

Concrete Experiences and Practical Exercises: Interventions to Create a Context for a Synergistic Learning Environment

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How many of us have endured interminable, droning, sleep inducing lectures in learning environments, and simply accepted the experience as a part of higher education? You know the routine: three-hundred people file into an auditorium, settle into cushy-but-not-quite-comfortable seats as the lights dim, then fight for consciousness as an "expert" subjects the audience to three hours of verbal alum. Eyelids droop, pencils drop, heads nod forward or even snap backward, and finally someone begins to snore. When this educational abuse is over, the lights come back up, the audience slowly returns to life like creatures crawling out of a tar pit, and the students determine they must read the pre-assigned text to understand what the lesson of the day was all about.

Adult education does not have to be like the scene described above. There is a better way, in which adult learners can take an active role, and assume some of the responsibility for their own learning. Creating an "adult learning environment" requires discarding some of the paradigms about "the way education has to be." In some of our educational institutions, that change is taking place already. The Command and General Staff College (CGSC) is one of those institutions leading the way to a more effective adult learning environment. The change is one born of necessity, not luxury, altruism, or change for its own sake.

As the Armed Forces of the United States reduce in sheer numbers, educational synergy is an imperative for CGSC. We are making the force more flexible, agile, lethal, and deployable to ensure the force's relevance and applicability to the nation's security. Likewise, we must make the educational experience of our warfighters – our warrior leaders – relevant, efficient, and effective. Although we face no peer competitor at present, our national security environment is arguably less predictable than at any other time in our past. Consequently, we simply don't have the luxury of applying inefficient educational tools to officer professional development. The time we have to invest in student officers is simply too scarce, too precious.

How does an instructor create the greatest educational value with the time he or she has to invest? At CGSC, part of the answer has been to recognize that adult students truly are adults. They bring a wealth of experience to the learning environment that can and should be tapped. Furthermore, our officer population is composed of a rich, broad spectrum of individuals, not clones, whose most effective learning styles are far from identical. Our educational environment must address the diversity of our student population, to foster success, and tap into the talents of the entire population. Creating an adult learning environment by applying the "experiential learning model" is one of the key principles applied at CGSC to make the most of the educational opportunities of its officers. "Interventions" are tools instructors (facilitators) use to shape the context of the educational environment and focus on learning.

The Command and General Staff College: Mission and “Terrain” Analysis

The primary mission of CGSC is to educate leaders in the values and practice of the profession of arms. The College is the executive agent for the Army’s Leader Development Program, and the developer of division and corps level warfighting doctrine. It is also charged to promote and support the advancement of military art and science.

Although the largest, most visible part of CGSC is the Command and General Staff Officer’s Course (CGSOC) known throughout the world as “the Major’s course.” CGSC is in fact a much more diverse educational institution. CGSC also includes the Combined Arms and Service Staff School (CAS3), the School of Command Preparation (SCP) a pre-command course for battalion and brigade commanders, and the School of Advanced Military Studies (SAMS). CGSC is also the home for some of the Army’s most senior level learning experiences as well, hosting a variety of senior leader and general officer conferences. The learning population is consequently extraordinarily diverse. While the majority of students are Majors in CGSOC who are generally thirty to forty years old, the population also includes Lieutenants and Captains in CAS3 in their early-to-mid-twenties. At the senior end of the spectrum are battalion and brigade commander attending SCP, in their mid-forties to mid-fifties.

Adult Learning Theory

Dr. Malcolm Knowles is “the father of adult education” in the United States. He identified and defined seven conditions of adult learning in The Modern Practice of Adult Education from Androgogy to Pedagogy.¹ Recognizing and understanding these seven conditions is fundamental to creating a foundation for an adult learning environment.

1. Learners recognize and feel the need to learn.
2. Physical comfort, mutual trust and respect, mutual helpfulness, freedom of expression, and acceptance of differences characterized the learning environment.
3. Learners perceive the goals of a learning experience to be their own.
4. Learners accept a share of the responsibility for planning and operating a learning experience, and therefore have a feeling of commitment toward it.
5. Learners participate actively in the learning process.
6. The learning process is related to and makes use of experience of the learners.
7. Learners have a sense of progress toward their goals.

In short, adult learning is an active process, rather than a passive process. Students do not learn by absorption or osmosis, they learn by doing and experiencing.

Learning Modes

In The Cycle of Learning from Experience, Dr. David A. Kolb developed a theory describing four different modes of learning: *concrete experience*, *reflective observation*, *abstract conceptualization*, and *active experimentation*. Every individual possesses elements of each learning mode, but every individual also has a preferred or dominant learning style, made up of 2 modes, in which learning is easiest and comes most naturally. Perhaps surprisingly, part of Kolb's theory is that the most complete and effective learning takes place not when the student learns exclusively from the perspective of his *preferred* learning mode, but when he is forced to learn from the perspective of *every* learning mode.²

In *concrete experience*, students address learning objectives from personal involvement (affective domain) with human situations. Students learn by feeling rather than thinking, from specific experiences. They should admire the uniqueness and complexity of reality, perhaps noting an absence of structure, and employ an intuitive, artistic approach to the situation with sensitivity to personal feelings and other people. Ideally, the student is involved fully and openly in the new situation.

During *reflective observation*, students address the learning objective from observation rather than action. Students use impartial and careful evaluation to see implications and connections, appreciate different points of view, and look for the meaning of things.

In *abstract conceptualization*, students look at the learning objective from a quantitative analysis perspective, and develop and act on intellectual understanding (cognitive domain) of the situation. They should create concepts and theories from their observations.

Active experimentation is more than learning by doing. Students approach the learning objective by influencing people and events through action, or changing the situation. They also have an opportunity to extend beyond the immediate learning objective by trying the new knowledge or skill in another application or environment. Students key on practical application of a concept, rather than the theory of a concept. They impact their environment by taking risks and accomplishing things. In the active experimentation mode, students use theories to make decisions and solve problems.

The different learning modes are not equally popular with all students. Students have preferred learning modes – learning modes that seem easiest, most natural, and that have produced the greatest success in the past. Dr. Kolb stresses in his theory that the most effective learning occurs when the student must visit the learning objective from each of the learning modes.

The Experiential Learning Model

The Experiential Learning Model (ELM) is a framework for building a learning experience that takes students through a cycle of learning that deliberately visits each of the learning modes described by Dr. Kolb. The model helps instructors design lessons that are experiential, interactive, and that develop critical and creative thinkers. The ELM follows the guidelines of the “Learning by Experience Model” described in the University Associate’s Annual Handbook for group facilitators.³ Some of the terminology used in the ELM coincides with the terms used to describe learning modes. This is no accident. The ELM uses five steps to visit and address the learning objective, causing students to consider the objective from all of the learning modes.

The first step in the ELM is a *concrete experience* designed in the affective learning domain. When students are first presented with a new situation, the very first exposure is in the form of a concrete experience (CE). The concrete experience must be an active, interactive event that involves all of the students in the activity. The event may not be obviously related to the learning objective at first glance – it may seem at first to be totally unrelated. However, it should tie in to the learning objective eventually, and if it is analogous to the task, it is ideal. For example – one of our faculty members uses a large (four-by-six foot) map puzzle as a concrete experience for his course introduction. He simply introduces himself to the group of twelve to fourteen students, pours the pieces out on the floor, tells them to put it together within five minutes, then stands back and takes notes while the scramble begins. The concrete experience invariably leads to an extremely enlightening discussion during the publish and process step of task organization, specialization, teamwork, time management, and “how we could do it better next time.”

The second step, as we have already described, is *publish and process*. For Army trainers, this step should seem very familiar. The facilitator guides the group into publish and process (P&P) with leading questions familiar to anyone who has ever conducted or been a part of an After Action Review (AAR): What happened? What did you see? What did you learn or relearn? Students consider and then respond to these open-ended questions just as they would in an AAR. When effectively facilitated, it is a time of considerable discovery for individuals and for the group. IF the concrete experience was a group project, the group should publish the results: describe what happened or present a report on the activity. This is especially true of a concrete experience for a large group that has been split into several smaller groups. Sharing the experience is a key component of sharing the learning.

Publishing is answering the questions of “What happened or what did you see?” The process goes a step further, by asking, “Why were there differences?” “What have you learned?” Students must analyze not only “what” but “why.” They may discover answers that are entirely unexpected, even for an experienced facilitator. The facilitator’s role is crucial during publish and process, to keep the group on track – prompting discussion when necessary, and at the same time keeping that discussion from wandering too far astray. Throughout the entire P&P phase, the facilitator is also assessing the proficiency level of the group in the task described by the learning objective. If the facilitator discovers a high level of competence in the group, the next

step, Generalize New Information (GNI), may be significantly abbreviated. Adults do not need to be lectured on subjects they already know, and they respond poorly to that kind of “lock step” treatment. A key transition question for moving from P&P to GNI is “Today we are focusing on (insert learning objective).”

Generalize New Information should be familiar to all of us. It is the classic lecture style of teaching and should be designed in the cognitive learning domain. The instructor (facilitator) tells the student group what they don’t know. Again, if the P&P was accomplished effectively, the facilitator should be able to customize the lecture for the student group, by filling in the blanks, rather than plowing blindly through a canned presentation. Techniques to limit the amount of lecturing TO the group should be used whenever possible. For example, an interactive, Socratic lecture technique is far more effective with adult students than a “talking head” lecture. This stage can be contracted or expanded, to fit the needs and the skill level of the student group.

Once the group has achieved a knowledge or competence “floor,” they are ready to think about and discuss how this new knowledge or skill could be applied. This is the *Develop New Courses of Action* step. Students go from abstract theory to application of that theory. It is a creative period, when new ideas are generated, and the facilitator should not be surprised if the more creative students generate ideas that are not terribly practical. It should be a challenging time for students, when they are pushed to redefine premises, decide how to apply the learning, and deal with “what ifs” applied to the learning objective. The facilitator uses open ended-questions to push creative and critical thinking. Depending on the group, the cognitive level of learning may actually exceed that of the learning objective.

Finally, during the *Apply Courses of Action* step, students put the knowledge or skill to work in a practical application, the practical exercise (PE) we all know and love. The PE is an interactive application of the learning objective that requires students to meet the learning objective standard. The PE is instructor designed and observed or evaluated, but is a student process only. The PE may be the “final exam” for demonstrating achievement of the learning objective standard. On the other hand, the P&P of the PE begins the next cycle through the ELM, leading to the next (higher level) learning objective.

Designing and Applying Interventions

Up to this point, we have spent quite a bit of your time and our energy laying a foundation of theory. Now you know about the basic concepts of learning modes and the experiential learning model. How can you put the theory into practice? For most of us, altering the lecture paradigm will truly be breaking the mold. Remembering that the instructor sets the context of the classroom. Interventions are tools and techniques the instructor can use to shape that context, to create an environment in which students are not only able to learn, they are eager to learn. The names of several interventions may be familiar (role-playing, case studies, and practical exercises), but the way they are used in the ELM is likely to be novel.

Designing classroom interventions can be tricky business. Every classroom environment is different – the facilities, the furnishings, the student population, and the learning objectives. Develop interventions that fit your class, your classroom, and your instructional style.

When the instructor creates an educational context that develops and intrinsic need or desire to learn within the student, the rest of the class is easy. A well-designed and effective concrete experience can do exactly that. Design CE's that help students realize their personal goals, relating to the learning objectives. The CE should help them identify the gap between where they are in their competence level, and where they want to be. Projects, puzzles, and games make excellent concrete experiences. Even adults like to “play” a little bit, and such activities provide an opportunity to experience the need to use the learning that is taking place.

The greatest challenge for most instructors when faced with a need to develop a CE for a learning task is the presence of mental blocks. If your creative juices just aren't flowing, talk it over with a fellow instructor. Brainstorm it! Get wildly creative, then go back to weed out the impractical or impossible. Once you've developed a few CE's, it gets easier. The important keys within CE's are that they involve ALL students as participants somehow, and that every student has a common experience that is shared with the rest of the learning group. Note the term “common” rather than “identical.” Students will experience the CE from their individual perspectives, through their own filters. This common experience can be used repeatedly by the instructor to bring out specific key learning points.

Start with a CE that requires problem-solving skills of the entire group. Design CE's and PE's that require interdependence of group members. As the instructor, identify, acknowledge, and accept differences of opinion and critical questioning at any step in the ELM. Remember you must control the context of the learning environment, and accomplish the learning objective to an identified standard. Do not let differences interfere with accomplishment of the learning objective. Model trust and respect: trust and respect your students' ability to solve problems. Keep hands off during CE's and PE's, and let the students work the problem while you act as a process observer, making notes about what happens, for use during the publish and process step. Look for things early and often to praise the group as a whole, as well as individuals. Give open praise to interactions that lead to accomplishment of the task.

Remember the link between the CE and the PE. The CE creates a desire to learn, and the PE puts the learning to work. When you design lessons using the ELM, contemplate designing CE's and PE's related to the experience of the students. Use the design of the CE to help you assess the experience and competence of students in the area of the learning objective. Then use the publish and process step to assess further, and fit the lecture (generalize new information) step to fill the gaps in student knowledge or proficiency. A great way to get students to experience a sense of progress is to reuse part or all of the design of the CE in a PE, in the Apply Courses of Action step. At the end of the ELM cycle, this should make students acutely aware of their learning.

Now, Just Do It

Adapting “traditional” lesson plans to the ELM is not easy. Nor is designing lesson plans using the ELM from the ground up. But it is well worth the effort. Both learning and instructing can be more satisfying, more effective, and simply more fun. Effective, well-designed interventions are a key to success in the adult learning environment. Share innovations you design, borrow from your colleagues, and rely on your own experience to develop new designs. You will find yourself eager and excited about presenting new learning experiences, and your students will think you’re a hero!

CONCRETE EXPERIENCE and PRACTICAL EXERCISE Ideas

1. LEARNING TOPICS: Time management, meeting management, group dynamics.

Concrete Experience: Have the group select a movie to attend or a TV show to watch, from a local schedule.

Practical Exercise: Select a restaurant for dinner, or a dessert choice from a menu, for after the movie or show.

2. LEARNING TOPICS: Group facilitation, meeting management, group synergy, decision-making processes.

Concrete Experience: Solve a “matrix” puzzle as a group, with each member holding only one or two clues.

Practical Exercise: Do a mission analysis or project analysis as a group.

¹Knowles, Malcolm, The Modern Practice of Adult Education from Androgogy to Pedagogy, 1993.

²Kolb, David A., The Cycle of Learning from Experience, 1984.

³Pfeiffer and Jones, 1973.