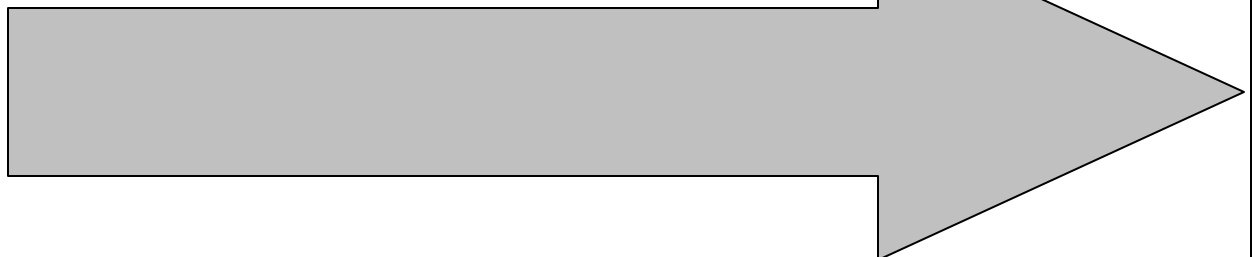
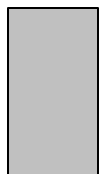
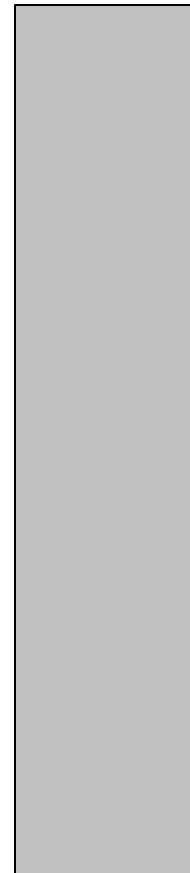
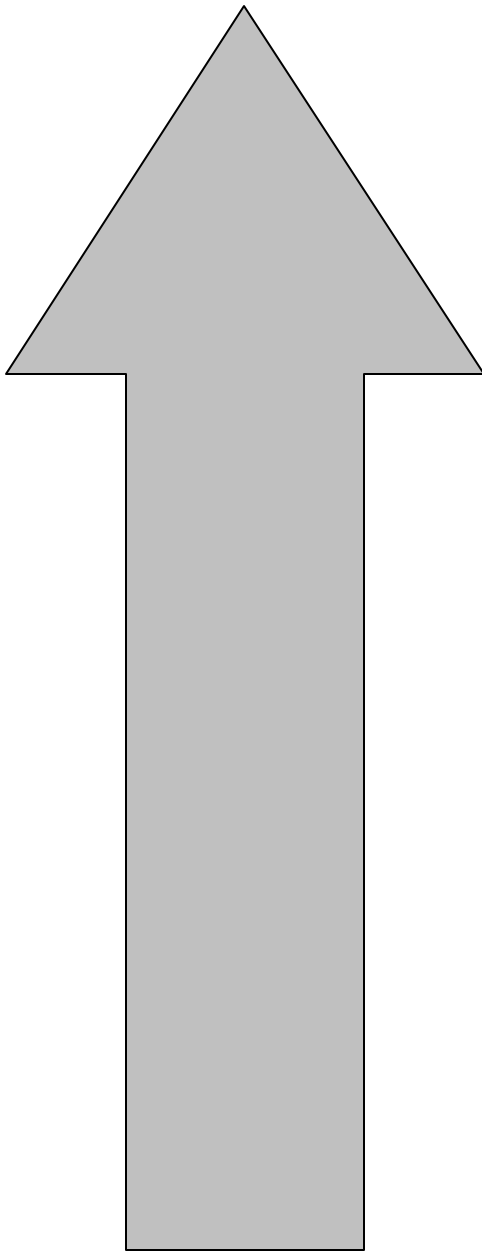


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## Editorial

### Prognostications and adaptations

- by John Rice

Teachers have a long history of adapting technology for educative purposes. If we define teaching as communication, we see that most of these adoption efforts revolve around technologies that facilitate communication: chalkboards, slides, and PowerPoint presentations; books, radios, and the Internet. So it is that the latest technological advances are now being touted as potential new inroads in education. Cell phones are a good example.

Now that cell phones are nearly ubiquitous, educational technology advocates are salivating over the prospects of usurping their communication powers for learning. One company recently introduced an SAT study service, which sends study questions to subscribers' phones throughout the day. In effect, this service turns a cell phone into an electronic flashcard system.

While I'm not sure about cell phone-based flashcards yet, it does seem reasonable to use certain mobile electronic devices in the classroom that have progressed in capability in recent years. PDAs come to mind. They are portable, powerful, and inexpensive. They've been around long enough for a fairly large body of research on their usefulness to be formed, devoted to studying their place in education environments. While they can't fully replace a laptop, they can supplement classroom computers quite nicely. Think of fighter jets supplementing aircraft carriers in war maneuvers.

As technologies progress, new products and paradigms will emerge that continue to enhance communication and productivity. Will cell phones find a permanent home in educational technology's pantheon? Time will tell. In the meantime, let's keep an eye on the prognosticators as they continue to trumpet the next new things.

### Journal of Applied Educational Technology Electronic Edition

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The Journal of Applied Educational Technology (JAET) serves an audience of teachers, educationists, and educational administrators who deal with technology in the K-20 environment. It seeks to offer solutions for educators through the use of applied technology as well as providing a publishing platform for current research. The journal publishes articles focusing on classroom uses of technology, book reviews, and research in the field. Research articles are subjected to blind peer review before acceptance for publication.

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## Book Review

## Sock-knocking typography

*Great Web Typography*. Wendy Peck.  
Wiley, John, and Sons, 2002.  
ISBN: 0764537008, 338 pp.



by Louise Keeton

If you have a basic understanding of Hypertext Markup Language (HTML) and graphics and want to delve a little deeper (or catch up to your students), *Great Web Typography* is a book you will find useful.

The book is arranged in four parts with a total of 14 chapters. The four parts are:

- Getting started with Web typography
- Controlling Web type with Cascading Style Sheets (CSS)
- Graphic type for the Web
- Typography for Flash

Three appendices end the fourth part of the book:

- Appendix A - contains general information on typography and more on CSS, including a list of resources
- Appendix B - lists raster and vector graphic software programs by name, with pros and cons for each
- Appendix C - Peck lists HTML code and an associated CSS style sheet for menus used as examples in a previous chapter

Peck includes lots of screen shots in her book. These screen shots show how different content and graphic fonts look and are excellent aids to visualizing her concepts.

*Great Web Typography* has a good-sized and thorough index, including entries for individual

typefaces and font names. Many typographic and Web terms are included throughout the book but, unfortunately, not a glossary where these terms are housed in one location.

One of the most appealing features of *Great Web Typography* is “Behind the Scenes,” Peck’s interviews (formatted as Q/As) with people working in the field. The interviewees include such experts as Robin Williams, of *The Non-Designer’s Type Book* fame (Peachpit Press, 1998); Eric Meyer, on CSS; Suzanne Stephens, self-professed type evangelist; and Joe Gillespie, designer of numerous pixel-based fonts.

As the content becomes more complex, Peck includes mini-tutorials with screen shots of menus, settings, and dialog boxes from software applications (Macromedia Flash MX, Fireworks, and Dreamweaver MX, Adobe ImageReady and Photoshop, and TopStyle, a stand-alone CSS file creator). Many graphic software programs have a steep learning curve and these tutorials are a ready aid for anyone wanting to try out her suggestions. Peck often shows steps for accomplishing a task in two or more software programs, which is particularly helpful.

Peck has also included several useful lists in her book:

- Ten steps to professional Web type (with screen shot examples): pp. 13–17
- Design checklist for every page: pp. 38–39
- Avoid the top ten errors in graphic typography: pp. 149–150
- Rollover effects you should never use: pp. 173–174

*Great Web Typography* is reasonably priced and would make a good addition to the books required for a Web development or multimedia class, a class reference library, or to a teacher’s personal library.



## In the Classroom

## Merry Christmas and Happy Internet Inquiry: Motivating the at-risk student with technology

by Lisa Cherry  
Osborne High School  
Marietta, Georgia

Every year as Thanksgiving turkeys and trimmings are cleared from tables across America and the countdown to December 25th begins, expect to be surrounded by a host of familiar sounds: the chop of an axe as a freshly cut fir tree descends to the ground for decoration, the crunch of hard snow beneath winter boots, and melodious renditions of Jingle Bells from Salvation Army street choirs. Along with these auditory experiences, there are also the traditional staging of Charles Dickens's classic, *A Christmas Carol*. No holiday season is complete without revisiting crippled Tiny Tim and being reminded of the universal theme of making the most of the time one is given in life. It is a miraculous sight to see, for upon exiting the theater, men immediately take up Ebenezer Scrooge's quest, walk with their own ghosts of the past, present, and future, and suddenly become roused from the state of complacency that develops so naturally in our hectic world. They are determined to start anew, relinquish destructive habits at year's end, but by mid-January, the depression sets in as they renege on their word and realize they are again wasting the precious gift of free hours bestowed upon them by a higher power.

Educators should find a pedagogical analogy in Dickens's story and the cycle of motivation and frustration it sets off in us every August as school bells ring, classes commence, and curriculum is covered. Teachers in all corners of America can identify with this scenario: sitting through preplanning sessions at the start of the academic calendar resolved to block out some free exploratory minutes for students each week only to forsake their lofty goals before the end of the first marking period. Administrators, pupils, and especially those professionals in the trenches are under tremendous pressure to increase test scores, and with cries for less recess and more rigor in schools, longer days and years, and greater teacher accountability, the last thing most parents and politicians would recommend is giving students an unstructured period each day with the freedom to learn something of their own choice (Wolk, 2001). And so it goes. The poor lot of teachers, mere mortals, swallow their collective pride, yield to the demands of higher ups, and do what they know is theoretically wrong. Looking out on a dim horizon, they throw up their hands in defeat, and shout, "Scrooge, where's my spiritual

guide, when I need him? I can't do it all – impart, remediate, enrich. Something has to fall by the wayside!"

In reality, what teachers should do is muster a little intestinal fortitude, turn a blind eye to the mistakes of the past and present and move positively toward the future – namely its promise of salvation in technology. Young minds are scheduled to enter the halls of my at-risk high school in a month, and they will indeed arrive with a complex problem set: poverty-ridden homes, family histories of drop outs, the lure of gang activity in the neighborhood, second language barriers. To them, the academic climate is largely aloof, clinical, and irrelevant, so in anticipation of the obstacles I will face in my twelfth grade Language Arts course, I have deliberately set aside nine consecutive Fridays for students to engage in independent explorations of topics that interest them. My goals for this massive undertaking are all inclusive as I want my Internet Inquiry to serve as a capstone for all the reading, writing, critical thinking, problem solving, collaborative, and multimedia presentation objectives I cover in Pacesetter English, a College Board course of study for grades 9-12 that shows adolescents the way, the truth, and the light of voice and textual power in the modern era. In short, each student starts the semester by identifying a leader, a celebrity, a crisis, a hobby, or some other aspect of life that interests him or her enough to devote a steady stream of energy to its study. In becoming an expert on his or her subject, the teen is ultimately expected to convert the expertise into an authentic museum exhibit to be viewed and critiqued by his peers. This instructional model, outlined extensively by Dr. Donald Leu, et. al. (2004) in *Teaching With The Internet K-12*, consists of five distinct stages: Questioning, Searching, Analyzing, Composing, and Sharing.

### Questioning Phase

Educational journals are rich with an instructional caveat many in our field ignore: A student's ability to question effectively is not innate or pre-wired at birth, but a faculty that must be overtly demonstrated and cultivated by the teacher (Canter, 2003). Since this opening segment is the most critical of all the elements in the Internet Inquiry framework, I spend a few weeks exposing my seniors to three-story interrogative levels before I even introduce them to the psychology/self-help series I draw their project questions from. As they read the novel *Ellen Foster*, I compose problems at the recall, comprehension, application, analysis, synthesis, and evaluation rungs on Bloom's ladder, making certain to identify the question stems and the what, why, how adverbs used in each type. Then I have my teens write and share their own tiers of inquiry in connection with a second parallel reading, the Vietnam fiction piece *The Things They Carried*. In this way, they are sufficiently prepared to tackle the more difficult narrowing down of research ideas that come with Evelyn McFarlane's popular series of coffee table books. First published in 1995, her *If Questions for the Game of Life, Would You...? And, How Far Will You Go?* works were sold under one advertising slogan: Break out this little beauty to stimulate conversation in awkward social settings. However, her musings so perfectly mirror the alternative cognitive and emotional mindset of at-risk youth that they have a direct classroom

function as well. They touch on essential questions of the heart and soul, helping us to define what it means to be human, to probe the deepest issues confronting the world, to defy pat solutions (McKenzie, 1997). A quick survey of some of the issues McFarlane raises in her volumes illustrates just how emotional and raw her set is, how each text cuts across curriculum lines and hits at bigger truths in life, the same meanings old Ebenezer Scrooge looked for a century ago. From *If Questions for the Game of Life* (McFarlane, 1995), for example, readers are asked to ponder these tough situations:

If you could have lived through any war in history (without actually fighting in it), which would it be? (page 6)

If you could only keep one of your five senses, which would you save? (page 20).

And from the 2000 edition of *Would You...?* (McFarlane, 2000), we are treated to these dilemmas:

Would you place adoptive children only with parents of their own race? (page 88)

Would you give the police more power in exchange for a lower crime rate? (page 6)

Would you say you value the struggle for success more than the results? (page 69)

Beginning in the first week of the semester, I use these controversial texts as sponge activities and ice breakers, directing a student to select one random question from a basket, and then monitoring discussions in small and large groups for a half hour.

But teacher, please proceed with caution. Despite their merits, there is an ever present, paradoxical danger in using McFarlane's questions as the basis of an Internet Inquiry lesson. In asking students to respond to a question such as, "If you could change one thing about the world, what would it be and why?" (McFarlane, 1995, page 8), one runs the risk of receiving empty, beauty pageant answers like world peace, hunger, and global warming. Envision instead stronger probes, more inventive solutions, and something new, and in moving students to this place, stress the importance of subsidiary questions in drawing out specific, manageable subtopics. I employ Inspiration software in guiding and focusing the brainstorming process. Hence, as I ask, "If you could physically transport yourself to any other country in the world, where would it be?" (McFarlane & Saywell, 1995, page 5), I encourage my kids to go beyond the one word answer of Bermuda and explore the hidden, unconscious details behind this decision to relocate south. A typical dialogue with an individual might run as follows: "Is it a cultural connection you feel? If so, probe deeper into the local color on the island and report on it. Or is your decision based on the warm climate? If so, then look into seasonal affective disorder and the influence weather can have on a person's mood." Steven Wolk (2001), an avant garde advocate of exploratory free time

in school settings, applauds this approach to instruction, noting that teachers must be hands on and proactive, making specific suggestions about how students can create and shape intellectual, challenging, creative, and interesting outcomes.

### Search And Analysis Phases

In these sections of the lesson, I rely on the same strategies used in previous steps, openly teaching front end navigation skills in the first nine weeks of the semester before turning the students loose to browse autonomously in week ten. At this point in the project, students usually turn to their favorite search engines and directories for facts and display little understanding of the subtle differences between online databases that prescreen material and narrow file retrieval results. Since the Web is brimming with guides for expedient journeys in Cyberspace, I direct students to helpful charts such as the one located at <http://www.infopeople.org/search/chart.html> which describes the salient features of the Yahoos and Googles of the world. Next, I take my students into the computer lab for a mini unit on how to judge the accuracy and relevancy of facts found on the Internet. In this mini workshop, I address such tips as the ending of URL's, about this site links, web master credentials, and updates on pages. To further illustrate my point of buyer beware, I use Filamentality to hot list a few ridiculous stops on the information superhighway such as The Taxonomy of Barney found at <http://www.improb.com/airchives/paperair/volume1/v1i1/barney.htm>. In concluding the lesson, I ask my seniors to rate a few sources on their own. Each of these scaffolding activities is designed to enhance the student's plan of attack in reading difficult passages and browsing through complex Internet sites. Furthermore, in spreading all of his sources on the desk before him and distinguishing between those pieces that are reliable and worth keeping and those that are outdated and unsubstantiated, the pupil is forced to clarify the intent of his original question. At long last, he understands that research is not a clean business, and it sometimes involves returning to the drawing board. This culling of source material leads him to new avenues of discovery and investigation, and as he embarks in fresh inquiry directions, he unknowingly repeats and reinforces the cycle of search and analyze again.

In these middle portions of the nine-week Internet Inquiry, I promote student success by following the common sense guidelines every educator learns in his first professional development class. Once a child chooses a topic, he or she submits a written plan of action to me spanning the duration of the work period. It must include specific timelines for delivery of products along the journey, and as a facilitator, I conduct frequent status of the class discussions or one on one conferences with pupils to keep them on track for a passing grade. I even require my cherubs to self-monitor in daily progress logs, another best practice grounded in hard study. I firmly believe that teachers across all subject areas need to maintain high expectations, and giving students the freedom to choose what to learn about does not equate with the freedom to twiddle his thumbs, to misbehave, or to do poor quality work.

### Composing And Sharing Phases

In keeping with the daring nature of the project altogether, the final stages of the labor take on a celebratory, liberated tone wrought with food, soft drinks, and easy listening tunes humming in the background of the classroom. In his groundbreaking book *The English Teacher's Companion*, author Jim Burke (1999) outlined 103 creative ways students could demonstrate their understanding of concepts, and his laundry list of assignments is a resource I often rely upon on my at-risk campus for its respect of multiple intelligences. I am especially fond of the more innovative outcomes Burke recommends such as board games, music CDs, skits, and diaries (page 333). Because the choice of presentation medium is left up to the individual teen, my rubric is generic in nature and centers on such basic skills as support and evidence, mechanics, and effective use of class time. However, I have found it advantageous to leave one category on the grading scale blank and allow the kids to fill this in, thereby gaining practice in authentic assessment and taking true ownership in their future scores.

In conclusion, in a recent study conducted at Brown University, Meltzer discovered four key factors instrumental in prompting reluctant readers to finally pick up a book and view English as a springboard for lifelong learning. Chief among these was motivation and learning environments where students work on literacy initiatives that connect to their lives and take into account their social and emotional needs. Secondly, this team of scholars advised teachers to abandon their dinosaur methods of embarrassing kids into comprehending by reading aloud and limiting assessment options to true-false, multiple choice exams. They proposed more free research-based, open-ended, cross-curricular approaches (Meltzer, n.d.). If what my colleagues in the field say is true, if these best practices are all it takes to bring America's youth out of their current intellectual funk, then let the marriage of Internet Inquiry and subject matter begin in your classroom post haste! In reaching deep into its pockets to cater to personal tastes, this instructional model does not leave kids with the conventional excuse, "I'm not interested!" and the option to forfeit an assignment. Rather, it dangles the proverbial carrot in front of the most skeptical of souls, hooks and holds, and tricks him into reading, writing, processing, and sharing effectively on a long-term basis.

By discarding the fetters of convention and tradition in the Language Arts research task, it recasts a once dreaded, piecemeal, boring task into one filled with freedom and pleasant ambiguities. Life on the mean streets for my disadvantaged students cannot be tied up neatly in a bow, so the open-ended, unsettling nature of Internet Inquiry rings true to them, giving them a taste of how yummy and infectious academics can be so they cannot turn back once they have savored the flavor. It makes for more savvy, self-directed employees who can problem solve independently. Plain and simple, it just manufactures better people like Scrooge. And look how this old coot transformed after a night out in the cold. Dickens tells us, "Scrooge was better than his word. He

did it all, and infinitely more...He became as good a friend, as good a master, and as good a man, as the good old city knew, or any other good old city, town, or borough, in the good old world..and it was always said of him, that he knew how to keep Christmas well, if any man alive possessed the knowledge. May that be truly said of us, and all of us! And so, as Tiny Tim observed, God Bless Us, Every One!" (Dickens, 1843).

Now this is a classroom finale anyone dedicated to the profession should aspire to!

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## Research

## Ethical research practices: Collaborative action research part II

By Chris Calvin  
Walden University  
University of Phoenix

In part one of this series we looked at a number of issues relating to ethical research praxis. In this article we will further examine these practices but in relation to one of the most popular and often used field-based research methods currently in education (Calvin, 2003).

Collaborative Action Research (CAR) goes by many names but one essential characteristic of CAR is that it is meant to be used by professionals in the field. Guidance and assistance from an expert is advised for early practitioners of this methodology but not required. CAR is by no means the only available field-based research methodology (Creswell, McMillan, Mills, and Schumacher, 2002). There are quite a few available but action research is one of the first utilized by practitioners for problems and issues they encounter on a daily basis (Sagor, 2000). This approach does much to empower a practitioner in the field to generate and control her/his own data and hopefully influence organizational policy. Data based decision making is currently the primary driver of change in most successful educational institutions (Erlandson, Stark & Ward, 1996). This makes ethical research praxis a primary concern and ensuing review essential. In the interview below the appropriate use of Institutional Review Boards (IRB) in the CAR method and some of the concerns involved when doing this type of data collection in the K-16 environment were examined.

### Relevant Communication

Several areas need further scrutiny with regard to this methodology. Problems can arise in several forms if early planning is to be fruitful. To better examine some of these issues we turned to Dr. Richard Sagor, one of the premier researchers and contemporary developers of this popular educational method in a recent interview conducted by the author of this article. All of the following context is left intact for purposes of accuracy. Following the text of the interview I will include additional editorial comments.

(Emphases added by the author)

From: Richard Sagor  
Date: 2003/08/04 Mon PM 04:24:25 CDT

To: Chris Calvin

>Dr. Sagor,  
>  
>After reviewing your text "Guiding School Improvement with CAR" and >the videos I realized that you are encouraging teachers to report to the >public and publish, but I don't see anything about using IRB during the >stages you present. Much of what they will be studying is involving >students, families, etc. and it seems should go through a review process >to protect human subjects. What would you suggest?  
>-Chris  
>  
>-Dr. Chris D. Calvin, Director  
>The Center for Digital Equity  
><http://atpr.fws1.com/thecenterfordigitalequity.html>  
>Houston, TX

Hi Chris,

Thanks for writing. You have raised a good question and it is one where I think there is ample room for disagreement. And, I should state at the outset that my bias when treading on ethical or policy grounds is to err on the conservative side. While I don't discuss the IRB issue specifically in the book, the discussion in chapter 12 covers much of my thinking on this topic.

That having been said, here is my take on the issue:

### Do I support the IRB process?

The IRB process is one that I heartily endorse. Its purpose is the protection of human subjects...something that scientists have not always been ethical about in the past and this is something that needs to be corrected and we educators should be the lead in making known our concerns for the well-being of the innocent.

Nevertheless, my position is that IRB approval is not necessary for most educational action research, largely because we are not engaging in "experiments" which involve "human subjects."

### Why a concern for the protection of human subjects?

People have a right to go about their lives without being manipulated for someone else's benefit--whether it could harm them or not. If, someone (a research scientist) decides that he/she would like to manipulate someone to learn from their experience (the essence of human experimentation) then ethical behavior as well as law requires that we get informed consent. But, even informed consent is not enough, some manipulations could be so potentially damaging that it would be wrong to let someone engage in it, even with subject consent, hence the Institutional Review Process--a process where the scientific community under the cloak of law, polices itself.

### Is all research subject to IRB approval?

The IRB process was instituted to provide oversight for institutionally sponsored research. I am not sure how that is defined. Clearly, a research grant made to a University department is considered institutionally sponsored. Doctoral research is always considered institutionally sponsored. But, what about class assignments that require research? I don't know how that line is drawn. Certainly, if research done in fulfillment of a degree requirement is deemed to be University

sponsored at WU, then considering some form of IRB review would be warranted. I've heard about it being as perfunctory as a proposal made on behalf of an entire class or program by the professor or department head to individual proposals submitted by each class member.

That being said all research doesn't require approval. It is my understanding that basic experimental research in the natural sciences, that does not make use of human subjects, can proceed without IRB approval. But a significant amount of other research, most notably research in the arts and social sciences (involving investigations into human behavior) does not require IRB approval.

One distinction that I have found helpful in determining if review is called for is whether or not research (on a human endeavor) is experimental. Meaning does the study involve some sort of manipulation by the researcher--a manipulation which would not have occurred other wise and would not have involved a set of individuals were it not for the conduct of the experiment. **In my opinion all experiments on humans should ALWAYS receive approval.**

But what of other types of research into human endeavors? Such as research into works of art and artistic movements? Certainly the works were created by humans, but the work was not done at the request of the researcher, for the researcher, and would have been none even if the researcher never existed. Another example is that of historical research or journalism. Certainly the historian is reporting on the acts of humans. But, these were all acts that were engaged in independent of the researcher (historian/journalist) and would have occurred whether or not the events became an issue of scholarly inquiry. A reporter is a researcher, but hardly an experimenter!

Perhaps closest to home is the example of anthropology and other naturalistic cultural studies. The anthropologist clearly is reporting on the lives, actions, even the words of the humans. The humans the anthropologist has chosen to report on were not chosen at random, they were, in fact chosen because they were representative of a sample (a particular culture). Nevertheless, the very methodology of the ethnographer demands that efforts be made to ensure that no manipulation occur. The entire validity of the report hinges on the fact that what was observed was what was and would have been occurring naturally--with or without the presence of the recorder.

#### **Is action research experimental research?**

With a few exceptions (which I will discuss later) it rarely meets the definition of experimental research, at least as I've defined it here. An experiment being defined as providing services to students or exposing them to certain conditions solely because the teacher was doing an action research project. As I stated in chapter 12 of the book---*I have some serious ethical concerns about experimental designs (particularly treatment and control designs) in school settings. In my opinion every teacher has a moral obligation, every single day they are in the classroom, to utilize the best approach/techniques they know how. When a teacher uses an approach they wouldn't normally use (because they are doing research) they are violating their sacred obligation to the kids. Likewise, to deny kids an approach that their teacher believes is in their interest (solely to create a*

*control group) is an equally heinous violation of our duties as teachers.*

It is for this reason (that in nearly every case--the exception to be discussed below) I assume that the teacher conducting action research is exposing his/her kids to nothing different than the kids would have been experiencing if the teacher was not being systematic about collecting and analyzing data on the impact of their teaching.

#### **Are there subjects in educational action research?**

In my opinion, to the degree that there is a "subject" being placed under my microscope as a teacher researcher, it is me. The object that I am studying is "my teaching behavior." Yes, the work done by the students, even the opinions expressed by the students may be windows (data) into the efficacy of the behavior of the subject of my research. But, in no way is this different way than the recipient of medical treatment is the recipient of the doctor's practice and the client of the lawyer is a recipient of the lawyer's practice. If the doctor and lawyer are performing just as they would have (if they weren't in the habit of being reflective practitioners) then there is no experimental manipulation going on. If the doctor, lawyer, or teacher elect to reflect on their practice (making use of the results of their work—to draw conclusions) and even if they later report on what they learned, it still doesn't constitute an experimental manipulation. Instead the doctor, lawyer, teacher is reporting on their routine practice.

#### **Are these the only legal and ethical issues we need to be concerned with?**

Absolutely not! Whether it be the naturalistic research of a journalist, a historian, an anthropologist or a teacher the research can and often does have unintended consequences for the individuals and communities that were reported on. While their behavior would have been the same with or without a reporter being there to chronicle it, once the behavior is reported it can produce numerous anticipated and unintended consequences (basic chaos theory). The impact of reporting can be both positive and negative. For this reason both the law and our ethical strictures should control all of our decisions on confidentiality and anonymity.

Once again, this is an issue that concerns teachers whether or not they ever venture into the arena of action research. Student work, grades, their faces, their opinions, etc., etc. belong to them and to them alone. Allowing a student to be identified (even if it is identified for something positive) without prior un-coerced student and parental consent is wrong (and often illegal) and this will be the case even if an IRB ruled otherwise.

Note: Earlier I said there were limited circumstances when action research might be experimental yet, still ethical and (arguably) not subject to IRB approval. This usually occurs when a decision needs to be made by the school authorities ---in circumstances when authorities will be asked to make an informed choice among alternative programs or strategies. It is not uncommon for this to occur, even in schools which have never heard of Action Research. Often in such circumstances a variety of alternative approaches are piloted, results are reviewed and, ultimately, a decision is made on how to proceed. When this happens the student who experiences one program (as opposed to another) simply because it is being piloted in their room is certainly being subject to a manipulation (having an experience) that wouldn't

have occurred if pilot wasn't occurring. But, just as when a doctor decides to try one particular medication (with you) as opposed to another, it doesn't require IRB approval (even at a University Medical Center). In my opinion, understanding this distinction requires examining the issue of "motivation." In the case of trying out different medications or alternative textbooks, the motivation for the manipulation is clear. As I see it, the motivation in both cases is the following:

- 1) It is being done because the treatment appears to be a worthwhile approach.
- 2) It is being tried to enable "your practitioner" to learn how to provide you with better service.
- 3) It is being done on a short term basis with monitoring.

So, in conclusion, my recommendations are to:

**A) Go overboard on informed consent.** Take a look at the sample letter (figure 12.4) on page 160. It doesn't hurt to let people know what you are doing. It reduces parental concerns, impresses them that you care about the students and are working at becoming more effective, and finally is an efficient way to gain approval for the use of student work/artifacts (should you want to) for publication or presentation.

**B) Maintain anonymity** (make liberal use of pseudonyms) even when it isn't necessary. This is a case where an ounce of prevention is certainly worth a pound of cure.

**C) Avoid using control groups.** If you want/need a comparison group find a naturally occurring one. Student come to school to receive the educational services we deem best, not to be denied them so they can be objects of study.

**D) See student work as what it is, a reflection of our instruction.** Perhaps as we teachers begin accepting the truth that the grades and other assessments of student work we produce are, in fact data, but not data on the kids, but rather data on our teaching effectiveness, it will help us develop a healthier attitude towards kids, grades, and teaching.

And finally,

**E) If in your opinion or in the opinion of your University, IRB approval seems to be a prudent strategy, by all means use it.** For starters most IRBs use a process whereby work of this sort will get an expedited review. It won't take up much administrative time, it won't have a significant effect on the course requirements (submitting a 3 page proposal at the start of the term-is a minor thing), it will teach the students about the IRB process and by doing so alert them to an important and sad history of abuse of human subjects both here and abroad, and finally it will help keep controversy at bay. In education we have enough going on....we should choose our battles and this is not one worth spilling blood over!!

Best wishes,

Dick

Richard Sagor, Director  
Institute for the Study of Inquiry in Education  
16420 SE McGillivray, Suite 103-239  
Vancouver, WA 98683

### Summary, Comments, and Conclusions

The above suggestions offered by Dr. Sagor are fairly consistent endorsements of standard research IRB protocol and proscribe a format for K-16 educators that errs on the side of the participant in any school related research project. As he established above, "I should state at the outset that my bias when treading on ethical or policy grounds is to err on the conservative side." According to Sagor (2003), for most CAR studies the expedited process will probably suffice but in cases where significant questions remain the full review should be made available.

Of course, as discussed in Part 1 of this series (Calvin, 2004), independent review for questionable application of a research protocol that has been reviewed by an institution with a vested (financial) interest in the studies outcomes have not been addressed through the National Research Act or subsequent action. The best advice for someone in a situation like the one previously mentioned in Part 1 is to appeal the findings of the institutional committee that has the financial interest involvement to a level that appears to be independent of the initial group. Each IRB is required by law, as are the principal investigators in any federally-funded study, to provide this contact information to research participants and anyone else associated with the project.

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## Action Research

## Action research in health and P.E.

By Sherri Brogdon  
University of North Texas

### Abstract

This paper summarizes the effects of action research and technology integration throughout a year of Health and Physical Education classroom instruction. The learning curve for me, as the teacher, was very steep, but was worth the time and effort. Technology integration was a slow and often painful process, especially when access was limited, and action research was a totally new concept for me when the year began. It has been one of the most rewarding experiences of my teaching career. I would recommend the process of action research during technology integration processes, as well as teaching any new concept. It has proved invaluable as both a learning and reflecting tool.

Why does the terminology “standards-based” and “data-driven” evoke fearful responses in the classroom teacher’s heart to the point of physical trembling? This vocabulary is not new. In fact, it first surfaced 25 years ago when the movement to establish greater accountability for student achievement first began in the USA (Stansfield, 2003). But teachers have not been taught how to cope with these initiatives or teach under their constraints. We are currently grasping at an elusive straw to make sense of all the mandates and new rules by which we must play. One “straw” that seems to be making an impact is action research, which is based on a “pragmatic conception” of a two-way relationship between thought and action first announced by Dewey in 1929. It has since been used as an approach for research by organizations interested in social and organizational change, dating from the late 70’s to present day application. “With its focus on practice as the locale of knowledge activities and its potential implications for transforming social practices, action research has become associated with an ideological commitment to social change” (Hoshmand & O’Byrne, 1996). Even though action research has been around for years, in August of 2003, it was a brand new concept for me as a 12 year veteran of the classroom. But the more I learned about it, the more I decided that it can be instrumental in helping teachers “put it all together” and successfully teach to the best interest of the students and conquer the new challenges set forth at the state and national levels. We can even provide each other with a sense of accomplishment and professionalism, which doesn’t seem to exist in many school districts during this time of conflict and change. Richard Sagor (2000) states it best in his book *Guiding School Improvement with Action Research*. “If ever there were a time and a strategy that were right for each other, the time is now and the strategy is action research!” He

further theorizes that educators can accomplish the following by using the action research model:

- Professionalize teaching.
- Enhance the motivation and efficacy of a weary faculty.
- Meet the needs of an increasingly diverse student body.
- Achieve success with “standards-based” reforms (Sagor, 2000).

In ever-changing times, teachers must continue to change. As educators, we must learn new strategies and methodologies to incorporate into our classroom management and teaching styles for success with a “standards-based” curriculum, and action research should be one of the first strategies we implement.

Action research has helped in my classroom by allowing me to reflect on what I am teaching, why I am teaching it, and how I can improve the process. I began the integration by studying action research through a Practicum class at the University of North Texas. But without waiting for all of the concepts to sink in, I began to use action research in my 8th grade Health class. The first order of business was to select a focus. I knew that I wanted to improve the drug awareness unit I was about to introduce, but what did I want to improve about this unit? The project consisted of research on a particular drug category and a creative writing assignment emphasizing the effects drugs have on individuals, families, and society. I decided the creative writing component was the area I needed to improve. In evaluating the writing portion, I also had to brainstorm assessment of the project, time considerations, especially given the limited amount of technology equipment; and expectations for each student outcome. As I was brainstorming these areas of concern, many other problems kept creeping into my mind. By journalizing my thoughts, the students’ actions, and other teacher’s ideas, I was able to filter through the maze and focus on the ideas that would make the drug unit better.

By doing so, I realized that journaling is a crucial element of action research. “We must actively teach and model reflective skills in a variety of ways if we are to demystify reflection” (Spalding and Wilson, 2002). Reflecting on our experiences and thoughts as we progress in our teaching profession is a very intense and inspiring activity. Without journal writing, many of the concepts I learned would have been fleeting thoughts. I was able to look back at my thoughts to see that I had changed my teaching strategies to incorporate the new concepts. If I had not kept a journal, there were many considerations that would have been quickly forgotten; therefore, the transition from old to new methodologies would not have seemed so important or professionally advantageous.

After brainstorming, I decided on a plan of action, which is step two in the action research process. I began the project with a pretest using a circle map to find out how much prior knowledge each student would be bringing to the project. This would be one method of assessment for the project. I decided that I would need more than one type of assessment so that I could depend on

the results and articulate them at a later time for other teachers. "By triangulating data, the results are more reliable" (Capobianco, Horowitz, Canuel-Browne, Trimarchi, 2004). Being able to see student success and the data produced by the unit, other teachers would hopefully be encouraged to be a part of other action research projects. Other methods of assessment would include: the final product, a peer review process, and a student interview on how to improve the project.

After the pretest, the students were assigned their drug topic by groups. They were also given a rubric by which they could self-assess their notes, and research began in the library and on the Internet. Eight days, at 45 minutes per day, were given for research, after which the students were given instructions on how to create a bibliography. They turned in their notes and bibliography for a grade. Although specific instructions were given, many of the students did not comprehend the format to be used for the notes and/or bibliography. I researched and read more about assessment, and I decided that they needed to see a good example, a model. So, I used several good examples produced by some of the students, and gave them a second chance to edit and improve their grade on this portion of the project. "Excellence is attained by such cycles of model-practice-perform-feedback-perform" (Wiggins, 1998, p 64).

The students then began the creative writing process. I learned from the previous assessment that modeling could be the most effective method of presentation, so I borrowed examples from the public library and our regional service center. The students were very attentive to the models selected and even became emotional about the effects of the drug problems told in the stories. I used this involvement to help them see how they could tell a story about how drugs affect people without just spitting out facts. They began to realize my expectations for their creative writing assignment. After their rough draft was complete, we began a peer editing process that allowed them to read other stories, as well as edit for interest. They were told to mark the line where they lost interest. The editing was done by two peers, after which, I edited for grammar and composition. Before I gave them back their papers with the edited remarks, I read them a story that I had composed. They were able to edit this paper orally as a group without knowing the identity of the author. I wrote down their remarks, which were very insightful, and then I explained that all papers, no matter the author, can be improved by the editing process. I also revealed that I was the author of the paper they had just edited. I was hoping this activity would allow them to take the edits in a positive manner and improve their paper by using the critiques. One of the biggest benefits of the peer-review process is being able to network with other students and teacher. I learned from the assignment as much, if not more, than the student whose work I was reviewing. When reviewing another person's interpretation of the assignment, my students were able to understand concepts, such as "authentic," "meaningful," "responsive," and "engaging" much better and make adjustments to their own unit with a new comprehension. It also allowed them to practice positive

feedback, which is an important tool for teachers, administrators, and students alike to learn and use.

As the weeks and lessons flew by, I realized that action research was enabling me to study the way in which I was teaching and to make adjustments that would integrate better methods into my classroom. I wasn't just planning lessons, but I was considering the impact of the lesson on my students. Were they learning the intended objective? Could they perform the tasks to the level I wanted? Were my lessons aligned with the performance standards? Was critical thinking a component of the lesson? How was technology integrated into the lesson? All of these questions became so important that I found myself overwhelmed and had to take a step back to consider changing one thing at a time.

The final stages of action research involve collecting data, analyzing data, reporting the results, and taking informed action. The collection of data included: the students' final paper, a thinking map assessment for information learned from the unit, and a paragraph on what they had learned and improvements that could be made to the project. These assessments allowed multiple sources of data for my action research. During the analysis phase, I interpreted the thinking map assessment by averaging the new facts noted; the students learned and remembered an average of 6.6 facts from the project. The most informative data came from the qualitative information about improvements that could be made. These improvements included information found in Table 1.

**Table 1: Research observations**

<b>Improvements Needed According to Students</b>	<b>Number of Observations</b>
More Computer Access	19
More Time for the Project	13
Due Dates Given at Beginning of Project	5
Group Problems	10
Student Work Habits	8
Multi-tasking Problems	5

This information is very important from the teacher's perspective because it allows improvement to the unit and presentation to better enable the students to learn and complete the objectives. Giving the students the due dates at the beginning of the project instead of in stages would definitely improve the unit, according to the students. The organization of the groups could be improved also, but the main improvement would be more computer access. A solution to this problem would also address the time issue and the multi-tasking problem because the lack of computer equipment caused the time constraints and the need for multi-tasking. As the students were finishing their project, we were forced to start new lessons because only 5 students were allowed on the computer at one time. Improvement to this unit should include using group projects,

not just group topics, so that we can use the available 3-5 computers within the time constraints of the unit.

Results were reported for this project by submitting them in an article to a School Health newsletter for our regional service center, which was sent to administrators throughout Texas. The article allowed me to reflect on the overall unit, the action research component, and report it in a professional venue. I think it is very important to record the results of action research and the feedback we get from students and colleagues in reference to our units of study, so that others can benefit. In organizing the results and thinking about how they could be better in the future, I was able to rethink and review many of the concepts from previous lessons. I also read and referenced other articles, which reinforced these new strategies. Taking informed action is the last component of a good action research project. Thus, I wrote a grant for handheld computers with keyboards to help address the access problem for our campus.

Has action research become part of my teaching strategy? Having seen the results of action research and continuing to study and learn about how it can make a difference, I decided to try to incorporate it into my physical education classes during the semester after Health. The project is completely different, and is only assessed for individual improvement; it is not used for a grade. The focus began with a study on student nutrition and health problems. The action plan includes taking a baseline measurement of 3 areas that indicate good health: body mass index, fat percentage, and waistline. Each month the physical education class will emphasize a different strategy for improving student health. For example, in February, we introduced stretching and toning exercises. The statistics at the end of February were the waistline measurement decreased by an average of 2-3 inches. In March, we focused on limiting sugar intake. April's focus was to drink at least 8 glasses of water per day. The measurements were taken individually at the end of each month. The students were motivated by seeing improvement in their measurements. Hopefully, this will be a learning activity that will help them develop good eating habits throughout their life. Some analysis of data was accomplished at the end of each month, but the majority of data was analyzed at the end of the project. Assessment was quantitative with the measurements and qualitative with the input of student interviews. A report was written and shared with colleagues and was used to incorporate nutrition into the Health curriculum. The ultimate goal was to get everyone involved in nutrition and health, including the school cafeteria workers, the school nurse, and the administration.

Has action research made a difference in the way I teach and prepare to teach? Yes, I have learned that my decisions in the classroom have a tremendous effect on my students' success in meeting their objectives. I also want them to be able to self-assess and learn to be responsible for their own decisions success in and out of school. Action research is a tremendous tool to help achieve these goals. Although, this is not a wide-spread solution in the school in which I teach, many teachers

could benefit from this strategy. If there were others trying to incorporate action research into their classroom, this strategy would also allow for networking, professional development opportunities, and peer support from other teachers. We wouldn't feel so isolated or at a loss while trying to accomplish impossible goals set for us by those trying to improve the education process from afar.

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### Upcoming Events

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#### Ed tech conferences

Texas Computer Educators Association (TCEA)  
25<sup>th</sup> Annual Convention and Exposition (largest state conference)  
Austin, Texas, February 7-11, 2005

Society for Information Technology & Teacher Ed. (SITE)  
16<sup>th</sup> International Conference  
Phoenix, Arizona, March 1-15, 2005

American Educational Research Association (AERA)  
2005 AERA Annual Meeting  
Montréal, Canada, April 11-15, 2005

National Educational Computing Conference (NECC)  
NECC 2005: Digital Illuminations, the 26<sup>th</sup> Annual NECC  
Philadelphia, Pennsylvania, June 27-30, 2005

World Conference on Educational Multimedia, Hypermedia, and Telecommunications: ED-MEDIA 2005  
Montréal, Canada, June 27-July 2, 2005

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