

# Feedback and Agility on Elementary School Students' Basketball Dribbling Skill

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**Abstract:** This article discusses the method of learning that uses immediate and delayed feedback in relation to the degree of agility as well as its effect on the mastery of basketball dribbling of elementary school students. The method was experimental with 2x2 factorial design. The sample was 40 students. The instrument to measure agility is Shuttle run 4x10m and to measure dribbling skill control dribbling test was applied. After going through the results of processing and data analysis using Anova and Tukey Model Advanced test, it can be concluded that the method of learning by determining the type of feedback becomes important because it affects the learning outcomes where in this study, overall, the method of learning with immediate feedback is better than delayed feedback on basketball dribbling skills. However, the method of learning by determining feedback is influenced by the degree of agility at which the high level of agility of the immediate feedback is better. However, immediate feedback and delayed feedback do not have a significant difference in the low agility group.

## 1 INTRODUCTION

*Feedback is considered an important teaching function and researchers in sport pedagogy have shown interest in verifying this importance to achievement in physical education* (Lee et al, 1993). In the field learning activities, feedback is a very important component for the success of student learning (practice). Feedback can be delivered verbally (oral) and written. Feedback can be done immediately after the practice takes place without having to wait for the next practice (immediate feedback), or it can be given at a certain time interval after the student through multiple feedbacks. However, the processing of information and memory capabilities of learners, especially the age of the children is still limited, so it is doubtful that young students can receive and store very much information during multiple feedback presentations. It is also doubtful that learners can be very effective in correcting subsequent actions in more than one way, especially with feedback on motion patterning (Schmidt and Lee, 2013).

Much of the research in terms of learning is concerned with the function of feedback information that refers to its role in providing information about

individual performance in relation to the purpose of the learning task (Wulf and Shea, 2004). Some recent findings suggest that the benefits of general feedback are motivational and can foster self-confidence and students can recognize their strengths and weaknesses (Schmidt and Lee, 2005). The principle of feedback is to inform students clearly, specifically, personal and honest about how to improve their performance (Bloxham and Boyd, 2007; Allin and Turnock, 2007). If there is no corrective feedback, students may wonder whether the response is true or false (Epstein et al., 2001).

Specifically, immediate feedback has the benefit of improving verbal mastery and motor skills, generating efficient retention, and improving classroom management and improving student interaction in the classroom, as well as improving student performance. (Anderson et al., 2001; Dihoff et al., 2010; Haryoko, 2011). A learning procedure in the field that does not use immediate feedback may lead to misunderstanding of Mutch students (Mutch, 2003). Direct and delayed feedback has the same level of effectiveness Robin (Dihoff et al., 2010). Although delay feedback has not been supported in some studies but delayed feedback is as effective as immediate feedback (Haryoko, 2011).

Some of the above opinions still seem to be disagreements about the effects of feedback strategies (immediate feedback and delayed feedback) on process quality and learning outcomes. Robin (Dihoff et al., 2010) states that although there is sufficient agreement that learning should be facilitated by feedback, it is questionable as to what kind of feedback is most effective. In accordance with the explanation, the authors want to prove which type of feedback is more effective on learning the type of skill in improving students' dribbling skill. So, based on the above background, the author is interested to examine the problem. The research title is formulated as follows: The effect of Feedback and Agility on Elementary School Students' Basketball Dribbling Skills.

## 2 METHODS

### 2.1 Participants

The population in this study is 80 sixth grade students of Al Ma'soem Elementary School. The reason for taking this population is the learning of a large ball (bolabasket game) at the sixth grade elementary school level. The sampling technique used in this study is the upper and lower groups with a total of 40 people taken by 27% of the upper group and 27% of the lower group.

### 2.2 Instrument

#### 2.2.1 Shuttle Run 4x10m

Shuttle runs are used to assess a person's ability to measure speed, control the body and change direction between marked lines. In this study the testee must move the beam with a distance of 4x10m.

#### 2.2.2 AAPERD Basketball Skills Test

AAPERD Basketball Skills Test is used to measure basic basketball skills consisting of dribbling test, defensive test, passing test and shooting speed test (Komarudin, 2016). Because in this study the dependent variable is dribble, so researchers adopt this instrument only the dribbling test only.

### 2.3 Procedures

The Sample did the pretest of agility test. The result was used to divide the sample into two groups; high

group and low group. The specified samples were divided into four groups based on the agility test, i.e. a) high student agility group was given immediate feedback, b) group of students with low agility was given immediate feedback, c) high student agility group was given delayed feedback and d) group of students of low agility level were given delayed feedback.

The length of the study was six weeks with frequency of twice a week training referring to Selder and Rolan's research results in Magill (1994) comparing the feedback effect with videotape and verbal feedback, where the differences between the two different treatment groups appeared after six weeks. The training duration of each meeting is seventy minutes (two hours of lesson) in accordance with the learning setting of Physical Education of Sports and Health in Elementary School.

The treatment was conducted in the immediate feedback group via verbal in students who had high agility and low agility with the material adjusted for an increase in the type of skill. While in the delayed feedback group, the students who have high agility and low agility in the form of giving feedback in the form of video recording (playback) and professional video. The recording is shown to students as feedback with the correct search superimposed over student search (Schmidt, 2013). Video recording solves many issues in Movies: Feedback on performance (performance) can be seen after just a few seconds of recording backwards, and this replay will capture the details of the movement very well. And the material given to the delayed feedback group is the same as the immediate feedback group material so as not to lose weight on one of the groups.

After twelve meetings, the sample performs a posttest. The data was analyzed in SPSS 23.

## 3 RESULTS

The data has been analyzed through homogeneity and normal distribution test. It was revealed that the data were normally distributed and homogenous. Normal distribution was done to dribbling score from all the sample. It was done to confirm the data normal distribution. Homogeneity test on the other hand was carried out to identify the homogeneity level of the data.

The normal distribution was done through Shapiro Wilk Test in 0.05 significance level by using SPSS version 23. Shapiro Wilk Test was used as the sample is less than fifty. For the homogeneity test, Levene test was applied in 0.05 significance level by

using IBM SPSS 23. and the result showed that the data were normally distributed and homogenous.

Furthermore, the hypothesis was tested using Two-way ANOVA. The test was intended to discover the effect of agility and feedback on the dribbling skills. the hypothesis testing was done in 0,05 significance level and the critical value is 3,55. The result of the test is presented in Table 1.

Table 1: The Summary of Two-way ANNOVA.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2596,998 <sup>a</sup>	3	865,66	23,91	0,000
Intercept	100000,00	1	100000,0	2762,85	0,000
Agility	156,687	1	156,68	4,329	0,046
Feedback	629,361	1	629,36	17,388	0,000
Agility * Feedback	1810,950	1	1810,95	50,034	0,011
Error	1303,002	36	36,19		
Total	103900,00	40			
Corrected Total	3900,000	39			

Based on table 1 in feedback the F observed is 17,388 with sig. 0,000 in feedback. It implies that sig < 0,05.it means that sig < 0,05. It leads to the conclusion that Ho was rejected and Ha was accepted. It can be concluded that there is a difference in dribbling skill between immediate and delayed feedback.

Furthermore, to identify the interaction between feedback and agility, based on table 1 in agility and feedback. It shows that F is 50,034 with sig. 0,011. It implies that sig < 0,05. It leads to the conclusion that Ho was rejected and Ha was accepted. It can be concluded that there is an interaction between dribbling skill and immediate and delayed feedback.

After the ANOVA test, Post Hoc test was then used. Post Hoc test was used as a further test to see the significance of the difference. Ost Hoc test was done along with in Tukey Test to identify which categories from feedback variable that have significant differences. The Post Hoc test was done in 0.05 significance level.

Table 2: The Summary of Post Hoc test with Tukey.

(I) kl_ub	(J) kl_ub	Mean Difference (I-J)	Sig.
Kel_tinggi_U BSegera	Kel_tinggi_UB Tertunda	21,39*	0,000
Kel_rendah_UB Segera	Kel_rendah_UB Tertunda	-5,52393	0,188

\*. The mean difference is significant at the 0.05 level.

Table 2 shows that high agility have mean difference of 21,39 with sig. 0,000. It implies that sig < 0,05. It leads to the conclusion that Ho was rejected and Ha was accepted. The third hypothesis testing showed that there is a difference in dribbling skill between those who get immediate feedback and those who get delayed feedback in students with high agility.

Table 2 shows that high agility have mean difference of -5,552393 with sig. 0,188. It implies that sig > 0,05 It leads to the conclusion that Ho was accepted and Ha was rejected. It can be concluded that there is no difference in dribbling skill between immediate and delayed feedback in students with low agility

## 4 DISCUSSION

Overall, the highest average score is in the immediate feedback. This is in accordance with the provision of a quick understanding or immediately after the appearance will have a positive effect on appearance (Magill, 1994). The advantages of immediate feedback have been firmly demonstrated to increase the mastery of verbal materials and the skills of motor skills (Anderson et al., 2001). The results of this study also confirmed Kulik and Kulik (1988) who reported that immediate feedback was more effective than delayed feedback to apply. It was supported by Rink (1985) in Propst and Koesler (1998) saying that "*If the feedback is delayed beyond the point of remembering the behavior, then individuals do not benefit from that feedback.*" This means that if feedback is delayed beyond the point of remembering behavior, then the individual does not benefit from the feedback.

The speed of success or failure of students to master a particular type of skill is determined by precisely the feedback given by the teacher, trainer or student friend in the practice. This becomes an interesting discussion to be studied is the information receiving time. Information feedback may be provided immediately after the completion of the appearance or after being delayed for some time (Dewi and Sitompul, 2016).

Based on the second hypothesis, this study revealed that there is an interaction between feedback and agility and dribbling skill. Providing feedback to students is one way that can be used by teachers or trainers to encourage positive changes and motivate the students to think deeply in their learning. With feedback students will know the extent to which

learning developments have been produced. In addition, the level of agility is one of the factors required in doing physical activity and exercise.

Students who have a high level of agility in following the learning process that ultimately have an impact on the achievement of learning outcomes more optimal skills than students who have low level of agility (low). Therefore, it can be concluded that feedback and agility are two interconnected factors contributing to the dribbling skills in basketball. The practical finding from the researcher's observation suggested that there is an interaction between feedback and agility in students' dribbling skill.

The third hypothesis testing showed that there is a difference in dribbling skill between those who get immediate feedback and those who get delayed feedback in students with high agility. Based on the finding, the difference is caused by the two different characteristics of feedback and the test of dribbling in basketball games. The research data showed that someone is considered good in dribbling if he has speed and agility in changing direction without looking at the ball. Agility is the ability to change the direction and position of the body quickly and precisely while moving, without loss of balance and awareness of the position of his body (Harsono, 1988). A good dribble should be able with the right and left hand is also influenced by the speed and agility in changing direction without having to see the ball (Oliver, 2007). So, Agility is an important factor in dribbling.

This means that someone who has a high level of agility is expected to be more successful in completing the task of special motion skills, let alone supported by providing appropriate feedback or appropriate. Conversely, students who have a low level of agility will find it difficult to learn and take longer to attain their learning outcomes as they are constrained by their ability. Based on this, it is in line with the results of this study that immediate feedback is more suitable to apply to students who have high agility because the learning process is done immediately and immediately notified or corrected what is the lack of movement. It is also intended that students can take into account the achievements and the results of further learning. If the period between the implementation of the movement and when the feedback is long enough, it is feared that the motivation to improve will be lost (Dewi and Sitompul, 2016).

Testing of the fourth hypothesis shows that there is no difference in the type of dribbling skills between immediate feedback and delayed feedback on groups of students who have low agility. The level of skill

and environmental difficulties affects skill training. Dribbling in a basketball game is the basic skill that needs to be learned.

Immediate feedback is given immediately by giving correction or motivation so that the students can perform better when doing the movement. Delayed feedback on the other hand is given after the students complete the practice. Delayed feedback is done via video replay and to compare videos of professional athlete are played. This is done so that students have a good picture of what movements so that students can analyze for themselves what is less than the movement itself and the shortcomings or mistakes can be analyzed in depth.

The basic thing that the writer observes from both feedbacks occurs, among others, because of the process of learning implementation, which in the immediate feedback students are required to quickly understand what the mistakes, so that the group of students who have high agility becomes an obstacle in following the learning that uses delayed feedback because they have to wait for the movement is over and the new corrected mistakes that eventually make students feel bored and saturated. In the provision of delayed feedback there is time to be considered (Dewi and Sitompul, 2016). Whereas, in students with low agility, it is seen that they are experiencing a less supportive constraint on learning activities that use immediate feedback, as we know the characteristics of immediate feedback, the students immediately receive the error instructions and directly correct them

Teachers must be good at choosing the right method by displaying the advantages of a method and minimizing the shortcomings (Sutisna, 2014). This means that teachers not only understand it but apply it let alone be sorted according to the level of agility of students. . It was supplemented by Hastie et al. (2017) stating that "The grouping of students in terms of skill level has implications for them in-game behaviors, ... potentially for their motivation to persist during play." Student groupings in terms of skill levels have implications for behavior in their game, and potentially for their motivation to survive during play. Based on the practical findings from the author's results, it turns out that the type of dribbling skills in a basketball game of elementary school students, in groups of students who have low agility delayed feedback is better than immediate feedback.

## 5 CONCLUSIONS

After going through the results of processing and data analysis using Anova and Tukey Model Advanced test, it can be concluded that the method of learning by determining the type of feedback becomes important because it affects the learning outcomes where in this study, overall, the method of learning with immediate feedback is better than delayed feedback on basketball dribbling skills. However, the method of learning by determining feedback is influenced by the degree of agility at which the high level of agility of the immediate feedback is better. However, immediate feedback and delayed feedback do not have a significant difference in the low agility group.

## REFERENCES

- Allin, L., Turnock, C., 2007. *Assessing Student Performance in Work Based Learning*, (online) available at: [www.practicebasedlearning.org](http://www.practicebasedlearning.org). 11 February 2017.
- Anderson, D. I., Magill, R. A., Seklya, H., 2001. Motor Learning as a Function of KR Schedule and Characteristics of Task Intrinsic Feedback. *Journal of Motor Behavior*. Vol.33, 59-66.
- Bloxham, S., Boyd, P., 2007. *Developing Effective Assessment in Higher Education*, Open University Press. NewYork.
- Budiman, D., 2009. *Bahan Ajar Pedagogi Olahraga FPOK UPI*, FPOK UPI. Bandung.
- Dewi, C. C., Sitompul, H., 2016. Pengaruh Pemberian Umpan Balik Dan Kemampuan Motorik Terhadap Hasil Belajar Shooting Siswa Smp Negeri Dikecamatan Langsa Kota. *Jurnal Teknologi Pendidikan*. Vol. 9, No. 1, April 2016, p-ISSN: 1979-6692; e-ISSN: 2407-7437.
- Dihoff, R. E., Brosvic, G. M., Epstein, M. L., 2010. *The Role of Feedback during Academic Testing: the Delay Retention Effect Revisited*, Department of Psychology, Rider University. Lawrenceville.
- Drowatzky, 1985. *Motor Learning Principle and practice*, Burgess Publishing Company.
- Epstein, M. L., Epstein, B. B., Brosvic, G. M., 2001. Immediate Feedback during Academic Testing. *Psychological Reports*. Vol. 88, 889-894.
- Harsono, 1988. *Coaching Dan Aspek-Aspek Psikologis Dalam Coaching*, CV. Tambak Kusuma. Jakarta.
- Haryoko, S., 2011. Efektivitas Strategi Pemberian Umpan Balik Terhadap Kinerja Praktikum Mahasiswa D-3 Jurusan Teknik Elektronika. *Jurnal Cakrawala Pendidikan*. 1(1).
- Hastie, P. A., Ward, J. K., Brock, S. J., 2017. Effect of graded competition on student opportunities for participation and success rates during a season of Sport Education. *Physical Education and Sport Pedagogy*. 22(3), 316–327.
- Komarudin, 2016. *Penilaian Hasil Belajar Pendidikan Jasmani*, PT Remaja Rosdakarya. Bandung.
- Kulik, J. A., Kulik, C. C., 1988. Timing of Feedback and Verbal Learning. *Review of Educational Research (Journals Online)*. Vol. 58, 79-97.
- Lee, A. M., Keh, N. C., Magill, R. A., 1993. Instructional effects of teacher feedback in physical education. *Journal of Teaching in Physical Education*. 12(3), 228-243.
- Magill, R. A., 1994. The influence of augmented feedback on skill learning depends on characteristics of the skill and the learner. *Quest*. 46(3), 314-327.
- Mahendra, A., 2007. *Teori Belajar Mengajar Motorik*, FPOK UPI. Bandung.
- Moran, K. A., Murphy, C., Marshall, B., 2012. The need and benefit of augmented feedback on service speed in tennis. *Medicine & Science in Sports & Exercise*. 44(4), 754-760.
- Mutch, A., 2003. Exploring the Practice of Feedback to Students. *Active Learning in Higher Education*. Vol. 4(1): 24–38.
- Oliver, J., 2007. *Basketball Fundamentals (Dasar-dasar Bolabasket)*, PT Intan Sejati. Bandung. Penerjemah: Wawan Eko Yulianto.
- Propst, D. B., Koesler, R. A., 1998. *Bandura goes outdoors: Role of self- efficacy in the outdoor leadership development process*, Pages 319-344 | Received 13 May 1966, Accepted 29 Jul 1998, Published online: 13 Jul 2009 <http://dx.doi.org/10.1080/01490409809512289>.
- Schmidt, R., Lee, T., 2013. *Motor Learning and performance, from principles to application, Fifth Edition*, Human Kinetics. United States, America.
- Sutisna, D., 2014. *Pengaruh Metode Mengajar dan Motor Ability terhadap Hasil Belajar Keterampilan Lay-up Shoot Bolabasket*, SPS UPI Bandung. Bandung, *Tesis Magister*.
- Wissel, H., 2000. *Bola Basket Dilengkapi Dengan Program Pemahiran dan Teknik*, PT. Raja Grafindo Persada. Jakarta. Alih Bahasa. Bagus Pribadi.
- Wulf, G., Shea, C. H., 2004. *Understanding the role of augmented feedback: the good, the bad, and the ugly*. In: WilliamsAM, HodgesNJ, eds. *Skill Acquisition in Sport: Research, Theory and Practice*, Routledge. London. 2004;121–44.