Implementation of Problem Based Learning in Dance Education

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ABSTRACT: Implementation of problem-based-learning in dance education have not simple. Provide an overview of the lesson problem-based-learning and describe the specific features that define this teaching model. Describe the theoretical basis of the model problem-based-learning and summarizes the research supporting its use. Explains how to plan and use the problem based learning model, including how to adapt its use to students with different abilities and backgrounds (Arends: 2008). Describe how to implement a learning environment that is conducive to use problem-based-learning. Describe appropriate ways to address student learning in accordance with objectives problem-based-learning. Specify regarding usage restrictions problem-based-learning and make predictions about its future use. Several aspects in the art of dance can be used as a problem, which students seek to find a solution to, namely: movement, accompaniment/music, floor patterns, make-up, fashion, property. Students are given the task in groups to discuss and explain selected aspects of a regional dance. Another example, students discuss making floor patterns in regional dance, with a predetermined number of dancers. Problems of movement, accompaniment, floor patterns, make-up and clothing can be used as problematic topics in the art of dance.

KEYWORDS: Problem-Based Learning, Dance Education, and Teaching Model

I. INTRODUCTION

The dance-teacher's role in *problem-based learning* (PBL) is to pose authentic problems, facilitate dance student inquiry, and support student learning. The essence of PBL involves the presentation of authentic and meaningful situations, which serve as a foundation for student investigation and investigation. Student collaboration in PBL encourages joint inquiry and dialogue and the development of thinking skills and social skills. Related with curriculum of *Merdeka Belajar Kampus Merdeka 2020*.

Thinking Skills and Problem Solving Skills

A confusing variety of ideas and words are used to describe how people think. But what is actually involved in thinking? What are the thinking skills and, in particular, what are the skills high level thinking that. Most of the existing definitions describe abstract intellectual processes, for example: Students work in teams to achieve learning goals.

1. Thinking is a process that involves mental operations, such as induction, deduction, classification, and reasoning.
2. Thinking is a process of symbolically representing (through language) various real objects and events and using these symbolic representations to discover the essential principles of these objects and events. These symbolic (abstract) representations are usually compared with mental operations that are based on facts and specific cases at the concrete level.
3. Thinking is the ability to analyze, criticize, and reach conclusions based on good inference or judgment.

Most contemporary statements about thinking suggest that higher-level thinking skills are not the same as skills related to more routine patterns of behavior. They emphasize that although a precise definition of higher order thinking cannot always be found, we recognize such thinking skills when we see them at work. Furthermore, higher order thinking, in contrast to more concrete behaviors, is complex, and cannot be easily reduced to fixed/definite routines.

Listen to Lauren Resnick's (1987b) statements regarding the definition of higher order thinking:

1. Higher order thinking is nature non-algorithmic. That is, the path of action is not completely predetermined.
2. Higher level thinking tends to be complex. The total path is not "visible" (mentally) from any point of view.
3. Higher order thinking often gets the job done multiple solutions (many solutions), each with its own disadvantages and advantages, and not a single solution.

4. Higher order thinking involves application multiple criteria (many criteria), which sometimes contradict each other.
5. Higher order thinking often involves uncertainty (uncertainty). Not everything related to the task to be handled is known.
6. Higher order thinking involves self-regulation thinking processes. We cannot detect high-level thinking in an individual if someone else determines each step.
7. Higher order thinking involves imposing meaning (determining meaning), finding structure in something that appears disorderly.
8. Higher order thinking is nature effortful (requires a lot of effort). There is a lot of mental work involved in elaboration and judgement required therein.
9. Higher order thinking skills cannot be taught using approaches designed to teach concrete ideas and skills.

PBL usually consists of five main phases that begin with the teacher directing students to a problem situation and culminate with various artifacts. If the scope of the problem is not too broad, the five phases of the model can be completed in a few class hours. However, more complex problems can take a full school year to resolve. The five phases of the model will be described in more detail later in this chapter.

In contrast to the tightly structured learning environment required for direct instruction, or the thorough use of small groups within cooperative learning, the learning environment and management system for problem-based teaching is characterized by democratic and open processes and the active role of students. In fact, the entire process is to help students become independent and independent learners self regulated, who believes in their own intellectual abilities, requires active engagement in a safe environment and inquiry oriented (investigate oriented). Although teachers and students move through the phases of PBL learning in a somewhat structured and predictable manner, the norms surrounding the lesson are open inquiry and freedom of thought. The learning environment emphasizes the central role of the learner, not the teacher. PBL takes cognitive psychologists as its theoretical support.

Dewey and the Problem-Oriented Classroom

As well as cooperative learning, PBL finds its intellectual roots in the work of John Dewey in Democracy and Education (1961), Dewey described a view of education with the school as a mirror of the larger society and the classroom would be a laboratory for investigating and solving real-life problems. Dewey's pedagogy encouraged teachers to engage students in a variety of problem-oriented projects and helped them investigate a variety of important social and intellectual issues. Dewey and his students, such as Kilpatrick (1918) said that learning in schools should be purposeful (has a clear purpose) and is not abstract and that purposeful learning can be accomplished best by ordering children in small groups to tackle projects that are of interest to them and of their own choosing. Learning vision purposeful and problem centered (problem-centered) supported by the student's innate desire to explore situations that are personally meaningful to him clearly relate contemporary PBL to Dewey's educational philosophy and pedagogy.

Piaget, Vygotsky, and Constructivism

Dewey provided the philosophical basis for PBL in the twentieth century, but it was psychology that provided much of its theoretical support. European psychologists, Jean Piaget and Lev Vygotsky, had a role structivism (constructivism) on which much contemporary PBL relies.

Jean Piaget, a Swiss psychologist, spent more than fifty years studying how children think and the processes related to their intellectual development. In explaining how intelligence develops in young children, Piaget confirmed that children have an innate curiosity and are constantly trying to understand the world around them. This curiosity, according to Piaget, motivates them to actively construct representations in their minds about the environment they experience. As they age and gain more capacity for language and memory, their mental representations of the world become more complex and abstract. However, throughout all stages of development, children's need to understand their environment motivates them to investigate and construct theories that explain it.

Constructivist theories of learning, which emphasize the need for learners to investigate their environment and construct personally meaningful knowledge, provide the theoretical basis for PBL. Discovery learning emphasizes active learning experiences that are child-centered, in which children discover their own ideas and derive their own meaning. Scaffolding is a process for a student who is assisted by a teacher or someone who is more capable to overcome problems or master skills that are slightly above his current level of development. Contemporary PBL also relies on another concept originating from Bruner, namely his idea of scaffolding, Bruner describes scaffolding as a process of students being helped to overcome certain problems that are beyond their developmental capacity with assistance(scaffolding) teacher or someone more capable. Note how similar Bruner's concept of scaffolding is to Vygotsky's concept of zone of proximal development.

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II. METHODS

Plan and Implementing Problem Based Learning

The PBL model is not complicated and it is easy to grasp the basic ideas associated with this model. However, effective implementation of this model is more difficult. This model requires a lot of practice and requires making certain decisions during planning and implementation. Some of the teaching principles are similar to those described for presentations, direct teaching, and cooperative learning, but others are unique to PBL. In the discussion that follows, the emphasis is on the unique features of problem-based teaching.

Planning PBL Lessons

At its most fundamental level, PBL is characterized by students working in pairs or small groups to investigate puzzling real-life problems. Because this type of teaching is so interactive, some people believe that detailed planning is unnecessary and may even be impossible. This is absolutely not true. PBL, like other student-centered interactive teaching approaches, requires just as much or even more planning effort. It is teacher planning that facilitates smooth movement from one phase of problem-based learning to another and facilitates the achievement of desired instructional goals. Because of its interactive nature, PBL requires as much planning, or even more, when compared to more teacher-centered models.

Designing the Right Problem Situation

PBL is based on the premise that confusing or unclear problematic situations will arouse students' curiosity, making them interested in investigating. Designing appropriate problem situations or planning ways to facilitate the planning process is one of the very important planning tasks for teachers. Some developers of problem-based teaching believe that students should play a major role in determining the problem to be researched, because this process will help create a sense of ownership of the problem (Krajcik et al., 2003). However, others believe that teachers should help students perfect pre-selected problems that are taken from the school curriculum and that teachers already have sufficient materials and equipment for.

A good situation involving a problem can be perceived as authentic, confusing, open to collaboration, and meaningful for students. Projects that require investigation or collaboration outside of school present special challenges for PBL teachers.

III. FINDINGS AND DISCUSSION

Conducting PBL Lessons

The five phases of PBL and the behaviors required of teachers for each phase are summarized in Table 2.1. The desired behavior of teachers and students, associated with each phase, is described in more detail in the following sections. Students need to understand that the purpose of PBL lessons is to learn how to investigate important problems and become independent learners.

Providing Orientation about the Problem to Students

At the beginning of a PBL lesson, as with all other types of lessons, teachers should clearly communicate the purpose of the lesson, establish a positive attitude toward the lesson, and describe what students are expected to do. For students who are younger or have never been involved in PBL, teachers should explain the processes and procedures of the model in detail. Matters that need to be elaborated include:

1. The main goal of lessons is not to learn large amounts of new information but to investigate important issues and become an independent learner. For younger students, this concept can be explained as a lesson for them to be able to "discover the meaning of things for themselves."
2. The problem or question being investigated does not have an absolute "right" answer and most complex problems have many solutions that sometimes conflict with each other.
3. During the investigative phase of the lesson, students will be encouraged to ask questions and seek information. The teacher will provide assistance, but students should try to work independently or with friends.
4. During the analysis and explanation phase of the lesson, students will be encouraged to express their ideas openly and freely. There are no ideas that will be laughed at by teachers or classmates. All students will be given the opportunity to contribute to the investigation and to express their ideas.

Teachers need to address problematic situations carefully or have clear procedures for involving students in problem identification. The guidance given in Chapter 8 (Book One) on how to conduct classroom demonstrations can be helpful here. Teachers should present problematic situations to students as interestingly and accurately as possible. Usually, being able to see, feel, or touch something will arouse interest and motivate investigation. Often times, use discrepant events (situations where the outcome is unpredictable and surprising) can arouse student interest. For example, a demonstration showing water flowing upwards or ice melting in extremely cold temperatures can create mystery and create a desire to solve the problem. Short video

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recordings of interesting events or situations that illustrate real-life problems such as pollution or urban environmental degradation are also motivational. The important thing here is that orientation about the problematic situation sets the stage for subsequent investigation, so the presentation must captivate students and arouse their curiosity and passion for investigation. One way to pose a problematic situation for PBL is to use discrepant events which creates mystery.

Table 2.1: Syntax for PBL

Phase	Teacher Behavior
Phase 1: provide orientation about the problem to students.	The teacher discusses lesson objectives, describes important logistical needs, and motivates students to engage in problem-solving activities.
Phase 2: organizing students to research	Teachers help students to define and organize learning tasks related to their problems.
Phase 3: assisting independent and group investigations	Teachers encourage students to get the right information, carry out experiments, and look for explanations and solutions.
Phase 4: develop and present artifacts and *exhibit*	Teachers assist students in planning and preparing appropriate artifacts, such as reports, video recordings, and models and help them to convey them to others.
Phase 5: analyze and evaluate the problem solving process	Teachers help students to reflect on their investigations and the processes they use.

Organizing Students to Research
Investigative teams can be formed voluntarily around friendship patterns or according to particular social or cognitive arrangements.

Cooperative Planning
Once students have received orientation about the problematic situation in question and have formed study teams, teachers and students should spend sufficient time to determine specific sub-topics, investigative tasks, and schedules. For some projects, the planning task is to divide more general problematic situations into appropriate subtopics and then help students decide which subtopics to investigate. For example, a problem-based lesson on a general weather topic could be divided into sub-topics, including acid rain, storms, clouds, and so on. The challenge for the teacher at this stage of the lesson is to ensure that all students are actively involved in the investigation and that the combined results of the sub-topic investigations will lead to a viable solution.workable (can work) for those problematic situations in general.

Collecting Data and Experimentation
This aspect of the investigation is very important. It is this step that teachers use to encourage students to collect data and carry out mental or actual experiments until they fully understand the dimensions of their problematic situation. The intent is for students to gather enough information to create and construct their own ideas. This phase of the lesson should be more than just reading about the issue in a book. Teachers should help students gather information from various sources, and they should ask questions to get students to think about the problem and about the type of information needed to arrive at a solution.defensible (maintainable). Students will need to be taught about the procedures of active investigators and how to use methods appropriate to the problem they are researching, namely: interviews, observations, measurements, following directions, or taking notes. They also need to be taught proper investigative etiquette. Most problem-based situations involve data collection, experimentation, hypothesis development, and solution analysis.

Developing Hypotheses, Explaining, and Providing Solutions
Teacher support for the free exchange of ideas and full acceptance of various ideas is a must in the investigative phase of PBL

Analyzing and Evaluating the Problem Solving Process
The final phase of PBL involves activities intended to help students analyze and evaluate their own thought processes as well as the investigative and intellectual skills they use. During this phase, the teacher asks students to reconstruct their thoughts and activities during the various phases of the lesson. When did they begin to reach a clear understanding of the problematic situation? When do they start to feel confident about a particular solution? Why do they accept certain explanations more easily than others? Why do they reject certain explanations? Why did they adopt the final solution? Did they change their mind about the problematic situation during the investigation process? What caused this change? What will they do differently in the future?

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Use Learning Centers for PBL, in dance

Learning centers in elementary schools has long been used as a vehicle to facilitate PBL and to enable younger students to work independently or in small groups in problem-based situations. Regardless of the label,centers it exposes students to a wealth of experiences and hands-on activities and allows students to experience PBL within the scope of the classroom environment. Learning centers usually contains a variety of materials, such as books, films, computer software, and audio and video recordings. This rich environment allows students of all ages and abilities to work at their own pace and on topics of their own choosing.

Arends (2008), According to Castle (2002), teachers can select content for learning centers in several ways. Some teachers organize centers around certain themes (e.g. autumn); others are around certain fields of study (mathematics, literacy, science, social studies).Centers can also be organized around specific stories or literature, with separate stations to address various literacy skills, such as listening, reading comprehension, vocabulary, or writing. Other teachers organize learning center around Gardner's theory of multiple intelligences (which is described in Chapter 2 [Book One]). For certain topics, teachers may have a centers that emphasizes the visual-spatial aspects of a particular topic; centers others are focused on logical-mathematical aspects, and others may emphasize interpersonal aspects.

Handling Multitasking Situations

In classrooms, where teachers use PBL, many learning tasks will occur simultaneously. Some groups of students may work on sub-topics in class, while others in the library, and others in the community or online. Younger students may use interest centers, they work in pairs and small groups on a variety of problems related to science, mathematics, language arts, and social studies before coming together again to discuss their work with the entire class. To make this multitasking classroom work, students must be taught to work both independently and collaboratively. Effective teachers develop cueing systems to alert students and help them transition from one type of learning task to another. There needs to be clear rules about when students are expected to talk to each other and when they are expected to listen.

Adapts to Different Completion Rates

PBL-specific management issues include making adjustments for different levels of completion, monitoring student work, managing materials and tools, and managing student movement outside of class.

Monitoring and Managing Student Work

In contrast to other types of teaching where all students complete the same assignment on the same day, PBL creates multiple assignments, multiple artifacts, and often varying completion dates. Consequently, monitoring and managing student work becomes crucial when using this teaching model. Three important management tasks that are critical for student accountability to be maintained and for teachers to maintain momentum in the overall teaching process are (1) assignment requirements for all students must be clearly explained, (2) student work must be monitored and feedback provided on work in progress. Running, and (3) notes on student progress must be made.

Regulating Movement and Behavior Outside of Class

When teachers encourage students to carry out investigations outside the classroom in places such as the library or computer laboratory, they need to ensure that students understand the school-wide procedures for movement and use of these facilities. When neededhall pass, teachers must ensure that students use them properly. When the movement is onhall regulated, students must understand the rules associated with it.

Measuring Understanding

Use Checklist and Rating Scales

Finding valid and reliable measurement techniques is a challenge faced by teachers who use PBL.

Table 2.2: Example of a Rating Scale for an Oral Presentation

a) Students clearly describe the question and provide reasons for its importance.	a) Students set questions, but do not describe or provide reasons for their importance.	a) Students do not set questions.
b) Strong evidence of preparation and organization.	b) There is some evidence of preparation and organization.	b) There is no evidence of any preparation or organization.
c) The presentation is mesmerizing.	c) The presentation is quite captivating.	c) The delivery is flat.
d) The sentence structure is correct.	d) The sentence structure is rather spot on.	d) Many of the sentence structures are wrong.

e) Visual aids are used to enhance the presentation.	e) Visual aids are referred to separately.	e) Visual aids are not mentioned.
f) Audience questions are answered clearly and with specific information.	f) Audience questions are answered on the fly.	f) Audience questions were not answered.

There is considerable enthusiasm for PBL among teachers and students.

IV. CONCLUSION

In dance, provides an overview of problem-based learning and describe the specific features that define this teaching model.

In contrast to other models where the emphasis is on presenting ideas and demonstrating skills, in PBL the teacher presents problematic situations to students and instructs them to investigate and find their own solutions. The instructional goal of PBL is threefold: to help students develop investigative skills and problem-solving skills, to provide students with experience in adult roles, and to enable students to gain confidence in their own abilities, to think and become good learners.self-regulated.

The general flow or syntax of PBL consists of five main phases: providing orientation to students about the problem; organizing students to research; assists with independent and group investigations; develop and present artifacts andexhibit, and analyzing and evaluating work. The PBL learning environment is characterized by openness, active student involvement, and an atmosphere of intellectual freedom.

Describe the theoretical foundations of PBL and summarize the research that supports its use.

PBL has intellectual roots in the Socratic method of ancient Greece, but has been expanded by ideas originating from twentieth-century cognitive psychology. The knowledge base of PBI, is rich and complex. Several studies conducted over the past few years provide strong evidence of the model's instructional effects. However, other studies have come to the conclusion that the effects are still unclear.

Over the past three decades, considerable attention has been paid to teaching approaches known by various names discovery learning, inquiry training, higher-level thinking all of which are focused on helping students to become autonomous and independent learners, who are able to understand for themselves the meaning of various things.

Explains how to plan and use PBL, including how to adapt it for use with students with diverse abilities and backgrounds.

The main planning tasks associated with PBL include communicating goals clearly, designing interesting and appropriate problem situations, and logistical preparation. During the investigative phase of problem-based lessons, the teacher acts as a facilitator and guides students' investigations.

Describe how to implement a learning environment that is conducive to using PBL.

Specific management tasks associated with PBL include handling a multitasking learning environment, adapting to different levels of assignment completion, finding ways to monitor student work, and managing a variety of materials, supplies, and logistics outside the classroom.

Describe appropriate ways to access students' academic and social learning that are consistent with PBL goals.

Appropriate assessment and evaluation tasks for PBL require efforts to find alternative assessment procedures for measuring student work such as performance and exhibit. These procedures may include performance assessments, authentic assessments, and portfolios.

Specify obstacles to using PBL and making predictions about its use in the future.

Dance teachers who use PBL face many obstacles such as inflexible school schedules and regulations, which limit student movement. Will interest in PBL continue, or will use of this model discontinue over time?

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