (2013) explains that, motor skills are divided into two categories, namely gross motor skills and fine motor skills (dexterity). Gross motor skills are large movements that are performed more dominantly using large muscles, such as arms, legs, or body. Generally, movements are more flexible and energetic such as crawling, walking, running, and jumping (Fallah, Nourbakhsh, & Bagherly, 2015), whereas fine motor skills or dexterity tend to be a physical skill that involves small muscles with coordination between the eyes and hands. These motor skills help children become more independent to do various things, such as carrying the ball, throwing, and catching the ball (D'Hondt, Deforche, De Bourdeaudhuij, & Lenoir, 2009). Mastering both motor skills is important for children's growth and independence. Motor skills are used every day throughout our lives (Muhtar, Supriyadi, & Lengkana, 2019). Having good motor skills can help us move and do everything from lifting heavy objects to coordinating smooth motion. Motor skills

and motor control begin to develop after the children was born and will develop along with the child's growth (Jarani et al., 2016). Having good motor control also helps children explore the world around them, which can help with many other areas of development.

Physical education is applied in formal schools and even in inclusive schools whose aim is to support the needs of students to continue to perform physical activities under any conditions. Muhtar and Lengkana (2019) explained that educational programs for disabilities are based on comprehensive assessments to be able to provide skills experience, recreational activities, and exercise experience to improve physical fitness.

Adaptive Physical Education is a subject that can directly be provided to children with special needs. In many cases, if a child is identified as visually impaired, physically disabled, multiple disabilities, or other health problems, they will be assured of receiving adaptive physical education (Winnick & Porretta, 2016). Physical education programs for people with disabilities use a modified learning system. It is designed to meet individual gross motor needs or other challenges related to disability. Teachers should modify the learning that allows children with special needs to participate in physical education activities. Klavina (2011) divides modification into four areas, including (1) *Instructions*. Rules, lesson plans, strategies, and etc. can be modified or incorporated to help children to keep up in physical education. (2) *Rules*. A rule can be adapted or changed if it allows children with special needs to be successful. (3) *Equipment*. Standard sports equipment can be replaced with other objects that have different shape, color, size, and etc. (4) *Environment*. If necessary, the teacher can change the size of the playing area using tape to determine the playing area.

The fulfillment of motoric skills in the activities of physical education performed by the researcher focuses on the local content aspect from community habits; by applying traditional games. The implementation of traditional games in the physical education allows students to have enjoyable activities, achieve physical fitness, and acquire good motor skills (Lengkana, Supriadi, Hermawan, & Soleh, 2017). The implementation of traditional game allows teacher to be able to direct and convey the learning contents based on the development stage of students. Mulyana and Lengkana (2019) state that the implementation of traditional games aim at promoting skills development, motions and knowledge acquisition within physical education in school, as well as encouraging active movements among students.

The author found out how hard physical education teachers are for students with disabilities. Students tend not to give full attention to every lesson. They tend to choose to do activities that they prefer. Consequently, the gross motor quality of students becomes poor, for instance, they are not being able to control and coordinate movements. This is due to the limited intensity of mobility performed by the students during physical education. When it is neglected, it becomes a serious problem in the near-future. Therefore, this research aims at implementing traditional games to improve motor skills among students with disabilities. The implementation of traditional games among students with disabilities aims at improving control ability of their body, improving movements acquisition, and increasing dexterity.

METHOD

This research employed an experimental research design. The experimental research design aims at identifying the position and correlation among research variables (Arikunto, 2010). It was chosen since this research aimed at examining traditional games in improving gross motor skills of students with disabilities in Tasikmalaya. This research employed *One-Group Pre-test-Posttest Design* by performing initial test to identify students' gross motor skills before giving the treatment and final test to identify students' gross motor skills before after the treatment.

This research took three special schools in Tasikmalaya as a research sample. The subjects of this research were 25 students with the average age was 12 years old. This research employed purposive sampling technique to determine the sample. Purposive sampling technique allows the researcher to determine the sample based on a particular characteristic (Sugiyono, 2010). In this research, the researcher took students with disabilities including, intellectual disability, hearing impairment, mutism, and autism.

To analyse the data, the researcher used *Statistical Package for the Social Science* (Pallant & Manual, 2010). It consisted of normality data testing using Kolmogorov–Smirnov and Independent Samples t–test (Pallant & Manual, 2010). The test instruments used in this study were (1) Standing Broad Jump, (2) Long Jump, (3) Throwing the ball into the box while lifting one leg (Bartlett, 2014).

RESULTS AND DISCUSSION

After obtaining the data, the next step was processing and analysing the data to obtain the answer of research question. The Table 1 presents the mean and standard deviation of each test.

Based on the Table 1, the mean score of standing broad jump was 51.2311 with the standard deviation of 1.0231, the mean score of long jump was 51.3256 with the standard deviation of 1.1149 and the mean score of throwing test was 50.7812 with the standard deviation of 1.3432 (Figure 1).

Based on the Figure 2, the posttest results acquired by students with disabilities for standing broad jump was 59.1002 with the standard deviation of 1.5241, the mean score of long jump was 56.5521 with the standard deviation of 1.4279, and the mean score of throwing test was 53.2213 with the standard deviation of 1.5457.

Then, the data normality testing was performed to identify whether the data obtained was normally distributed or not. In addition, the normality testing performed determined the next step of statistical testing; whether using parametric or non-parametric. The Table 2 presents the normality test results of motor skills test.

Based on the results, the probability value (Sig.) based on Kolmogorov-Smirnov was higher than 0.05. Thus, the motor skills test results were normally distributed. After performing normality testing, then it was followed by parametric testing. It took means difference through one sample t-test method. The Table 3 presents the hypothesis testing results.

According to the results, the mean difference of both pretest and posttest for motor skills test obtained a P-value from one sample t-test method was 0.000 or lesser than 0.05. It means that H₀ was rejected. This further signifies that there is a mean difference of both pretest and posttest. Thus, the traditional games employed in this research positively influences the development of students' gross motor skills.

The results of this research report positive results during the learning process by implementing traditional games to improve gross motor skills of students with disabilities. It further confirms that motoric skills of students could be improved as their growth is progressing (Lengkana, 2016). In addition, the lesson content as the focus of learning process needs to be taken into account by teachers (Lengkana, 2018). Various learning approaches need to be given to all kinds of students, including students with disabilities. Particularly, teachers should be able to design attractive learning approaches and strategies to attract their attention during the learning process. (Hadders-Algra, 2018). These findings are also in line with the previous studies who report that games could accommodate and facilitate the development of students' gross motor skills; in each level of education, age, or different physical conditions (Akbari et al., 2009; Hsiao & Chen, 2016).

The development of motor skills through physical education encourages students to acquire direct and conscious experience where the learning activities are directed to achieve the pre-determined objectives. Students need to develop their motor skills. Although students are demanded to master the skills when developing their motor, it does not simply mean that they

Table 1. Motor Skills Test Data Description

Group		Pre-test		Post-test		
		Statistic	Std. Error	Statistic	Std. Error	
Standing Broad Jump	Mean	51.2311	.35241	59.1002	.20112	
	95% Confidence Interval for Mean	Lower Bound	50.1143		58.8231	
		Upper Bound	52.4432		60.0315	
	Std. Deviation	1.0231		1.5241		
Long Jump	Mean	51.3256	.37138	56.5521	.21112	
	95% Confidence Interval for Mean	Lower Bound	50.0023		55.0012	
		Upper Bound	51.8721		66.0562	
	Std. Deviation	1.1149		1.4279		
Throwing	Mean	50.7812	.36475	53.2213	.22376	
	95% Confidence Interval for Mean	Lower Bound	49.7342		51.5621	
		Upper Bound	51.2972		56.6623	
	Std. Deviation	1.3432		1.5457		

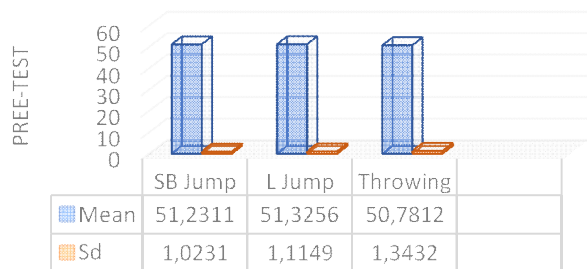


Figure 1. Motor Skills Pre-test Results

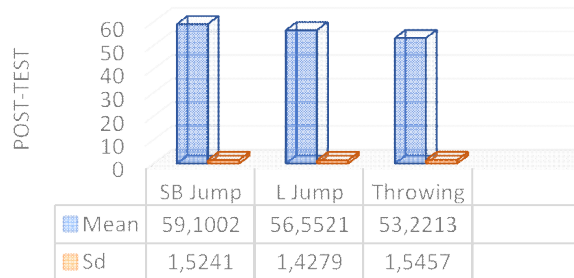


Figure 2. Motor Skills Post-test Results

Table 2. Normality Testing Results

	Kolmogorov-Smirnov ^a		
	Statistic	df	Sig.
Standing Broad Jump	0,189	25	0,162
Long Jump	0,190	25	0,087
Throwing	0,201	25	0,061

Table 3. The Results of T-test

One-Sample T-test						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Pretest	48.251	24	.000	19.00253	17.1327	19.2331
Posttest	60.017	24	.000	18.31411	13.7721	15.5742

should not pay attention to cognitive and affective domains. Hence, positive learning atmosphere should be established, both by parents and teachers to maximize the development and avoid any obstacle such as cognitive development, language acquisition, and reading skill interferences (Abdurrahman, 2012). It further confirms that the positive learning atmosphere plays a prominent role in any educational study since it significantly influences the development of students (Roskam, Stievenart, Meunier, & Noël, 2014).

CONCLUSION

According to the results and analysis, the implementation of traditional games positively influences the development of gross motor skills of students with disabilities in Tasikmalaya. The findings further confirm that it is important for all related stakeholder, including teachers, to design particular learning approaches for students with disabilities. The accessibility of particular learning approaches for students with disabilities should be a new standard that must be prioritized in both general and inclusion schools.

Based on the explanation above, this study further suggests that (1) the school for special needs kids

should accommodate diverse condition of disabilities, (2) the educational system for students with disabilities should be designed comprehensively, and (3) the teachers must implement various approaches of learning models to accommodate diverse condition of students.

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