I'M NOT A RESEARCHER BUT....

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Misguided Creativity

When you ask cooperative education coordinators or directors whether they or their colleagues are conducting any research they answer:

I'm not a researcher but,

"Every year I provide the public affairs office with information about the cooperative education students. I report the number of students by department and provide an analysis of each population by age, gender, hometown, major, year in school to date, and work placement(s)."

I'm not a researcher but,

"I have looked at whether specially admitted students, those who did not meet our 2.5 grade point average eligibility requirement for cooperative education programs, experienced academic difficulty regarding classroom learning. What I discovered is that these 'exceptions' either maintained their pre-existing grade point average or went up in grade point average."

I'm not a researcher but,

"I have studied the number and kind of companies we use for placements. This has aided me in deciding how many jobs and students my coordinators can manage. I have also looked at the shifts in student majors to determine their current employment interests and shifts in interests. This is useful to decide which companies to approach and to get involved in our program."

I'm not a researcher but,

"I have six years of follow-up data from graduates of my program. These follow-up data tell me what they liked and did not like about the company and what we could do to improve this placement."

I'm not a researcher but,

"We use student evaluations to advise us on what does and does not work for them. These data are used on an individual basis for program planning and collectively for marketing and curriculum planning. We get about a 70% response rate."

I'm not a researcher but,

"I collect data on salaries earned by our students and graduates and offer this information to the academic departments. This is useful information for student recruitment and helps faculty understand the relationship between what they do and employment."

I'm not a researcher but,

"We ask employers for their perceptions of our cooperative education students. This information is useful for planning workshops for students and faculty. It gives us current information about the field and how our students are doing in that field."

It would appear from these responses that cooperative education coordinators and directors have, with misguided creativity, determined that while cooperative education practitioners conduct research, they cannot call themselves researchers!!! Sadly these responses suggest that the orthodox scientific world view is alive and well, perpetuating the perspective that knowing is in the hands of an elite few, the researchers. The scientific world view has taught us the value of critical public testing of what should be taken as knowledge. The scientific test is one that passes the requirements for objective and validated information according to scientific methodology: random assignment, pre-post standardized testing, and control groups. However, clearly, and unfortunately, this perspective with its prescribed technology also separates the researcher from the research subject in order to establish objective knowledge and one separate truth (Bateson, 1972). As Rogers (1955) noted, slavish adherence to these perceptions forces us to make the unfortunate choice between "persons and science."

In fact, this forced choice need not be made. For years there has been a model that allows for, indeed demands, the integration of research and practice. This model is called the research-practitioner model or scientist-practitioner model (Howard, 1986; Leong & Zachar, 1991; Staats, 1993; Tinsley, Tinsley, Boone & Shim-Li, 1993). Another, and more recent, way of framing this kind of approach is "reflective practice" (Schon, 1983; van Gyn, 1996)

which speaks to a process of thinking about professional practices by challenging basic assumptions to make and own rational choices in practice.

A Rose by Any Other Name Is Knowledge

Both the research-practitioner model and the reflective practice model dismiss the idea that the model of science is adequate to offer a complete understanding of human action in the world. A common sense understanding of our world, an inclusion of a critical approach (value-impregnated approach), and empirically grounded scientific studies, all contribute toward an understanding of human action. Therefore, all approaches for claiming knowledge are required to achieve an integrated knowledge base. What it comes down to is a live-and-let-live philosophy that advocates both science and practice are important (Staats, 1993). Practice and science coexist on the same plane; each offering information that contributes toward understanding human beings and the world in which they live. There is no need to bridge the two because neither one needs to be valued over the other and the skills for one are in fact required in the other. Rather than separating rationality from causality we can simply embrace the opportunity to develop and create within the integration of practice and science. New ways of thinking and new avenues for learning can only result in greater understanding and knowledge.

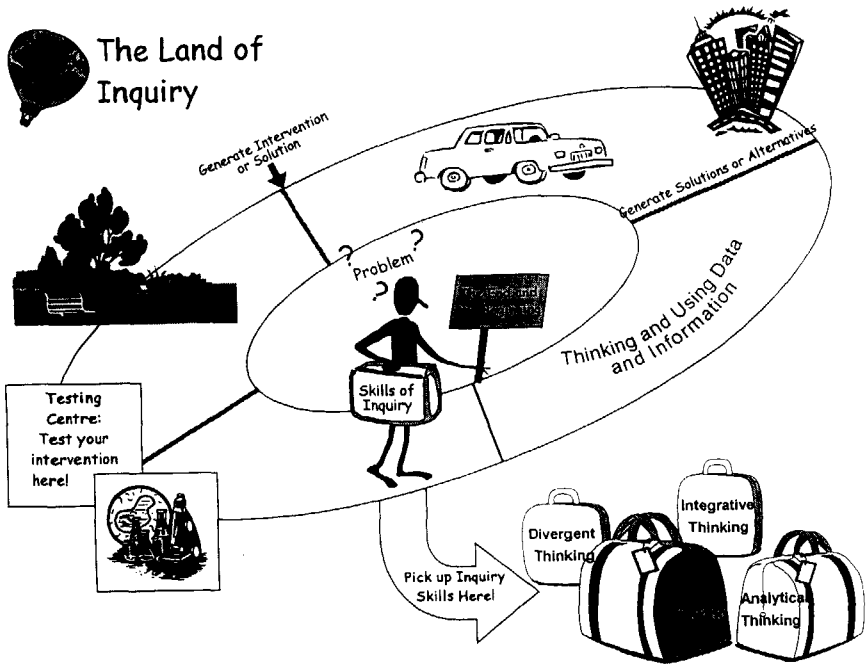
Research-Practitioner Model

Research-practitioners are practitioners who bring a variety of research approaches to their work. Consequently, for cooperative education, the practitioner brings a set of knowledge-securing procedures adequate to the needs of researchers to their educational employment situations and academic settings. The foundation for thinking as researcher and practitioner is coming from a **place of inquiry** and having the **skills of inquiry**. To be in a place of inquiry is to know that you do not know and to problem-solve in order to find out that which you do not know. To wonder: What is going on here? What is happening? What went wrong? What worked? What do I need to know? What can I do that might affect the situation? What would work best here? To stay in a state of wanting to understand, of wanting to learn, of wanting to generate the best solution (while recognizing that you do not know what that might be) is to be in the state of inquiry (see Figure 1).

The skills of inquiry are thinking skills and involve four different ways of thinking (Ricks & Griffin, 1996): divergent thinking (thinking of different explanations for the same data base), analytical thinking (pulling things apart to understand how the parts are related and make up the

whole), critical thinking (challenging underlying assumptions and premises) and integrative thinking (restructuring and related information to come to a new understanding). As a research-practitioner one uses these skills throughout the researching process and moves from one to the other as needed.

Figure 1
Research-Practitioner Process Model



It is this state of inquiry and the thinking skills of inquiry that point to the second critical aspect of being a research-practitioner, **thinking and using data or information** for decision making and problem solving. In thinking and using data, the research-practitioner is staying in inquiry (what do I want to know?) and asking: What will I take as evidence? What information will be useful in helping me address what I want to know? Where will I find this evidence? Some will prefer to use a scientific approach and will explore whether experimental studies have already spoken to the question. In this case a quick review of the literature in the library or on the Internet will meet their needs. Others will want to do a study of their own. Still others will want to ask students what they think, and so on.

It is from these data or information that the research-practitioner **generates solutions or alternatives** to address the situation confronting their practice. When generating alternatives, the research-practitioner holds the alternatives as hypotheses, e.g., which one or ones would work the best? Using a rationale, the research-practitioner then **generates an intervention or solution** that theoretically would work the best and **puts it to the test.** In putting the solution to the test, the research-practitioner is looping back to **inquiry** and engages in the process of **thinking and using data or information**. Typically they ask: What do I want to know about this solution? What will I take as evidence and where will I get the data or information?

In the simplest terms, the research-practitioner researches a practice situation to generate a solution, and then researches the implementation of the solution to see if it worked. The research-practitioner engages in a process of learning which requires staying in a state of inquiry, collecting and analyzing information, generating and testing solution(s), and ultimately **integrating what was learned** into their personal practice knowledge base. Throughout the research-practitioner process (see Figure 1), the research-practitioner uses the inquiry skills of divergent thinking, analytical thinking, critical thinking, and integrative thinking.

In looking at cooperative education practice in this way, the distinction between research and practice becomes artificial and falls away. When you engage in practice from a research-practitioner point of view, ipso facto *when you are practicing you are conducting research;* when you are conducting research it is in the context, and not separate from, practice. To invoke a scientific process of critical thinking and hypothesis testing throughout cooperative education practice requires the practitioners to operationalize their decision-making strategies, make explicit their values and preferences, and evaluate the effectiveness of what they do. It allows for, indeed demands, a professional accountability. For research-practitioners the professional accountability is built in. You cannot escape from what you come to know and understand!

Approaches to Inquiry in Cooperative Education As Research Practitioners

Once the research-practitioner is ready to explore and study practice, the research options or strategies are numerous. Primary approaches are those that encourage and require participative inquiry. Peter Reason (1986, 1988, 1994) has discussed many approaches to participative inquiry that we will only briefly summarize. Experiential participatory research approaches were first put forward by John Heron (1971) who posits that:

> "All those involved in the research are co-researchers, whose thinking and decision making contribute to generating ideas, designing the project and drawing conclusions from the experience, and also as co-subjects, are participating in the activity being researched." (Reason, 1994, p.325)

Reason goes on to list three research approaches that lend themselves to cooperative and experiential research: (1) cooperative inquiry, (2) participatory action research, and (3) action inquiry. Participation research involves all those who are part of and who join in the experience. As cooperative education is both participatory and experiential, these approaches are simply part and parcel of any research done in this domain. Certainly there are degrees of involvement; especially different degrees of involvement in giving meaning to the information collected. However, it is often, if not always, the players in cooperative education (cooperative education coordinators and directors, faculty, and students) who define the issues, articulate how to proceed, point to the direction for collecting the data, assist in the collection and articulation of the data, and determine what should be done in light of the meaning of the data. Cooperative education has been doing this for the past 50 years! The elite researchers are getting around to naming it "cooperative and experiential research," thereby giving us permission to do what we have been doing. Further, we can now call ourselves researchers!

Keep Planting the Roses

Now that the artificial distinction between research and practice has been exposed and cooperative education practitioners can legitimately declare their involvement in research as research-practitioners, the question can shift from "Can/should we do research?" to "What is/should be the nature of cooperative education research and are we asking the right questions?" In our experience, the real nature of cooperative education research is a closely kept secret! We know it is out there and that's about all we can say. We, therefore, want to discuss the importance of asking the right questions and point to what some of those might be.

The first point we want to make is that any close-to-home question is the right question. In other words, any question that gets your heart beating and any information that informs what you are doing, is RIGHT. In most cooperative education programs there exists a great deal of data on students, programs, employers, and faculty. This information is sitting around in existing information systems that have different levels of access depending on the technology of the institution. A first step might be for a

group of coordinators, students, and faculty to sit down and ask questions that can be answered from existing information systems. Simple questions about students, faculty, employers could be brought forward to the institution and used to market existing programs as well as plan more appropriate programs and strategies.

The second point we want to make is that there are questions that need to be raised which are both practical and push the envelope on cooperative education. For example,

> In these times of economic hardship, is it the case that cooperative education students finish school with less debt or no debt? Does this give them a competitive advantage in that they are able to take jobs that have more risk to them (geographically farther away, don't know if they will like it, smaller salary) because they have less or no debt?
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> Do cooperative education experiences provide a career counseling opportunity? Do the work placements give students such a clear view of future work that they discover that this particular option is not for them? For example, I don't want to work in a large organization or I don't want to sit at a desk all day. If so, hasn't cooperative education been successful? Because the student has qualified for cooperative education, should the student be given the option to transfer to another department? What would be required of departments in the college to cooperate in viewing cooperative education in this way?
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> How can business partnerships be developed to provide students the opportunity to conduct research in business settings? What creative approaches can be developed with business partnerships to move away from a "this student works for you" to a "this student works with you" partnership? Can faculty members be part of this creative approach and participate as a research and learning partner?
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> What kind of curriculum needs to be developed to prepare students to function as research-practitioners in their work settings? Are the curriculum needs different for the academic departments or are they operating out of an old paradigm about discipline differences? Can cooperative education affect this? What kinds of data can be packaged for the college that helps to institutionalize cooperative education? How do we keep the

institutionalization of cooperative education flexible so that it is a viable educational opportunity and strategy in keeping with current times . . . whatever those times might be?

What different delivery methods and models for cooperative education are possible and required in light of the current information technology and accessibility? What do staff members need to know in order to move in this direction? Are there departments within the college that can help with this? For example, can education and computer science cooperate to deliver and research a different delivery approach?

What training packages can be offered to better prepare cooperative education personnel to function as research-practitioners. What kind of management and institutional support do cooperative education specialists need to balance research activities in the context of their practice?

Changing Roses to Pansies

Clearly to engage in research that addresses the above questions has serious implications for cooperative education. The most serious implication is to understand that the question(s) raised and resolved through research impacts on defining and redefining the work/practice. The interaction between research and practice is one that informs and therefore changes the practice itself.

In the case of cooperative education we think that cooperative education practitioners have been researching and redefining their practice for years. Again, we realize that this process has been a closely guarded secret! What if people found out that most current practices of cooperative education are really variations of cooperative education that violate the principles and definition required for certification and funding? What if over that past 50 years cooperative education has changed dramatically and by keeping the silence we can continue to think that we are all engaged in the same thing. In other words, when does the rose become a pansy or a weed and does that really matter?

We suggest that it probably doesn't matter that much and that what probably matters more is when educational approaches and strategies do not change with the times, and like dinosaurs, become extinct. Therefore, we would encourage cooperative education practitioners (coordinators, directors, students, and employers) to adopt or continue with a research-practitioner approach in the practice of cooperative education. We would further encourage cooperative education practitioners to own up to the

research that has been done and is being done. We think it is time to have an honest appraisal of what has been learned from our collective research-practitioner experiences and use that to reformulate cooperative education as a viable educational approach that can take learners forward into the next century. A new hybrid of roses, if you will!

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