BAB II
LITERATURE REVIEW

2.1 Learning Scenario

2.1.1 Definition of Learning Scenario

Learning scenarios are sequences or series of learning process activities arranged by a teacher so that the learning process occurs as desired and the achievement of the goals to be achieved (Mezak et al, 2018). learning scenario is an a priori description of a learning situation, independently of the underlying pedagogical approach. It describes its organization with the goal of ensuring the appropriation of a precise set of knowledge, competencies or skills. The learning scenario is to plan the steps that the teacher will take during the learning process, which includes an introduction, core, and closing activities (Lete, 2022). Important learning scenarios are prepared by teachers so that the learning process runs well and learning objectives can be achieved in accordance with the allocation of time set. Preliminary activities in learning are initial activities in a learning meeting aimed at checking students' initial behaviour, generating motivation, and focusing students' attention to actively participate in the learning process. Core activities are teaching and learning activities or understanding material to achieve Basic competencies (KD). The closing activity of learning is the final activity carried out with reflection, feedback, assessment, assignment collection, and follow-up (Lete, 2022).

Learning scenarios are the design of learning activities made by teachers that have the potential to achieve certain basic competencies in accordance with the syllabus that has been made by the teacher (Hursen et al, 2017). In addition, Hendrowati &; Suningsih (2018), quoted in Mezak et al (2018), stated that a learning scenario is a sequence or series of learning process

activities arranged by a teacher so that the learning process occurs as desired and the achievement of the goals to be achieved.

A learning scenario is an a priori description of a learning situation, independently of the underlying pedagogical approach. It describes its organization with the goal of ensuring the appropriation of a precise set of knowledge, competencies or skills. It may specify roles, activities and required resources, tools and services (Leujene, 2013). Based on this understanding, learning scenarios as components of learning tools must be arranged rationally and aim to meet certain aspects to enable the learning process to occur.

Based on the opinion above, what is meant by the learning scenario in this study is a design that contains a series of learning activities prepared by the teacher in achieving the desired learning objectives and basic competencies. The preparation of a learning scenario is very dependent on the goals to be achieved, where the steps contained in the scenario have an important influence on directing students to have the ability as expected in the objectives. Rustiyani et al (2021) revealed that the most important aspect in determining the quality of learning is the extent to which lessons are acceptable and reasonable for students. To ensure that learning makes sense, teachers must present learning scenarios in an organized manner.

2.1.2 The Urgency of Learning Scenarios

Learning scenarios are structured with the aim of allowing participation from students, so teachers try to design active learning. This was also conveyed by Nugraha (2017), who stated that learning with scenarios can create opportunities or opportunities for students to be more active and develop real-life skills during the learning process they experience. Learning scenarios designed by teachers will be a reference for learning

directions so that if scenarios are arranged to display active learning, the learning process will have the opportunity to develop the abilities of students.

Learning scenarios can present situations that encourage active student engagement beyond formal learning to compete globally. Learning scenarios will be a bridge between teacher expectations to involve student activeness with the abilities of students who want to build. This formed ability will be the capital for students in the future.

The scenario that has been designed by the teacher directs students to become individuals who are able to rely on their ability to learn and individuals who actively develop themselves. The learning scenarios prepared are expected to be able to provide experience, impression and meaning to students both in terms of knowledge, attitudes and skills. This hope is what is called meaningful learning.

Sanjaya (2012: 156-160) in Nugraha (2017) states that designing learning experiences for learners to match learning objectives is an important aspect both in planning and learning design/scenarios. The learning scenarios designed are outlined in real learning procedures in the classroom, this is supported by the opinion of Kusriandi Wendi et al (2022) saying that Designing learning must pay atten-tion to the process. Therefore, learning scenarios are guidelines for creating experiences for students in the activity of finding their own knowledge independently.

The relationship between learning scenarios and the ability of learners to compete globally in the future does sound very far away, but a quality generation is determined by the basis of learning implemented in education.

2.1.3 Learning Scenario Objectives

Learning scenarios which are further details of the subject syllabus, especially in the formulation of learning experiences as operational guidelines for teachers in carrying out the learning process (Carlos, 2017). Learning scenarios are used as operational, technical guides for teachers in carrying out the learning process both inside and outside the classroom. Through learning scenarios, teachers can develop their creativity in empowering students' potential by utilizing existing learning resources. Based on the description above, it can be concluded that the objectives of the learning scenario, according to Sayed (2021), are as follows:

1) Provide guidelines on the stages/steps of the sequence of learning activities

   One of the reasons for the importance of preparing a learning implementation plan is as a learning guide. This lesson plan is created to provide guidance on learning directions. Teachers and students can be more focused in carrying out every learning activity because there are steps that have been prepared before.

2) Provide guidance on the description of learning activities that will be carried out by both teachers and students

   In the learning scenario, there are steps intended for teachers and students. So it is very important for a teacher to compile a good learning scenario because it will be a picture of the activities that will be carried out during the learning process.

3) Provide guidance on strategies, techniques, methods, media and tools that will be used during the learning process

   In compiling learning scenarios, there are strategies, methods, media, and tools that will be used during learning; it will, of course, involve planning how the material will be

delivered, how the interaction between teachers and students will occur, and how students will be involved in the learning process.

4) Provide guidance on the estimated use of time in each learning activity

Learning scenarios are arranged based on step-by-step the activities of a teacher and students along with the estimated time, of course so that the learning poses can run according to the specified time so that the process of teaching and learning activities runs effectively and efficiently.

2.1.4 Steps to Develop Learning Scenarios

Learning Scenarios are created and designed step by step. This is so that it can be a signpost in its implementation to avoid and anticipate things that can interfere with the course of learning (Malda, 2021). In designing learning scenarios, there are several steps, including:

1) Learn the LKS (Question Worksheet)

Student Worksheets or often abbreviated as LKS, are sheets that contain tasks that must be done by students. LKS can be interpreted as sheets used by students as guidelines in the learning process and contain tasks done by students in the form of questions and activities that will be carried out by students.

According to Prastowo (2016) in Malda (2021), LKS is a printed teaching material in the form of sheets of paper containing material, summaries and instructions for the implementation of learning tasks that students must do, both theoretical and / or practical, which refers to the basic competencies that students must achieve, and their use depends on other teaching materials. By studying LKS first, teachers or learning designers will have a deeper understanding of the material they want to teach. It helps in planning appropriate and

effective activities to help students understand the desired concepts. Learning design can plan activities that are relevant, and in accordance with the content of LKS; this ensures that activities are designed according to the level of difficulty and learning objectives that have been set.

2) Determine the time, equipment, or aids to be used in learning

The determination of time allocation in each KD is based on the number of effective weeks and the allocation of learning time per week by considering the number of KD, breadth, depth, level of difficulty, and importance of KD. The time allocation included in the syllabus is an average estimate for mastering the KD needed by diverse learners. Therefore, the time allocation is detailed and adjusted again in the RPP. Therefore, after determining the allocation of time, learning activities will run smoothly.

This is supported by Paige (2016) which states that the allocation of time is determined according to the needs for the achievement of basic competencies and learning load. The allocation of time is taken into account for the achievement of one basic competency, expressed in-class hours and the number of meetings . Therefore, the time to achieve a basic competency can be calculated in one or more meetings depending on the basic competence.

Determining the equipment or aids to be used in learning equipment and aids in learning is important for a teacher to prepare in making learning scenarios. because it can help the teaching and learning process so that the meaning of the message conveyed becomes clearer and educational or learning goals can be achieved effectively and efficiently (Paige, 2016).

3) Write down the steps to be carried out in the learning process according to the planned learning stages

The learning steps include an introductory activity, a core activity, and a concluding activity. This is in accordance with Mulyasa's in Paige (2016) that the implementation of learning activities includes three activities, namely opening, competency / core formation, and closing. Based on Permendikbud No. 41 of 2007, the preliminary step of a teacher must prepare students psychologically and physically to follow the learning process, ask questions that relate previous knowledge to the material to be learned, explain the learning objectives or basic competencies to be achieved, and deliver material and explanation of activity descriptions according to the syllabus.

Core activities generally must be carried out interactively, inspirationally, fun, and challenging, motivating students to actively become information seekers and providing sufficient space for initiative, creativity, and independence in accordance with the talents, interests and physical and psychological development of students because Core activities in learning play an important role in achieving learning objectives and in shaping student abilities that have been set (Koehler, 2015).

Closing and follow-up activities should be carried out on the basis of planning that has been made by the teacher. Teachers need to plan and execute final and follow-up activities effectively, efficiently, flexibly and systematically. The final activity in learning is not only interpreted as an activity to close the lesson but also as an assessment of student learning outcomes and follow-up activities. Follow-up activities must be taken based on student learning processes and outcomes.

4) The learning steps are written in full

The learning process is carried out from beginning to end, from planning to evaluation, so that the assessment process or activity is inseparable from the overall learning process

(Koehler, 2015). This means that a teacher must write down the learning step by step thoroughly, starting from the introduction, core and closing activities.

5) Write an assessment plan for learning activities

Through assessment activities, teachers can find out the extent of students' ability to know a material. Assessment of learning outcomes includes measuring students' skills and abilities so that the results of the assessment process can be used by teachers in designing future learning processes.

6) The success criteria for the assessment results can be detailed in detail and include three duplicates, namely cognitive, affective, and psychomotor

Based on the research by Owen (2017), learning success criteria must cover 3 domains, namely Cognitive, Affective and psychomotor. Research Conducted by Hatija Muna (2023) The assessment is carried out by going through stages in learning that must be passed by teachers, including the first stage; it is expected that practice has been guided to understand and explore as well as a general description of the concepts and meanings of basic teaching skills in the teaching and learning process, using appropriately, synergizing one and another skills and accuracy when and in conditions how one and other skills are used. In addition, it is expected that practitioners can synergize their knowledge to be used in teaching reality combined with basic teaching skills.

In the second stage, it is expected that the practice actually practices the basic teaching skills repeatedly, with the hope that if the practice has repeatedly done, the practice will find out the shortcomings in the skills they learn to master and be skilled in using them in the teaching and learning process. At this stage, practice can prepare learning tools starting from lesson plans,

media to be used and everything that is required for professional teachers / outriggers in the future.

The third stage is a flashback of practice by studying the results of peer observation, who will provide information after seeing firsthand the implementation of practical teaching activities. Colleagues will provide an assessment related to the advantages and disadvantages of practice, which will then be discussed and as material to improve performance as a professional outrigger.

2.2 Revised Bloom's Taxonomy

Taxonomy is a set of hierarchical models that are applied to classify educational learning goals or objectives into a certain level of complexity (Afzamiman, 2019). Taxonomy comes from Greek and refers to knowledge-based settings and education. Classification is based on a set of criteria or guiding principles, or it can refer to knowledge that explores classification. Taxonomy is a type of classification system that is based on information gathered through in-depth research on various topics covered in this systematization (Owen, 2017). So taxonomy can be defined as a grouping of things based on a certain hierarchy. Benjamin S. Bloom, M. D. Engelhart, E. J. Furst, W. H. Hill and D. R. Krathwohl (1956) introduced a concept of thinking skills called Bloom's Taxonomy. Bloom's taxonomy is a hieraki structure that classifies skills ranging from low-level (simple) to higher-level (complex). Benjamin S. Bloom, in the framework of this concept, divides educational objectives into three domains / domains of intellectual abilities, namely cognitive, affective and psychomotor. In 1994, one of Bloom's students, Lorin Anderson Krathwohl and psychologists of the school of cognitivism improved Bloom's taxonomy to suit the times. The results of these improvements were only published in 2001 under the name Revised Bloom's Taxonomy. Revision is only done in the cognitive realm. The revisions include :

Table 1. Differences between Bloom's Taxonomy and revised Bloom's Taxonomy.

Criteria	Bloom's Taxonomy	Revised Bloom's taxonomy
Proposed by	Benjamin Bloom in 1956	Anderson and Colleagues in 2001
Sub-division of knowledge	Factual, Conceptual, and Procedural	Factual, Conceptual, Procedural and Metacognitive
Name of the cognitive levels according to hierarchy	Knowledge < comprehension < application < analysis, synthesis < evaluation	Remembering < understanding < applying < analyzing < evaluating < creating
Type of terminology	Noun form	Action verb form
Dimensional representation of knowledge pyramid	One-dimensional: Cognitive process	Two- dimensional: knowledge dimension and Cognitive process dimension
Hierarchy	Cumulative hierarchy	Hierarchy based on complexity of knowledge

Note : '<' indicates 'lower level than

2.3 Cognitive Domains Revised Bloom's Taxonomy

The cognitive domain of Bloom's taxonomy is often used as a framework for classifying educational objectives, designing assessments, and designing curricula Alyona (2018). The concept of Bloom's taxonomy was developed by Benjamin S. Bloom in 1956. In the cognitive realm, there are six categories, namely knowledge, comprehension, application, analysis, synthesis, and evaluation.

In 1994, Lorin Anderson Krathwohl, one of Bloom's students, and several psychologists of the school of cognitivism made improvements in Bloom's taxonomy. The revised domain is only in the cognitive realm. These improvements are made to match the progress of the times. The result of the improvement of Bloom's taxonomy and published in 2001, is called the revised Bloom's Taxonomy (Shofiya F &; Sukiman, 2018). Changes in these terms can be seen in the following figure:

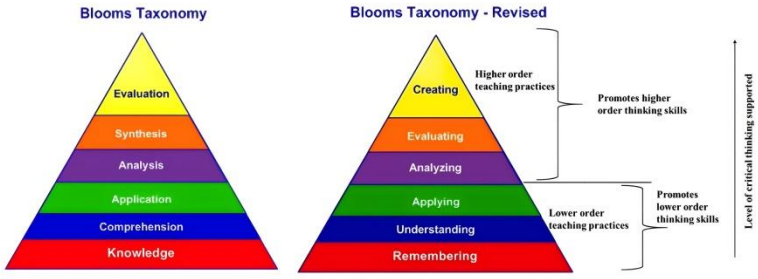

Figure 1. Revised Bloom's Taxonomy (Anderson et al., 2001).

Based on Figure 1, there are two versions of the hierarchy of cognitive aspects (old version and new version). The following will be presented an explanation of the description of the two versions. Krug (2022) Certifies that The first third level (bottom) is Lower Order Thinking Skills (LOTS), while the next three levels are Higher Order Thinking Skills (HOTS). Higher Order Thinking Skill is an advanced stage of low-level thinking or in other languages, before a person is able to think in the 3 stages above, must learn through the three stages below.

Anderson dan Krathwohl (2001:66-88) revise Bloom's Taxonomy of the cognitive realm to Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating. The 6 levels include the following:

1. **Remembering (C1)**

   Remembering is the ability to recall relevant information from long-term memory. Remembering is the lowest level in the cognitive domain. At this level, students should be able to identify, describe and name the material they have just learned. Functional verbs commonly

used in formulating memory indicators include mention, definition, explanation, name, list, agreement, outline, and restate.

2. **Understanding (C2)**

Understanding refers to building an understanding of various sources such as news, reading and communication. Comprehension refers to the classification and comparison of activities. Classification occurs when students try to identify information that falls into a certain category of information. Classifying begins with specific examples or information and then looks for general concepts and principles. Comparison means identifying similarities and differences between two or more objects, events, ideas, problems, or situations. Comparison is a cognitive process by which the traits of the objects being compared are found individually.

Classifying begins with specific examples or information and then looks for general concepts and principles. Comparison means identifying similarities and differences between two or more objects, events, ideas, problems, or situations. Comparison is the cognitive process of successively discovering the characteristics of the objects being compared.

3. **Applying (C3)**

Applying refers to the cognitive process of applying or using methods to complete an experiment or solve a problem. Apply refers to the procedural knowledge dimension. Legislation includes execution and realization.

Carrying out procedures is a cognitive process of students in solving problems and administering tests, where students already know the information and can decide with certainty which procedure to perform. If students do not know which procedure to take to solve the problem, they can change the standard procedure that has been established.

Implementation occurs when the student selects and applies procedures to things that he does not yet know or is unfamiliar. Since this is still unknown to students, they must first identify and understand the problem and then determine the appropriate course of action to solve the problem. Implementation is closely related to another dimension of cognitive processes, namely understanding and creation.

Applying is an ongoing process that begins with students solving problems using known standard methods. This activity is carried out regularly so that students can really complete this process without problems. This will then continue when there is a new problem that the student does not know, so students must know the problem well and choose the right method to solve the problem.

4. Analyzing (C4)

Analyzing includes the ability to break a whole into parts and determine how the parts are connected to each other or that part to the whole. Analysis emphasizes the ability to break down a basic element into parts and see the relationship between these parts. Analyze as an extension of understanding. The Apply category consists of the ability to distinguish (Differentiating), organize (Organizing) and give symbols (Attributing). The ability to process information to understand things and look for relationships. Separating material or concepts into parts to be reorganized into easy-to-understand structures.

Analyzing refers to the cognitive processes of engagement and organization. Attribution occurs when a student discovers a problem and then needs action to remediate the problematic issue. Activities make students gain information about the origins and reasons for discovering and creating something. Organizing presentations identifies elements of communication or situational outcomes and tries to figure out how these elements can create a good relationship. Organizing allows students to build systematic and consistent

relationships from the information provided. First, students must identify the most important and essential elements of the problem and then establish appropriate relationships from the information provided.

5. **Evaluating (C5)**

   Evaluating is defined as the ability to make judgments based on certain criteria and standards. Criteria are often used to determine quality, effectiveness, efficiency, and consistency, while standards are used to determine quantity and quality. Evaluation includes the ability to form an opinion about something or several things, along with accountability of that opinion based on certain criteria. The existence of this ability is expressed by giving an assessment of something.

   The evaluating category consists of Checking and Critiquing. The ability of learners to make judgments about situations, values or ideas includes the ability to make an opinion about something and take responsibility for its opinion. Operational verbs commonly used in compiling these capability indicators are compare, judge, criticize, weigh, decide, interpret, detail, validate, test, support and select.

6. **Creating (C6)**

   Creation leads to the cognitive process of combining elements into a single whole and leads students to create new products by structuring some elements in different shapes or patterns than before. The creation is closely related to the learning experience of students at previous meetings. Although making leads to a creative thought process, it does not completely affect the creativity of students.

   Creating, in this case, means directing students to create and produce work that can be done by all students. The difference between the creation of this cognitive thinking and other dimensions lies in other dimensions, such as the understanding of students, the application and analysis of knowledge already known in the work and production of students.

Creating includes generalizing and producing. Generalization is the activity of posing a problem and finding alternative hypotheses. This generalization refers to divergent thinking, which is the essence of creative thinking. Manufacturing leads to designing to solve a specific problem. Producing is closely related to other dimensions of knowledge, namely factual knowledge, conceptual knowledge, procedural knowledge, and metacognitive knowledge.

Table 2. Cognitive Operational Verbs

Remembering	Understanding	Applying		Analyzing	Evaluating	Creating
Choose	Characterize	Acquaint	Organize	Analyze	Assess	Compose
Clone	Clarify	Acquaire	Perform	Calculate	Calibrate	Construct
Define	Classify	Apply	Plan	Categorize	Compare	Design
Describe	Compare	Carry out	Practice	Classify	Conclude	Develop
Enumerate	Conceptualize	Collect	Prepare	Compute	Determine	Establish
Identify	Contrast	Communicate	Presenting	Contrast	Estimate	Generate
Match	Convert	Complete	Preserve	Diagnose	Evaluate	Integrate
Outline	Deduce	Conduct	Process	Differentiate	Justify	Make
Read	Demonstrate	Culture	Provide	Discriminate	Measure	Modify
Recognize	Differentiate	Delivery	Purify	Distinguish	Perceive	Plan
Remind	Discuss	Develop	Raise	Examine	Predict	Prepare
	Draw a conclusion	Do	Select	Explain	Quantity	Solve
	Elucidate	Draw	Sketch	Explore	Select	Troubleshoot
	Illustrate	Employe	Undertake	Isolate	Suggest	
	Interact	Execute	Use	Maintain		
	Interpret	Extract		Manage		
	Involve	Face		Retrieve		
	Narrate	Familiar		Separate		
	Predict	Formulate				
	Relate	Grow				
	Show	Implement				
	Summarize	Introduce				
	Understand	Operate				

Based on table 2, Anderson LW, Krathwohl DR (2001) also changed Cognitive Operational Verbs. Operational verbs are concrete verbs that represent that an indicator or indication has been implemented, so that it can be measured or assessed how strongly the indicator appears in students. Operational verbs are one of the important components in the 2013 curriculum because they help teachers describe the actions or activities that students perform during the learning process more clearly. Thus, teachers can more easily measure student learning outcomes and evaluate the success of the learning process. Therefore, it is important for teachers to use operational verbs in lesson planning and assessment of student learning outcomes.

By using operational verbs, it is expected that the learning process will be more structured and measurable so that students can more easily understand the material taught. In addition, operational verbs can also assist teachers in developing effective lesson plans and assessing student learning outcomes more precisely. By paying attention to these things, teachers can carry out the PTK cycle well and improve the quality of learning in the classroom. In addition, teachers can also develop their professional competence by conducting PTK continuously.