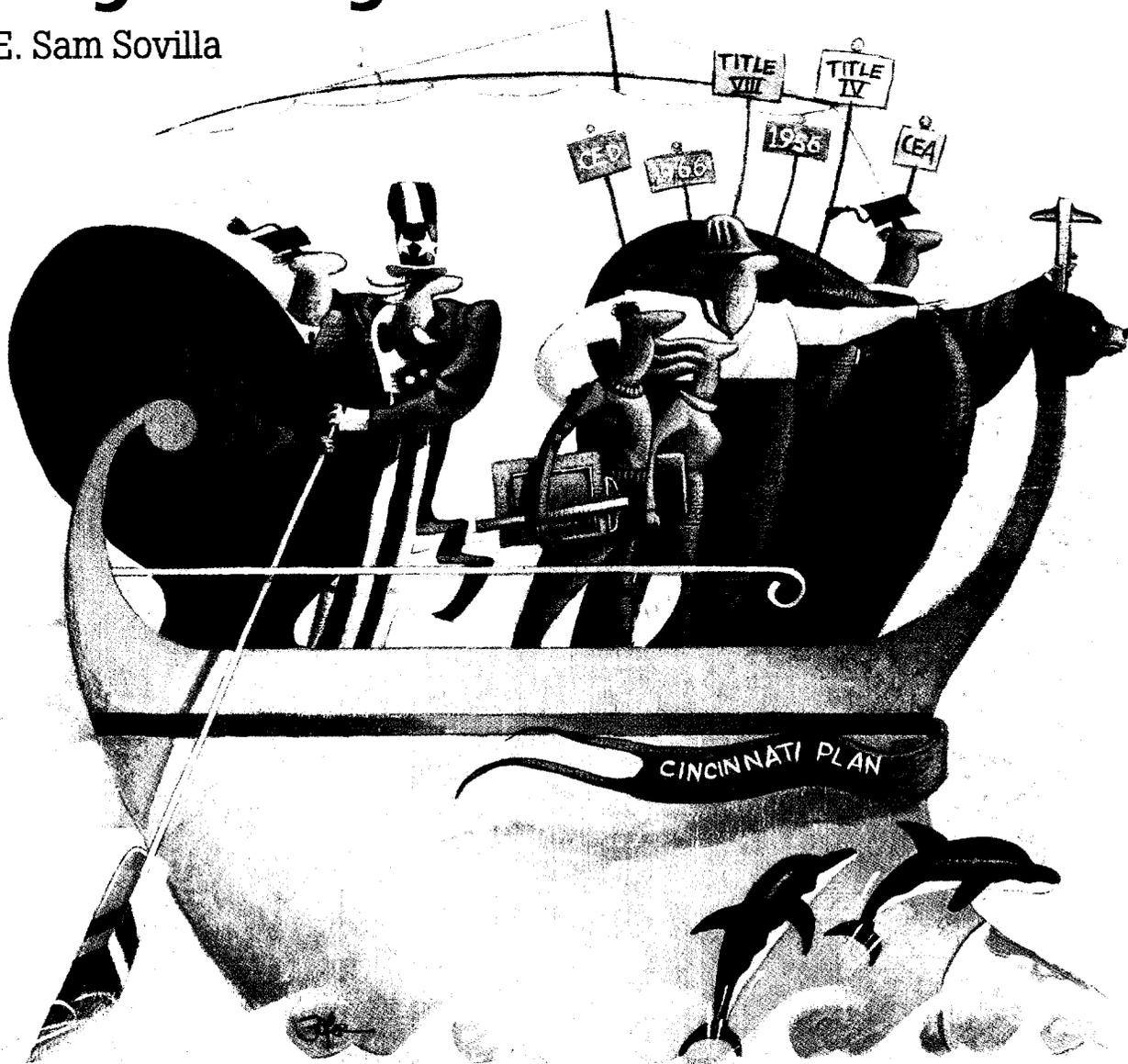


Co-op's 90-Year Odyssey

By E. Sam Sovilla

Cooperative education has come a long way since its founding in 1906, but the journey is far from over. Co-op veteran Sam Sovilla examines its history, current status, and outlook for the near future.



THE 1996-97 ACADEMIC YEAR marked the 90th anniversary of cooperative education. What started as a small experiment in work-based learning in the engineering college of one institution has expanded to similarly structured programs at more than 900 colleges and universities in the United States as well as abroad.

Co-op has much to celebrate as it approaches centennial status, but also much to consider in terms of growth,

identity, quality control, and corporate involvement. Those interested in shaping its future would do well to examine its complex history and the positive and not-so-positive realities of cooperative education today.

As a co-op director for 22 years at the University of Cincinnati, co-op's founding site, I would like to share some of my knowledge about co-op's past and present as well as offer a few predictions and recommendations regarding its future.

History of Cooperative Education

One of the best ways to assess cooperative education's potential is to examine the key events and accomplishments of its past.

The First 50 Years

Herman Schneider, an engineering professor (and later engineering dean) at the University of Cincinnati, conceived of this unique pedagogy in 1906 after becoming convinced that many professional con-

cepts and skills could not be learned effectively in the classroom, but required practical experience for their understanding and mastery. He proposed that a substantial component of the engineering curriculum involve the coordinated alternation of on-campus study and off-campus, real-world, paid experiences.

Although many academics and industrialists scoffed at such a radical departure from traditional education, Schneider persevered and in 1906–07 enrolled 27 electrical and chemical engineering students in his first co-op program. After the initial year's trial, more than 400 prospective students inquired about the co-op program, and a large proportion applied for admission. Word of Schneider's innovation quickly spread to other institutions, and many engineering schools inquired about "The Cincinnati Plan," as it was commonly labeled at the time.

In 1909 in Boston, the Polytechnic School of the YMCA Evening Institute (which later became Northeastern University) established a cooperative education program; by 1941, 28 other institutions followed suit.

H.P. Hammond, who was president of the American Society for Engineering Education in 1936–37, announced at that year's ASEE annual conference that "the most noteworthy, single development in engineering education in this country since 1893 was the establishment in 1906 of the cooperative system."

Neither the Depression nor two World Wars seriously impeded the growth of cooperative education. By its 50th anniversary in 1956, approximately 60 colleges and universities had adopted cooperative education programs. These programs were designed predominantly for those studying engineering or technology, but some offered co-op opportunities in business administration, the physical sciences, and the liberal arts.

The New Era

The last 41 years of co-op development, from 1957 to present, constitute what has often been called the "New Era." Forces at work during this time led to a tremendous rise in the number of programs and to significant federal government involvement, but also to serious philosophical differences among co-op educators over the purposes of and standards for cooperative education.

Early Signs of Change

Perhaps the most significant change force in 1957 was Charles Kettering, research director for the General Motors Corporation. A strong advocate of cooperative education, Kettering was disappointed with the level of national publicity co-op's 50th anniversary garnered. In his role as chair of the Thomas Alva Edison Foundation, he charged the foundation's executive director, George Probst, with the responsibility of attracting greater attention to cooperative education.

The Edison Foundation's first initiative was to organize a conference in Dayton, Ohio, to assess cooperative education's potential role in higher education. Confer-

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ence participants concluded that cooperative education's alternating on-campus and off-campus activities offered an economical way to accommodate growing numbers of college-bound students, but that convincing traditional educators to initiate such programs would require documented evidence of co-op's educational value.

The Ford Foundation's Fund for the Advancement of Education agreed to finance a two-year study to determine this value. Led by James Wilson of the Rochester Institute of Technology and Edward Lyons of the University of Detroit, the study culminated in the 1961 publication of *Work-Study College Programs*, a book that attributed many educational benefits to cooperative education. For example, the study concluded that:

- by coordinating work experience with the campus educational program, theory and practice are more closely related and students find greater meaning in their studies;

- employment experiences contribute to student understanding and appreciation of the nature of the working world and to the development of mature judgment;

- cooperative education programs enroll students who are as academically talented as students enrolled in traditional programs.

Co-op advocates recognized that educational validation was not enough, however; they needed to formalize ways to continually relay this information to those in positions of influence. In 1962 they formed the National Commission for Cooperative Education to promote cooperative education on a large scale and to raise funds to support ongoing efforts.

Cooperative education gained even more representation in the early 1960s with the founding of the Cooperative Education Association (CEA). Members of ASEE's well-established Cooperative Education Division (CED) provided significant leadership in forming this inclusive organization, designed to serve growing

numbers of practitioners from nonengineering disciplines and two-year colleges in addition to engineering educators. During these years, CEA enjoyed the largest co-op practitioner membership base and became a major player in shaping the future directions and philosophical orientation of cooperative education. CED continued as the primary affiliation for those with engineering and engineering technology co-op programs, but many of its members also participated in CEA.

The Federal Funding Period

The most significant influence during this time, however, was the advent of federal funding for co-op programs. Since its founding, the National Commission did what it could to inform legislators about the benefits of cooperative education through testimony at House and Senate committee meetings. Societal forces were also working to cooperative education's advantage. The national agenda included issues of access to higher education, affordability of that education, equal rights, and educational relevance. The National Commission effectively communicated how cooperative education addresses all of these issues. This, in turn, established the base for federal support for cooperative education.

The Higher Education Act of 1965, an

initiative of President Lyndon Johnson's "War on Poverty," provided the first opportunity for direct federal funding for cooperative education. Title III of that act included cooperative education as one of the options under which developing institutions could apply for funds.

A 1968 revision of the act moved cooperative education to Part D of Title IV, clearly labeling it as a form of student assistance (because of its salaried work com-

ponent). This move meant that any institution, not just developing institutions, could now apply for co-op program funding. The most important change, however, occurred in 1976, when amendments removed cooperative education from Title IV-D and gave co-op funding its own identity as Title VIII. This action signified that cooperative education should no longer be considered a form of financial aid, but a distinct higher education program.



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The availability of federal program funding fueled a major expansion of cooperative education. The number of programs shot up from a base of approximately 60 colleges and universities with programs in the late '50s to 225 by 1971. During the years of federal funding, from 1965 to 1996, the federal government allocated more than \$275 million to expand and strengthen co-op programs. At its peak in 1986, 1,012 colleges and universities, or roughly one-third of all U.S. post-secondary educational institutions reported having co-op programs.

This brief profile of federal funding would seem to reflect the success of the National Commission for Cooperative Education and the overall practitioner



community in their collective advocacy for the advancement of cooperative education. But there is another side of federal funding history that is very important in understanding co-op's evolution and its condition today. From the inception of government support until roughly 1976, the federal guidelines concerning institutional eligibility for funding were similar to the standards of practice long established for engineering cooperative educa-

tion. Those guidelines specified that co-op programs were for full-time students, and involved alternating periods of academic study with periods of off-campus, paid employment. In 1977 various higher education groups persuaded the federal government to allow funding for "parallel co-op," a model in which students attend school part of the day and work part-time. The modified regulations also opened Title VIII funding to programs in which students worked full-time while continuing their education in night classes.

During the remaining years of Title VIII, many experiential education practitioners lobbied successfully for an even more liberal definition for co-op in Title VIII guidelines. Many educators came to perceive Title VIII as a potential funding

source for all small or undersupported, work-based learning programs, and determined that modifying the defining guidelines for co-op was the key to access.

Not all who proposed changes did so simply to gain funding eligibility for their programs. Some sincerely believed that the guidelines were too restrictive and did not recognize their perceptions of alternative "legitimate" models of cooperative education. But, whatever the reasons for the modifications (and some were appropriate), in the waning years of Title VIII, almost any educational program with any type of experiential component, even a single work term, was eligible for funding as a "co-op" program. As a result, the debate about definitions, standards, and terminology for cooperative education greatly accelerated, and continues today.

In my opinion, federal funding for expanding cooperative education was well intentioned, but flawed. This wasn't anyone's fault. There was virtually no one in the field with experience in designing the expansion of a major educational effort. This lack of relevant expertise led to four major misjudgments that limited the suc-

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cess of the government's funding support for co-op's expansion.

1. Emphasizing Enrollment Over Program Quality. From the outset, the performance evaluations for programs receiving funding emphasized growth in student enrollment over progress in building a foundation for educational quality. Universities knew that to receive continued federal funding, they needed to report increases in student numbers each year, and so directed their energies accordingly. As a result, when federal funding eligibility ended, many programs collapsed, owing to poor design and/or lack of integration into the school's academic and administrative structures.

2. Encouraging Immediate Campuswide Implementation. Federal funding placed a high value on programs that pro-

posed implementing co-op throughout the institution from the outset. Not only was this impossible to do well, given the modest resources of most grants, it was not the way to develop a large co-op program. Based on my in-depth experience as an evaluator of programs at 55 institutions, it seems obvious to me that you build large-scale educational programs one step at a time, beginning with disciplines where faculty commitment is strong and an employment market likely exists for students. From this modest success base, the university can plan expansion in an orderly manner. Co-op directors during the federal funding period tended instead to spread themselves too thin, taking on the whole campus, leaving little time and energy for fostering sustained faculty interest and involvement.

3. Building Programs from a Faulty Information Base. Co-op practitioners and consultants failed to identify all of the key success factors of viable programs until late into the federal funding years, leaving newcomers without essential information about how to structure successful programs (e.g., establishing faculty ownership from the outset).

4. Perpetrating the Myth that Co-op is Right for Every Institution. Leaders in the co-op community perpetrated the myth of Title VIII—that successful co-op programs could be built on every campus. The fact is that the academic culture of many colleges and universities does not provide fertile ground for co-op. For example, some college faculties are very traditional, and hence unreceptive, to modifications in the academic calendar or to additional summer instruction needed to accommodate co-op. The federal government spent millions of dollars on co-op programs that had little chance of succeeding.

Current Status: A Critical Review

Despite setbacks and misjudgments, co-op programs today exist in every state of the union and in many other countries. Successful alumni claim that cooperative education programs helped accelerate their careers. Thousands of companies and government agencies are employing co-op graduates and looking to hire more. And increasingly, co-op programs are providing students with overseas opportunities that let them experience firsthand a more global perspective of their chosen

disciplines. There is even talk among visionaries in the field that cooperative education is evolving into its own discipline. Clearly, cooperative education has come a long way in 90 years. But all is far from perfect as the following will attest.

Growth

In 1971 approximately 100,000 students enrolled in cooperative education programs in 225 colleges and universities. In 1986, student participation increased to 191,000 students and 1,012 schools. In other words, in only 15 years, the number of students had nearly doubled, and 787 additional colleges and universities had implemented programs. Four years later, in 1990, the last year in which comprehensive field data was collected, student numbers continued to increase, reaching a level of 237,000, although 103 fewer schools had programs. This growth, a direct result of federal funding, might lead one to conclude that cooperative education had become firmly established in U.S. postsecondary education. Clearly, the Title VIII funding initiative succeeded, but not at the high level perceived by many educators. Some thoughts to consider:

- After roughly 25 years and \$275 million in federal funds, is a total increase of 137,000 co-op students significant?

- While the number of participating students has increased, the percentage (2 to 3 percent) of all college students that participate in co-op is at nearly the same level as in the first year of Title VIII federal funding. Should this percentage be higher?

- How much of the increase in numbers of students and programs over the years of federal funding can we attribute to the liberalization of federal guidelines that defined eligibility for co-op funding? There were obviously some real increases in the number of programs and participating students, but the baseline from which these increases were calculated reflected numbers for programs that met a more restrictive definition of cooperative education.

- The vast majority of school co-op programs are still small. Research data developed by the former Cooperative Education Research Center of Northeastern University in 1986 revealed that the median program size was 105 students. Even if the median program size has doubled over the past 10 years, which is doubtful, the typical program would still be of modest size.

The Co-op Accreditation Movement

In 1993, 12 cooperative education leaders met at Georgia Institute of Technology to discuss common issues and share information about best practices. In subsequent annual meetings, this informal group expanded and officially named itself the Cooperative Education Network.

During the course of network discussions, participants overwhelmingly concluded that cooperative education was facing an identity crisis and that the quality of many programs calling themselves “cooperative education programs” was below acceptable standards. Several participants drafted a set of standards for co-op programs, which after discussion and refinement, the entire group adopted and called “Attributes of Cooperative Education Programs.”

These attributes allow for multiple program operational models and apply to any discipline, yet they remain consistent with the combination of unique features that have always distinguished co-op from other work-based learning programs (e.g., paid work experiences and coordinated curricula).

In subsequent meetings and after representatives of 132 colleges and universities endorsed the “Attributes,” the network proposed that there be a formal accreditation organization for cooperative education programs of all disciplines. In a meeting at Northwestern University in August 1997, the 54 attendees elected Richard Abel, department head of professional practice in the College of Applied Science at the University of Cincinnati, to lead a group effort to form an accreditation organization.

For more information about the Cooperative Education Network or to review “Attributes of Cooperative Education Programs,” see www.co-op.uc.edu/home.

Academic Integrity

As previously mentioned, Herman Schneider founded cooperative education on the conviction that the alternation of classroom studies with real-world, practical experiences would yield a more rounded education. In short, his goal was to enhance student learning. Most academics knowledgeable about co-op recognize its educational purpose and view co-op as an academic program.

Many institutional administrators, however, don't seem to understand co-op's mission, or else they choose to ignore it. During the past decade, they have transferred a significant number of programs out of the academic mainstream, often merging them with comprehensive career centers in an attempt to cut operational costs. These transfers signal to many faculty members that co-op is a student support/service function and not an integral part of the academic program that helps achieve curriculum goals.

This can decrease the likelihood of faculty input in a co-op program, which is crucial to maintaining a program's focus on learning. Faculty need not be involved in day-to-day operations, but should have a role in developing fundamental program policies and should also feel a part-

learning," they emphasize co-op's positive impact on student recruitment and retention, student success in attaining jobs after graduation, and the income co-op can offer students. This imbalance in the promotional literature clouds co-op programs' mission in the minds of academic decision makers.

Research Base

There are few current studies of cooperative education that adequately assess learning outcomes. Unfortunately, the field has collected far more testimonials than results from solid research. This meager research base makes it difficult for developers of new programs to obtain facul-

retired or are no longer with us. The field is in danger of having no one documenting its history. Cooperative education will not advance if its practitioners fail to record its defining moments and the lessons to be learned from past initiatives.

Historical documentation is not enough, however; people must avail themselves of it. Unfortunately, in recent years, some leaders representing co-op organizations have known very little about either the history of co-op or of the organization they chaired. More significantly, some could not even articulate the foundations of the field. To play a more significant role in higher education's future, the cooperative education commu-



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nership with the co-op office in defining program goals.

Additionally, a co-op program may not have as many opportunities to grow if it is merely a small segment of a much larger center. A career center must allocate its limited resources in a way that provides for all of its services. Under these conditions, it is difficult to establish the funding base required for sustained expansion of a co-op program.

Field practitioners also contribute to the problem of academic integrity. They regularly emphasize the noneducational over the educational benefits of co-op in promotional pieces and internal reports. Instead of promoting "enhanced student

support and involvement, and even tougher to gain media attention for "the right reason"—a program's enhanced learning capabilities.

Recognizing the need for expanded research is one thing; bringing it about is another. For most field practitioners, operating their programs is the priority. Few have the staffing luxury or the educational background to perform research.

Field History

During co-op's 90 years, only a few scholars recorded its evolution, analyzed those records, and from that analysis, recommended goals for the field's advancement. Most of those individuals have now

nity needs to develop ways to better educate its own on the roots and routes of its past.

Benchmarking

Until roughly the mid 1960s, co-op program structures and operational models were similar enough to permit useful comparisons among participating colleges and universities. Today, the overly liberalized use of the label "cooperative education," coupled with a lack of standards in the field (except in engineering where the Accreditation Board for Engineering and Technology has established some criteria), has contributed to multiple program models and great variance in actual practices. This makes it very difficult to identify comparable programs for benchmarking or for budget analysis.

When it comes to co-op programs housed in comprehensive career services centers, it is often impossible to break out the actual level of support for co-op from the costs of the centers' other services and programs.

Corporate Changes

Downsizing, total quality management, and mergers have changed corporate practices during the past 20 years, often making it more challenging for schools to maintain quality cooperative education programs.

Perhaps the biggest corporate impact has come from downsizing and its subsequent reduction of management layers. For many years, a common title in larger corporations was "manager of college relations," and in companies with large co-op programs, "manager of cooperative education." These positions were often at a senior management level and held by the same persons for a long time. Their title holders knew the purposes of cooperative education, had the knowledge base to operate a quality program, and they and their staffs were well acquainted with college co-op representatives. They also had a good feel for the content and quality of the academic programs and the nature of the student bodies. During recent years, many companies have downsized or eliminated this college relations function. Today, in some of these corporations, no senior manager is overseeing the co-op program, and feedback about the company's use and value of cooperative students rarely reaches corporate policymakers. In many of these companies, line managers employ and supervise co-op students, some with only minimal knowledge about cooperative education or with misconceptions about co-op's purposes. To compound the problem, many of the line managers or co-op supervisors perform these roles for two or three years and move to new positions.

The consequences of these and other changes in corporate America make it difficult for institutions to build relationships with many of their industry co-op supervisors and to maintain program continuity. Without long-term co-op champions in a company, a program often deteriorates to the point of simply being a one-term student employment arrangement, with the primary purpose being that of filling immediate staffing needs. In such programs, there is often no developmental plan for co-ops, and work may not be closely tied to curricula. As Neal Houze, Purdue University's cooperative education director, said recently, "We have an increase in companies offering cooperative *employment*, not cooperative *education*."

There are still many employers who

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are near-perfect partners in providing excellent cooperative education programs for students. They are fewer in number today, however, which forces some schools to compromise their standards in order to provide practical work experiences on a timely schedule for all of their students.

What Next?: Some Precautions and Recommendations

Knowing what I do about the history and critical issues of cooperative education from participating in co-op programs for more than 25 years, I would like to make the following predictions and recommendations regarding cooperative education's future development.

Growth Lag

The end of federal funding will produce several years of program instability. The number of programs will probably decline further, probably reaching a level of 500 to 600 programs. With growth in the number of programs stagnating, the next step for cooperative education is to focus on helping the successful, newer programs to improve quality and expand student participation.

Focus on Quality

In addition to helping newer programs prosper, co-op's agenda for the years immediately ahead should, and will likely, include a focus on quality standards, culminating in an accreditation organization for programs across disciplines. This process has already begun as a result of the formation of the Cooperative Education Network (see "The Co-op Accreditation Movement," page 21).

Also high on the agenda will be greater efforts to guide and assess student learning in co-op programs. This is well underway on some campuses, and will expand rapidly due to the greater emphasis accreditation agencies now place on learning outcomes.

In due course, I expect that those who are committed to co-op but differ as to

some of its key defining features, will reach an amicable level of co-existence, but will not achieve full closure. I predict that with the advent of standards, those less committed to the philosophy of cooperative education, however, will move on and identify with experiential education programs more like their own.

Corporate Challenges

Structural changes in corporate America will continue to challenge cooperative education. Co-op educators will need to find ways to address these challenges and to encourage more employers to develop quality co-op programs.

Useful Research

Research will remain on the agenda because documented evidence of co-op's values is the key to both school and corporate endorsement. The challenge will be to encourage researchers in various disciplines to be involved in studies that can be useful to better understanding various facets of cooperative education.

Conclusion

Whatever the future holds for higher education, I believe cooperative education will be a part of it because all participants—educators, students, and corporate managers—gain substantial benefits from their involvement. Through co-op programs educators can keep abreast of industry trends, students can enhance their understanding of key engineering concepts and processes, and corporate managers can tap a valuable source of part-time and potentially full-time employees. That is why cooperative education has survived through 90 years of societal changes, wars, economic cycles, and dramatic swings in public policy.

E. Sam Sovilla is associate provost and director of the Division of Professional Practice at the University of Cincinnati. He is former chair of ASEE's Cooperative Education Division and a past president of the Cooperative Education Association.