

The Active Learning Approach: Teaching Caseworkers at a Community Outreach Program

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Introduction

There are numerous outreach programs across the country and worldwide whose goal it is to cater to the under-served of a community. These clubs and organizations take time and effort to make contact with less fortunate individuals in the hope of improving at least a small part of their current situation. Whether it be in the form of money, goods, food, or clothes, these programs try to provide support and assistance, so that those less fortunate have less stress and obstacles to overcome to obtain basic needs for living day-in and day-out. If these people can be secure in having provisions for basic needs, then they may be able to focus on higher goals such as: finding a job, maintaining personal independence, and providing for younger family members. The hope is that with each generation, the standard of living for the under-served will improve enough so that they too will be able to productively give to their community in return.

But how do these outreach programs function? Besides providing objective goods and supplies, they also may try to educate their recipients about better means of improving their own lifestyles independently. As a result, it is hoped that they become less dependent on community support in the future. With any form of education, however, if one is asked to teach others, he/she must educate him/herself first. In programs whose goal it is to deliver information as well as support, three facts must be considered: (1) what exactly the information is that needs to be delivered; (2) who will be passing on that information and what do they need to know to do so; and (3) how will the information be conveyed to the recipients in a way that they will understand and incorporate that knowledge into their daily lives.

This project tried to organize goals (1) and (2) mentioned above over a period of one year of working with a local outreach program. The plan was first to develop a concise curriculum of information to be taught to the workers of this program. Then to use this curriculum to teach newly selected workers, followed by an assessment of their knowledge through testing. Originally, the plan was to also assess how that new knowledge was then conveyed to the clients whom the workers assisted, however, due to time constraints this was not done.

Curriculum Development

“What matters...is not just what students know but what they can do with what they know. What’s at stake is the capacity to perform, to put what one knows into practice.”
(Hutchings, 1990)

How to develop a curriculum entails learning first about the type of individuals who will be taught (Belenky, et al., 1986; Cross, 1981; Meyers & Jones, 1993; Vygotsky, 1997). In this case, I worked with adults—all females—in a community program to help support and educate pregnant women at risk for premature labor and delivery. The program is named the Maternal-Infant Outreach Program (MIOP) and is located in Hartford, CT. City finances and a private hospital budget fund it, with about 60% of funds coming from the city of Hartford. The caseworkers to be educated came from varied educational backgrounds. All had finished high school, and most had completed college programs. However, overall only a couple workers had had any background in the science of conception, pregnancy, and birth, beyond any possible personal experiences with pregnancy of the caseworker and her family.

With this background knowledge, it was then possible to discover a worthwhile method to assist these caseworkers in learning a large amount of information surrounding these topics in a short period of time. First, an important realization about teaching adults compared to younger

students is that they usually have a background of knowledge from which they see the world and work within it. They already have a basis from which to build on. This idea follows the origins of Western education, which is thought to start with Socrates and his philosophy that tried to have his students express knowledge that they already knew (Cross, 1981; Meyers & Jones, 1993). He believed that people take in new information based on personal background and experiences.

However, as Cross (1981) explains in the more modern view of teaching. She states, "Learning is not so much an additive process, as it is an active, dynamic process in which the connections are constantly changing and the structure reformatted." This concept helps to differentiate the human mind from computer mechanics. While computers continue to store data as it is obtained in its original format and concept, people are able to resynthesize new information with the old to bring about new concepts and ideas. With this in mind, Cross (1981) makes another good point that, "Most adults are not much interested in storing knowledge for later use or in locating answers to questions they do not have." Adults want useful information that can assist them in their daily living. "Adult learners are most frequently motivated by the pragmatic desire to use or apply the knowledge or skill. Most often, they hope to take action—do something, produce something, or decide something" (Tough, 1968). It puts the control of learning in the student's arena to discover what he/she would find most useful for daily work and activities. Not only does this make learning more interesting and enjoyable for the participant, but by applying knowledge to situations directly, the information becomes more ingrained in the person's mind to be remembered (Knowles, 1978; Meyer & Jones, 1993).

These concepts lead into the next important understanding for successful teaching: What motivates people to learn? Certainly in the situation of this curricular development, the information needed to be clear, concise, and related to current common situations in which the MIOP caseworkers would be involved. Making the learning environment an active atmosphere keeps interest alive. "Too often we expect that by simply having students do a certain amount of reading, our objectives will be successfully accomplished. That is usually not the case" (Meyers & Jones, 1993). Instead, research has shown that students absorb materials better when there is discussion and application of the information to real-life situations. As Meyers & Jones (1993) state, "Students learn not by just absorbing content (taking copious notes and studying for exams), but by critically analyzing, discussing, and using content in meaningful ways." It is also an important motivational factor to encourage the student to accept more responsibility for his/her own behavior. This approach put the leader in a position of guidance through a student's learning, rather than as an authoritative prominence (Knowles, 1978; Williams, 1998). As a result, the student is given more control over his/her learning process, and allowed to discover the best method by which to remember the gathered information.

Other work by Cross (1981) and Belenky et al.(1986) about how to improve learning participation and interest of people with low self-confidence was applicable to the caseworkers with whom I worked. The goal is to provide opportunities to learn with low levels of risk and threat. That is, emphasis on self-directed learning with fewer events for public evaluation will more likely be successful for the low self-esteem individual. The curriculum should aim to provide noncompetitive situations. Certainly it is important to have tasks that are clearly defined with adequate feedback and instructions for improvement, so the objective is to clearly outline goals and extend support and reassurance to these students that they can succeed through their own efforts. Therefore, assessments should be frequent, private, and provide direction as to where future energy on learning should be focused (Belenky et al., 1986; Cross, 1981; Vygotsky, 1997). Considering the caseworkers with which I worked, many of them portrayed a hesitant interest and participation in group sessions at the outset of the curriculum. "I don't know," or "I can't learn all of this," or simply silence were some of the responses in the beginning when I

asked a topic question or presented a short problem case. However, I realized that the workers usually had many correct answers when I persisted with the questions and provided reassuring comments, such as: “I’m sure you can explain this to me,” or “You are doing well,” or “Remember, we are just discussing the case. We do not need a definite answer now.” By the end of the course, the workers seem to speak much more openly and without hesitancy throughout the educational sessions.

Project Location

The community outreach program involved with this restructuring of the educational curriculum for their workers is called the Maternal and Infant Outreach Program (MIOP) located in Hartford, CT. MIOP was created in 1985 with the goal to reduce the number of low birth weight babies and improved the infant morbidity and mortality in Hartford. To do so, it has organized a network of caseworkers who are trained to assist clients in the community during their pregnancy and labor & delivery, as well as to promote positive parenting skills and preventative child care.

MIOP works with many medical clinics for prenatal care in the Hartford area, including Saint Francis Hospital, Mount Sinai Hospital, Hartford Hospital, Charter Oak/Rice Heights Centers, Community Health Services, Asylum Hill Family Practice, and other private physicians’ offices. Clients are referred to MIOP by these sites or by self-referrals. If the client agrees to be given assistance, MIOP provides free visits to the client’s home on a monthly basis, or more often if deemed necessary.

The caseworkers at MIOP have been trained in the past by the staff at MIOP and in particular, Dr. Leticia Marulanda, who was medically trained in the country of Colombia. While the program has been working generally well up until this time, Dr. Marulanda has been looking for ways to better organize and present the information to the caseworkers, which use it to guide and educate their clients. It has been questioned if the caseworkers are getting the same information due to no consistent method of teaching the information, and no specific assessment tool to test their knowledge.

There are 10 caseworkers currently employed at MIOP and each worker stays, on average, about two to three years. Therefore, the need to design a packet of training materials would be considered invaluable to the program since it would be used frequently and provide a more efficient, organized, and standardized method of teaching.

Methods

Working with Dr. Marulanda, a list of topics was generated that she, the workers, and I deemed important based on the frequency of discussion of these topics with clients. The topics are listed in *Table 1*. Each topic was organized into a learning session with related articles and videos chosen for their concise goal-directed approach of teaching concepts from a patient-oriented perspective. In turn, these readings could be used by the caseworkers to teach their clients in the future. A set of listed objectives, cases, and questions were also designed for each topic to be used during specific teaching sessions, as recommended by research goals for active learning (Cross, 1981; Myers & Jones, 1993). These elements would help to reinforce the knowledge base by applying topic information to specific presentations of the topic at hand. Please see *Appendix A* for the entire curriculum designed for MIOP.

Table 1. List of Curriculum Topics for MIOP Caseworkers

Basic Anatomy and Physiology of the Female and Male Reproductive Systems
Female Reproductive Cycle
Stages of Pregnancy
Obstetrical Tests and Procedures
Rh Isoimmunization
Normal Labor and Delivery
Preterm Labor
Third Trimester Bleeding
Gestational Diabetes
Pregnancy-Induced Hypertension
Urinary Tract Infections
Contraception
Sexually Transmitted Diseases

The topics were separated into 15 distinct teaching sessions that lasted 45 minutes on average. Most often, a single lesson was taught each day, although occasionally two lessons were combined due to time constraints. Two new caseworkers were taught in September of 1999 and one new worker in February of 2000. The curriculum was completed in about three weeks (15 workdays) on both occasions.

As the “curriculum instructions” explain (see *Appendix A*), the caseworkers were asked to read the assigned materials prior to the lesson date so that they had fundamental knowledge of the topic at the outset of a teaching session. All lessons were organized in similar fashion. First the objectives for the topic were reviewed orally with the caseworker/s. Second, the caseworker/s read the case/s for the topic aloud, followed by the reading of the first question for the case. From this point, there was open discussion about how the caseworker/s would handle the case surrounding the topic for that lesson. Discussion of the case/s would always lead to multiple questions from the workers in training, and I, as the teacher, aimed to re-ask their questions in other ways to hopefully assist them in answering their own questions. This process was successful in the majority of episodes.

At the end of the curriculum’s training sessions, the caseworkers were given a week to review the curriculum topics and confirm any questions that came up about the topics with me. Then an assessment test designed to evaluate the caseworkers’ knowledge of these 15 topics was taken by the caseworkers to see if they could apply the knowledge that was taught (see *Appendix B* for the Assessment Test). The original test design was based on open-ended questions related to written cases, similar to those used in the lessons for each topic. However, after discussion with Dr. Marulanda, it was decided that this method of testing, although recommended by research on assessment methods for active learning (Bridges & Hallinger, 1997; Meyers & Jones, 1993), was, in this case, too “difficult, extensive, and time-consuming” for the caseworkers to answer in written form. As a result, the second draft of the assessment test kept the topic cases and a few open-ended questions, but also added other test formats such as: True/False; Multiple Choice; and Matching sections. The final product was still able to relate the questions to each case-based topic so as to apply answers to specific situations, just as the caseworkers would do with actual clients in the future.

The three caseworkers took the test on a Monday after ten days of review time for Worker #3. Since Workers #1 and #2 went through the training curriculum in September 1999, they already had the information and were simply reminded at the start of the review period that they would be taking the test on the same day as Worker #3. The workers were given two hours to complete the

assessment test. Dr. Marulanda corrected the test and each worker met privately with her to go over the test questions that were incorrect. Goals of the meeting were to have the caseworker focus on the topics of weakness by re-reading the curricular materials and meeting at a later date to discuss the weak areas again.

Results

Objectively, all three newly trained caseworkers did extremely well on the written test. Out of 108 questions, Worker #1 had 20 wrong, Worker #2 had 3 wrong and Worker #3 had 10 wrong. All workers completed the test within the given time period. Each worker had different areas of weakness based on the results of the assessment test. Dr. Marulanda went over the corrected answers to those questions, and within a couple weeks of taking the test, I met with the three workers to discuss in open forum their impression of the curriculum, the training, and the assessment test to receive feedback for future use of the curriculum. Table 2 lists the caseworker's statements that critique the curriculum.

Table 2. Critique of the New Curriculum as Stated by the Caseworkers

The Curriculum:

- "I liked the objectives. They helped me to focus on what was especially important to learn."
- "I would like to have more information on how to teach the topics to my clients."
- "The single page for each topic outline was easy to understand and well organized."
- "The format of the topic sessions was relaxed yet I learned a lot."
- "I felt very comfortable asking questions."
- "There's a lot of reading...I didn't read all of it, but what I did read was short and specific...it was useful information."
- "Reading the cases helped me to focus on the topic of the day."
- "I liked being able to review the topic of the previous day before starting the new topic of that day."
- "I have been using the videos with my clients that I was asked to see during the review of the topics."
- "Everything is so organized!"

The Assessment Test:

- "It was too long."
 - "I feel more confident about the information now."
 - "I did not do well on the anatomy section, but actually I did not review it before the test."
 - "I did not realize that it would be more detailed than matching and 'true/false'...I found that difficult...it meant you had to really think about the answer."
 - "I would suggest that we had more written 'drills' periodically throughout the curriculum to prepare us for the long written test at the end."
 - "It might have been easier to answer those questions in an oral exam instead of on paper."
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Recommendations / Conclusions

The new curriculum, using the method of active learning (Cross, 1981; Meyers & Jones 1993), provided a novel way to teach the MIOP caseworkers about background scientific information that would be useful on a daily basis during their interactions with clients. Overall, the project was a success concerning immediate results. The caseworkers' feedback present a positive view

of what topics were chosen, how the workers were taught, and what their subjective impression of how their new knowledge would affect their teaching and assistance of clients. The high pass rate of the assessment test also presents a positive outcome of the curricular training process on an objective level.

However, as with any new application, there are ways to improve current successes for the future. I make the following suggestions below and encourage that the work on this project not end here, but continue to be developed in the years ahead. First, concerning the educational materials specific for MIOP, it might be worthwhile have more of them be written in Spanish. The reason for this is that MIOP has a number of native spanish-speaking caseworkers and therefore, having the readings written in their native tongue might increase their comprehension of the information to be learned. With better understanding comes increased confidence in the subject and the potential for improvements in educating clients about the topic. Also, it would probably be useful to increase the number of cases used throughout the curriculum. As stated earlier, the more the caseworker is able to apply learned knowledge to practical situations, the more useful he/she will find the information and be motivated to learn it. As Flexner stated at an open forum on curricular education (1910) "There is no cement like interest, no stimulus like a hint of practical consideration."

The next suggestion relates to the ability of caseworkers to maintain the knowledge that they have gained over the long term. To remember new information beyond the present time it needs regular rehearsal and use. Therefore, it would seem to make sense to have periods of "refresher" cases surrounding these educational topics to reinforce the knowledge base of the caseworkers. This could be done at regular intervals. For example, cases could be presented at monthly meetings, related to specific clients or originally created, to highlight different, and caseworkers would verbally explain how they might handle various situations given to them. Not only would this help the MIOP director assess how well the information is understood at timely intervals, but it also would allow the caseworkers to judge for themselves what topics may need reviewing based on how well they were able to explain their method to remedy the situation presented.

Concerning the design of the assessment test, I believe that it would be more useful to test the newly-trained caseworkers using open-ended questions related to example cases given. This would provide more accurate results as to how well a caseworker understands the topics being tested. By using testing forms of matching, true/false, and multiple choice, the test automatically puts the answer on the page in front of the person being tested. As a result, this increases the correct "guess" when compared to the process of having to answer a completely open question. As a result, there would be less likelihood that a caseworker would get through the testing period with weak point in their knowledge base. If this method "takes too long," then perhaps it would be worthwhile to have part of the assessment completed in an oral examination.

When areas of weakness in knowledge are found using the assessment test presently there is no set method of re-testing the caseworker after she has been informed of her weak areas. It would make sense to establish a method of re-assessing the worker's knowledge. Perhaps the worker would be given a few days to a week to review the topic and then be given more cases to answer in an oral session. If more intense study is required, the worker could be asked to teach the rest of the workers at a given organizational time.

Finally, a huge area of this project that was neglected, due to time constraints, concerns how the knowledge of these topics is passed on to the clients in the MIOP program. In this case, my curriculum was used to teach persons of a certain educational and community background. The clients are of a different group as well. Research into how the clients will learn and retain the

information is required. After all, the long term is to improve the pregnant-mother's lifestyle. With better understanding of their situation and what they can do to prevent complications and obstacles during their pregnancy and child's infancy, the better off the mother and child will be in the future. Research on educating this population would extend MIOP's abilities to assist their clients to an even higher degree than what is done already.

References

- Belenky MF, Clinchy BM, Goldberger NR and Tarule JM. *Women's Ways of Knowing: The Development of Self, Voice, and Mind*. 1986; Basic Books, New York.
- Bridges EM and Hallinger P. "Using Problem-Based Learning to Prepare Educational Leaders," *Peabody Journal of Education*. 1997; 72: 131-146.
- Cross KP. *Adults as Learners*. 1981; Jossey-Bass Pub., San Francisco.
- Hutchings P. "Assessment and the Way It Works," Closing address at AAHE Conference, 1990. In Meyers & Jones, *Promoting Active Learning: Strategies for the College Classroom*. 1993; Jossey Bass Pub; San Francisco.
- Knowles MS. *The Adult Learner: A Neglected Species*. (2nd ed.) 1978; Gulf, Houston.
- Meyers C and Jones TB. *Promoting Active Learning: Strategies for the College Classroom*. 1993; Jossey Bass Pub; San Francisco.
- Tough A. "Why Adults Learn." In Cross, *Adults as Learners*. 1981; Jossey-Bass Pub., San Francisco.
- Walton HJ and Matthews MB. "Essentials of Problem-based Learning," *Medical Education*. 1989; 23: 542-558.
- Williams GC and Deci EL. "The Importance of Supporting Autonomy in Medical Education," *Annals of Internal Medicine*. 1998; 129: 303-308.
- Woods DR. *Problem-Based Learning: How to Gain the Most from PBL*. 1997; W.L. Griffin; Ontario.
- Vygotsky LS. *Educational Psychology*. 1997; CRC Press, Boca Raton, FL.

Curricular References

- Beckman CRB, Herbert WNP, Laube DW, Smith RP, and Barzansky BM. *Obstetrics and Gynecology*. (3rd ed.) 1998; Williams & Wilkins, Baltimore.
- Novy MJ, McGregor JA, and Iams JD. New Perspectives on the Prevention of Extreme Prematurity," *Clinical Obstetrics and Gynecology*. 1995; 38: 790-304.
- **Please see Reading Index in Appendix A for further educational materials used within the curriculum.**