DEVELOPMENT OF INSTRUCTIONAL MEDIA FOR OUTSIDE SHOOTING BASIC TECHNIQUE PRACTICE IN MINI BASKETBALL CLUB

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Abstract

Coach and athlete get involved on communication process during training process. Many athlete can not place their hand properly when they want to shoot. The mistake happens because the communication between coach and athlete do not run smoothly. Because of that mistake they need media to reduce the barriers on their communication process. Objective of this research is develop a media which can help mini basketball athlete in order to get easier to learn outside shooting and help coach to send information about outside shooting to their athlete. Outside shooting is an important basic technique because it's the only way to make score. This research use Borg and Gall's research and development method. Research subjects are 2 coaches on interview process, 1 coach and 8 athletes on field preliminary field test process, and 2 coaches and 30 athletes on main field test process. Beside the field test process, there is a validation for media design to make media become more interesting, easier and has clear guidance to use. The result show that media can help coach on their process to send their information about outside shooting and make the athlete feel easier to learn outside shooting. Coach and athlete also feel that the media is interesting, easy to use and has clear guidance to use. The conclusion is media can help coach to send outside shooting materi to their athlete and help athlete to understand the materi.

Keywords: instructional media, basketball, mini basketball, basic technique, shooting, outside shooting.

INTRODUCTION

1. BACKGROUND

Basketball is a sport that require several basic technique in order to play. Those basic technique are main terms for someone to play basketball well. Amber (2009) said that the most important ability in basketball is ability to shooting or put the ball into the net. Shooting has many type, according to Oliver (2004) shooting as basic technique divided into inside shooting which consist of lay-up, under the basket shot and hook shot, and outside shooting which consist of jump shot, free throw and set shot. The way to release the ball in free throw almost similiar with another kind of shooting technique. Based on that similiarity, if someone can do the way to release the ball in free throw well, he or she has a big chance to do the same thing with the other of kind of shooting technique.

Beside the main function of shooting technique, which end of offense pattern. This technique has high use frequection on one game. Based on observation, U12 basketball game, both of team did 97 times of shooting which consist of 18 times free throw, 69 times set shot and 10 times lay-up. That statistic show how often shooting technique used on game, especially set shot and free throw. Nowadays, basketball has been adjusted for kid below 13th years old. That adjusted

basketball called mini basketball. FIBA Oceania (2005) said that mini basketball is a game based on basketball, for girls and boys under 13 years of age. Mini basketball has same basic technique with conventional basketball.

Regarding the important and result that given by shooting technique and high use frequention on one game, it's a must for coach to make their athlete perform a right shooting technique. Transferring information in practice time can be easier with an instructional media. Media literally means center, introduction and in-between (Munadi, 2012). The abilty of media on accelerate information transfer between coach and athlete make its has important position in shooting technique practice.

Several things that underlie this research are, which conclude from the explanation above, shooting is end of offense pattern, shooting has high use frequention, almost all of shooting kind has similair way to release the ball like free throw, mini basketball has same basic technique conventional basketball and the important position of media in any information transfer process.

2. FORMULATION OF THE PROBLEM

Based on the research background, formulation of the problem is "how to develop an instructional media that can help mini basketball ahtlete to practice outside shooting technique?".

3. GOAL OF RESEARCH

The goal of this research is develop an instructional media that can help mini basketball ahtlete to practice outside shooting technique.

4. BENEFITS OF RESEARH

Athlete get an easier process to practice shooting technique, coach get helped to transfer the shooting technique information to athlete, Mini basketball club has additional media for practice and literature in order the club want to develop another kind of media and as new precious experiences for researcher to aply the knowledge.

METHOD

1. DESIGN OF RESEARH

Research and development is chronological step to develop new product or polish up the old product in responsible way (Sukamadinata, 2005). As an chronological step, research and development has its steps to develop product. Borg and Gall (1983) set ten steps to do research and development, that is:

- 1) Research and information collecting. Includes review of literature, classroom observations, and preparation of report of state of the art.
- 2) Planning. Includes defining skills, stating objectives determining course sequence, and small scale feasibility testing.
- 3) Develop preliminary form of product. Includes preparation of instructional materials, handbooks, and evaluation devices.
- 4) Preliminary field testing. Conducted in from 1 to 3 schools, using 6 to 12 subjects. Interview, observational and questionnaire data collected and analized.
- 5) Main product revision. Revision of product as suggested by the preliminary field-test results.
- 6) Main field testing. Conducted in 5 to 15 schools with 30 to 100 subjects. Quantitative data on subjects pre-course and post-course performance are compared with control group data, when appropriate.

- 7) Operational product revision. Revision of product as suggested by main field-test results.
- 8) Operational field testing. Conducted in 10 to 30 schools involving 40 to 200 subjects. Interview, observational and questionnaire data collected and analyzed.
- 9) Final product revision. Revision of product as suggested by operational field-test results.
- 10) Dissemination and implementation. Report on product at professional.

In this case, researcher only use 1st step until 7th step because the special condition. The step and procedure of research and development is not a normative procedure. Every developer, in this case researcher, can choose and set the step that suitable with the field condition (Ardhana, 2002).

2. SAMPLE AND POPULATION

The sample of this research are 1 mini basketball club with 1 coach and 8 athletes for preliminary field test and 2 mini basketball club with 2 coaches and 30 athletes. The population of this research is 2 mini basketball club with 4 coaches and 72 athletes.

3. PROCEDURE OF RESEARCH

- 1) Research and data collection needed to see the field condition. In this first step, researcher need to know the coach problem and how big the coach desire to solve the problem. Researcher use observation and interview method.
- 2) Plan arrangement be adapted with data that appear from observation and interview in the first step.
- 3) After plan arrangement, researcher develop preliminary form of instructional media. In this step, researcher get the expert judgement from 2 experts. Those 2 experts are expert in basketball and expert in instructional media.
- 4) After done with development of preliminary form, which get help from 2 experts judgement, researcher held preliminary field test. This test is a measurement how far the instructional media can help, both athlete and coach, in small scale (see the sample above). Preliminary field test data is important for polish up the instructional media.
- 5) According to preliminary field test data researcher revise the product. This step called main product revision. The revision depend on data that appear from the test before. If the data say that the coach and athlete satisfied with the product, researcher can go to the next step without revision on product.
- 6) After small scale measurement, instructional media will measure in bigger scale (see the sample above). Even though the sample is not fit with the Borg and Gall's step, researcher still want to check how far the benefit of instructional media in a bigger scale.
- 7) The last step is operational product revision. This revision based on main field test that has bigger scale than preliminary field test. This step has the same rule with main product revision. If there is not any data that show the weakness of instructional media, mini basketball club can use it to practice the shooting technique. The opposite condition will apply if there is data that show the weakness. The revision must be done before the mini basketball club can use the instructional media.

4. DATA COLLECTION INSTRUMENT

The instrument that researcher use in this research and development are observation, interview and semi open questioner. Detail use of those instrument is on table 1.

Table 1 Instrument that use

No.	R n' D Step	Research Object	Instrument
1	Need Assesment	All Coach	Interview
		All Athlete	Observation
2	Expert Judgement	Expert	Semi open questioner
3	Preliminary field test	1 coach and 8 athelete in 1 mini basketball club	Interview
4	Main field test	2 coach and 30 athelete in 2 mini basketball club	Interview

5. DATA ANALYSIS TEECHNIQUE

Data that appear from this research are qualitative and quantitave. Qualitative data represent need assesment and advices form expert, quantitative data represent preliminary and main field test which just simple percentage. Data analysis technique is adjusted with the research step that researcher use (table 2).

Table 2 Data analysis technique

No.	R n' D Step		Data Analysis Technique
1	Need assesment		Qualitative
2	Expert Judgement		Qualitative
3	Preliminary field test	Coach	Qualitative
		Athlete	Quantitative
4	Main field test	Coach	Qualitative
		Athlete	Quantitative

Qualitative data analysis technique which use in this research is Miles and Huberman data analysis technique (Sugiyono, 2011). Quantitative data anlysis technique which use in this research is descriptive analysis technique. The formula to analyze data (Sudijono, 2008) is:

$$P = \frac{f}{N} \times 100\%$$

Explanation :

f : Frequention

N : Number of case

P : Percentage

If the data is percentage, proportion or ratio, the conclusion can make based on the norm below (Arikunto, 2006):

Good	= 76% - 100%	can use
Average	= 56% - 75%	can use
Below Average	= 40% - 55%	can not use
Poor	= < 40%	can not use

RESULTS AND DISCUSSION

1. INTERVIEW WITH COACH

Two coaches get interviewed in this step. SB3S's coach (Sekolah Bola Basket Bima Sakti) said that she put the perfection of movement as priority, the way athlete get their hand on outside shooting position is fundamental for outside shooting, athlete always did the same mistake on outside shooting whenever they practice, coach has no special instructional media for outside shooting practice, and coach put interest with instructional media that researcher develop. IMBTC's coach (Indonesia Muda Basketball Training Camp) said the same thing, except he always give feedback to his athletes and coach develop his own instructional media once, but it does not work.

Both of coach only give proper example and try to correct their athlete if they do wrong technique. Actually coaches already do something good, they never let their athlete practice a wrong technique. However, coaches still need a proper instructional media to help them in correction process. Instructional media can press athlete degree of mistake when they do outside shooting practice (Fig. 1). Instructional media can equalize the perception between coach and athlete (Sanjaya, 2012). Beside of that thing, athlete can understand easily about how to positioning their hand in outside shooting technique and make the correction process faster are another benefit of using instructional media. Sadiman, et al (2012) said that media is everything that can use to transfer information from the sender to receiver so that can stimulate think, feel, attention and interest of receiver.

Figure 1 Good communication process (Sadiman et al, 2012)

2. EARLY OBSERVATION TO ATHLETE

The results of the way athlete get their hand on outside shooting position observation can see at table 3 and 4.

Table 3 Observation at IMBTC

No.	Aspect	Definition	Mistake Percentage (%)		
			Observer 1	Observer 2	Observer 3
1.	Shooting arm	Elbow form 90° degree	57.1	61.9	71.4
		Hand is pointing on ring	0	0	0
		Lower arm perpendicular with floor	57.1	85.7	81
		Hold the ball with fingers	0	47.6	76.2
2.	Non-shooting arm	On side of the ball	95.2	90.5	52.4
		Only use to balance the ball	90.5	90.5	71.4

Tabel 4 Observation at SB3S

No.	Aspect	Definition	Mistake Percentage %		
			Observer 1	Observer 2	Observer 3
1.	Shooting arm	Elbow form 90° degree	55.6	83.3	88.9
		Hand is pointing on ring	5.6	16.7	0
		Lower arm perpendicular with floor	50	77.8	88.9
		Hold the ball with fingers	0	22.2	0
2.	Non-shooting arm	On side of the ball	77.8	55.6	5.6
		Only use to balance the ball	72.2	72.2	88.9

Many athlete put their hand on the wrong position when they do shooting technique because there is no proper instructional media that help them. Another reason of that mistake is athlete give a wrong response to coach stimulation about shooting technique. Even coach give proper materi and example is not guarantee that athlete will receive the explanation well (Figure 2). Give proper materi and example in some repetition method which use by coach has limitation, Smaldino et al (2012) said that there is not all of materi receiver will receive well that repetition, which has potency to be bored and do not help the materi receiver to learn.

Fig.2. Fail communication process (Sadiman et al, 2012)

3. PRELIMINARY FORM OF INSTRUCTIONAL MEDIA

Design of instructional media which developed get revise base on results of expert judgement (table 5).

Table 5 Expert judgement results

No.	Name	Expert on	Results
1.	Bayu Santoso, S.Pd	Basketball	Add instructional media manual book fo user.
			Give mark on center of the ball to notice the ball spin after release.
2.	Adi Wijayanto, S.Or, S.Kom, M.Pd	Media	Put nails picture on hands picture in order athlete can put their hands easier.
			Add cartoon on hands picture to attract kids.
			Use eye catchy ball.
			Add instructional media manual book fo user.
			The instruction media has to accomodate southpaw athlete.

On its early design, instructional media only the basketball with a hands picture that show athlete where they have to put their hand for outside shooting. According to results of expert judgement, there are some revision that applied to instructional media (Fig. 3). As the experts give an advice about the manual book, that manual book must through expert judgement too just like the ball

Fig. 3. Expert Judgement Results

Table 6 Manual Book Expert Judgement

No.	Name	Expert on	Results
1.	Bayu Santoso, S.Pd	Basketball	Add example picture.
2.	Adi Wijayanto, S.Or, S.Kom, M.Pd	Media	Increase font size.
			Crop ball picture according to the picture side
			Add contrast level of the color.
			Give border between example picture with materi.
			Make an interesting cover.
			Use glossy paper for the cover.
			Use 160 paper for the contents.
			Give effect on font that use in the cover.

Experts feel that design of instructional media and manual book is too simple. The early design considered lack of interest and do not show how to use it. After expert judgement process, both instructional media and manual book get revision. Application of instructional media can add student motivation, in this research refer to athlete, and make their attention to materi increase (Sanjaya, 2012). Experts want the instructional media can do the same thing with that theory. Later design of instructional media and manual book makes it more clear and interesting to use.

4. PRELIMINARY FIELD TEST RESULTS

Preliminary field test held on SB3S (Sekolah Bola Basket Bima Sakti). The test on coach result is coach want suitable palm picture for kid (Fig. 4). The test on athlete results are 100% athlete feel that explanation about the instructional media on manual book is clear, 100% athlete feel that glance about instructional media is clear, 75% athlete feel that the manual book is interesting, 75%

athlete feel that the instructional media make them easier to practice, 100% athlete feel that instructional media is interesting and 75 % athlere feel that instructional media is helpfull.

Fig.4 . After preliminary field test design

Preliminary field test show that both instructional media and manual book can use by coach and athlete. Even athlete can use the instructional media coach want to make the palm picture suitable for them. The suitable palm picture will make athlete fell comfort and easy to use instructional media. Coach request and athlete response show that instructional media can use better if has suitable palm picture. Manual book help athlete and coach to use instructional media.

5. MAIN FIELD TEST RESULTS

Main field test held on SB3S (Sekolah Bola Basket Bima Sakti) and IMBTC (Indonesia Muda Basketball Training Camp). The test on coach result are coach feel that their athlete still need time to adjust with the instructional media and need another interesting instructional media for another basic technique. The test on athlete results are 86,6% athlete feel that explanation about the instructional media on manual book is clear, 86,6% athlete feel that glance about instructional medua is clear, 86,6% athlete feel that the manual book is interesting, 96,6% athlete feel that the instructional media make them easier to practice, 100% athlete feel that instructional media is interesting and 80% athlere feel that instructional media is helpfull.

Main field test show that both of instructional media and manual book do not need some revision anymore. Both of coach feel that instructional media help them to transfer the outside shooting materi to their athlete. The modification on palm picture which more suitable for kids also make athlete comfor to use the instructional media. Beside of that results, manual book also give a contribution for athlete to understand how to use the instructional media and practice outside shooting properly. Instructional media give athlete real experience to positioning their hand poperly. Real experience is the most helpfull practice method in Edgar Dale's experience cone (Figure 5).

Fig.5. Edgar Dale's Cone Experience (Sanjaya, 2012)

CONCLUSION AND SUGGESTION

1. CONCLUSION

Coaches feel that instructional media and manual book help them to transfer information or materi about outside shooting basic technique. Instructional media makes practice process more fun and more interesting. Athletes feel the same thing, they feel that instructional media and manual book really helpfull. Instructional media give athlete real experience to position their palm properly.

2. SUGGESTION

1) For club

Mini basketball club supposed to use instructional media regularly to gain the good result. Beside the instructional media that developed by researcher, mini basketball club must give stimulus, support and chance for coach to develop another instructional media that more interesting, more usefull, more helpfull, easier to use and give faster result for athlete.

2) For coaches

Coach have to use instructional media to fix the technique quality. In order to make the practice run smoothly, coach have to integrate instructional media and their coaching method. Instructional media will be useless if coach can not use it properly. Coach can not always depend on instructional media that developed by researcher, they have to develop their own media that suitable with their coaching method and athlete condition.

3) For athletes

Athlete have to add their practice hour outside regular practice. Instructional media that supported with manual book give athlete a chance to practice by themself.

4) For another researcher

If another researcher want to develop similar instructional media or revise instructional media better they held a test on bigger scale. Researcher should develop an instructional media that can accomodate another basic technique.

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