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## Study In Banyumas District: Is The Learning Materials Of Football In School Already Oriented To High Order Thinking Skill?

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### Abstract

**Objective:** This study aims to analyze how well football learning materials are oriented to HOTS (Higher Level Thinking Skills) in public high schools in Banyumas.

**Method:** This type of research is a descriptive study with a survey method. The population in this study was PJOK teachers in state high schools in High Schools in Banyumas Regency who supported 20 teachers. The sampling technique used was purposive sampling. Sample criteria included: (1) PJOK teachers in public high schools in Banyumas District, (2) each school was represented by 1 teacher, (3) each teacher provided football learning material in accordance with the lesson plan. Based on this, those who meet the 10 criteria for teacher approval. The instrument used is the Change rubric. Data analysis techniques using quantitative descriptive analysis presented in the form of a percentage.

**Results:** Based on the results of data analysis, the results of research and discussion can be known about the analysis of football learning materials oriented to HOTS (Higher Level Thinking Skills) in state high schools in High Schools in Banyumas Regency depending on the category of "very less" by 0,00% (0 schools), "less" by 0,00% (0 schools), "enough" by 30,00% (3 schools), "Good" at 70,00% (7 schools), and "very good" at 0,00% (0 schools). Based on the average value, which is 65.60, in the "good" category.

**Keywords:** learning material, football, HOTS (High Order Thinking Skill)

### INTRODUCTION

One of the subjects taught in schools is Physical Education, Sports and Health (PJOK). Learning PJOK is a learning that is more than just teaching knowledge from a teacher to students, more than that in this learning process, it is hoped that an educator can optimize the potential that exists in students. PJOK learning is an integral part of education as a whole. PJOK aims to develop physical fitness aspect, social ability, reasoning, emotional stability, moral action, aspects of healthy lifestyles and the introduction of a clean environment. Activities in PJOK are planned systematically to achieve national goals(1).

There is a PJOK curriculum based on SK (competition standards) and KD (basic competition) contained in curriculum 13 where SK and KD are made so that the objectives of learning are achieved. PJOK learning includes material in which there are basic locomotor, non-locomotor, manipulative, traditional games, small ball games / big ball games (such as soccer games), athletics, fitness, gymnastics (floor or rhythmic), water activities, exploration (activities outside of school), and health, each of which has different characters and methods of delivery. KD (basic competence) and KI (Core Competency) in learning big balls in which there is football material taught in class X, XI, and XII. This confirms that soccer learning must reach students. The hope is that students can get to know, understand and practice a basic motion soccer game(2).

Football is one of the subjects of learning in high school, especially in learning sports and health physical education. In football techniques, there are several basic movements that the coach needs to provide, namely shoot (shoot), pass (feed), and dribble (dribble)(3). Of all the basic techniques, shoot (shoot) is the most important because shoot (shooting) is any attempt to put the ball into the goal (football) (4).

In learning PJOK in Senior High Schools (SMA), football can be implemented in a real form like real football according to the KD contained in the 2013 curriculum without any game modification. CHD learning in cognitive level schools for high school aged children aged 15-18 years. At age, children tend to have better cognitive abilities than children at the age below. As said by (5) that " based on the opinion of Piaget, children ages 15-18 years are included in the most complex stage of cognitive development. Children are able to think hypothetically well, think logically with descriptions, good verbal skills in logical thinking "(6). Therefore, the importance of a method that is appropriate for learning in high school age that has the hope that built with the 2013 curriculum, high school students are able to develop themselves, especially in terms of their analytical skills (7). While not ruling out the hierarchy below it. One of the correct methods to illustrate the above explanation is HOTS ( Higher Order Thinking Skills )(8).

Higher Order Thinking Skills (HOTS) is the output of learning outcomes, one of the things that causes low learning outcomes is that teachers teach with a one-way (conventional) approach(9). In one-way learning, students are not given the opportunity to use their thinking further, so that when faced with theories and practices that require higher-order thinking skills, such as deep analysis or reasoning, students will find it difficult(10). Based on that assumption, it is necessary for teachers to use learning that can lead students to higher order thinking skills (11).

The Learning Implementation Plan prepared by PJOK teachers must be in accordance with the curriculum used, namely the 2013 curriculum. The 2013 curriculum is a competency-based curriculum in which the 2013 curriculum uses a scientific approach or so-called scientific approach, namely observing, asking, trying, reasoning and communicating(12). The purpose of using the scientific approach model or scientific approach based on the 2013 Curriculum Diktat module is intended to provide understanding to students in recognizing, understanding various materials using a scientific approach, that information can come from anywhere, anytime, not depending on unidirectional information from the teacher. Therefore, the learning conditions that are expected to be created are directed at encouraging students to find out from various sources of observation, not being told(13).

Based on the author's observations while carrying out observations and interviews on December 5, 2019 at SMA Negeri 1 Purwokerto in High Schools in Banyumas Regency. Some of the teachers there already have educational backgrounds, as well as experience in teaching for 4 to 22 years. Results of interviews in doing, showed that some teachers PJOK BC A State already several times following the workshop preparation of lesson plans, teachers are also always create and prepare lesson plans at the beginning of the semester. Teacher PJOK BC A State in the District of Banyumas using RPP MGMPs results, but there is also one of the teachers who prepare themselves sebagai RPP made. Another problem, related to the implementation of the 2013 curriculum in the field, still finds several obstacles in its implementation.

Researchers see that PJOK teachers still do not understand the 2013 curriculum. This is because teachers feel that they are almost retired, so that in teaching they still use the teaching method of the 2006 curriculum and in understanding the 2013 curriculum only know without practicing in the field. In practice, teachers are still dominant in teaching (teacher enter). This is in stark contrast to the learning of the modern era of 21st century skills, namely students are more active in learning (student center). For example, in the practice of learning big balls such as soccer, teachers explain a lot of material so that it consumes lesson hours. This has an impact on students' not maximizing practice and feeling bored with PJOK subjects which should be fun.

A teacher must have academic qualifications and know the basics of science, one of which is to carry out RPP preparation activities, so that in the implementation of teaching and learning activities the teacher can direct learning activities from beginning to end. This proves that a PJOK teacher must be able to compile a lesson plan properly and in accordance with K13 standards and it will be better if it is HOTS (High Order Thinking Skill) oriented, which is to stimulate students to be more critical and courageous because HOTS-oriented teachers will tend to build class with representation, describing the material every time teaching and building relationships with students with activities that involve mentally trained, so that teaching and learning activities can run well. Starting from this problem is the background for conducting research entitled "Analysis of HOTS Oriented Football Learning Materials (High Order Thinking skills) in High Schools in Banyumas Regency".

## METHODS

### Types of research

This research is descriptive research. Sugiyono (2007), states that descriptive research is used to describe or describe the data that has been collected as it is. The method used in this research is a survey. The data collection technique is a checklist.

### Time and Place of Research

This research was conducted in Senior High School in High Schools in Banyumas Regency consisting of 10 schools. The research was conducted in January 2016.

### Research Target / Subject

The population in this study were 20 teachers of PJOK in State Senior High Schools in High Schools in Banyumas Regency. Sampling technique used is purposive sampling. Sugiyono (2007) states "purposive sampling is a sampling technique with certain considerations". The criteria in determining this sample include: (1) PJOK teachers in Senior High School in High Schools in Banyumas Regency, (2) each school is represented by 1 teacher, (3) each teacher is willing to provide soccer learning material in the form of RPP. Based on this, there were 10 teachers who met the criteria.

### Data, Instruments, and Data Collection Techniques

The instrument or tool used in this study was an assessment rubric. Arifin (2010: 78) suggests that a rubric is a scoring tool consisting of a list of a set of criteria or what should be calculated. Rating scale with four answer choices, namely:

**Table 1. Scoring**

Score	Description	
1	Incomplete	It is not in accordance with
2	Less complete	Partially Fit
3	Complete	Completely fit
4	Very Complete	Very Complete

Testing the validity of the instrument in this study was carried out by professional judgment, according to Purwanto (2007: 126) "Professional judgment is a person who is in a particular field that is in accordance with the area of the study of the instrument, for example teachers, mechanics, doctors, and so on. The grille of the instrument is as follows:

**Table 2. Instrument Grid**

Aspek	Indikator	Butir
Perumusan Indikator	1. Kesesuaian dengan KD.	1
	2. Kesesuaian penggunaan kata kerja operasional yang memuat <i>HOTS</i> dengan kompetensi yang diukur.	2
	3. Kesesuaian dengan aspek pengetahuan, dan keterampilan.	3
Pemilihan Tujuan Materi Pembelajaran	4. Kesesuaian tujuan dengan materi berbasis <i>HOTS</i>	4
	5. Kesesuaian tercapainya pembelajaran sesuai metode <i>HOTS</i>	5
Pemilihan Metode Pembelajaran	6. Pemilihan Metode Terkait dengan <i>HOTS</i> (IL, PBL, PJBL, Tgfu, Saintifik)	6
Kegiatan Pembelajaran	7. Kesesuaian dengan sintak model pembelajaran yang dipilih	7
	8. Kesesuaian penyajian dengan sistematika materi.	8
	9. Memuat <i>HOTS</i> terkait <i>Transfer Knowledge</i>	9
	10. Memuat <i>HOTS</i> terkait <i>Critical Thinking, Creativity</i>	10
	11. Memuat <i>HOTS</i> terkait <i>Problem Solving</i>	11
Penilaian	12. Kesesuaian dengan teknik penilaian autentik.	12
	13. Kesesuaian dengan instrumen penilaian autentik	13
	14. Kesesuaian soal dengan dengan indikator pencapaian kompetensi yang terkait dengan <i>HOTS</i>	14
	15. Kesesuaian kunci jawaban dengan soal.	15
	16. Kesesuaian pedoman penskoran dengan soal.	16
Pemilihan Media Belajar	17. Kesesuaian dengan materi pembelajaran	17
Pemilihan Bahan Pembelajaran	18. Kesesuaian dengan karakteristik peserta didik.	18
	19. Kesesuaian dengan materi pembelajaran	19
Pemilihan Sumber Pembelajaran	20. Kesesuaian dengan materi pembelajaran	20
	21. Kesesuaian dengan karakteristik peserta didik.	21
<b>Total</b>		<b>21</b>

The data collection technique that will be used is by giving questionnaires to respondents who are the subjects of the study. The mechanism is as follows:

1. The researcher asked for a research permit and coordination.
2. Researchers are looking for physical education teacher data in High Schools in Banyumas Regency Schools to the requested material learning (RPP) football.
3. Researchers provide material learning (RPP) soccer from physical education teacher of Banyumas Regency Schools to lecturers validation for assessment using the rubric created.
4. Furthermore, the researcher collected data and performed a transcript of the results of filling in the rubric .
5. After obtaining the research data, the data were processed using statistical analysis and the researchers took conclusions and suggestions.

**Data analysis technique**

After all the data is collected, the next step is to analyze the data so that a conclusion can be drawn. The data analysis technique in this research is using percentage descriptive data analysis technique.

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

Information:

M : average ( mean )

X : score

S : standard deviation

Determine the interval using the formula from Arikunto( 2010 : 207) in table 11 as follows:

**Table 3. Assessment Norms**

Interval	Category
81 – 100	Very good
61 – 80	Well
41 – 60	Enough
21 – 40	Less
0 – 20	Very less

(Source: Arikunto, 2010)

## RESULTS

### Research result

Descriptive statistical research data analysis-oriented learning materials soccer HOTS (High Order Thinking Skills) in High Schools in Banyumas Regency obtained a score (minimum) 51.19, best score (maximum) 73.81, the average (mean) 65.60, the value of the middle (median) 67.86, recurring value (mode) 69.05, standard deviation (SD) of 7.13.

Analysis of football-oriented learning materials HOTS (High Order Thinking Skills) in High Schools in Banyumas Regency can be presented in Figure 1 as follows:

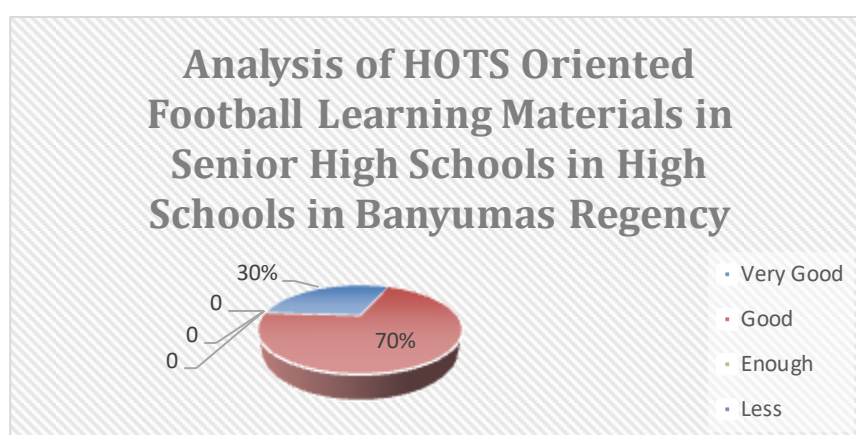


Figure 1 . Diagram Circle Analysis Football Oriented Learning Materials HOTS ( High Order Thinking Skill ) in High Schools in High Schools in Banyumas Regency

Based on the image 1 above, it shows that analyzes football-oriented learning materials HOTS (High Order Thinking Skills) in High Schools in Banyumas Regency in the category "adequate" was 30.00%, "good" was 70.00% (7 schools). Based on the average value, namely 65.60 is in the good category.

The results of the study analysis of learning materials soccer oriented HOTS (High Order Thinking Skills) in High Schools in Banyumas Regency, which is divided into several aspects, namely the formulation of indicators, the election purpose of learning materials, the selection method of learning, learning activities, assessment, selection of learning media, selection of learning materials, selection of learning sources, are described as follows:

1. Football-oriented learning materials HOTS in High Schools in Banyumas Regency based aspects of indicators that are in the category of "very poor" amounted to 0.00% (0 of the school), "less" of 20.00% (2 schools), "enough" for 10.00% (1 school), the "good" amounted to 30.00% (3 schools), and "excellent" by 40.00% (4 schools).
2. Football-oriented learning materials HOTS in High Schools in Banyumas Regency based aspects of the election purpose of learning materials that are in the category of "very poor" amounted to 0.00% (0 of the school), "less" of 30.00% (0 of the school), "enough" amounted to 0.00% (0 of the school), the "good" amounted to 70.00% (7 schools), and "very good" by 0.00% (0 of the school).
3. Football-oriented learning materials HOTS in High Schools in Banyumas Regency based aspects of the selection method of learning that are in the category of "very poor" amounted to 0.00% (0 of the school),

- "less" of 0.00% (0 of the school), "sufficient" amounted to 0.00% (0 of the school), the "good" amounted to 50.00% (5 schools), and "excellent" by 50.00% (5 schools).
4. Football-oriented learning materials HOTS in High Schools in Banyumas Regency based aspects of learning activities that are in the category of "very poor" amounted to 0.00% (0 of the school), "less" of 0.00% (0 of the school), "enough" for 60.00% (6 schools), "good" at 40.00% (4 schools), and "very good" at 1.11% (1 school).
  5. Football-oriented learning materials HOTS in High Schools in Banyumas Regency based assessment aspects that are in the category of "very poor" amounted to 0.00% (0 of the school), "less" of 0.00% (0 of the school), "enough" by 40.00% (4 schools), "good" was 60.00% (6 schools), and "very good" was 0.00% (0 schools).
  6. Football-oriented learning materials HOTS in High Schools in Banyumas Regency based aspects of learning media selection in the category "very poor" amounted to 0.00% (0 of the school), "less" of 0.00% (0 of the school), "sufficient" amounted to 0.00% (0 of the school), the "good" by 100.00% (10 schools), and "very good" by 0.00% (0 of the school).
  7. Football-oriented learning materials HOTS in High Schools in Banyumas Regency based aspects of the selection of learning materials that are in the category of "very poor" amounted to 0.00% (0 of the school), "less" of 0.00% (0 of the school), "sufficient" amounted to 0.00% (0 of the school), the "good" by 100.00% (10 schools), and "very good" by 0.00% (0 of the school).
  8. Football-oriented learning materials HOTS in High Schools in Banyumas Regency based aspects of the selection of learning resources that are in the category of "very poor" amounted to 0.00% (0 of the school), "less" of 0.00% (0 of the school), "sufficient" amounted to 60.00% (6 schools), "good" by 40.00% (4 schools), and "very good" by 0.00% (0 schools). Based on the average value, namely 72.50, it is included in the "good" category.

## DISCUSSION

This study aims to determine the analysis-oriented learning materials soccer HOTS (High Order Thinking Skills) in High Schools in Banyumas Regency. Based on the results showed that the analysis-oriented learning materials soccer HOTS (High Order Thinking Skills) in High Schools in Banyumas Regency in the category of "good". In detail, the largest category was in the good category, which was 70.00%, and then in the moderate category, it was 30.00%. Higher-order thinking is a concept of educational reform that is based on learning taxonomies such as Bloom's Taxonomy. The idea is that some types of learning require more cognitive processing than others, but also have more general benefits. Higher order thinking involves learning complex judgmental skills such as critical thinking and problem solving. In other words, problem-solving learning can improve students' thinking, namely critical and creative thinking, which are higher-order thinking skills (14).

Research conducted by (13) shows that difficulties in generating ideas experienced by students will cause students to experience technical problems in completing their assignments. This is a major factor affecting student achievement. Therefore, students need to learn HOTS to overcome difficulties in generating ideas. HOTS is important because it can help students complete assignments. As a consequence of this, students must be helped to obtain HOTS; either through conventional teaching, learning environments or individual assignments.

In the results of research conducted by (15), it is stated that another effect of developing thinking skills through science in schools is increasing student interest and motivation as well as curiosity about a phenomenon, providing opportunities for students to increase understanding through observation, encouraging the development of scientific concepts by linking the knowledge students get at school with what students get in their daily activities.

The detailed analysis of football-oriented learning materials HOTS (High Order Thinking Skills) in High Schools in Banyumas Regency based on each aspect is described as follows:

1. The components of the learning implementation plan in the formulation of indicators are conformity with KD, suitability of use of operational verbs containing HOTS ( Higher Order Thinking Skills ) with measured competencies, conformity with aspects of attitude, knowledge, and good category skills.
2. The components of the learning implementation plan in the selection of learning materials are the suitability of the objectives with the HOTS -based material, the suitability of the achievement of learning according to the HOTS method in the sufficient category
3. The component of the learning implementation plan in the selection of learning methods, namely the selection of methods related to HOTS ( Higher Order Thinking Skills ) (IL, PBL, PPA, TGfU, Scientific) category is very good.
4. The components of the learning implementation plan in learning activities are conformity to the syntax of the chosen learning model, conformity of presentation with material systematics, containing HOTS (Higher Order Thinking Skills) related to knowledge transfer, containing HOTS (Higher Order Thinking Skills) related to critical thinking, creativity, Loading HOTS (Higher Order Thinking Skills) related to problem solving falls into the sufficient category.
5. The components of the learning implementation plan in the assessment are conformity with the syntax of the selected learning model, conformity with authentic assessment instruments, conformity of questions with indicators of competency achievement related to HOTS ( Higher Order Thinking Skills ), compatibility of answer keys with questions, suitability of scoring guidelines with questions fall into the good category.
6. The component of the learning implementation plan in the selection of learning media, namely conformity with learning material and conformity with the characteristics of students, is in the good category.
7. The component of the learning implementation plan in the selection of learning materials, namely conformity with learning material, is in the good category.
8. The components of the learning implementation plan in the selection of learning sources, namely conformity with learning material and conformity with the characteristics of students, fall into the good category.

## CONCLUSIONS

Based on the results of data analysis and discussion can be concluded, that analyzes football-oriented learning materials HOTS (High Order Thinking Skills) in High Schools in Banyumas Regency in the category enough of 30.00 % (3 schools), the good of 70% (7 schools). Based on the average value, namely 65.60 is in the category of good.

## REFERENCES

1. Tambunan H. The Effectiveness of the Problem Solving Strategy and the Scientific Approach to Students' Mathematical Capabilities in High Order Thinking Skills. *Int Electron J Math Educ.* 2019;14(2):293–302.
2. Miri B, David BC, Uri Z. Purposely teaching for the promotion of higher-order thinking skills: A case of critical thinking. *Res Sci Educ.* 2007;37(4):353–69.
3. Festiawan R, Nurcahyo PJ, Pamungkas HJ. Pengaruh Latihan Small Sided Games Terhadap Kemampuan Long Pass pada Peserta Ekstrakurikuler Sepakbola. *Media Ilmu Keolahragaan Indones.* 2019;9(1):18–22.
4. Istofian RS, Amiq F. Metode Drill Untuk Meningkatkan Teknik Menendang Bola ( Shooting ) Dalam Permainan Sepakbola Usia 13-14 Tahun. *J Kepelatihan Olahraga.* 2016;1(1):105–13.
5. Johnson DW, Johnson RT. An educational psychology success story: Social interdependence theory and cooperative learning. *Educ Res.* 2009;38(5):365–79.
6. Hopson MH, Simms RL, Knezek GA. Using a technology-enriched environment to improve higher-order thinking skills. *J Res Technol Educ.* 2001;34(2):109–19.
7. Wartono W, Takaria J, Batlolona JR, Grusche S, Hudha MN, Jayanti YM. Inquiry -Discovery Empowering High Order Thinking Skills and Scientific Literacy on Substance Pressure Topic. *J Ilm Pendidik Fis Al-Biruni.* 2018;7(2):139.
8. McBride RE. Critical Thinking—An Overview with Implications for Physical Education. *J Teach Phys Educ.* 2016;11(2):112–25.



9. Tambunan H, Naibaho T. Performance of mathematics teachers to build students' high order thinking skills (HOTS). *J Educ Learn*. 2019;13(1):111.
10. Rahmi YL, Alberida H. Peningkatan Keterampilan Berpikir Tingkat Tinggi Mahasiswa Melalui Penerapan Asesmen Portofolio Pada Mata Kuliah Telaah Kurikulum Dan Buku Ajar Biologi. *Bioeducation J*. 2017;1(1):22–33.
11. Raiyn J. The Role of Visual Learning in Improving Students' High-Order Thinking Skills. *J Educ Pract [Internet]*. 2016;7(24):115–21. Available from: <http://files.eric.ed.gov/fulltext/EJ1112894.pdf>
12. Wicaksono PN, Kusuma IJ, Festiawan R, Widanita N. Evaluasi penerapan pendekatan saintifik pada pembelajaran pendidikan jasmani materi teknik dasar passing sepakbola Evaluation of application of scientific approach in physical education learning basic technical material for football passing. *J Pendidik Jasm Indones*. 2020;16(1):41–54.
13. Heong YM, Othman WB, Yunos JBM, Kiong TT, Hassan R Bin, Mohamad MMB. The Level of Marzano Higher Order Thinking Skills among Technical Education Students. *Int J Soc Sci Humanit*. 2011;1(2):121–5.
14. Handayani R. PENGARUH PEMBELAJARAN PROBLEM SOLVING BERORIENTASI HOTS (Higher Order Thinking Skills) TERHADAP HASIL BELAJAR KIMIA SISWA KELAS X. *J Inov Pendidik Kim*. 2012;6(2):1051–62.
15. Minarni A, Elvis Napitupulu E. Learning Approach and Soft-skills Contribution toward Mathematical Higher Order Thinking Skill of Junior High School Students. *Am J Educ Res*. 2019;7(12):925–9.