The Effect of Instructional Media and Motivation on Student's Skill of Dribbling in Indoor Hockey Games

by

Advances in Social Science, Education and Humanities Research, volume 481
3rd International Conference on Education, Science, and Technology (ICEST 2019)

The Effect of Instructional Media and Motivation on Student's Skill of Dribbling in Indoor Hockey Games

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ABSTRACT
This study describes the differences between two learning media on the Skills of Dribbling (SoD) in indoor hockey games. The study design was a simple factorial design 2x2 with a sample of 40. These samples were taken using random sampling techniques divided into four groups, with ten people per group. Indian Skill of Dribbling research instruments is arranged based on dimensions and indicators of indoor hockey skills. At the same time, motivation uses a validated questionnaire on each item with reliability (r) = 0.85. The results of the study concluded that Instructional Media of Audio-Visual Android (IMAVA) better improve Skill of Dribbling in hockey games than Instructional Media of Visual (IMV) ($p < 0.05$). There was a significant interaction between learning media (IM) and motivation (Mo) on the Skill of Dribbling in hockey games ($p < 0.05$). For High Motivation groups (HMo), the Instructional Media of Audio-Visual Andoid (IMAVA) is better at increasing Skill of Dribbling in hockey games than in Instructional Media of Visual (IMV). For low motivation groups (Lmo), the android based audio Instructional Media of Visual (IMAVA) is better to improve the Skill of Dribbling in hockey games than using Instructional Media of Visual (IMV).

Keywords: *Instructional media, motivation, the skill of dribbling, indoor hockey*

1. INTRODUCTION

The hockey game is one of the subjects in the curriculum of the Study Program at the Faculty of Sport Science, Universitas Negeri Makassar. This course shows a positive side in developing physical and mental and improving skills and intelligence for students. The results of researchers' observations in the lecturing process at the Faculty of Sport Science, Universitas Negeri Makassar showed that the lecturers in presenting necessary technical materials for indoor dribbling hockey, are less impressive. The result is that students do not become skilled under the study's objectives, even though the material has been presented within a period of three to four meetings.

Based on the observations of why students pay less attention to the lecturer's material, one of them is the lecturer less utilizing the learning media. In comparison, the use of media in the learning process aims to make the process take place effectively and efficiently to improve the quality of education. Media is a component of learning resources that contain instructional material in the student environment, which can stimulate students to learn.

With that basis, it is necessary to identify the initial needs for an exciting and current learning media. It can motivate students to contribute in the learning process in order to obtain optimal skills. Learning media can be provided in the form of Instructional Media of Visual (IMV) and Instructional Media of Audio Visual using Android (IMAVA). Visual media such as teaching aids can be seen by the eye, such as graphics, charts, posters, caricatures, and others. Media of Visual are learning tools used by students involving the sense of sight and hearing through smartphones so that students are more comfortable understanding the material delivered by the lecturer.

In terms of the lecturer's delivery of material, learning media that are visual and audiovisual are not new. Still, many do not utilize this media optimally. Especially in the 4.0 era, learning should lead to digitizing media because ownership of mobile devices through digitalization media is increasing. Digitalization media that utilize android smartphone technology are called mobile learning (m-learning). The use of mobile device learning is unique. It enables students to access learning material to increase student attention in understanding subject matter, making learning pervasive and can motivate students [1].

The presence of m-learning is used as a complement to existing learning. It provides opportunities for students to re-learn material that is not mastered anywhere and anytime [2]. Besides external factors such as learning media in improving Indian dribbling skills in indoor hockey game courses, there are also internal factors, namely motivation in learning [3]. In addition to physical factors such as physical activity, psychological factors, namely motivation is also very much needed. The motivation will give a sense of motives from inside and outside the student to perform a movement stage to produce the right and accurate Indian dribbling process.

2. RESEARCH METHOD

In this study, independent variables were Instructional media of Visual (IMV) and android-based audiovisual learning media (IMAVA). The dependent variable is the dribbling skill in indoor hockey (SoD), and the attribute variable is the motivation level, high (HMo), and low (LMo). This type of research is a simple factorial design of 2x2. The population was the students who programed the Hockey Game course. The study used a random sampling technique that collected 40 research samples. Indian dribbling skills research instruments are arranged based on dimensions and indicators of indoor hockey skills. The instrument lattice used Dribbling skills (SoD) data was obtained through dribbling tests made by researchers. While the motivation level data uses a standardized questionnaire with a reliability level of (r) = 0.85. The data analysis technique analysis of variance (ANOVA) and continued with the Tukkey test with a significance of α 0.05.

3. FINDINGS AND DISCUSSION

Descriptive analysis of research data consists of test scores for dribbling skills The summary of the descriptive analysis results listed in Table 1. ANOVA are summarized and presented in the form of Table 2.

Table 1. Summary of Dribbling Skill Data Description from Each Group

Motivation (Mo)	Instructional Media (IM)		Total
	IMV	IMAVA	
High (HMo)	N = 10 Ẍ = 22.5 Sd = 2.953	N = 10 Ẍ = 27.2 Sd = 2.616	N = 20 Ẍ = 24.85 Sd = 3.631
Low (LMo)	N = 10 Ẍ = 11.5 Sd = 1.354	N = 10 Ẍ = 14.5 Sd = 2.068	N = 20 Ẍ = 13 Sd = 2.294
Total	N = 20 Ẍ = 17 Sd = 6.609	N = 20 Ẍ = 20.85 Sd =6.907	N = 40 Ẍ = 18,925 Sd =6.707

Table 2. Summary of Anava Results for Indoor Dockey Hockey Skills Data

Variation Sources	JK	df	RJK	F	Sig.
IM	211.600	1	211.600	45.451*	0.000
Mo	1299.600	1	1299.600	279.150*	0.000
IM * Mo	25.600	1	25.600	5.499*	0.025
Error	167.600	36	4.656		
Total	15692.000	40			

3.1. Differences in dribbling skills (SoD) in hockey games between visual learning media (IMV) and android-based audiovisual learning media (IMAVA)

From Anova calculation results from different skills, it was found that there is a difference between the treatment of learning methods obtained by the value of Fh = 45.451 * (p <α 0.05). It means that dribbling skills in hockey games based on android audiovisual learning media (IMAVA) are higher (better) than dribbling skills in hockey games with visual learning media (IMV) (XIMAVA = 20.85> XIMV = 17).

3.2. Interaction Between Learning Method (IM) and Motivation (Mo) Against dribbling skills in hockey games

From the calculation, results showed that there is an interaction between learning methods (IM) and motivation (Mo), which is obtained by the value of Fh = 5,499 (p <α 0.05). It can be stated that the achievement of dribbling skills in hockey games is influenced by the

interaction between learning methods (IM) and motivation (Mo).

3.3. Differences in dribbling skills in hockey games that have high motivation between visual learning media (IMV-HMo) and android-based audiovisual learning media (IMAVA-HMo)

There is a difference for the highly motivated group in using visual learning media (IMV-HMo) and android-based audiovisual learning media (IMAVA-HMo) ($p < \alpha$ 0.05). That is, dribbling skills in highly motivated hockey games with android-based audiovisual learning media (IMAVA-HMo) are higher (better) than visual learning media (IMV-HMo) (X IMAVA-HMo = 27.2> X IMV-HMo = 22.5).

3.4. Differences in dribbling skills in hockey games that have low motivation between visual learning media (IMV-LMo) and android-based audiovisual learning media (IMAVA-HMo)

In ANOVA calculation followed by the Tukey test, it is evident that there is a difference for the groups that have low motivation between visual learning media (IMV-LMo) and android-based audio visual learning media (IMAVA-HMo). In both groups the probability level (sig) = 0.018 is smaller than α 0.05 ($p < \alpha$ 0.05). However, the skills for the low motivation group by using android-based audiovisual learning media (IMAVA-HMo) are higher (better) than the one that use visual learning media (IMV-LMo) (X IMAVA-HMo = 14.5> X IMV-LMo = 11.5).

3.5. Differences in Dribbling Skills in Hockey Games Between Visual Learning Media (IMV) and Android Based Audio Visual Learning Media (IMAVA)

Instructional media is used by educators to convey messages to students to stimulate thoughts, feelings, concerns, and interests and attention in the learning process to improve the quality of learning itself. Learning media are physical means to convey learning content/materials such as books, films, videos, slides, and so on. The use of instructional media increases with the development of technology in education that demands efficiency and learning effectiveness. One effort that needs to be done is to reduce and eliminate the dominance of the verbal delivery system of learning by utilizing learning media. Likewise, this M-learning system is carried out to provide high-quality education [4]. The usefulness and ease of use of mobile learning affect user learning attitudes that lead to better behavior [5].

Learning by using Android-based audiovisual media (IMAVA) is a way of practical learning. The use of existing media applications which contained audio and video elements in android for students in the process of absorbing material involves the senses of sight and hearing. Audiovisual media in this study is in the form of using an android smartphone. The use of an android smartphone is optimal to support learning because it will facilitate access to the material taught by educators, and the learning process is more interesting. Audiovisual learning media is better in improving learning outcomes of sport skills in several games than visual media.

Android smartphone owned by all students today are unfamiliar devices because a smartphone is necessary and provides convenience in accessing information and communication. Like the material prepared by educators to facilitate independent learning, students can be packaged in the form of text, audio, and video in one smartphone device. Thus, the process of knowledge transfer through interaction between students and learning resources becomes more comfortable. Therefore, Android-based Adobe Flash audiovisual learning media is declared to be "Very Eligible" [6].

Currently, learning media that are being developed are Android-based learning media. The technologies have the advantage of being easily accessed by anyone and anywhere. The learning process can still be done even without the face-to-face process between students and educators. The time used is relatively efficient because it does not reduce the intensity of learning hours. Also, Android-based learning media can be created and developed attractively to provoke a sense of interest from students to learn more easily and to receive the subject matter delivered by educators. Adi and Fathoni [7] in their research use a smartphone to deliver learning material about swimming model to students. With the development of the swimming model, the students can learn and carry out swimming practice learning effectively by using their phones. The product results in the form of developing swimming training models indicate that it is feasible to use [7]. The learning media was easier for students. It invited them to utilize the combination of senses. The more sense organs functioned to receive and process information, the more likely the information is understood, corrected and maintained in memory.

3.6. The Interaction between Learning Media (IM) and Motivation (Mo) on dribbling skills in hockey games

Every individual must own motivation in the learning process because motivation determines whether a person is right or not on a skill he has. To improve dribbling skills in indoor hockey games, it can be done through quality learning methods. Motivation owned by someone is not an absolute requirement to obtain dribbling skills in a good hockey game. The motivation does not stand alone to provide dribbling skills but must synergize with educators' learning model process. In line with [1], there

is an influence of technology use to increase student motivation in physical education. The use of technology such as smartphones android in learning will improve skills. It motivated students to see, then understand, and analyze and continue by demonstrating the stages of dribbling skills according to the correct stages they see.

Likewise, someone's motivation will raise a feeling of willingness to achieve goals. When students carry out physical activity in learning with high motivation, it will provide good repulsion process results [8]. Furthermore, it was stated that motivation is very closely related to kinesthetic (motion). Therefore the high level of kinesthetic possessed by students will encourage students in the learning process and always strive to achieve optimal results and achievement. Through these activities, it can be done well if supported by kinesthetic. Motivation drives a person to race against excellence, both his superiority and the excellence of others, and encourage someone to participate in a physical activity actively. The involvement of students in each task assignment encouraged the students' ability to express their skills. Therefore the effort to raise students is to give students to experience successful experiences.

3.7. Differences in Dribbling Skills in Hockey Games that Have High Motivation between Visual Learning Media (IMV-HMo) and Android-Based Audio Visual Learning Media (IMAVA-HMo)

Based on the analysis results, high motivation groups, android-based audiovisual learning media (IMAVA-HMo) are better at increasing dribbling skills than visual learning media (IMV-HMo). In delivering learning material, an educator must be smart, especially in utilizing the media in the presentation of material for fluency in learning. The material can be understood by students and following the learning objectives on that day. To be easily understood by students, android audio-based learning media is the right solution.

However, some variables also influence dribbling skills, namely, motivation. Motivation is a driving force that causes someone to start an activity, move, or make an effort to achieve a goal. The previous study also reveals significant differences in students' motivation in terms of attention between video-based instruction and traditional text-based instruction. Besides, students report that video-based instructions are easier to remember than traditional text-based instructions. This study implies that context-based videos in online courses can increase student retention and motivation [9]. So motivation is a psychological condition that drives a person to do an activity. Correspondingly, highly motivated people are very good at improving dribbling skills in hockey games. Therefore, an educator (teacher) is always required to evoke motivation for students.

3.8. Differences in Dribbling Skills in Hockey Games that Have Low Motivation between Visual Learning Media (IMV-LMo) and Android-Based Audio Visual Learning Media (IMAVA-LMo)

The results of the research data analysis for the group who have low motivation, it showed that with android-based audiovisual learning media (IMAVA-LMo), the students have higher dribbling skills than the one who use visual learning media (IMV-LMo). Visual learning media and android-based audiovisual learning media is a form of presentation of learning materials. Differences in hockey games' dribbling skills occur because of different use of learning media. The sample group with low motivation (HMo) taught by android-based audio visual media is shown to be more motivated. They explore more on the knowledge than students who are taught with visual learning media. In visual learning media, it does not attract the students, causing the students to be less enthusiastic about learning activities. Although students alike have low motivation in learning, the learning outcomes achieved are different [10]. Furthermore, it was stated that learning methods that can influence the development of students who have high learning motivation and low learning motivation.

By utilizing audiovisual media (IMAVA), it is expected that students can understand and perform dribbling movements correctly and adequately. On the other side, the media also increase student interest and learning outcomes. Audiovisual learning media (IMAVA) also as an alternative media designed to overcome the level of saturation in the learning process despite having low motivation, for that educators are required to be creative and innovative in compiling learning programs given to students [1]

4. CONCLUSION

Some points in the analysis can be concluded: 1) Android-based audiovisual learning media (IMAVA) is better than visual learning media (IMV). To increase the dribbling skills in indoor hockey games. 2) There is a significant interaction between learning media (IM) and motivation (Mo) on dribbling skills in indoor hockey games. 3) For high motivation groups, android-based audiovisual learning media (IMAVA-HMo) is better at increasing dribbling skills in indoor hockey games than in visual learning media (IMV-HMo). 4) For low motivation groups, android-based audio visual learning media (IMAVA-LMo) is better at increasing dribbling skills in indoor hockey games than in visual learning media (IMV-LMo).

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