

PROGRESSIVE FOCUSING B12

I will begin sharing a collection of thoughts about progressive focusing by quoting a well-known author advising a group of young scientists:

"Gradualness! About this most important condition of fruitful scientific work, I never can speak without emotion. Gradualness, gradualness, gradualness. From the very beginning of your work, school yourselves to severe gradualness in the accumulation of knowledge."¹

The man who advised them, and us, to guard *against presumption*, was Ivan Petrovich Pavlov (1936). For revealing his learners to be so susceptible to the mechanical processes of conditioning, Pavlov became an antichrist among humanists. But this advice should ring a bell: to school ourselves to severe gradualness in the accumulation of knowledge.

In our graduate schools, we entreat our students to come to understand a problem thoroughly before designing a study, before spending precious time in the field. Whether we emphasize a preordinate or responsive approach, we want a good preliminary understanding of the potential issues. We urge our students to be ready. There is too little time to learn the complex issues once we reach the field. We have to be prepared, so we say.

But the feeling among many reformist educational-evaluation specialists has been that we have been too *prepared*, too committed to a plan, too fixated upon certain variables, as we begin gathering the data.

In 1972, at the University of Edinburgh, Malcolm Parlett and David Hamilton, authored a paper entitled, "Evaluation as Illumination, A New Approach to the Study of Innovative Programs." In it they spoke at length about the importance and complexity of the learning milieu. They spoke about three stages at which illuminative investigators observe, inquire further; and then seek to explain. Parlett and Hamilton went on:

"Obviously the three stages overlap and functionally interrelate. The transition from stage to stage, as the investigation unfolds, occurs as problem areas become progressively clarified and re-defined. The course of the study cannot be charted in advance. Beginning with an extensive data base, the researchers systematically reduce the breadth of their enquiry to give more concentrated attention to the emerging issues.

I believe this is the only reference to "progressive focusing" in that paper and I am not aware if they ever felt it needed further discussion. Let us, though, examine the concept some more.

The illuminative evaluator, the naturalistic enquirer, the emic-issue ethnographer, takes the vow of postponement, waiting, to find at the site, the language, actions, beliefs, and concerns to be the target of study. At the outset they are to be sensitive to what concepts and concerns might become eligible for study, but to postpone the choice until well acclimated to the scene.

Still, they have to have what David Ausubel (1963) called "organizers," the pivotal idea, the key concept, a basis for understanding a great many happenings. We all have advance organizers. We could not wipe our minds clean if we wanted to. We will ever have presumptions. We need to identify some things we will particularly be alert to observe. Lou Smith borrowed the term from

Malinowski: *fore-shadowing questions*. At the outset of each field study, we prepare a list of ideas or problems that may turn out to be important. We try to agree in advance to abandon these questions if they fail to be salient. Even those questions that reveal our own cleverness, those titillating a client or audience, we pledge to ignore--and turn to matters more pertinent to the experience at the site.

I think Parlett and Hamilton wanted us to take, to the data-gathering site, a rich background of generalizations about human conditions, and a storehouse of particularistic data for comparison purposes, and notions about what kinds of questions are more or less important to various audiences. That baggage we would take, focused but not indelibly focused. We would commit ourselves to decide only gradually the activities, variables, and issues for special attention.

This sounds like pretty good advice, but my students find it quite difficult to follow. And so do I, because the issues emerge, oh, so slowly; showing up in some spots but not in others; and with twists and nuances that confuse. There in the field we learn a great deal about what is going on and what people think about things, but those ideas seldom sort neatly into piles for further study or chapter writing. Some clusters begin to show, but already it is time to write up the final report. And in the crunch we may rely pretty much on our initial presumptions.

In the occasional study, we have a couple of years to focus "progressively." That was true in our *Case Studies in Science Education* (1978). Figure 1 identifies, over the three-year duration, the changing issues of that study. To start with, in August '75, the RFP from the National Science Foundation listed questions for the case study workers to pursue, noting that the answers should triangulate with other status-study research going on. These categories of information were helpful in setting boundaries around the study, allowing a great deal of room for subsequent foci.

At the outset (July, 1976) we at CIRCE had three compound foreshadowing, questions guiding entry into the selected science classrooms. From the RFP we stressed budget, teaching materials, teacher preparation, and student learning, adding a number of particulars not mentioned in the RFP.

By November we had four or five observers in the field, generating the first feedback. We started to identify which issues might be suitable for eleven *scenarios*, i.e., typical problem situations which could be used for standardized interviewing and also for a national survey to be undertaken when the field work was finished. We recognized that such a list of issues might ultimately be the same as our chapter headings. We wanted to help the list evolve and improve.

Let me go down the November 1976 list one-by-one:

Budget cuts. An issue prominent at sites, but later found not as important as expected.

Articulation . (i.e., the need for uniformity place to place and from year to year). An emerging issue, not anticipated as important.

Back to Basics. Anticipated, subsequently confirmed as a major issue.

Math Problems. Anticipated, easy to get teachers talking on this one, but an issue of special interest to the research team.

Mastery learning. Not discussed much in the field, of interest to research team.

Pedagogical theory vs. practice. Anticipated big, turned out to be of little interest at sites.

Teacher Socialization. Increasingly appeared to be a major reason for the demise of the NSF curriculum reform program.

Elitist teaching. If worded so, it was a stinging question; found subsurface usually, yet of little concern.

Comments like these on many separate issues continued throughout the study. If you choose to look carefully you will find that some issues persisted, some emerged, some faded. Many issues of most interest to the curriculum theorist and district curriculum coordinator failed to be recognized as important by our observers in the classroom.

In May 1977, when I circulated an "early outline" of a final report's chapter-titles, team member Terry Denny chided me for still seeing what I saw at the beginning, for "regressive focusing," you might say. Even after a year in the field the picture was hazy. It was difficult to find a dominant structure of issues across sites. It was easy to argue that the issues identified for organizing the final report were in fact important findings in perhaps half our sites, but our team could have settled on several other configurations. And other teams would have found the same case records to be telling of issues we did not respond to.

It is increasingly apparent that particularly with naturalistic evaluation studies, we are presenting an interaction between a research viewpoint and a field activity. There is uniqueness to the research team's predilection, and uniqueness to the site. There are alternative stories to be told--even amid hopes for generalization. We find that some audiences want us to bend every effort to make our view as typical of other researchers' as we can, and to tell the one story that best represents what happened at the site. But other audiences recognize that we sacrifice special insights by striving for uniformity, for the "typical." In the end, pretty much, I think all of us tell the story that seems most meaningful to ourselves.

The choice of "most meaningful" is a terribly subjective choice. We have numerous opportunities to check out bits and pieces with other researchers, with representatives of our audiences, with program staffs and others. Valuable as those negotiations are, particularly for correcting erroneous or offensive inclusions, they are weak grounds for "progressive focusing." We still rely mostly on intuition.

Progressive focusing is a slogan, a good slogan. It indicates our desire to leave observations and interpretations open. We sacrifice the increased power of instruments and protocols based on early delimitation. We can gain in relevance, timeliness. What changes evolve in focus, narrowing the spotlight or shifting it elsewhere, remain a very subjective choice, open to challenge or reinforcement by others. But these others seldom have the field experience, in composite, even if they are in the field themselves. The researcher by site interaction remains something more or less unique in each naturalistic evaluation study.

Progressive focusing signals our commitment to *gradualness*, a partial effort to control presumption. May we salivate to emerging issues.

References

Ivan Pavlov, 1936. *Bequest to the Academic Youth of Soviet Russia.*

Malcolm Parlett and David Hamilton, 1972. Evaluation as illumination: A new approach to the study of innovatory programmes. Occasional Paper No. 9, Centre for Research in the Educational Sciences University of Edinburgh, 1972. Reprinted in Gene V. Glass, ed. ' *Evaluation Studies Review Annual*. Volume 1, Beverly Hills, SAGE Publications, 1976. 140-157

David Ausubel, 1963. *The Psychology of Meaningful Verbal Learning*. NY: Grune and Stratton 1963.

Robert Stake, Jack Easley and all, 1978. Case studies in science education. Urbana: University of Illinois, CIRCE, 270 Education Building.

Figure 1. The evolution of issues across three years of the CSSE Project

Questions raised in the RFP by NSF

August, 1975

What is the current status of . . .

- . . . science education role and function?
- . . . differences in practice in science, math, and social studies?
- . . . the review and selection of teaching materials?
- . . . classroom teaching intents and effectiveness?
- . . . student outcomes ?
- . . . evaluation of teachers and students?
- . . . the use of laboratory materials?
- . . . the use of out-of-school resources?
- . . . the budgetary support for science education?
- . . . course improvement efforts?
- . . . individualized instruction in science?
- . . . science teacher inservice training?

Foreshadowing questions recognized by staff at CSSE outset

July, 1976

How is science being taught?

- . . . curriculum and style, books and materials?

- . . . what is the relationship among courses?
- . . . how well are teachers and other responsible people prepared?
- . . . what are students learning, and where?

What are the current conceptualizations of science in science courses?

- . . . a body of organized knowledge
- . . . a process of inquiry
- . . . an appreciation of one's world

What currently are the encroachments upon the science program?

- . . . budget cutbacks
- . . . emphasis on basic skills
- . . . emphasis on bilingual programs
- . . . activism of parent groups
- . . . teacher-union confrontation with administration
- . . . emphasis on mastery of particular objectives
- . . . desegregation problems
 - . . . hostility among student subgroups
 - . . . diminished respect for science in the culture

Identification of "scenarios" for questioning CSSE interviewees November, 1976

- Budget cuts
- Science course-to course articulation
- Emphasis on mastery of particular objectives
- Student problems learning math
- Emphasis on mastery of particular objectives
- Conflict between practice (teacher view) and theory (professor view)
- Constraints on teaching social problems
- Elitism in science education

Preliminary findings of CSSE field workers December, 1976

Budget problems, public dissatisfaction with education generally

Teacher-union militancy

Constraints imposed by government; homogenization; falling teacher authority

Nonschool science-education opportunities not being utilized

Inadequacies of teach inservice education

Widespread student problems in learning math

Physics and chemistry only for the most able students

Science curriculum not abreast of even popular science developments

Issues seeking further validation for CSSE assimilation

May, 1977

Budget problems, reassignment of teachers, more emphasis on management

Low public priority on science education, except for college admissions

Cry for more vocational approach, more relevance to youngsters' lives

Lack of parent activism

Back to the Basics

Desire for instruction aimed at mastery of particular objectives

Classroom management problems, too many "unteachable" students

Lack of a sound diagnostic remediation system anywhere, rhetoric notwithstanding

Heavy reliance on textbooks

Teachers traditionalistic, skeptical; divided on "hands on" vs directed learning

Teachers objecting to social programs such as Headstart and Family Service

Teacher emphasis on moralisms, work-ethic, conformity, etc.

Final Questionnaire "scenarios"

May, 1977

Budget cuts, teacher reassignments

Course to course articulation, uniformity

Back to the Basics, teaching for mastery

Diagnostic teaching, math problems, practice vs theory

Classroom management problems, pedagogical styles and classroom atmospheres

Teacher support systems, inservice training, summer institutes

Constraints on teaching social problems, taboos

Elitism in science education, aims of general education

Assimilation chapter titles of the final report, early outline

May, 1977

Conditions of Education Today

Stability and Change in Science Education

Support Systems for Classroom Instruction

The K-12 Curriculum

Pluralism and Uniformity

Student Learning

Conceptualizations in Science

The School and the Community

Assimilation chapter titles of the final report, rough draft

October, 1977

The Context of Precollege Education in America Today

The Various Aims of Science Education

The K-12 Curriculum

Pluralism and Uniformity

Student Learning

The Teacher in the Classroom

The School and the Community

Assimilation chapter titles of the final report, final version

January, 1978

The Various Aims of Science Education

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Primary findings identified in the CSSE Executive Summary

January, 1978

The teacher is the key, much more than the school, materials, etc.

There are two "basic" teaching in school: reading and math

Math, science, and social studies remain separate domains

Socialization of students was a pre-emptive aim of most teachers

Much of the teaching in science is text-book bound

Articulation of courses and uniformity are called for but not wanted

There is a low public priority placed on science education