Best Practices in College Teaching
Intended to Challenge the Professional Development of All Educators

Collected here are practices that constitute excellence in college teaching. These represent the broad range of the most effective actions educators take, and requisite conditions educators establish, to facilitate learning. Recognizing that what we do as educators is difficult to describe, I advance this list of dimensions of excellence as a starting point for discussions about the performances we strive for and may help each other obtain.

While leadership in the college classroom is widely recognized as essential to higher education institutions, we who do this are rarely rewarded for learning to do it well. Among the reasons, I think, is the lack of an agreed-upon set of observable actions that constitute effective teaching.

Becoming an excellent college educator is a life-long professional challenge, the dimensions of which are often unrecognized. I wish to emphasize that word professional. In the general mind, doctors and lawyers are professionals, yet teachers are not regarded in the same way. Their semi-professional status might be changed, if we agreed upon a core best practices list such as this one that enabled procedures, such as internships, for helping new faculty acquire competence, and resources for sustaining faculty growth.

Observable Actions

In order for change to occur, listings of best practices in college teaching ought to list competencies that are visible in order to enable anyone—students, colleagues, and visitors—to see the actions of leadership at the time they occur. When components of excellence can be defined as confirmable performances, we can investigate those actions in practice, individually and collaboratively. For if a component can be self-perceived near the time it occurs, it can be modified and strengthened. That's how professionals pursue reflective practice.

In that spirit I offer this list as a beginning. I have gathered what I have found in the literature and what I have struggled to learn to do in my years of teaching about teaching. I recognize classrooms vary in content and goals, yet I believe it's possible to construct a core set of Best Practices applicable to most education environments, both professional/technical and academic, albeit in differing degrees. Gathered here is my attempt to specify performances that are worthy of professional attentiveness.

Categorized in twelve headings are specific components of teaching well. These are not attitudes, dispositions, or aspirations, such as those one often sees in other lists: *keep students engaged, design meaningful experiences, be resourceful, provide a road map, encourage discussion*, and so on. Admirable intentions, for sure, but each lacks clarity: what does one actually do? The Best Practices listed here are observable performances. Each can be demonstrated, evaluated, and further evolved.

Application to Tenure

The twelve numbered headings can serve as rubrics for professional development as well as tenure qualification. As I have used it, the tenure committee agreed it would ask the candidate to pursue one self-chosen objective in each of the twelve areas. Discussions during tenure committee meetings were grounded in observational information from the committee members and the self-study by the candidate of two or three agreed-upon headings. When the committee informally agreed that one of the headings seemed satisfactorily addressed, it was marked as accomplished in the tenure committee record. At the end of the twenty tenure committees in which I served, all the members agreed that (1) the 12 areas addressed the breadth of being a professional college educator and (2) organized the process beneficially for both the candidate and the committee.

1. *Lecture Practices*
2. *Group Discussion Provocations*
3. *Thoughtful Questions*
4. *Reflective Responses to Learners*

1. Lecture Practices

Effective ways to present new information orally to include differences in learners
At times information must be transmitted orally to a passive listening audience. But research has shown that after 10 to 20 minutes of listening, assimilation falls off rapidly. If the educator must rely on the oral presentation of material, these techniques could enhance learner retention.

LECTURE/RHETORICAL QUESTIONING

Talk in 7 to 10 minute segments, pause, ask pre-planned rhetorical questions; learners record their answers in their notes.

SURVEYS WITH EXEMPLIFIER

Pause, ask directly for a show of hands: "Raise your hand if you agree… disagree… etc." Ask for a volunteer to speak for each response group.

TURN TO YOUR PARTNER AND…

Pause, ask each to turn to the person next to them and share examples of the point just made or complete a given phrase or sentence.

HALTING TIME

Present complex material or directions and then stop so learners have time to think or carry out directions. Visually check to see whether the group appears to understand. If they do, continue.

EXPLICATION DE TEXTE

By reading and analyzing passages from the text aloud, learners can see higher-order thinking skills, see criticism is an intellectual exercise, and experience how great writing can have a profound effect. A convention for doing this: the speaker reads the relevant portion of the text aloud to the group, paraphrases the meaning in her or his own words, and then expands upon the ideas and offers personal connections. The author becomes present as another speaker before the audience.

GUIDED LECTURE

Learners listen to 15-20 minutes of lecture without taking notes. At the end of that time they spend five minutes recording all they can recall. The next step is offer them the time to meet together in small discussion groups to reconstruct the lecture conceptually, with supporting data and their own reflections, prepare notes, and return, if necessary, to the instructor to resolve questions that arise.

IMMEDIATE MASTERY QUIZ

When a regular immediate mastery test is included in the last few minutes of the period, learners retain almost twice as much material, both factual and conceptual, than if they just pack up and leave.

STORY TELLING

Stories, metaphor, and myth catch people within; no longer are listeners functioning as tape recorders subject to information overload limits. What human beings have in common is revealed; personal connection is possible. Stories allow the listener to seek an experience of being alive in their imagining and find clues to answers within themselves. The 10 to 20 minute limit for talking to passive listeners no longer applies. Deep joy and profound connection become possible.

2. Group Discussion Provocations

Effective ways to present a common experience to engage a group in a discussion
Awareness of complexity and enhanced understanding results when learners discuss the meaning of events with each other. To be successful, however, groups need a common experience to draw them into participation, establish a personal connection with the content, and provide a shared referent from which to frame their ideas. Understanding that disequilibrium or puzzles are essential to that engagement, here are nine choices to connect participants with the dimensions of the content and with each other.

SHORT READINGS

One can offer brief texts to read in class and respond to. Most provocative are readings with contrasting viewpoints.

SEMINAR PROTOCOL

A seminar convention can provide a structure for group discussions of a text. Here is an example of a handout describing one such protocol.

1. Participants read the assigned text, outside of class, and make notes in the margins or elsewhere.
2. When a participant wishes to contribute to the group discussion of the text, they refer the others to the page and paragraph and read it aloud for others to follow along.
3. Once read, the participant expresses in his or her own words what they think that passage means, concluding with a question or a comment.
4. At that point the discussion opens to everyone in the group. The group takes responsibility to ensure opportunities are open to all who have something to contribute.
5. When that topic has run its course, another participant opens the next discussion of the text in the same way.

FIRST PERSON EXPERIENCE

Works conveying a personal voice—autobiographies, biographies, oral histories, diaries, audio/video recordings, and memoirs—when used as counterpoints to more abstract sources, bridge the gap between personal experience and the content under study. Learners more readily take part in discussions when they can relate their lives to the material.

INDIVIDUAL TASK WITH REVIEW

One can immediately offer problems to solve that apply the concepts presented. Learners complete a worksheet or other task and compare the results with their neighbors before the whole class discusses the answers.

SELF-ASSESSMENT QUESTIONNAIRES

One can ask for a show of hands or the completion of a short survey to assess learner attitudes and values. Small cards and simple questions at the end of a session can guide one's leadership.

TOTAL GROUP RESPONSE: HUMAN GRAPH

Learners literally take a stand on an imaginary graph or continuum. The first few volunteers justify their choice of position, and then the remainder of the class joins them without the need for comment. Then one can ask what the group thinks this means.

CASE STUDIES

A case study is the factual account of human experience centered in a problem or issue faced by a person, group or organization. It can raise a variety of complex issues and stimulate discussions of alternative viewpoints. Typically, case studies are written objectively and include a brief overview of the situation, its context, and the major decisions that must be made. Rather than expecting learners to have any answer, case studies challenge learners to apply their understanding, frame problems, generate solutions, and evolve principles that may apply to other situations.

VISUAL STUDIES

Seeing something first hand creates a common ground. Photographic essays, video programs, and personally made video recordings are examples of ways to bring into the classroom depictions of the concepts and complexities being discussed.

ROLE PLAY

Learners explore human relations problems by enacting problem situations and then discussing the enactments. Together learners can explore feelings, attitudes, values, and strategies. Theater attempts to help individuals find personal meaning within their social world and resolve personal dilemmas with the assistance of the social group.

3. Thoughtful Questions

Question formulations that foster engagement and confidence

What does it mean to think? According to Frank Smith, some people would like to be able to "think better" — or more often want other people to "think better". But research shows that everyone is capable of thinking— the problem is to stop educators from precluding other's thinking. The right kind of questions, at the right moment, may help. The challenge is to phrase them in an open way.

The goal is to focus the learner's attention upon applying their emergent understanding to the content of current experience in a natural way. When a class has experience from many of these challenges, they know they can "think". Note that none of these kinds of questions ask for recall of non-discoverable information — I-know-and-you-don't stuff.

DISCOVERABLE QUESTIONS

These ten question formulations meet the criteria of being both perceptually based and discoverable. Since these tutorials investigate shared experience, the teacher can lead a learner who may not at first answer adequately back to available evidence to find their own connections. The "right" answer can be found in shared experience.

- *Description: What did you see? What happened? What is the difference between...*
- *Function: What is the function of...? What is the purpose?*
- *Procedure: How was this done? What is the next step? How do you do this?*
- *Possibility: What else could ...? How could we...?*
- *Prediction: What will happen? What will it look like?*
- *Justification: How can you tell? What evidence led you to... ?*
- *Rationale: Why? What is the reason for that?*
- *Generalization: What is the same about ... and ...? What could you generalize from these events? How does that relate to this?*
- *Definition: What does (concept) mean?*
- *Meaning: What can we can conclude and take forward?*

WAIT TIME

After posing one of these challenges, learners may need at least 15 seconds of processing time before they can begin to formulate their response. Education is not radio: dead space may have value.

4. Reflective Responses To Learners

Establishing mutually beneficial communication through attentive, reflective listening

To facilitate self-discovery and self-appropriated learning, educators face the challenge of responding in an enhancing way for the other's benefit. In other words, the learner's view of the learner is more important than the educational leader's perspective. When a learner contributes to the discussion or asks a question, taking on the initiative to learn, the educator has to be careful to respond in a way that maximizes the learner's participation. To stay on another's path one has to be careful to not change the topic into one's own thinking. One way to do this is to address a clarification of the topic first. "Are you talking about...?" Once the topic is

clear, the challenge is to act with respect and without domination. These three reflective responses, when used in sequence, constitute a "responding convention" to hopefully optimize the opportunity. The goal is for the educator to develop a habit of talking that releases the potentialities of the learner and promotes mutually significant sharing. Used in this order, each step sequences the amount of educator "push" from very light to heavy.

PARAPHRASE

While remaining alert to both the intellectual and emotional aspects of learner contributions, rephrase the underlying message the learner is sending in one's own words, not the learner's words. This especially applies when the learner says something new, something more than commonplace comments. 'Parroting back' repeating the learners words or routinely beginning, "I hear you saying…" is both irritating and condescending. Here is an example. "Professor, what is the answer?" Paraphrase: "You want me to tell you?"

PARALLEL PERSONAL COMMENT

Without changing the topic or bending it in the slightest, talk about current feelings or a past experience of yourself that matches what the learner has said. Usually statements start with "I…" "Professor, what is the answer?" Parallel personal comment: "I had the same question when I encountered this problem."

LEADING QUERY ON LEARNER'S TOPIC

Ask for clarification of aspects of the comment without shifting it to one's own agenda. "Professor, I don't understand this part." Leading query: "Could you give an example of what you don't understand?" A leading query can involve others: "Who can build on what she is saying?" What? Where? Why? How? are the usual beginnings of queries.

5. Rewarding Learner Participation

Support learner risk-taking with effective, well-timed positives

Worthwhile education moves learners into areas of risk and incompetence. So often the job of an educational leader is to find nascent deftness when it is easier to notice the maladroit. The methods chosen to administer positive support at crucial times are as skillful as a mason's use of a trowel. Educators must send clear messages about what is important to achieve. Are learners supposed to work toward external approval or their own performance? Are grades the true reward? Or are learners supposed to learn to enjoy the quest itself? Teachers answer these questions through the manner in which they support improvement.

The best rewards are not contrived, foster personal reflection and independence, and actually work, that is, learners maintain new abilities or do better. Effective teachers support emerging initiative, cooperation and perseverance with well-timed positives, without praise, in these alternative forms.

AVOID PRAISE

Praise, the expression of judgment, is less successful in rewarding learner performance than the techniques listed below. Praise tends to foster approval seeking rather than intrinsic feelings of worth and joy. Examples of praise: "Good question." "That's a nice weld." "I like that." "Good for you." Praise is not feedback: feedback is positive and negative information, such as "That's correct." "This part is missing."

DESCRIPTION

Describe objectively those aspects of learner performance needing support, avoiding a personal evaluation: "That's a topic we need to discuss." "That weld is even." State a culturally accepted conclusion a group of dispassionate observers would concede: "That's a pertinent question." "That weld is just like the book."

NARRATION

Detail the action a learner takes immediately as it occurs. Narrations usually begin with "You…" Example: "You're raising an issue that needs discussion." "You're obviously trying to fit the pieces together."

SUBJECTIVE-TALK
Talk about your own thoughts or prior personal experience. Example: "I have wondered that, too." "Questions like that have always intrigued me." 'Subjective' here is not the opposite of 'objective': it means I am the subject of this statement.

NONVERBAL OR VOCAL SOUNDS
Smile. Wink. Thumbs up. Gestures of excitement and success. "Wow!" "Indeed!" Whistle.

PERSONAL FEELINGS
Describe your emotional reactions as a participant learner, a member of the group, expressing deep, genuine, personal feeling. "What a joy for me to listen to this discussion!" "I get discouraged, too."

INTRINSICALLY-PHRASED STATEMENTS
Positive expressions about emerging learner performance and achievement highlight internal feelings of self-worth and self-satisfaction (without praise, which is an extrinsic judgment). Enjoyment—"That was fun!" "I get pleasure from that, too." Competence—"You did it!" "That is mastered!" Cleverness—"That was tricky." "Creative." Growth —"You've taken a step forward." "Change has occurred!"

6. Active Learning

Fostering co-constructive participation
All research on people and on their brains shows we learn by doing. Learning is a constructing process. Here are the choices available in the literature on teaching. Educational leaders select the type of activity to match the current purpose

CONSTRUCTION SPIRAL
The educator asks a question, at a here-and-now level, for participants to write, share, and then co-construct an understanding. It uses a three-step learning cycle: (1) individual writing for 3-5 minutes in response to a provocation or disequilibrium, (2) small group sharing in trios or pairs of those perspectives, and (3) whole class, non-evaluative compilation. What participants say goes up for all to see. Another question might emerge from that. The construction spiral is the method of choice when constructing understandings and concepts.

ROUND
Each person in turn expresses their point of view on a given topic, or passes, while others listen. The round elicits a range of viewpoints and builds a sense of safe participation.

BRAINSTORM
The educator solicits and compiles for all to see alternative possibilities without making personal judgments. Used to generate ideas, encourage creativity, involve the whole group, and demonstrate that people working together can tap into divergent perspectives that may be just emerging.

WRITING IN CLASS
Focus questions, in-class journals, lecture or reading summaries and in-class essays can improve the learning of the subject matter and, with clear objectives and feedback, improve writing skills, too. This task creates a documentation trail of each participant's experience over time.

SIMULATIONS AND GAMES
By creating circumstances that are momentarily real, learners can practice coping with stressful, unfamiliar or complex situations. Simulations and games, with specific guiding principles, rules, and structured relationships, can last several hours or even days.

PEER TEACHING
By explaining conceptual relationships to others, tutors define their own understanding.

• *Question Pairs*—learners prepare for class by reading an assignment and generating questions focused on the major points or issues raised. At the next class meeting pairs are randomly assigned. Partners alternately ask questions of each other and provide corrective feedback as necessary.

• *Learning Cells*—Each learner reads different selections and then teaches the essence of the material to his or her randomly assigned partner.

EXAMINATIONS

Scheduling an exam stimulates learners to study. Completion, true false, and multiple-choice items require memorization of facts and statements. Essay examinations require re-reading and attaining an overall general concept of the material. It is a rather obvious way to involve learners in doing something and getting them to think about what they are doing.

7. Cooperative Groups

Assigning cooperative challenges

One form of active learning deserves special attention because it overtly places the learners as workers, demands that each process beliefs and construct expression with peers, and forces the attainment of a group goal. Cooperative learning groups embrace five key elements: positive interdependence, individual accountability, group processing, social skills, and face-to-face interaction. In order for cooperative groups to be successful, leaders must expect to spend time attending to cooperative skills, listening to how each group works, and challenging the group to assess itself. People learn to be in groups by being in groups — learning, accomplishing, and then becoming aware of the way cooperation works in encountering what we do not now understand. **The challenge for educators is to create these opportunities and not to grade them**. Learners ought to be free to do what they do, learn how they do it, and be as powerful as those pioneers whose work they are studying.

8. Goals to Grades Connections

Agreement flowing from goals, to objectives, to criteria, to measures, to grades

An obstacle every educator faces is how to analyze the content of a course, predetermine the outcomes desired, and communicate the necessary performance expectations to the learners in a detailed, congruous syllabus that logically connects goals to the measures for grades. The goals are clear; the objectives follow from the goals; the requirements for output are demonstrations of performance of those objectives; the evaluation methods for grades reflect attainment of the objectives to accessible criteria. This is rarely simple — at times teachers need their own cooperative learning groups in order to solve the myriad of problems of coordinating course goals, uncovering the traditional discontinuities between goals and grading, and clarifying assessment in a public way. This is tough.

GOALS STATED AS OUTCOMES, NOT PROCESSES

Goals are agreed to by the other faculty in the instructional unit and achieve outcomes desired from an integrated program of study.

OBJECTIVES ARE PERFORMANCE OUTCOMES

Performances that represent achievement of the course goal are phrased using measurable verbs from Bloom's Taxonomy and placed at the level of the taxonomy that reflects the amount of time allocated.

REQUIREMENTS CLARIFIED

All desired learner outputs, including the criteria for success and relative weights, are clearly specified in advance with the least amount of judgment on the part of the leader as is possible.

CRITERION REFERENCED GRADING

Learner achievement is measured with respect to a specified standard of quality, on a continuum from zero to perfection, not against other learner's achievements. Performance on each instructional

objective is measured at the appropriate level on Bloom's Taxonomy. Ideally a system includes a pre-assessment and alternative learning activities for those failing to meet criteria at first. We all learn from mistakes.

9. Modeling

Personally represent openness, learning, and trust

As a paragon of personal development, the educational leader faces challenges in every action he or she takes to engage, facilitate, catalyze, and give life to the opportunity to learn. Great educators lead by example. It is the authentic life that instructs. These attitudinal qualities of being connected to learning in delight, illumination, and even rapture have been described in many ways, especially by Carl Rogers. Three themes emerge.

OPENNESS TO EXPERIENCE IN THE HERE AND NOW

Being truthful, personally in touch with one's own feelings and current experience.

INCORPORATION INTO ONESELF OF THE PROCESS OF CHANGE

Being open to learning opportunities, believing in oneself as an effective learner, and modeling learning, and its accompanying mistakes, visibly to learners.

UNCONDITIONAL POSITIVE REGARD FOR OTHERS

Deeply trusting in the underlying goodness of each person, despite how they appear, with the explicitly expressed belief in each learner's ability to learn and grow.

10. Double Loop Feedback

Promoting the awareness of how one learns to learn

The times when the educator corrects performance are often the most difficult as well as the most significant. It is easier to identify errors and deficiencies in the actions of others than to communicate corrections to them in a way that fosters their continued engagement. Because people rarely produce actions that do not make sense to them (they act intentionally), they naturally tend to become defensive, confused, or ashamed when criticized or given advice. Yet individualized correction is often the key to improved performance. According to Chris Argyris an effective feedback procedure enables reflection and self-correction without fostering hostility or defensiveness because the assumptions in the external frame are regarded simultaneously.

Double loop feedback is a method of providing care in a way that maintains the learner's continued engagement in the process of acquiring competence and self-confidence. It sequences the statements the educational leader makes by starting with least inferential and examining both the learner's perspective and the evaluator's assumptions at each stage. In double loop learning an open-ended cycle is created where the teacher and the learner cooperatively examine both the learner's performance and the underlying perspectives the teacher brings to regard that performance.

Optimal correction is possible when both parties responsibly work for error detection at each level of inference before proceeding to the next. In other words, get the facts right first; then work to agree upon what "most people would agree" those facts to mean. As opposed to the natural tendency to think of judgments and opinions first, this procedure holds them in abeyance.

STEP 1. OBJECTIVE DESCRIPTION OF FACTS

State the facts as you see them:

a. "There are 14 misspelled words here."

b. "Since I assigned the class the task, you have asked me four questions."

c. "You pointed your finger at the person you addressed."

Get agreement, for correcting errors may not be possible unless both parties agree to a common set of facts.

STEP 2. CULTURALLY ACCEPTED (SOCIALLY-CONSTRUCTED) MEANING

Describe what a jury or group of informed, dispassionate observers would conclude:

a. "It hasn't been spell-checked."

b. "You are using me as the first resource not the handouts or your friends."

c. "That non-verbal gesture implies an adversarial rather than cooperative stance."

Again, get agreement. Usually the learner will either justify or correct when the behavior is recognized as holding an accepted meaning. This level of inference is the same used by journalists and anthropologists to describe events and actions as viewed from a culturally specific viewpoint. That viewpoint, too, is also suspect and, to be fair, should be examined simultaneously—thus the term "double loop."

STEP 3. JUDGMENTS AND PERSONAL OPINIONS

After the above have been discussed and agreed upon, the judgments of both parties can be stated without inducing animosity or defensiveness. At times it may be wise to check first with the recipient before moving to this stage: "Would you like my opinion?"

a. "That many mistakes imply a disregard for written language."

b. "I would like to see you find answers independently."

c. "It is more effective to speak about yourself and how you see it than to talk about others."

11. Climate Setting

Care for the physical and mental climate

A large portion of teaching effectiveness involves setting the stage; solve comfort issues first and the learning path is smoother. Research shows that successful teachers spend 10% of classroom time optimizing the arrangement of the physical setting as well as the psychological setting—a climate of collaboration, relative indefiniteness, playfulness, joy, belonging, wellness, trust, and participation.

MEET THE LEARNER'S NEEDS FOR PHYSICAL COMFORT AND ACCESSIBILITY

Insure a comfortable environment where basic needs for all learners are met: warmth, comfort, sound levels, light levels, food, and arrangement of space.

DEFINE NEGOTIABLE AND NON-NEGOTIABLE AREAS

Clearly specify those aspects of class performance that are the instructor's responsibility, such as essential procedures, external constraints, performance requirements (such as attendance, participation, timeliness), and summative evaluation. Clearly specify those aspects of the course, such as seating arrangements, learning names, and formative evaluation methods that may have mutual responsibility. The methods and procedures can be negotiable.

CLARIFY THE INSTRUCTOR'S ROLE AS LEADER OF THE LEARNING COMMUNITY

Express explicitly that as the educational leader, you are here to facilitate learning by providing resources, tasks, and support. The leader trusts the participants as a group and individually to take responsibility for their own learning.

CLARIFY THE LEARNER'S ROLE AS A MEMBER OF THE LEARNING COMMUNITY

Clarify expectations the learners have for optimizing constructive relationships with each other. A learning community exists when one's own actions simultaneously enhance the self, the immediate other, and the community.

12. Fostering Learner Responsibility

Transferring responsibility for discovering, planning and evaluating learning as much as possible
Engagement is the first task. Effective educators offer ways for the learners to take an active role, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate strategies, and reflecting upon the outcomes.

INVITE THE LEARNER'S PARTICIPATION

People tend to feel committed to any decision in proportion to the extent to which they have participated in making it. Their participation is a decision they make, as openly and independently as possible, to take on the opportunity a course of study provides. Leaders can optimize learner's readiness and willingness by offering a formal invitation to step into the learning process and take responsibility for their own learning. These topics provide the dimensions of that invitation. This can be the content of an introductory speech to the participants who are eager to find out what will happen to them.
1. conveying commonalities that the group shares,
2. describing the possibilities that could be attained in an ideal future,
3. fostering a discussion about those aspects of that ideal that are present in the current situation,
4. inviting the explicit commitment of every person to take action, both for themselves and toward the betterment of each other.

DRAW FORTH PAST EXPERIENCE

Although many different activities can be created to enable learning, the educator's initial role is to set conditions to draw forth the past experience of each and every learner on the topic at hand. One way, for example, is to create conditions for each learner to represent aspects of their experience in this content area, orally, in writing, in drawing, etc., share those representations with each other, and then compile together a summary of what the group knows currently. Initial questions may arise in the discussion that can guide subsequent experiences. Disagreements are especially engaging and important to record to revisit later.
This ground-setting collaboration explicitly involves everyone, acknowledges each person's uniqueness, and sets the stage for participant responsibility for learning. When "what we know now" is compared to future possibilities -- models of competence, needs of society or organizations, or ideals and values -- learners can begin to identify experiences that could be more likely to provide a natural path for their development. This is the uncertainty of leadership in education and its joy.

INVOLVE LEARNERS IN CYCLES OF INVESTIGATION AND REPRESENTATION

Investigation is the general process of finding out new information: reading, measuring, interviewing, observation, etc. Representation is the transformation of experiences and interrelationships into public expressions: words, drawings, diagrams, formulae, dances, poems, models, sculptures, etc. The former provides new input; the latter conveys the meaning of experience in an output. Each investigation is followed by a representation and sharing that constructs new understanding, opens inquiry, and informs the educator of the unique dimensions currently at hand.

INVOLVE LEARNERS IN FORMULATING THEIR INQUIRY

Promote attainment of at least a portion of the course requirements through flexible contracts by which the learner
1. translates a learning need into a path of inquiry with investigations and representations specified,
2. identifies, with reflective help, resources and strategies for accomplishing a final product,
3. specifies the evidence that will indicate accomplishment of the dimensions of that product, and
4. participates in determining how this evidence will be judged or evaluated.

INVOLVE LEARNERS IN REFLECTING UPON THEIR LEARNING

Teachers document the course of the learning experience, gathering notes, audio and video recordings, learner's initial products, and dialog. Information is available continuously on an informal basis as the learners work individually and in groups. At the end of the experience, learners reflect

together upon what has occurred for them over the duration of the work. This reflection socially constructs meta-cognitive understanding of learning as a human activity. The elements of risk, playfulness, care, interpersonal support, the honoring of uniqueness of individual expression, acknowledgement of the challenges inherent in the representation of experience, and the rewards of accomplishment are apparent at every moment. If the leader explicitly sets structures to draw these elements out, participants have the opportunity to view themselves as lifelong learners and more able to attend to the responsibility for their next steps in learning.

In Summary

The educator, as leader, brings a mature view of learner development — unfolding over time — through a thoughtful perspective on the long-term aims beyond the classroom.
The educator brings experience in the evolution of knowledge, skills, and dispositions that lay beyond the learner's awareness.
The educator realizes that the content of a learning opportunity is ultimately social: the work of the classroom relates to what it means to be fully enabled to act for the welfare of self, the other, and society.
From maturity of experience, the educator is beneficent: the educator offers conditions for a sympathetic understanding of individuals and processes designed to open communication, collaboration, and belonging for all involved — a safe container in which people can blossom.
The educator brings an evolving understanding of the relation of the current study to what it means to be human as well as an ethical ideal.

- On the one hand, the learner is evolving an attitude of direct, open, non-defensive attitude of engagement in new areas of learning — an open-mindedness that welcomes suggestions and information, an absorption or engrossment that brings full attention to bear, and a responsibility to make clear choices and accept the results. These dispositions become the culture as repeated experiences of reflection become the norm.
- On the other hand, the educational leader is evolving also. Each individual educator's method, or way of attack upon a problem, is present in the continuity of his or her experience, acquired habits, and current interests. Professional educators provide opportunities for reflection in order to illuminate the darker areas and bring openness to the leadership of the ongoing flow. Reflective processes enable both educators and learners to become "experienced", more intentional, and more present to others in the next encounter.

By involving every participant in reflection — holding a mirror to what each does — the educator both illuminates and engenders dispositions to learn.