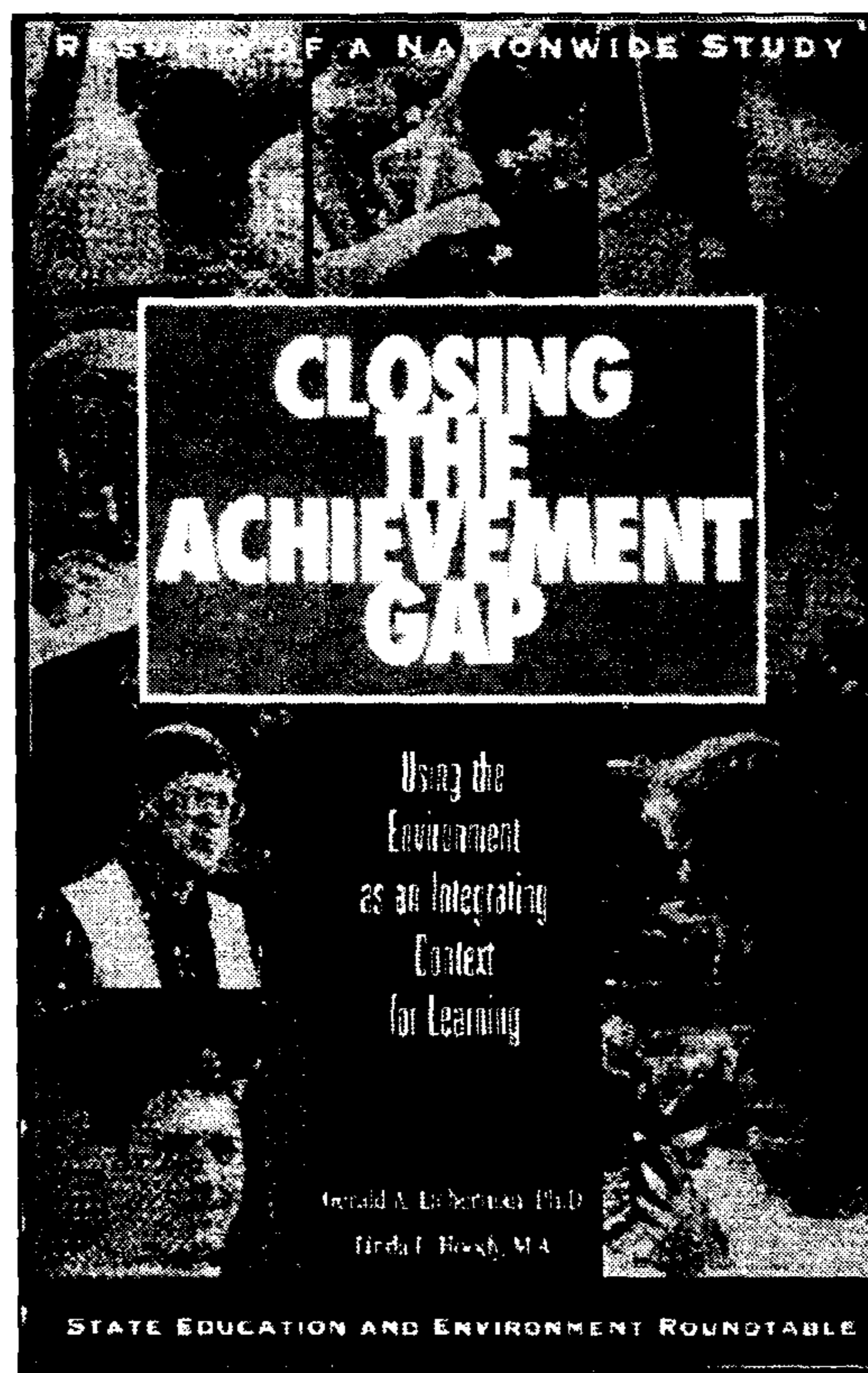


# Giving Credibility to a Tradition: Environment as an Integrating Context for Learning

by Tony Angell

When I began teaching high school English and Psychology in the mid-1960s, my classrooms were crowded with the same rich diversity of kids that characterize today's schools. Among the teachers there was little or no discussion of what we today know as multiple intelligences or learning styles, but we did sense that some learning activities motivated and excited kids a lot more than others. While the traditional classroom inquiry methodology interested some of the students, almost all the youngsters eventually wilted under the blather of my pitching fact after fact at them in a setting that amounted to little more than an oversized humidifier. What did excite and engage every single student to some degree was getting out into the world to develop an understanding of the subject by putting it to the test in combination with other disciplines.

To my everlasting good fortune, I had the flexibility to teach my students much the way I had learned. Whenever possible we went outside of the conventional classroom setting. When I began, I intuitively felt it was the thing to do because the kids perked up, liked the experience, were genuinely engaged and youngsters who had not handed in a paper that was intelligible up to that point were suddenly doing the job — and on time, too. On top of that, I liked the



*This recently released study provides strong evidence that environmental education has a positive impact on student achievement and attitude.*

teaching a lot more and brought that enthusiastic energy to my classes each day.

One of the most memorable field based learning sessions involved teaching deductive reasoning and logic as preparation for persuasive public speaking. This elective coincided with the first west coast hearings that were publicly held on the use of DDT. I knew the chairman from the University of Wisconsin, Dr. Joe Hickey, and arranged to have my students attend the hearing over several days so they might analyze the presentations of some of the panel participants. Here was an opportunity to take an interesting, important and, in this case, contentious issue and look at the persuasive presentations of professionals. The students were to analyze the speaker's remarks to determine how their arguments were substantiated and what methods (logical, ethical, emotional) they employed to reach

or convince the audience. The students were applying much of their sensory apparatus to analyze the speakers. They watched them, listened to their voices, and sensed their body language. (A few of the students were close enough to conclude that one of the presenters had bathed in aftershave!)

Some of the presentations were emotionally charged, such as the pesticide rep who claimed he actually ate DDT and suffered no ill effects. (A newspaper article a year or so later indicated that he died of cancer). Other remarks, while technically based, were so convoluted and esoteric, that even the chairman had difficulty following the points. Still others presented a thoughtful and clear series of facts that led to reasonable conclusions. Yes, seventeen and eighteen year old kids, without degrees in chemistry or biology, could understand the logical reasoning upon which positions were based and appreciated the style within which this information was delivered.

We spent another three active days discussing and analyzing these hearings and the speakers' remarks. Even the youngsters who missed the field experience were charged up by the other students' excitement and participated actively. This relatively modest field experience had focused on language arts, given fresh reality to the importance of science in our lives and demonstrated for the kids a bit of social studies by providing them with an example of democracy in action — a free and civil exchange of ideas on a then controversial subject. Today we can call it using the environment as an integrating context, or EIC.

This simple example from my career is hardly exceptional. Most of us who are in or have worked in the environmental education field can cite such strategies and the profound effects that it has had on student learning and achievement. The trouble is we have never had the resources to carefully document the effects on student learning and to compare our results with similar kids in more conventional classrooms. Well now, with the publication of *Closing the Achievement Gap* (research by Dr. Gerald Lieberman and Linda Hoody, MS), we can make comparisons both qualitatively and quantitatively.

Environment as the Integrating Context for Learning, or EIC, is the strategy that has been studied for the past

three years in 40 schools from throughout the country. The schools studied have been using this instructional strategy for as few as five and for as many as fifteen years. From elementary through high school, they represent a broad ethnic and socio-economic range. What follows is taken directly from the Executive Summary of the report and represents the teacher and administrators reporting that the vast majority of students in these EIC programs achieve the following:

- improve their academic achievement in reading, writing, math, science and social studies;
- show reduced discipline and classroom management problems;
- demonstrate increased engagement and enthusiasm for learning; and
- have greater pride and ownership in accomplishments.

Of the fourteen schools in the study currently using standardized tests, all found that quantitative measures of achievement affirm the academic benefits of EIC-based learning. They conducted a total of 39 comparative analyses of academic achievement using comprehensive and subject-matter specific, standardized tests and grade point averages. Ninety two percent of these comparisons indicate that students who have been in EIC programs academically outperform their peers in traditional programs. It should be noted that two of the three cases where traditional students performed as well or better than EIC students related to math scores in programs where math was not integrated into the EIC program.

As important as basic subject area and academic achievement is, it's significant to note that our intuitive sense about students developing more as civil and happy human beings in such learning conditions is also confirmed by the study. The students, teachers and administrators reporting in the careful interviews described in this study tell us that kids are far more able to develop skills needed to work in teams and groups as a wide range of abilities are utilized in EIC. Furthermore, EIC encourages and strengthens communication skills as kids work together, share ideas, discuss reasoning and develop new ideas from working together. And finally, an overwhelming number of the reporters spoke to how

working together in EIC promotes civility toward one another and encourages self discipline.

The above summary hardly begins to do the study justice. Get it and read it and share it with those who care about good education and may also give some

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thought to the proper stewardship of our earth. This study clearly demonstrates that good education is based in the environment and is not separate from it. Such information is a basis around which school boards can deliberate budget allocations and the structure of the curriculum. Your PTSA should likewise take positions and render support that will further opportunities for EIC. For decades environmental educators have been doing EE because they felt it was the right thing to do. Now we have more than feeling, we have proof. Let's use it thoughtfully and constructively, and build upon it.

*Closing the Achievement Gap* can become the framework upon which subsequent measurement of how learning in the context of the environment affects student development and achievement. I would expect that as many of you read this information you are already prepared to share your own battery of test scores and records indicating similar successes.

Having said all this, I am the first to admit that there is the inevitable irony at bay in the world of education. As good as this instructional strategy is, it has become increasingly more difficult to employ it in some communities. School districts continue to get whipped up to a frenzy over the unsubstantiated promises of educational technology and budget extraordinary amounts of limited dollars for more machines, only to discover a few years later that they have been rendered obsolete by their producers and should be replaced. Meanwhile the enterprising teacher must hold a bake sale and car

wash to cover the costs of a single field trip taken to the world where the water is really wet, the birds genuinely sing their messages, the smells have stories to tell and the visual landscape poses an infinite number of questions to the inquisitive mind.

Even when field study and real world environment is available and may be only out the classroom door, the teacher may be ill-prepared to take advantage of it. How many colleges of education are preparing new teachers to take kids out of the classroom and into the action, integrate the curriculum in a real world setting or apply instructional strategies wherein kids acquire and apply knowledge

in the environment? I cannot think of many and yet the demand for good teachers has never been greater. It is so great that standards are being changed to allow more people to teach who have no teaching certificates, but do have experience in applying the subject matter and possess a good feel for how people learn.

Such are a few of the challenges, but we've always had them and always will. Our business is teaching and most of us are in it because we believe in its importance, love the work and cherish our opportunity to make a difference for children. *Closing the Achievement Gap* has validated our commitment. It's up to us to make the most of it.

**For a copy of the report, teachers can call the Office of Environmental Education at (206) 365-3893. Copies can also be obtained from the State Education and Environment Roundtable, 16486 Bernardo Center Dr., Suite 328, San Diego CA 92128; (619) 676-0270.**

**A companion video summary "Closing the Achievement Gap" of 14 minutes is also available for check out from the Washington State Office of Environmental Education and for purchase from the State Education and Environment Roundtable office.**

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