DOCUMENT RESUME

ED 450 469 EA 030 890

AUTHOR Estes, Dwain M.
TITLE Issues in Problem-Based Learning.
PUB DATE 1999-08-00
NOTE 5p.; Paper presented at the Annual Meeting of the National Council of Professors of Educational Administration (Jackson Hole, WY, August 1999).
PUB TYPE Reports - Descriptive (141) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Achievement; *Administrator Education; *Cooperative Learning; Critical Thinking; *Curriculum Development; *Curriculum Evaluation; Educational Innovation; Educational Research; Elementary Secondary Education; Higher Education; Learning Strategies; Management Development; Medical Schools; *Problem Based Learning; Teacher Role
IDENTIFIERS National Council of Professors Educ Administration

ABSTRACT

Problem-based learning in educational administration preparation programs is increasingly the focus of university departments, professors, presenters at symposia, and the literature in the field. This increasing attention, while appropriate, creates the need for additional reflection before organizations move ahead with problem-based learning programs. Important issues to consider include determining what content to cover, whether all required content is covered, and how the question of expertise is addressed. Problem-based learning typically stresses the importance of integrating "knowing" and "knowing how," and does not prejudge relevant content. This approach raises concerns among members of governing boards and faculties about whether problem-based learning programs ensure coverage of the appropriate content. Program implementation requires that the faculty learn about problem-based curricula, a key cadre of enthusiasts be developed, the dean's support is offered, and students understand the uncertainties that may arise. In problem-based programs, the nature of the teacher-student relationship changes, with teachers working more as facilitators and provider of resources than purveyors of knowledge. Student assessment and program evaluation are extremely important and require a review of objectives to ascertain desired outcomes. Educators at McMaster University in Canada developed objectives for problem-based learning, including making students active partners, increasing the perceived relevance of content, focusing on conceptual understanding instead of rote memorization, and scheduling less time in the curriculum. (TEJ)

EA

Paper presented at the 1999 Annual Meeting of the National Council of Professors of Educational Administration, Jackson Hole, Wyoming

ISSUES IN PROBLEM-BASED LEARNING

By Dwain M. Estes
University of Texas-Pan American

Problem-based learning in educational administration preparation programs is becoming ever more popular. More and more departments and individual professors are attempting to implement such programs. More and more papers are being presented at national conferences where the experimenters are sharing their experiences. A special interest group at the annual meeting of the American Educational Research Association gives attention to the area. All of this activity is good for this instructional approach holds great promise; nevertheless, there are some issues that need to be thought about as we move ahead with such programs.

1. One of the issues in problem-based learning is the question of how content is structured. What content is supposed to be covered in the curriculum? How does one know if all of the required content is covered? Problem-based learning takes the position that knowing how to do something is equally as important as knowing subject matter. The question of expertise becomes involved.

> On a subject-based conception, expertise tends to be seen in terms of content: to be an expert is to know a lot of content; it is to have 'covered much in one's learning; typically, one has a great deal of propositional knowledge, 'knowledge that . . . (such and such is the case)'. (Margetson, 1998, p. 38)

An alternative understanding of expertise is an ability to make sound judgments as to what is problematic about a situation, to identify the most important problems, and to know how to go about solving or at least ameliorating them. Dealing with problems presupposes prepositional knowledge but does not equate expertise with it. (Margetson, 1998, p. 38)

> Problem-based learning places emphasis on what is needed, on the ability to gain prepositional knowledge as required, and to put it to the most valuable use in a given situation. (Margetson, 1998, p. 38)

Problem-based learning does not deny the importance of content, but it does deny that content is best learned in the abstract, in vast quantities, and memorized in a purely propositional form, to be brought out and applied to problems. Problem-based learning requires a greater integration of knowing that with knowing how. It does not prejudge what is relevant subject-matter. (Margetson, 1998, p. 38)

Given these positions, there is still a great deal of concern on the part of governing boards and faculties about whether the right content will be learned in a problem-based approach. One university that was seeking approval from the State's Coordinating Board for Higher Education for a new doctoral program emphasized problem-based learning in its presentation to the Board. Some Board members had grave concerns about such an approach. Faculty members also wondered whether "their content" would be covered and to the extent needed.

One university tried to approach the concern by developing a curriculum structure that focused on the Interstate School Leaders Licensure Consortium National Standards. (Council of Chief State School Officers, 1996) Within the standards, a set of leadership themes was adopted to assure emphasis on leadership rather than traditional administration. Within this schema a list of 135 potential issues, concepts, theories and practices for inclusion in the curriculum were created. These topics were presented to students, faculty and some national leaders in the field of educational administration for their prioritization. The feedback form the various groups was analyzed and sixty-five topics were organized by standard, by theme and by year into a curriculum sequence. The objective was to indicate what content was to be covered in the curriculum and to make sure that in the implementation of problem-based learning, no gaps were left in the program.

This approach still begs the question of the extent to which problems identified determine the content covered and place of a preset amount of content that must be included in the program.

2. Implementation of a problem-based curriculum requires at least four considerations:

a. The faculty has to learn what problem-based curriculum really is.
b. A key cadre of enthusiasts has to be developed.
c. The Dean's support is required (Abrahamson, 1998, p. 53)
d. Students have to understand going in of the uncertainties that may be encountered in implementing the approach.

Medical schools that have implemented problem-based learning successfully, including Harvard, have taken great pains to educate prospective users of the methodology and have involved the instructors in the development of instructional materials. Field trips have been taken to successful sites and consultants from experienced universities are brought in to guide the implementation in the new setting. In some cases, dual programs have been offered letting students and faculty work in the program of their choice, at least initially. Sufficient time is allowed for preparation bvefore entrance into the program.

One university implementing a new doctoral program did not take an adequate amount of time, did not convince all of the professors of the soundness of the approach, did not prepare the students for the frustrations that might be encountered and by the end

of the first semester, the Dean, who was an initial supporter had decided that the doctoral students were in need of direct instruction, that an instructional injustice was being perpetrated on them, that the instruction that had been provided was superficial and not in depth, and that there was too much frustration associated with the approach. Thus, at the end of one semester the approach was killed, even though the leadership of the program had been charged with developing a new and innovative program for educational leaders based on problem-based learning.

3. Teacher and student roles change in a problem-based approach. The teacher becomes much more of a facilitator of learning and a resource person versus a dispenser of knowledge. Students have to become self-directed learners, have to work together to solve problems, and have to learn how to share findings that are critical to success. Being successful in the new approach requires adjustments on the part of each. It can be very frustrating for students who have been successful under a previous methodology to have to figure out what is needed to solve a problem and then acquire the necessary knowledge and skills to do so. Teachers may not be the sole source of wisdom in the new approach and this can be disconcerting for them.

4. Student assessment and educational program evaluation are extremely important. We are naturally concerned that the program designed consists of the very best program that can be developed to accomplish our professional objectives.

In evaluating problem-based learning, we need to review the objectives in order to assess outcomes. The medical educators at McMaster University in Canada in developing the original objectives for problem-based learning wanted to develop a curriculum that placed the emphasis on learning rather than teaching by:

a. making the student an active partner in the learning process,
b. increasing the perceived relevance of what is being learned,
c. focusing more on conceptual or deep understanding than rote memorization, and
d. having less scheduled time in the curriculum. (Woodward, 1998, p. 295)

The medical education pioneers decided to use patient problems as the cornerstone of curriculum planning. If we accept similar objectives and appropriate educational administration problems, we have to be able to measure whether administrators become better problem solvers, and will know how to seek out the information they need to solve future problems they will encounter in their professional careers.

References

Abrahamson, Stephen (1998). "Good Planning is Not Enough". In Boud, David and Feletti, Grahame (Editors), The Challenge of Problem-Based-Learning (p. 53). London and Sterling (USA): Kogan Page.

Council of Chief State School Officers (1996). Interstate School Leaders Licensure Consortium Standards for School Leaders. Washington, D. C.

Margetson, Don (1998). "Why is Problem-Based Learning a Challenge?" In Boud, David and Feletti, Grahame (Editors), The Challenge of Problem-Based Learning (p. 38). London and Stgerling (USA): Kogan Page.

Woodward, Christel A. (1998). "What Can We Learn from Programme Evaluation Studies in Medical Education?" In Boud, David and Feletti, Grahame (Editors), The Challenge of Problem-Based Learning (p. 295). London and Sterling (USA): Kogan Page.

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE

(Specific Document)

I. DOCUMENT IDENTIFICATION:

Title: Issues in Problem-Based Learning

Author(s): Dwain M. Estes

Corporate Source:

Publication Date: Presaentation-NCPEA August, 1999

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic media, and sold through the ERIC Document Reproduction Service (EDRS). Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following three options and sign at the bottom of the page.

The sample sticker shown below will be affixed to all Level 1 documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

Level 1

☒

Check here for Level 1 release, permitting reproduction and dissemination in microfiche or other ERIC archival media (e.g., electronic) *and* paper copy.

The sample sticker shown below will be affixed to all Level 2A documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE, AND IN ELECTRONIC MEDIA FOR ERIC COLLECTION SUBSCRIBERS ONLY, HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2A

Level 2A

☐

Check here for Level 2A release, permitting reproduction and dissemination in microfiche and in electronic media for ERIC archival collection subscribers only

The sample sticker shown below will be affixed to all Level 2B documents

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Sample

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

2B

Level 2B

☐

Check here for Level 2B release, permitting reproduction and dissemination in microfiche only

Documents will be processed as indicated provided reproduction quality permits.
If permission to reproduce is granted, but no box is checked, documents will be processed at Level 1.

I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries.

Sign here, please

Signature: Dwain M. Estes

Printed Name/Position/Title: Dwain M. Estes, Professor

Organization/Address: University of Tex.-Pan American, 1201 W. University Dr. College of Education, Edinburg, Tx. 78539

Telephone: (956) 380-3436

FAX: (956) 381-2797

E-Mail Address: dmesdes@earthlink.net

Date: 4-12-00