Problem – Based Learning

Problem-Based Learning, according to Savery and Duffy, was "developed in medical education in the early 1970's" (7). Problem-Based Learning, is simply defined as an instructional method in which students learn by solving a problem. Traditional learning takes place with instructors providing pre-determined content they wish students to learn in traditional platforms, such as lecture and textbook or instructional literature. In problem-based learning, learning takes place as students are presented with a problem in which they must solve. Without content material being provided, the learner becomes responsible "for their own learning" (Gallow) as they "discover and work with content the learner determines to be necessary to solve the problem" (Landsberger). Schmidt defines problem-based learning as an instructional method that "provides students with knowledge suitable for problem solving" in which the "activation of prior knowledge, elaboration, and encoding specificity" are described and measured (11).

There are notable benefits to the utilization of problem-based learning in instruction. First and foremost, problem-based learning is student-centered in which learning opportunities are relevant to students. In most cases, the problem presented presents a "real-world challenge similar to ones they might encounter" (Gallow). Another benefit to problem-based learning is that there is no right or wrong answer (Gallow). Learners will provide "reasonable solutions based on application of knowledge and skills deemed necessary to address the issue" (Gallow). Learners will, according to Schmidt, rely on their prior knowledge, look for application to life connections (described as encoding specificity), and elaborate or expand knowledge to formulate a solution (12). In the process, learners develop and strengthen critical thinking skills, those skills that "analyze, synthesize, and evaluate information" in order to apply that information appropriately (Gallow). Gallow postulates that as learners "demonstrate for themselves their capabilities," there is increase in "students' motivation to tackle problems" in the future.

The drawbacks to problem-based learning, like the benefits, lay on the learner. One criticism of problem-based learning is based on students are novices at learning. Students "cannot be expected to know what might be important for them to learn" (Gallow). Additionally, the learner may not possess prior knowledge in the subject area the problem to be solved presents. The individual's level of prior knowledge "can greatly impact their current learning" (Gallow).

While the issues raised with problem-based learning should be considered, the instructor plays a crucial role in its overall success. According to Gallow, one way is that instructors "witness how students go about addressing intellectual challenges" to gauge the level of "intellectual currency." This "active interactive, and collaborative learning, on which problem-based learning is based, allows an instructor the rare opportunity to observe students' learning processes" as well (Gallow). Likewise, "asking meta-cognitive questions" of students assists in the learning process as well as in student self-reflective behavior necessary in critical thinking (Gallow).

The model for problem-based learning, as presented by Landsberger, is as follows:

Step 1: Explore the issues.

Step 2: List what is known about the problem.

Step 3: Develop, and write out, the problem statement in own words.

Step 4: List out possible solutions, then select the strongest or best one.

Step 5: List actions to be taken with a timeline to complete assignment.

Step 6: List what you need to know/to research in order to support your solution and do the research.

Step 7: Once there is support for a solution, write it up with supporting documentation.

The school media specialist plays a significant role in problem-based learning. Providing valuable resources, both print and electronic, through comprehensive and well-planned collection development is only one component. As with the instructor, the school media specialist is a mentor for critical thinking skills through meta-cognitive question-probing. In addition, the school media specialist can work through independent as well as collaborative learning activities to provide research skills and information seeking skills and strategies which increase the learner's competency, furthering the learner's learning and success.

Works Cited

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