



The analysis of 21st century skills-based lesson plans for physical education in elementary schools

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Abstract: The learning process is the core of educational activities. In the 21st century, the learning process emphasizes 21st-century skills, which are crucial for students to reach a high level of thinking. This research investigated the analysis of 21st-century skills-based lesson plans for physical education, sport and health at elementary schools in Tapin district. This research is descriptive quantitative research using a survey method to document the lesson plans for physical education, sport and health created by teachers of elementary schools at 12 sub-districts in the Tapin district. The lesson plans were analyzed using specifically created assessment instruments. The research results show that the 21st-century skills-based lesson plans for physical education, sport and health in elementary schools in Tapin district were categorized as excellent 33,33%, good 33,33%, fair 16,67%, poor 16,67%, and very poor 0%. The results indicate that not all lesson plans contain the components of the assessment instrument. However, the 21st-century skills have been illustrated in the lesson plans, particularly in the components of learning activities and learning approaches/ methods/ models implementing 4C skills (creativity, critical thinking, collaboration and communication) and HOTS (higher-order thinking skills).

Keywords: Analysis; Lesson Plan, 21st Century Skills

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INTRODUCTION

The learning process is the core of educational activities. The educational process in educational units focuses on learning in each subject (Aryanti et al., 2023). 21st century education starts from 2001 to 2100. The 21st century is marked by the era of the industrial revolution 4.0, which in the 21st century is the century of openness or the century of globalization (Rifa Hanifa Mardhiyah et al., 2021). Education in the 21st century is an educational approach that focuses on developing the skills and knowledge necessary for success in the 21st century. 21st century education emphasizes the importance of critical thinking, creativity, problem solving, collaboration and digital literacy (Fakhri Akhmad, 2023). Learning in the 21st century era in the world of education emphasizes the need for a good combination of online or digital-based learning systems with face-to-face learning in transforming learning to be more effective (Triansyah et al., 2023). To create education in accordance with the 21st century era, learning must be student-centered (Warni et al., 2023). This is because the concept of education in the 21st century is centered on students and where teachers are only facilitators in the learning process (Hasibuan & Prastowo, 2019). Thus, the demands of the future world where students are required to have thinking skills in the learning process. These skills are in the form of 4C, namely Communication, Collaboration, Critical Thinking and Problem Solving, Creativity and Innovation (Mu'minah, 2021). Thus, it is known that 4C skills are very important to apply in the learning process in all subjects, with the implementation of 4C skills making learning towards HOTS (Higher Order Thinking Skill) or high levels thinking skills.

Physical education, sport and health is one of the subjects implemented at the primary and secondary education levels. Physical education, sport and health play an important role in realizing a 21st century era-based learning process in the form of a learning concept containing 21st century skills in the form of 4C. Educators in the learning process lead students to achieve these skills (Yusup et al., 2021). The ideal of physical education learning contains 21st century skills based on research results (Kanca, 2018) about "becoming a teacher of physical education, sport and health in the 21st Century" which starts from 1) understanding the 21st century students and teacher characteristics of physical education, sport and health, 2) mastering 21st century skills, 3) innovating learning facilities of physical education, sport and health, and 4) developing creativity and innovation in various strategies/ model/method/learning approach

in PJOK. As for the implementation of physical education, sport and health learning containing 21st century skills which provides students with skills related to 4C, it can be done by applying knowledge and connecting theoretical and abstract subject matter through everyday examples (Hendra, 2021). Based on this, it will make learning more creative, not monotonous, shape the character of students, and create student-oriented learning, which supports the realization of 21st century life skills competencies in physical education learning.

The fact that happens is that learning of physical education, sport and health is still teacher-centered learning and this is not in accordance with the 21st century learning concept of "student centered learning" or learner-centered learning. This statement is strengthened by the results of initial research observations (Pratiwi et al., 2019) found out that teachers of physical education, sport and health were less than optimal in independent training, which caused delays in following curriculum developments and this created obstacles for teachers in planning, implementation and assessment. However, these three things are actually the main tasks of educators in preparing a learning process to achieve a targeted competency. Other facts about the learning of physical education, sport and health in schools are based on research (Kurniawan et al., 2021) found that the results of research on observations and discussions of the teachers of physical education, sport and health in elementary schools regarding the preparation of lesson plans were that there were discrepancies in the selection and application of learning methods that did not lead to HOTS (higher order thinking skills). From these results, there is a fact that the learning of physical education, sport and health does not yet reflect 21st century learning. Methods are one of the components that determine whether 21st century skills will be implemented or not in the learning process (Yulianti & Wulandari, 2021). This is because the appropriate learning method/strategy/model will determine whether learning is teacher- or student-center. According to (Supriyadi et al., 2019) scientific learning and learning models that encourage students to use 21st century skills in accordance with Permendikbud No. 22 of 2016 are inquiry/discovery learning, problem based learning, and project based learning.

Based on the reality in the form of existing facts and expectations, there is a gap that creates problems. The existing problem lies in 21st century skills-based learning. It is already known that 21st century skills are very important in the learning process so that students reach a high level of thinking or often referred to as HOTS (higher order thinking skills). Therefore, it is important to carry out this research to determine the quality of lesson plans at the elementary

school education level made by teachers of physical education, sport and health before learning processes. With the quality of planning that will be known, it will become something new to become the basis for improving the quality and understanding of teachers regarding the implementation of 21st century learning in a lesson plan specifically in an area that is used as a research site. It is already known that 21st century learning in the form of 4C skills is very important for students as preparation and improving quality to compete in the educational realm and later in the industrial world.

Tapin is one of the districts in South Kalimantan province with 12 sub-districts. Judging from the existing problems related to 21st century skills, in Tapin district itself, outreach regarding 21st century learning, especially regarding skills referring to HOTS, has never been implemented. This is confirmed by the researcher being a teacher of physical education, sport and health and joining a teacher association organization. The teacher association organizations in question include KKG (Teacher Working Group), MGMP (Subject Teachers' Conference), and government program groups. Furthermore, based on a survey, researchers when participating in teacher association organizations specifically for physical education, sport and health subject concluded that there were no research results or anything similar related to plans for implementing physical education learning about 21st century skills in terms of planning in the form of tools or implementation during the learning process in Tapin district. Therefore, the researcher aimed to conduct research related to analysis of lesson plans implementing in elementary schools of Tapin district particularly in learning of physical education, sports and health based on 21st century skills. It is known that 21st century learning in the form of 4C century skills is very important based on several relevant research results provided by researchers. Therefore, the aim of this research is to find out the results of the analysis of lesson plans (RPP) for physical education, sports and health (PJOK) subjects in 12 sub-districts of Tapin district.

MATERIAL AND METHODS

This type of research uses descriptive quantitative research. The method in this research is a survey method. Using the survey method, researchers will carry out documentation related to the lesson plan documents of physical education, sports and health created by teachers at Primary School in 12 sub-districts of Tapin district for analysis and will obtain research data. Therefore, to support data collection in this research using documentation of teachers' lesson

plan documents of physical education, sports and health in elementary schools. With a population of teachers of physical education, sports and health teaching at elementary schools in 12 sub-districts of Tapin district and the sample for this research was 12 lesson plans of physical education, sports and health for created by teachers teaching at elementary schools of 12 sub-districts in Tapin district.

The instrument in this research uses an assessment instrument sheet which was deliberately prepared for data collection. Validation in this instrument is through content validation (contact validity) of judgment with experts (expert judgment). The following is a grid of instruments that will be used in assessing teachers' learning implementation plans based on the module (Suharto, 2015: 162-163) regarding "Teacher Training Materials for Implementing the 2013 Curriculum 2015" which were modified according to research needs and have been validated by Dr. Mashud, S.Pd., M.Pd., Hj. Nuril Hidayah, S.Pd., MM., and Nurul Huda, M.Pd.

Table 1. Lesson Plan Assessment Instrument Grid

Observed Components	Indicator	Question No
Subject Identity	Education unit, class/semester, subjects, and time allocation	1
Competency selection	Core Competencies Basic competencies	2, 3
Formulation of indicators	Compatibility with KD Appropriateness of the use of operational verbs (KKO) based on cognitive aspects containing HOTS with the competencies being measured Appropriateness of the use of operational verbs (KKO) based on psychomotor aspects containing HOTS with the measured competencies	4, 5, 6,
Learning objectives	Agreeableness is related to HOTS in cognitive aspects Agreeableness is related to HOTS in psychomotor aspects Conformity with ABCD components in the affective aspect. Conformity with ABCD components in cognitive aspects. Conformity with ABCD components in psychomotor aspects.	7, 8, 9, 10, 11
Learning materials	Compatibility with KD in cognitive aspects Compatibility with KD in psychomotor aspects Suitability to the characteristics of elementary school students in cognitive aspects	12, 13, 14
Learning methods	Compliance is related to HOTS	15
Instructional Media	Suitability to learning material Suitability to the characteristics of elementary school students	16, 17
Learning Resources	Conformity with KI and KD Suitability to the characteristics of elementary school students	18, 19
Learning Activities	Shows preliminary activities Conformity with the syntax of the learning model chosen in the core activities	20, 21, 22, 23, 24, 25, 26, 27,

	Suitability of presentation with systematic material	28
	Show closing activities	
	Suitability of time allocation with material coverage	
	Contains HOTS related to knowledge transfer	
	Contains HOTS related to Critical Thinking	
	Contains HOTS related to Creativity Thinking	
	Contains HOTS related to Problem Solving	
Assessment of learning outcomes	Completeness of Assessment Related to Affective Aspects	29, 30, 31,
	Completeness of Assessment Related to Cognitive Aspects	32, 33, 34,
	Completeness of Assessment Related to Psychomotor Aspects	35, 36, 36,
	Correspondence of descriptors related to the HOTS assessment instrument with indicators of achievement of affective aspect competencies	38, 39, 40.
	Suitability of assessment instruments with indicators of HOTS competency achievement in cognitive aspects	
	Conformity of descriptors related to the HOTS assessment instrument with indicators of achieving competency in psychomotor aspects	
	Correspondence of the descriptors in the assessment rubric to the observed affective aspects	
	Suitability of the answer key with the cognitive aspect question instrument	

The data analysis technique is in the form of analysis using the lesson plan assessment sheet, while in calculating it uses the technique of preparing and implementing objective form analysis, namely a technique that requires one correct answer from several alternative answer choices available with appropriate criteria to get a score (1) according to a partial score (2) does not match the score (1). The descriptive analysis of the percentage of teachers' ability to make lesson plans can be done by looking for test results using the formula: $P = \frac{F}{N} \times 100\%$ (Kumara, 2019)

Meanwhile, to find out the criteria for scoring, the resulting test scores are processed and converted into standard scores. According to Anas Sudijono in (Kumara, 2019) Processing and converting test scores into standard scores can be done based on norms or groups, often known as PAN (Normally Referenced Assessment) or PAK (Group Reference Assessment). This value is then made into an assessment reference which is based on the mean (M) and standard deviation (SD) using a five-scale benchmark assessment. Writing research methods Contains descriptions of research design, data sources, data collection, instruments, populations, samples and data analysis with a proportion of 10-15% of all articles Type of research, Population and Sample, Data Collection Techniques, Data Analysis.

Table 2. Five-scale benchmark assessment

Score Intervals	Category
$Mi + 1.8 SDi < X \leq Mi + 3 SDi$	Very good
$Mi + 0.6 SDi < X \leq Mi + 1.8 SDi$	Good
$Mi - 0.6 SDi < X \leq Mi + 0.6 SDi$	Enough
$Mi - 1.8 SDi < X \leq Mi - 0.6 SDi$	Not enough
$Mi - 3 SDi < X \leq Mi - 1.8 SDi$	Very less

(Bintari, 2019)

Description: Mi = Ideal Mean = $\frac{1}{2}(\text{Ideal Maximum} + \text{Ideal Minimum})$
 SDi = Ideal SD = $\frac{1}{6}(\text{Ideal Maximum} - \text{Ideal Minimum})$

RESULTS

Based on data analysis of 12 lesson plan documents using an assessment instrument totaling 40 aspects assessed can be seen in the following table after which it was converted into a five-scale benchmark table.

Table 3. Data on the results of the overall assessment of lesson plan components

No.	District of Lesson Plans	Total score
1.	South Tapin	98
2.	Binuang	62
3.	Piano	115
4.	Tapin Tengah	114
5.	Burnt	91
6.	Lokpaikat	92
7.	Greetings Babaris	69
8.	Laras Selatan Temple	116
9.	Bungur	119
10.	North Tapin	100
11.	Hatungun	73
12.	Laras Utara Temple	84

Table 4. Categorization of Research Data

No	Limitation	Category	Frequency	%
1	$104 \leq X \leq 120$	Very good	4	33.33%
2	$88 \leq X \leq 104$	Good	4	33.33%
3	$72 \leq X \leq 88$	Enough	2	16.67%
4	$56 \leq X \leq 72$	Not enough	2	16.67%
5	$40 < X \leq 56$	Very less	0	0%
Amount			12	100%

Based on the table above, the analysis of 21st Century Skills based lesson plans created by teachers of physical education, sports and health in Tapin Regency is in the "very good" category with a percentage of 33.33%, the "good" category with a percentage of 33.33%, the "fair" category. with a percentage of 16.67%, the "poor" category with a percentage of 16.67%,

and the "very poor" category with a percentage of 0%. The following is a diagram for the results of research analysis of lesson plans of physical education, sports and health applied in elementary school in Tapin district.

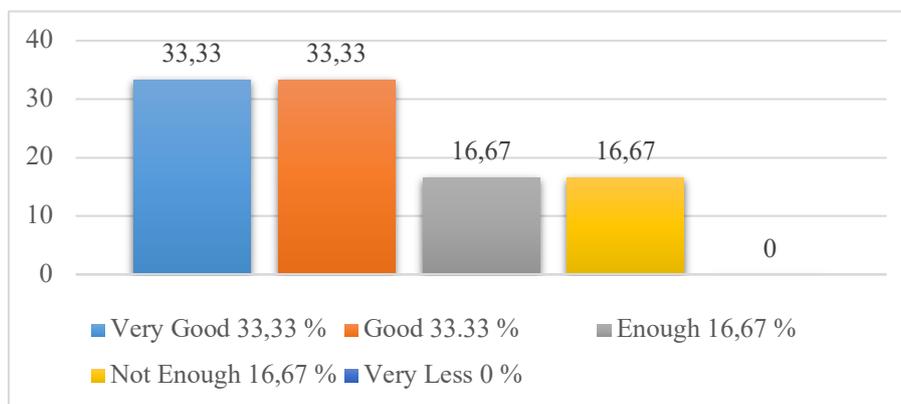


Figure 1. Diagram of research results analyzing lesson plans

DISCUSSION

Based on research results from data analysis of lesson plan documents, each learning implementation lesson plan document is different in terms of its content. Another fact that makes the results of the overall analysis of the physical education, sports and health subject learning tools is the results of the analysis of each component. Not every component analyzed falls into the appropriate category, some are partially appropriate, and some are not appropriate. However, all lesson plans analyzed has implemented 21st century learning, which is the context of HOTS learning which requires student-center learning, a system that requires students to learn more actively, independently, and be able to apply and understand appropriate learning materials. each other's abilities. This is confirmed according to (Mu'minah, 2021) The 21st century learning system is a shift in the learning approach to being student-centered and applying the 21st century "4C" skills, namely Communication, Collaboration, Critical Thinking and Problem Solving (critical thinking and problem solving), and Creativity and Innovation. (creativity and innovation). Strengthened again according to (Barus, 2019) There are 7 learning models that can be used in 21st century education, namely the DL (Discovery Learning or discovery) learning model, IL (Inquiry Learning or investigation), PBL (Problem Basic Learning or problem-based), PjBL (Project Basic Learning or Project-Based) , PBT/PBET (Production Based Training or product-based), TEFA (Factory

Teaching or industry-based learning), and MBL (Blended Learning Model or a combination of face-to-face and online learning). Based on this theory, if it is related to the elementary school learning implementation plan in Tapin district as a whole, it can be seen that there is already a plan for learning activities that includes communication and collaboration interactions between teachers and students as well as students and students, also includes critical thinking activities and problem solving, such as understanding, analyzing, evaluating, and making conclusions regarding a problem posed at the beginning of learning, and also containing learning activity plans that lead to student creativity, such as creating certain varied solutions in a learning process. Meanwhile, if it is related to the 21st century learning model that has been included, it can be explained that the overall learning implementation plan that has been analyzed has been found to use a model which will direct students to 21st century skills in the form of 4C and make the learning process into HOTS of high-level thinking skills. Several existing lesson plans have used the Discovery Learning model or discovery learning and PBL or problem-based learning with facts have included this model and applied learning syntax in learning activities. The syntax/learning phase directs students to think at a higher level and apply 21st century skills. This is reinforced by (Cintia et al., 2018) explains the procedures used in applying the discovery learning model, namely (a) stimulation (providing stimulation), (b) problem statement (problem identification), (c) data collection (data collection), (d) data processing (data processing), (e) verification (proof), and (f) generalization (drawing conclusions). And according to (Rohayati, 2022) explains the learning phases of Problem Based Learning (PBL) starting from orienting students to problems, organizing students, assisting student investigations. develop and present work results and analyze and evaluate the problem-solving process.

Meanwhile, if we look at the Higher Levels Thinking Skills or HOTS in the analyzed learning implementation plan, it can be concluded that HOTS has been implemented in the lesson plans in various existing lesson plan components. This was proven that several components were found to contain HOTS elements in the formulation of indicators, learning objectives, learning activity plans, and cognitive questions in the assessment. Even though it has not yet reached the highest HOTS level in every aspect (affective, cognitive and psychomotor). According to (Nisrina, 2021) explains that HOTS learning can be outlined in 3 (three) stages, namely: 1) the learning preparation stage in the lesson plan where HOTS is outlined in the indicators, objectives, preliminary, core, closing and assessment activities, 2) the

implementation stage HOTS elements can be applied to learning by accustoming students to higher level thinking through learning centered on certain learning models, 3) the learning evaluation stage if HOTS elements are applied in it such as solving problems, choosing learning solution strategies, finding new methods, arguing and making decisions new. This statement is in line with other opinions which state that HOTS in a lesson plan is obedient (Sofyatiningrum et al., 2018: 64) that in a lesson plan that contains HOTS elements, all or parts of the components in the lesson plans are described, such as the main indicators, learning objectives and core learning activities.

Based on the results of this analysis, when compared with the results of research on 21st century learning from research results (Ariyanti et al., 2020) Regarding the Development of Class I Student Lesson Plans Based on 21st Century Learning and Innovation Skills, it states that the application of 21st century skills in the form of 4C in core activities with the learning process using a scientific approach and a 21st century skills-based learning model that facilitates activities from observing to communicating. And research results (Widodo & Rizky Kusuma Wardani, 2020) Regarding Teaching 21st Century 4C Skills in Elementary Schools states that teaching 21st century skills teachers act as facilitators and 21st century learning should be carried out by prioritizing thinking skills through 4C skills and in assessments made in the form of case study questions, descriptions, story questions, and so on. which aims to hone students' logical skills. From the two relevant studies linked to the results of the analysis of elementary school learning implementation plans in 12 sub-districts of Tapin Regency, it can be concluded that they are similar or have similarities. This similarity is in the form of applying 21st century skills in learning using a scientific approach and relevant learning models, which makes 4C skills implemented in the learning process. This is proven by the results of the analysis of the RPP documents, some of which use a scientific approach and learning models that emphasize high-level thinking skills.

This research has advantages over previous research because it analyzes all components of the lesson plans in the physical education, sports and health subject at elementary school level made by the teacher, where these components support the implementation of 21st century skills-based learning in a physical education, sports and health learning implementation plan in school. However, there are differences from previous research by (Ariyanti et al., 2020) and (Widodo & Rizky Kusuma Wardani, 2020) where there are differences in results in the form of not all lesson plans, all components of the lesson plans direct

a process of implementing 21st century skills. There are several learning plans that do not apply learning objective components that do not lead to HOTS or higher order thinking skills, do not apply one of the learning methods such as learning models that are relevant to 21st century learning, and also assessment components that are incomplete and do not use knowledge instruments or skills that do not direct students to use 21st century learning are skills (4C) Communication (communication), Collaboration (collaboration), Critical Thinking and Problem Solving (critical thinking and problem solving), and Creativity and Innovation (inventiveness and innovation). This is a finding in this research which can be used as a basis for further research to examine a document on the implementation of lesson plans for learning physical education subjects in schools.

From the comparison between the results of the researcher's analysis and relevant research, it can be seen that 21st century skills in the form of 4C have been implemented in the lesson plans by paying attention to the components that support the creation of 21st century skills in learning such as the application of HOTS elements in the indicator formulation component, objectives learning, learning activities, and assessing student learning outcomes as well as selecting learning methods/approaches/models to support the application of 4C skills. Therefore, researchers advise physical education, sports and health teachers to always study and pay attention to the elements that support the creation of 21st century skills-based learning, which is very important for improving the quality of students today.

CONCLUSION

Based on the results of the research and discussions that have been presented, it can be concluded that not all indicators assessed in the lesson plan fit into the appropriate criteria, some are partially compliant or not completely compliant. This is based on the content of the indicators which are considered not to apply several things that are used as a reference in the assessment using the instrument. However, if the focus is on 21st century skills, it can be concluded that the learning tools in the form of lesson plans (RPP) for elementary schools for physical education, sports and health in Tapin district have implemented 21st century skills in the form of 4C, namely (creativity, critical thinking, collaboration and communication). This is based on 21st century skills in the form of 4C which have been implemented in the lesson plan by being found in the components of learning activities and have used a learning

approach/method/model that directs the implementation of 4C skills and HOTS (Higher Order Thinking Skill).

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