Influence of Learning Method and Motor Ability to Learning Results Basic Motion Skills of Slow Learners

Lilik Sugiarto✉ , Tandiyo Rahayu & Eunike Raffy Rustiana

Universitas Negeri Semarang, Indonesia

Article Info	Abstract
	This research aimed to (1) analyze the effect between remedial commando method and peer teaching commando method toward learning outcome of basic movement ability of slow learners; (2) analyze the effect between students with high and low ability toward learning outcome of basic movement ability of slow learners; (3) analyze interaction between learning methods and motor ability toward learning outcome of basic movement ability of slow learners. This research used experimental design method with two treatments model and each treatment has two level as attributes. The sampling technique was total sampling and got 22 students as sample. The analyzing technique in this study was Anova two-tailed used SPSS 16.0 and significance level α =0.05 and also Tuckey test. The result of this research showed (1) in general can be said that learning methods and motor ability are an element that effect to learning outcome of basic movement ability of slow learners, (2) remedial commando method gives better effect to learning outcome of basic movement ability of slow learners, (3) the enhancement of basic movement ability learning outcome with applying remedial commando method and peer teaching commando, also effected by motor ability level. The level of motor ability is needed to support the learning result of basic movement ability of slow learners.

✉ Alamat korespondensi:
  Campus UNNES Kelud Utara III, Semarang, 50237
  E-mail: liliksugiarto90@yahoo.com

INTRODUCTION

Learning difficulties are common and widely experienced by everyone in learning. Differences level of this intelligence that can affect the process of children in thinking and the occurrence of learning disabilities. Mulyadi (2010) explains that the definition of learning difficulties is a condition in learning process that characterized by certain disabilities to achieve learning outcomes. A fast learner needs knowledge extension and slow learners needs repetition (Sutijan, 2011). Basically slow learners students are children with low level of mastery of learning, while the material is a prerequisite for the next lesson, so they often have to repeat it (Sudrajat, 2008). According Suryani (2010) explains that, slow learners children is a child who has limited potential of intelligence, so that the learning process becomes slow. Their level of intelligence is slightly below average with an IQ between 80-90. Their learning slowness is evenly distributed across all subjects. Slow learners is between the average intelligence and mental retardation category.

Factors that can affect the process and the success of learning or training in physical education and sports, including; internal and external factors. Internal and external factors according to Rusli Lutan (2000) explains that, Internal factors are factors that exist in the child's own self while external factors are factors outside the child that can be manipulated in order to develop their internal potential.

The researcher is a teacher of physical education at Nurul Qomar Islamic Elementary School. Commando learning method is used during the practice learning of physical education, because it adapted to the existence of various backgrounds of students who have different characteristics, include smart students, average students and slow learners. During the course of the study, researchers did field observations on 3-5 grade at Nurul Qomar Islamic Elementary School Semarang from 7-19 November 2016. The observations included motor ability tests during practice learning of physical education, Intelligence (IQ) Tests, and unstructured interviews to their teacher. After did the observation, the researcher found that 10 students indicated as slow learners. Researcher realize the sample used in the research is less, then the researcher did another observation to Cita Bangsa Elementary School Semarang to get additional sample which needed. Observation did on 6 to 14 April 2017, the observations included motor ability tests during practice learning of physical education, Intelligence (IQ) Tests, and unstructured interviews to headmaster of Cita Bangsa Elementary School.

After did the observation, the researcher found that 10 students indicated as slow learners and they used as additional samples. A person's motor ability is closely related to Intelligence Quotient as described by Rahyubi (2014) "children with high IQ shows faster motor development rather than children with normal IQ". Motor ability is important thing and needed in every development. According to Giriwijoyo & Sidik (2013) in early childhood, complex skills such as running, jumping, swinging, skipping and climbing continue to increase. This is because these activities teach how to maintain balance and coordination and increase the proprioception (the impression of motion and position impression) and praxis (awareness of space) motion skills of each individual. The development of motor skills can be indicated from several aspects, such as speed, agility, coordination and balance (Firman Ardiansyah, 2016).

Different from Nurtajudin, Tandiyo Rahayu & Sulaiman research (2015) entitled (The Eye-Foot Coordination Coercion Exercises - The Hands and Balance Level Against Poor Motorcycle of Early Childhood), concluded that eye-hand-eye coordination exercises and balance levels did not provide interactions with gross motor, the level of equilibrium does not guarantee a child's gross motor will be better. It does not a problem because motor skills are something that did in coordinated. This is stated by Didik Cahyo Wicaksono (2013) "Motor ability is a process whereby an individual develops his motion capabilities into a coordinated, controlled and orderly response".

From the field observation by researcher, slow learners student in elementary school has weakness in movement learning that has delay in mastering a movement, slow in doing reflex movement or normal movement, difficulties in learning motion, in other meaning need some experiment just to mastering a certain movement. This observation was conducted during the learning of physical education in 3-5 grade in Nurul Qomar Islamic Elementary School and Cita Bangsa Elementary School, Semarang in 2016/2017.

Preliminary observation did on slow learners students in Nurul Qomar Islamic Elementary School and Cita Bangsa Elementary School Semarang with direct observation when learning of physical education be held, showing 20 students have difficulty in doing movement learning. The indications are strengthened by performing first motor ability test performed on some normal students and slow learner students, preliminary data obtained there are differences in motor ability on normal students than slow learners students.

The command method is suitable for learning motion, warming up and basic techniques. The meaning of the commando method is the direct and rapid connection between the teacher's stimulus and the student's respon. As stated by Metzler (2005)*" Teacher as instructional leader, accurately describes the most essential operations of the direct instruction model*".

Remedial teaching is one method of learning in an effort to improve student learning outcomes for students who have not been successful in terms of achievement of competence (Depdiknas, 2003). Students who are slow in mastering a standard of competence in ordinary learning followed in regular classes require remedial learning (Widodo, 2006).

Characteristics of slow learners students need direct learning, longer time and repeatedly to be able to complete academic and non academic tasks, thus requiring special education services. Remedial command learning method is expected to be an alternative in the learning strategy of slow learners students based on their characteristics, that is the delay in mastering materials learning in academic and movement.

Peer teaching method is also considered very appropriate for student learning, because learning is more friendly and allows for increasing student cognitive potential. This is confirmed by Metzler's statement (2005) *"The peer teaching model also has great potential to enhance students' cognitive development in physical education".*

The needs of slow learners students can be determined by analyzing their learning difficulties. Based on the characteristics of the difficulties in slow learner students, using appropriate learning methods are expected to support and improve the learning ability of slow learners students both in psychomotor and cognitive learning.

METHODS

The design of this research is two factor design. The design of this factor is called 2 x 2 factorial. The treatment is arranged so that each individual can be a subject simultaneously in two different factors and each factor consists of several levels.

In the research process, the first test performed is a basic motor ability test used to divide the group and determine the category of high motor ability and low motor ability category. After that the researchers formed a control group and experimental group, Ability test is used to divide the group and determine the category of high motor ability and low motor ability. After that, the researchers formed a control group and an experimental group. Group members come from groups with high motor ability and low motor ability. The group retrieval technique used is Matching and dividing the motor ability level into 2 subgroups and done by ordinary pairing (A-B-B-A). This method can divide the group in balance.

After doing the Pre test, then treated for 4 meetings and after that done Post test. Test Normality using Kolmogrov-Sminrnof and homogeneity test using Levene Test or F test with 5% significant level. Samples are called normal and homogeneous distribution, if the significance

value is greater than α (Sig > 5%). Data analysis using Anava SPSS 16.0 with a significant level of 0.05.

RESULTS AND DISCUSSION

The data obtained through the use of the instrument produces preliminary data in pre test (0,200) and final data in post test (0,214), the data were tested for normality by using Kolmogorov Smirnov at a significance level 5% (a = 0,05) and the provision that the data is normally distributed

if the level of significance > 0,05. In this case the researcher uses SPSS 16.0 program.

Homogeneity test in this research used Levene test (SPSS 16.0). Homogeneity test is performed to test the data type that sourced from pre-test and post-test data. This is the result of homogeneity analysis test.

From the homogeneity test results obtained significance value of 0.120 and 0.059 > 0.05 which means that the variance data between the groups are not significantly different or homogeneous.

Table 1. Summary of Anova Two-Tailed

Source	Type III sum of squares	df	Mean square	F	Sig.
Corrected Model	531.750	3	177.250	9.820	.001
	12852.450	1	12852.450	712.047	.000
Learning Method	151.250	1	151.250	8.380	.011
Motor ability	296.450	1	296.450	16.424	.001
Learning Method * *Motor ability*	84.050	1	84.050	4.657	.046
Error	288.800	16	18.050		
Total	13673.000	20			
Corrected Total	820.550	19			
a. R Squared = .648 (Adjusted R Squared = .582)					

Hypothesis testing based on data analysis and interaction analysis of variance. To know the difference of result of hypothesis testing, the researcher conducted Anova two-tailed test (SPSS 16.0), Anova calculation results show alternative hypothesis accepted if the significance value is smaller than (sig < 0,05).

Based on the results of data analysis above, hypothesis can be tested as the following. The first hypothesis explain that there is no difference of influence between learning method by using remedial commando and peer teaching commando to basic movement ability in small ball (*kasti*) game of slow learners tested using F test with $F_{arithmetic}$ = 8, 380 with significance level 0,011 (< 0,05). H_0 is rejected, and H_a : "There is a difference of influence between learning method by using remedial commando and peer teaching commando to significance level 0,011 (< 0,05). H_0 is rejected, and H_a : "There is a difference of influence between learning method by using remedial commando and peer teaching commando to basic movement

ability in small ball (*kasti*) game of slow learners" received.

The second hypothesis states that there is no difference of influence between slow learners students who have high or low motor ability to learning outcomes of basic movement ability in small ball (*kasti*) game tested using F test with $F_{arithmetic}$ = 16, 424 with significance level 0,001 (< 0,05). H_0 is rejected, and H_a : "There is a difference of influence between slow learners students who have high or low motor ability to learning outcomes of basic movement ability in small ball (*kasti*) game" received.

The third hypothesis testing is there is no interaction effect between learning method and motor ability toward learning outcome of basic movement ability in small ball (*kasti*) game of slow learners tested using F test with $F_{arithmetic}$ = 4,657 dengan nilai signifikansi 0,046 (< 0,05). H_0 is rejected, and H_a : "There is interaction effect between learning method and motor ability toward learning outcome of basic movement ability in small ball (*kasti*) game of

slow learners" received. Basic movement ability in small ball (*kasti*) game of slow learners" received.

Table 2. Differences in Interaction of Each Treatment

Compared Groups	Mean difference	Sig.	Explanation
$A_1B_1 >< A_2B_1$	-3,07500*	0,020	Different
$A_1B_2 >< A_2B_2$	-.27500	0,989	Not Different
$A_1B_1 >< A_1B_2$	3,92500*	0,004	Different
$A_2B_1 >< A_2B_2$	1,12500	0,596	Not Different

Group using Tukey Test

Hypothesis testing based on data analysis and interaction analysis of variance. To know the difference of result of hypothesis testing, the researcher conducted Anova two-tailed test (SPSS 16.0), Anova calculation results show alternative hypothesis accepted if the significance value is smaller than (sig < 0,05).

Based on the results of data analysis above, hypothesis can be tested as the following. The first hypothesis explain that there is no difference of influence between learning method by using remedial commando and peer teaching commando to basic movement ability in small ball (*kasti*) game of slow learners tested using F test with $F_{arithmetic} = 8, 380$ with significance level 0,011 (< 0,05). H_0 is rejected, and H_a : "There is a difference of influence between learning method by using remedial commando and peer teaching commando to basic movement ability in small ball (*kasti*) game of slow learners" received.

The second hypothesis states that there is no difference of influence between slow learners students who have high or low motor ability to learning outcomes of basic movement ability in small ball (*kasti*) game tested using F test with $F_{arithmetic} = 16, 424$ with significance level 0,001 (< 0,05). H_0 is rejected, and H_a : "There is a difference of influence between slow learners students who have high or low motor ability to learning outcomes of basic movement ability in small ball (*kasti*) game" received.

The third hypothesis testing is there is no interaction effect between learning method and motor ability toward learning outcome of basic movement ability in small ball (*kasti*) game of slow learners tested using F test with $F_{arithmetic} = 4,657$ dengan nilai signifikansi 0,046 (< 0,05). H_0 is rejected, and H_a : "There is interaction effect between learning method and motor ability toward learning outcome of basic movement ability in small ball (*kasti*) game of slow learners" received.

Based on testing the third hypothesis there is interaction then conducted further analysis with tukey test to know the difference influence of each groups.

Characteristics of slow learners students need a longer time and repeatedly to be able to complete academic and non academic tasks, thus requiring special education services.

The role of direct instruction is a limited but important in a comprehensive educational program (Huda, 2015). Remedial teaching is one method of learning to improve student learning outcomes, especially for students who have not succeeded in competence achievement (Depdiknas, 2003).

It can be concluded that the remedial command learning is a combination of commando learning where this instruction has direct instruction to the students and remedial learning which is an approach for students who are slow in mastering standard competence of learning. This remedial commando learning is expected to be able to support and improve the learning ability of slow learners students both in psychomotor and cognitive learning.

The tutor is a peer who is assigned to help a friend who has learning difficulties, because the relationship between friends is generally closer than the relationship of teachers and students (Ahmadi & Supriyono, 2003).

The needs of slow learners students can be determined by analyzing their learning difficulties, it can be concluded that peer teaching commando is a combination of commando learning and peer teaching, which the learning is based on the characteristics of slow learners students who have difficulties in adjusting in their environment change and need direct learning. Based on the characteristics of difficulties in slow learners students, peer teaching commando are expected to support and improve the learning

ability of slow learners students both in psychomotor and cognitive learning.

Based on it, it can be concluded that there is influence and difference of learning result of basic movement ability in small ball (*kasti*) game of remedial commando learning method and peer teaching commando. Therefore, remedial commando learning method and peer teaching commando method can be applied in basic movement ability learning of slow learners students.

Motor ability is the development elements of maturity and gestures control. The development of motor skills can be indicated from several aspects, such as speed, agility, coordination and balance (Firman Ardiansyah, 2016).

Motor ability is closely related to Intelligence Quotient as described by Rahyubi (2014) "children with high IQ shows faster motor development rather than children with normal IQ.

Based on it, it can be concluded that there is influence and difference between slow learners students who have high or low motor ability to learning outcomes of basic movement ability in small ball (*kasti*) game.

Learning method is a model and a way that can be done in teaching and learning activities to run properly (Rahyubi, 2014). Joyce & Weill (2009) stated that "the teaching style is clearly said to be part of the learning model".

Motor ability is important thing and needed in every motor development in each human. Motor ability is the development elements of maturity and gestures control. Sukantaka (2001) described that "motor ability is the quality of indiviual motion result in doing movement, both sport motion and non sport motion or maturity appearance motor skills."

The result related to interaction hypothesis test proves that there is interaction between learning method with motor ability level give influence to result learn basic motion skill of game of sphere or in other words research hypothesis that is offered is tested its truth. This shows that to know the result of learning basic motion skill in game of soccer not only use

learning method but also determined by motor ability level owned by slow leraners student.

CONCLUSION

Based on the results of research and discussion about the application of learning methods and ability of motor ability to the learning result of basic motion skills of slow learners slow ball game, can be described as follows:

There is a difference in the effect of the remedial command and peer tutorial command methods to the basic motion skills of slow learners students' ball games. Remedial command instruction method gives better influence than peer tutor command study method. There is a difference in the effect between slow learners students who have high motor ability and low level of learning outcomes of basic motion skills of the game of ball. There is an interaction between the learning method and the ability of the motor abilities to the basic motion skills of slow learners.

So it can be concluded that the remedial command instructional method when given to slow learners students who have high motor ability level and low, gives better basic motion learning outcomes compared to slow learners students who get peer tutor tutorial learning with high motor ability level and low.

REFERENCES

Ahmadi & Supriyono. 2013. *Psikologi Belajar*. Jakarta: Rienka Cipta.

Ardiansyah, F. 2016. Kemampuan Motorik Dasar Siswa Kelas IV dan V SD N Keraton Yogyakarta Tahun Ajaran 2015/2016. *Jurnal Kemampuan Motorik Dasar Tahun 2016*. Yogyakarta: Universitas Negeri Yogyakarta.

Depdiknas, 2003. *Pembelajaran Remidial*. Jakarta: Direktorat Tenaga Kependidikan.

Huda, M. 2015. *Model-model Pengajaran dan Pembelajaran*. Jogjakarta: Pustaka Pelajar.

Husdarta & Saputra, Yudha M. 2013. *Belajar dan Pembelajaran Pendidikan Jasmani dan Kesehatan*. Bandung: Alfabeta.

Joyce, B & Well, M. 2004. *Model of Teaching*. USA: Pearson Education, Inc.

Metzler, M, W. 2005. *Instructional Models for Physical Education*. Arizona: Holcomb Hathaway

Nurtajudin, Tandiyo Rahayu., & Sulaiman. 2015. Pengaruh Latihan Koordinasi Mata-Kaki-Tangan dan Tingkat Keseimbangan terhadap Motorik Kasar Anak Usia Dini. *Journal of Physical Education and Sport*, 4(2): 154-158.

Rahyubi, H. 2014. *Teori-teori Belajar dan Aplikasi Pembelajaran Motorik*. Majalengka: Nusa Media.

Rusli Lutan, 2010. *Belajar Keterampilan Motorik, Pengantar Teori dan Metode*. Jakarta: Departemen Pendidikan dan Kebudayaan.

Sukantaka. 2001. Kemampuan Motorik Dasar Siswa Kelas III SDN Surakarta Tahun Ajaran 2000/2001. *Jurnal Kemampuan Motorik Dasar Tahun 2001*. Yogyakarta: Universitas Negeri Yogyakarta

Suryani, Y. E. 2010. Kesulitan Belajar. *Magistra* No. 73 Tahun XX September 2010. ISSN 0215-9511.

Sutijan. 2011. Mengajar Peserta Didik Lambat Belajar di Sekolah Dasar. *Jurnal Rehabilitasi dan Remediasi (JRR)*, Volume 2. Surakarta: LPPM UNS.

Wicaksono, Didik C., & Nurhayati, F. 2013. Survey Kemampuan Motorik Siswa Sekolah Dasar Muhammadiyah Kelas se-Kecamatan Taman Sidoarjo Tahun Ajaran 2012/2013. *Jurnal Pendidikan Olahraga dan Kesehatan*, 1(1):98-103.

Widodo Joko, 2006. Pelaksanaan *Remedial Teaching* Mata Pelajaran Akuntansi di SMA Negeri Kabupaten Rembang. Semarang: Staff Pengajar Fakultas Ekonomi UNNES Volume 3.