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# National Assessment of Experiential Education: Summary and Implications

By Dan Conrad and Diane Hedin

Experience is never limited, and it is never complete; it is an immense sensibility, a kind of huge spider's web of silken threads suspended in the chambers of consciousness and catching every airborne particle in its tissue.

(Henry James, quoted in Pitchett, 1979, p. 3)

James' poetic characterization serves to put the Project and this report in perspective. As experience is too immense, too complex, illusive, even too mysterious a phenomenon to fully comprehend, so also is it the case with what is learned from it. There is no pretense in this report that its tables and numbers have miraculously captured that "sensibility" which has eternally eluded the poet. The report's more pedestrian aim has been to capture some small particles of experience, to reduce some part of the mystery to a size and form that can be grasped, understood, manipulated, and from which conclusions may be drawn and lessons learned.

## Overview of Project

### Case for Experiential Education

The arguments for experiential education are rooted in a concern for the total development of young people—social, psychological, and intellectual. This development is seen as jeopardized by a social milieu that increasingly isolates young people from the kinds of experiences, encounters, and challenges that form the basis for healthy development and that add purpose and meaning to formal education. The aim of social development—the development of active, concerned, involved citizens—is jeopardized by practices which isolate the young from adult society and deny them an active and valued role in it. The aim of sound psychological development—of persons who have a clear sense of who they are, what they believe, and what they can do—is jeopardized by lack of opportunity to demonstrate one's

worth and to test, stretch and challenge who one is and can be. The aims of intellectual development and academic learning are jeopardized by equating education with classroom instruction in an education process that produces graduates who are "information rich and action poor" (Coleman, 1974), who have had insufficient opportunity to test and apply that information, and who have not been prepared to continue learning from the experiences of everyday life outside of school.

More by default than desire or design, the schools have been left to play a central role in the total development of America's young people. Few educators have been at ease with the responsibility. Some have chosen to deny its broadest implications and to focus on the schools' more narrow and traditional aims of developing cognitive skills and transmitting the accumulated experience and wisdom of the society. Others have accepted a broader view—some from a sense of cultural necessity and some from a belief in the interrelationship of all dimensions of development—that no one aspect can be achieved in isolation from the others. Among the latter are numbered many of the advocates of experiential education.

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## Background of Project

While strong endorsements of experience-based education abound, there is relatively little "hard" evidence to demonstrate or document the impact of such programs on student participants. Little effort has been made to systematically test the assumptions underlying the endorsements or to investigate empirically which specific forms of experiential programs may be the most effective in realizing the hypothesized benefits.

The Evaluation of Experiential Education Project was undertaken to begin filling that gap—to assess the impact of experiential education programs on the psychological, social, and intellectual development of secondary school students. Equally importantly, it aimed at using this data to identify the program variables that are most effective in facilitating such development.

The project was initiated by the Commission on Educational Issues and co-sponsored by the National Association of Secondary School Principals, the National Association of Independent Schools, and the National Catholic Education Association. It evaluated 27 experiential programs in independent, public, and parochial schools around the country. Over 1,000 students participated in these programs. A preliminary study was also conducted involving nearly 4,000 students in 33 programs.

Primary funding for the Project was provided by the Spencer and Rockefeller Foundations with additional support from the General Mills Foundation. The Project operated out of the Center for Youth Development and Research, University of Minnesota, under the direction of Drs. Diane Hedin and Dan Conrad.

## Defining Experiential Education

For purposes of this research effort, experiential programs are defined as "educational programs offered as an integral part of the general school curriculum, but taking place outside of the conventional classroom, where students are in new roles featuring significant tasks with real consequences, and where the emphasis is on learning by doing with associated reflection."

## Selection of Programs

The programs included in the study are of four major types: volunteer service, career internships, outdoor adventure, and community study/political action.

Within each type, individual programs differ in terms of **length** — from four weeks to nine months; **intensity** — from 2-4 hours each week to full time; nature of **reflective component** — from none to a daily seminar related to the field experience; **student characteristics** — from ages 12 to 19,

from good students to poor, and from low income to highly affluent; its **voluntary or compulsory nature** — with nearly all programs being voluntary.

The school programs included in the study were not randomly selected, but chosen because of a demonstrated record of excellence—and as being representative of the major type of experiential programs. It seemed prudent to study only the most well-conceptualized and established programs to discover the effects of experiential programs.

We assumed, in addition, that the teachers and administrators involved in exemplary projects would be the persons best able to define, articulate, and specify the fundamental outcomes for experiential education. Furthermore, this research effort was committed to an approach which was practical, understandable, and applicable to everyday life in schools. Thus, a "Panel of Practitioners" (the educators who ran the programs being studied), along with the research project co-directors, were responsible for defining the issues to be studied, for helping to select and develop assessment tools, for implementing the research

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design, and for helping to interpret the data collected. It would be impossible to overestimate the contribution of this Panel to the conceptualization and implementation of the research effort and the interpretation of the data collected. Such cooperation and counsel made this a shared effort throughout, one in which all felt a commitment to its success.

## Selection of Issues

The first step of the research process was to survey the directors of 30 experiential programs. They were asked what they believed to be the actual effects of their programs on students, what each had directly experienced, seen, and heard.

There was a striking similarity in this "testimony of concerned observers." They described a core set of outcomes which each of them had observed whether they represented programs in small towns or large cities, work with low income or affluent youth, or programs featuring outdoor adventure, service, internships, or political action. The important implication was that there are common threads that unite a variety of exemplars of experiential education.

Among the observed effects reported by the directors were 24 which appeared with high regularity. This list was redrawn as a questionnaire and in May, 1978, administered to nearly 4,000 students in 33 programs. The students were asked which, if any, of the outcomes represented what they personally had gained from their program. A summary of the results of this survey is presented in Table 1 which is an

abridgment of that found in Chapter Three of the final report. On 14 of the 24 items there was an average agreement level of over 80% across all programs. The most frequently cited outcomes fit into three major categories—social, psychological, and intellectual growth. These became, then, the major areas of investigation for the project itself.

| <b>Table 1</b>   |                                |                  |                   |
|--|--------------------------------|------------------|-------------------|
| <b>What Students Learn in Experiential learning</b>  |                                |                  |                   |
| <b>Composite Profile of Students Responses from 30 Experiential Programs (N=4,000)</b>               |                                |                  |                   |
| <b>The first 10 and last 4 of 24 items</b>   |                                |                  |                   |
| <b>ITEM (in rank order)</b>  | <b>PERCENTAGE OF RESPONSES</b> |                  |                   |
|  | <b>Agree*</b>                  | <b>Disagree*</b> | <b>Don't Know</b> |
| 1. Concern for fellow human beings   | 93                             | 4                | 3                 |
| 2. Ability to get things done and to work smoothly with others                                       | 93                             | 4                | 3                 |
| 3. Realistic attitudes toward other people such as the elderly, handicapped, or government officials | 88                             | 4                | 8                 |
| 4. Self-motivation to learn, participate, achieve  | 88                             | 7                | 5                 |
| 5. Self-concept (sense of confidence, sense of competence, self-awareness)                           | 88                             | 7                | 5                 |
| 6. Responsibility to the group or class  | 86                             | 7                | 11                |
| 7. Risk-taking—openness to new experiences   | 86                             | 7                | 8                 |
| 8. Sense of usefulness in relation to the community  | 85                             | 8                | 6                 |
| 9. Problem-solving   | 86                             | 9                | 5                 |
| 10. Risk-taking—being assertive and independent  | 86                             | 9                | 5                 |
| 21. Use of leisure time  | 60                             | 26               | 14                |
| 22. Narrowing career choices   | 54                             | 34               | 12                |
| 23. To become an effective parent  | 52                             | 29               | 19                |
| 24. To become an effective consumer  | 46                             | 32               | 22                |
| *Strongly agree and agree are combined, and disagree and strongly disagree are combined.             |                                |                  |                   |

### The Research Questions

In regard to **social development**, the research questions were as follows: to what extent do experiential programs have a positive impact on students: a) level of personal and social responsibility; b) attitudes toward others; c) attitudes toward active participation in the community; and d) involvement in career planning and exploration. In regard to **psychological development**, both general self-esteem and self-esteem in social situations were assessed, as was moral development. Finally, in regard to **intellectual and academic growth**, students were asked for self reports on learning—were tested on problem-solving and, as mentioned above, tested for levels of moral reasoning.

In addition to looking at the general effects of experiential education on student participants, we also were interested in determining the ways in which different program forms (community service, internships, political action, community study, and adventure education) and formats (length, intensity, characteristics of the individual field experience) affect student learning. For example, do short-term experiences of three to four weeks show any effect on attitudinal change? Does the intensity of the program—two hours versus ten hours per week—affect student outcomes? Are some types of programs, e.g., community service, more likely to promote a sense of social responsibility or interest in community participation? To what extent do the characteristics of each student's individual experience affect the results?

### The Research Method

**Test Instruments.** The overall effects of social, psychological and intellectual development were operationally defined as scores on the test instruments and questionnaires employed in the study. The specific instruments used to measure psychological development were the Defining Issues Test (moral reasoning), the Janis-Field Feelings of Inadequacy Scale (self-esteem in social situations), and the Rosenberg Self-Esteem Scale. Social development was measured by the Social and Personal Responsibility Scale (social responsibility), three semantic differentials (attitudes toward others) and the Owens' Career Exploration Scale (career maturity). Intellectual development was investigated through the Problem Solving Inventory and through self reports of participants. The test battery included both standardized tests and adaptations of standardized tests. Two of the tests, the Social and Personal Responsibility Scale and the Problem-Solving Inventory were original instruments designed specifically for this study.

Because the outcomes being measured were elusive, triangulation of the data appeared to be the most reasonable approach. Each outcome was looked at from several different angles: paper and pencil tests; systematic observations of parents, teachers, and community supervisors; student journals and writing samples; case studies of individual students and programs; and a host of unobtrusive measures.

**Design.** All students were pre and post tested on or near the first and last days of the program. Six of the experimental groups (at least one in each program type cluster) also had comparisons. These were not random controls, but the students in each were comparable to those in their experimental pair in terms of age, grade-in-school, geography, grade-point-average, socio-economic status, classroom programs, and were tested pre and post at the same time as their experiential pairs.

**Analysis.** The data were analyzed in two phases. In the first, pre-post results were compared for each experimental and control group individually, by experimental and control groups combined, and by direct comparison between the four experimental-control pairs available for the study. In the second phase, specific features of the programs were examined to assess their influence on pre-post change scores. The specific elements investigated were: type, length, and intensity of the experience, existence of a reflexive component, student demographic characteristics, and the specific characteristics of individual experiences (e.g., how interesting, how demanding of responsibility, etc.). The analytical tools employed included t-tests of significance, analysis of variance, and multiple regression.

### Findings: Impact on Students

The results from the formal measures employed in this study demonstrated that the experiential programs did have a positive impact on the psychological, social and intellectual development of the student participants. This conclusion, while true in general, masks significant patterns of effect and effectiveness which are summarized below.

#### Psychological Development

An important finding in research in schools is that studying the formal, academic curriculum does not automatically lead to personal and psychological growth. In fact, there is a body of research documenting the largely negative impact of schooling on such variables as self-esteem, interest in learning, and personal autonomy (Sprinthall & Sprinthall, 1977). Proponents of experiential education have argued that psychological growth is more likely to be achieved through their approach to learning. They believe that placing students in well-planned experiential confrontations with practical problems is an effective mode of promoting personal growth. In summary, psychological growth requires challenge, conflict, support and significant experience.

Did the findings of this study corroborate this theoretical argument for experiential programs? The answer is clearly yes as discussed below.

**Moral Reasoning.** Students in two experience-based programs and one comparison group (from the same school) were administered the Defining Issues Test (DIT) pre and post. This is a paper-and-pencil test designed to measure levels of moral reasoning as detailed by Lawrence Kohlberg. All three groups received identical instructions in Kohlberg's theories, the only difference being that the two experiential groups were simultaneously involved in service activities in the community.

The test results showed that both experimental groups attained significant gains in their moral reasoning scores while the comparison group did not gain. This finding substantiated that of several other studies which have likewise shown the combination of significant role-taking experiences and active reflection to be an effective means of promoting growth in this aspect of development.

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*Experiential programs can effectively promote the psychological development of adolescents and do so at least somewhat more effectively than classroom-based programs. The impact is strongest when the experience is most intensive, most dissimilar from ordinary school activities.*

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**Self-Esteem.** Students in experiential programs did show increases in self-esteem and to a degree slightly but consistently greater than those registered by comparable students in classroom-based programs.

On the Janis-Field Scale, which focuses on the confidence one feels in social situations (e.g., meeting new people, speaking in front of a class), 20 of the 27 experimental groups increased, 10 at a level of statistical significance (.05). On the Rosenberg Scale, which deals with more general feelings of self-worth (e.g., "I feel I have a number of good qualities"), 23 of the 27 experimental groups increased, 9 at a level of statistical significance. Students in the comparison groups also registered some gain in self-esteem consistently on the Janis-Field Scale (3 or 6 groups increased, 2 significantly). In direct comparison, the experimental groups had greater increases on both scales, but this advantage was statistically significant only on the more stable Rosenberg Scale.

Among program types, the highest absolute levels of self-esteem, even on the pretest, were registered by students entering career internships. It may be that such programs attract students who are relatively more sure of themselves, at least enough to test themselves in adult

career roles. The most consistent pre-post gains were registered by students in outdoor programs—both in comparison to other experiential programs and to their own gains on the social and intellectual dimensions of growth examined in the study. Since no other program category showed such consistent results, it suggests that intensive outdoor experience may have a particularly strong effect on self-esteem. This may result from the intensity and uniqueness of such experiences and/or from the fact that evidence of achievement is clearly seen by, matters to, and is immediately reinforced by both teacher and peers.

In summary, the results from the Defining Issues Test and the two measures of self-esteem lend support to the hypothesis that experiential programs can effectively promote the psychological development of adolescents and do so at least somewhat more effectively than classroom-based programs. The data further suggest that the impact is strongest when the experience is most intensive, most dissimilar from ordinary school activities and, in the case of increased moral reasoning, when there is a combination of action and systematic reflection.

### **Social Development**

In the past decade, there has been a great deal of public concern about the level of personal and social responsibility exhibited by teenagers. Charges of increased privatism, hedonism, and aimlessness among adolescents have become commonplace, along with findings that they feel a strong sense of powerlessness in relation to the larger society and no sense of having a significant role in it (Hedin, 1979). Experiential educators have argued that it is precisely this lack of a significant role in the community and society that has bred apathy, cynicism, and powerlessness. They counter by suggesting that placing students in responsible roles in which their actions affect others will help them develop more responsible attitudes and behaviors.

This section summarizes the findings relevant to this hypothesis: that responsible action in an experience-based program would have a positive impact on students' levels of personal and social responsibility, have a positive influence on their attitudes toward adults and others, lead them to feel more inclined to participate in their communities and, relatedly, help them plan for and to explore potential adult careers.

The results reported below clearly show that experience-based programs can have precisely those effects. Despite the inevitable differences between specific programs, there was a strong and consistent showing of positive impact among the experiential programs as a whole. Furthermore, these gains significantly discriminated between these programs and the comparison groups. The latter tended to decline or show no significant change on most of the scales and subscales relating to social development. These results are outlined below according to the specific scales employed.

**Social and Personal Responsibility Scale (SPRS).** The overall results from the total SPRS scale indicated general positive movement by the experimental groups and no change by the comparisons. The experimental groups combined had a mean increase of almost 2 full points (+1.92,  $P = <.0001$ ) while the combined comparisons declined ( $-.09$ ,  $P = NS$ ). More precisely, 23 of 27 experimental groups increased, 13 by at least 1.50 mean points and at a level of statistical significance. Of the 4 groups which did not increase, 2 had the highest pretest scores of any of the groups and were still among the highest on the posttest; the other 2 were very low income groups who generally tended to do poorly on paper and pencil measures. In contrast to the above, 5 of the 6 comparison groups declined, 2 at a level of statistical significance.

There were some differences by program types. Career Internship programs showed the largest positive gains (an average of 2.58 points); Community Study/Action was next (1.77); followed by Service (.63) and Outdoor programs (.30).

**SPRS Subscales.** The SPRS contained five subscales relating to sense of **duty**, **social welfare** orientation, **social efficacy**, sense of **competence** and assessment of **performance**. The combined total of all experimental groups showed significant positive change on all five subscales while, among the comparison groups (combined) there was no significant change on any subscale except Social Welfare—in which there was a statistically significant decrease. Nine of the experimental groups showed positive change on each subscale. There were only two instances of significant positive change among the comparison groups, both on the Competence subscale.

Overall, the strongest changes were toward taking responsible **action** as opposed to having more responsible **attitudes**; and, among attitudes, toward having more **personally** responsible attitudes as opposed to **socially** responsible attitudes. This finding is consistent with most research on attitudinal and behavioral change which suggests that changes in behavior tend to precede rather than follow changes in attitude. It also suggests that the traditional model in citizenship education, that instruction in proper attitudes about personal and social obligations will lead to responsible behavior, may need revision. While the evidence from this study can only be suggestive of that conclusion, it is further strengthened by the fact that most of the comparison students were in social studies classes which were deliberately, and apparently ineffectively, aimed at improving attitudes toward taking personal and social responsibility.

One further point from the Social and Personal Responsibility Scale data bears mention. Students in service programs had the highest pretest scores on the SPRS followed by those in career internships, outdoor programs, and community study. The advantage for students in service programs was largely accounted for by their higher scores on the sense of duty and the social welfare subscales. This

would be consistent with the fact that these students had volunteered for programs in which helping and serving others is the major task (in contrast, students in outdoor programs had the lowest social welfare pretest and posttest scores). Students in Career internships had the highest scores on the performance and competence subscales which seems consistent with their choosing placements where they would be working independently with and as adults. It also coincides with their being the highest-ranked students on the two measures of self-esteem reported earlier.

**Attitudes Toward Adults.** A common critique of modern socialization practices is that young people are locked in an adolescent ghetto separated from meaningful interaction with adults. The implicit assumption is that separation breeds suspicion, if not hostility, and that greater contact with adults would promote more positive attitudes. This latter hypothesis was confirmed by the results of this study. Students in the experiential programs entered into collegial relationship with adults that are atypical of most school and work settings. These students tended to show large, consistent changes on the semantic differential scale toward more positive attitudes toward adults.

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*Study data also suggest that the traditional model in citizenship education,—that instruction in proper attitudes about personal and social obligations will lead to responsible behavior,—may need revision.*

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There was a positive change in 22 of the 27 experimental groups, and the combined mean change for all the experimentals was +1.45 which was statistically significant at  $P = <.0001$ . This mean change of near 1.5 was made on a scale of only 7 possible points. Students in comparison groups, conversely, showed an overall decline of  $-.74$  mean points spread over 5 of the 6 groups.

It is clear, from the above, that the adolescents do not automatically think more highly of adults merely because they have moved a little closer to that status themselves. It depends on what they are doing during that time. Remaining in a classroom with an adult teacher appears not to be a situation which raises their esteem of adults. Associating with adults on a collegial basis outside the classroom does, however, seem to have such a positive effect.

**Attitudes Toward Others.** A further contention of the proponents of experiential education is that when students are involved with persons they don't ordinarily encounter, they will come to value them more highly. The data, from a 10-item evaluative semantic differential scale, clearly indicates that community participation has a positive effect on students' evaluations of the people with whom they have been interacting. In the direct contrast between experimental-comparison pairs, each experimental group increased significantly while each of the comparison groups showed a decline. The difference was significant for the individual and the combined comparisons (the latter at  $<.001$ ).

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*At the time of the pretest, students in experiential classes valued the general notion of "being active in the community" less highly than did students in traditional classes.*

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Considering specific groups or categories, students initially valued hospital and little kids most highly, followed by old people, business persons, police and, dead last, junior high kids. On the posttest the ratings of all these categories had increased significantly—except for hospitals toward which there was a small increase and for business persons toward which there was a slight decrease in valuation.

The small increase in valuation of hospitals may reasonably be explained by the fact that the high pretest rating (the highest of any category) left little room for positive change. The decrease in relations to business persons is less easily explained. Perhaps it is the nature of interaction, not interaction per se, that creates more positive attitudes. In the case of internships, students perhaps tended more to be observers than participants, a situation that could account for the lack of change.

In any case, the fundamental finding of this portion of the study is that students do tend to show increased appreciation for the people with whom they associate in their off-campus experiences.

**Attitudes Toward Being Active in the Community.** A further hypothesis of experiential educators is that direct participation in the community will lead students to value such activity more highly and increase the likelihood of their seeing themselves as accepting community responsibilities in the future. The first part of the hypothesis was tested through a semantic differential with pairs such as smart-dumb and useless-useful. The second was tested by single continuum from "something I will do" to "something I won't do." The results from both scales confirmed the hypothesis.

At the time of the pretest, students in experiential classes valued the general notion of "being active in the community" less highly than did students in traditional classes. The highest rating was given by students in service programs followed by the comparison group and then students in community study, career internships, and outdoor programs. By the time of the posttest the situation was reversed. All of the comparison groups decreased, while 20 of 27 experimental groups increased. The strongest gains were by students in community study and outdoor programs, and the least gain by students in career internships. It must further be noted that for 4 of the 6 comparison groups the value and importance of community participation had been a deliberate (and seemingly unattained) emphasis of the in-school course.

A further question was whether students' evaluation of being active in the community carries over to (at least reported) inclination to actually do it. The data here revealed that secondary students rather strongly assert that they will be active in their communities. However, from a position of virtual equality on the pretest, the experimental students increased and the comparison students declined. A direct comparison between experimental and control groups showed the difference in change scores to be statistically significant.

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**Career Exploration.** One common critique of adolescent socialization is the inability of many youth to make a smooth transition from school to work. Many teenagers appear to have very little information about the myriad of careers available, and they fall into the trap of thinking that an interest in some activity implies a lifelong pursuit of one single occupation. An often expressed goal of experiential learning programs is to increase a young person's knowledge about work and career options. To learn whether this goal was achieved, students were given the Career Exploration Scale.

The data from this scale show that 24 of 27 experimental groups registered a positive gain, 13 at a level of statistical significance. Measures were also registered by the six comparison groups, with 2 at a statistically significant level. The combined change scores for both experimental and comparison groups were significant, though the absolute level of increase was substantially greater for the experimental groups.



The Career Exploration Scale contains two subscales. The first measures Career Action, or the degree to which students have been actively engaged in exploring careers. The second asks about information they have gained about a career field. Analysis of these subscales revealed that the greater overall increase for experiential students was largely accounted for by greater gains on the Action subscale. All 27 experimental groups increased on the Action subscale, 16 significantly so. In contrast, no comparison group showed significant gains on this subscale and 2 actually declined. The gains on the Information subscale were about equal for the experimental and comparison groups. Apparently facts can be effectively conveyed either in or out of the classroom. But the experiential approach adds the dimensions of active involvement in potential career choices.

Some interesting differences emerged from examining individual program scores. The highest pretest mean was attained by affluent 12th graders in an independent school and the lowest means by either junior high or low income students. It does appear that active planning and exploring of careers is related to both age and income—with older and more affluent students having the advantage.

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*In summary, the data support the hypothesis that participation in experiential programs does, or at least can, contribute to the social development of adolescents.*

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Among types of programs, those offering career internships did have the largest increases—most particularly a medical careers program for low income minority youth and a program featuring semester-long, full time internship experiences. However, community study, service, and outdoor programs also showed strong increases even though they had almost no organized or explicit focus on careers. It may be that when young people want to learn about careers, they actively seek such information, on their own, in their field experiences.

In summary, the data discussed in this section support the hypothesis that participation in experiential programs does, or at least can, contribute to the social development of adolescents. Students in experiential programs increased significantly in social and personal responsibility, gained more positive attitudes toward adults and others with whom they worked, and felt more positively toward being active in the community. They also showed increased information about, and activity in exploring, careers. The data also show that such increased are not necessary and inevitable outcomes of any and all experiential programs. There were almost always exceptions to the general trends suggesting there were dynamics operating within the programs that require closer analysis. Such analysis will be presented following the discussion of intellectual development.

## Intellectual Development

Theorists of learning and intellectual development from Aristotle through John Dewey to James Coleman have stressed the necessary relation of experience and education. Experience serves both as the source of knowledge and as a process of knowing. Education is of, by, and for experience. The study examined this relation by looking both at academic learning and intellectual development.

**Amount Learned.** Because the programs varied widely regarding academic objectives it was not practical to directly test the academic learning assumptions through any general test of facts or concepts. Instead, students were asked how much they felt they had learned in their experiential program compared to what they learned in an average class in

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*Students tend to feel they learn more from experiential programs than from regular school classes.*

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school. Seventy-three percent of the students reported learning more (41%) or much more (32%) in their experiential program, with 25 of 27 programs having mean responses that rounded off to 4 ("learned more") or higher. The mean responses of the other two were somewhat over 3 ("learned about the same"). Only 9% of the students reported learning less.

While all programs received high ratings on this dimension, there was a rather large spread between the higher and lower ranked programs which invited some speculation about the differences between them. Of the 12 highest ranked programs, 11 had a clearly defined seminar/reflective component, an element which characterized less than half (7) of the remaining 15 programs. Looked at from another perspective, 8 of the 12 programs with highest ratings involved students who might be expected to have a low opinion of regular classes. Four were composed of students in special alternatives for economically and educationally disadvantaged students, and four others involved students who had opted out of regular school for a full semester (one year) to participate in an experience-based program. These factors did not characterize any of the lower-ranked programs. Finally, the higher ranked programs were longer and more intensive than the lower programs.

The data indicate, therefore, that students tend to feel they learn more from experiential programs than from regular school classes and that this is most pronounced when the experiences are longer (at least 12 weeks), more intensive (at least 2 hours daily), include a formal reflective component and, to a lesser extent, involve students who may be disenchanted with traditional classroom programs.

**Problem Solving.** The primary measure of intellectual development used in the study was the Problem Solving Inventory. This Inventory presented students with 3 interpersonal problems and led them through the steps in problem solving outlined by John Dewey. Student responses were scored, pre and post, according to the number of alternatives listed, the degree to which they took responsibility for solving the problem, the degree to which they justified a decision according to its consequences, and the level of empathy and complexity of thought shown in the overall analysis of the problem.

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*Experiential education programs can and do have a positive effect on student learning and intellectual development. This is most strongly the case when the program features a combination of direct experience and formal reflection on that experience.*

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On the whole, neither the experimental nor comparison students showed significant increases on the first three indices. This appeared, however, to be more a factor of test weariness than lack of program effect. Only one program showed significant increases in the alternatives and consequences indices, and this program was unique in the degree the students faced problems similar to those in the stimulus stories and to which problem solving per se was a central focus of their seminar sessions. One other finding of interest on these dimensions is that in nearly half of the cases (48%), students selected other than their first alternative listed as their "best choice." This suggests that the request for further alternatives did help elicit the best thinking of students and confirms the common sense notion that one's first impulse does not always represent one's best judgment.

The heart of the Problem Solving instrument is its Empathy/Complexity Index. This Index assesses the ability and/or inclination of the respondents to empathize with the key "other" in the story, the level of need upon which s/he focuses, and the complexity of analysis applied to the problem. The pretest means were quite similar for all groups, with 27 of the 33 experimental and control groups having means that sounded off to level 4 (conventional, stereotyped thought and concern). On the posttest there was general movement by experimental students toward level 5, a more complex pattern of thought with a focus on relational concerns. This is discussed more fully below.

The Complexity/Empathy Index did clearly discriminate between experimental and comparison groups and between types of experiential programs. In terms of mean changes, 21 of the 27 experimental groups increased, 8 in-

creasing at least a one-third step on the seven point scale. Five of the 6 comparison groups decreased and one showed a non-significant increase.

Most interesting was the pattern between types of programs. To test a hypothesis, programs were divided according to the degree in which students were 1) directly confronted with interpersonal problems similar to those in the stimulus stories and/or 2) where problem solving was a deliberate focus of accompanying seminar sessions. These turned out to be critical variables in promoting change in complexity/empathy. Programs which featured both conditions registered an average mean increase of .59 points. Programs in which all students had one condition and some (not all) had the other, showed an average increase of .22 points. Programs in which both conditions were only partially present showed an average mean gain of .17. Programs in which students had neither element showed an average decrease of -.15.

The data reported in this section suggest that experiential education programs can and do have a positive effect on student learning and intellectual development. This is most strongly the case when the program features a combination of direct experience and formal reflection on that experience.

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*The pre-post test data clearly show that experiential education programs can have a positive impact on students' psychological, social and intellectual development.*

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#### Summary

To recapitulate what has been said thus far, the pre-post test data clearly show that experiential education programs can have a positive impact on students' psychological, social and intellectual development. Students in experiential programs tended to increase significantly, both in absolute terms and in relation to students in classroom programs, in the major scales employed in this study. These included tests of moral reasoning, self-esteem, social and personal responsibility, attitudes toward adults and others, career exploration, and empathy/complexity of thought.

While the results were extremely positive on a general level, they were not invariably so. That is, on every scale there were important differences among the experiential programs. The discussion shifts, thus, toward examining the dynamics within individual programs that could account for the differences in obtained results.

## Findings: Correlates of Effectiveness

The second major focus of the Evaluation of Experiential learning Project was to identify the program practices which were most effective in facilitating development in students. The factors examined for effect were 1) general **program features**: nature of off-campus experience, length, intensity, and reflective component; **student characteristics**: age, grade point average, and socio-economic status; and **characteristics of individual experiences** including the degree of autonomy, amount of direction, how interesting and varied they seemed to participants, and the like.

The safest conclusion that can be drawn from the data is that no single practice or set of practices guarantees effectiveness from all students. Within every program and every type of program there were students who gained a great deal and others who did not. There were some clear patterns however, patterns which suggest interesting hypothesis concerning the effective operations of experiential programs.

### Program Features

As described earlier, there were four general types of programs in this study: service, outdoor adventure, career internships, and community study/action. In actual practice, however, few of these were pure types, with elements of one or more (e.g., service) being found in more than one category of program. It may have been this factor as much as anything that resulted in there being no discernible relation between program type and student growth. While service programs appeared to do somewhat better than others on rankings of programs on intellectual and social development, the advantage virtually disappeared in a regression analysis which controlled for other program and student characteristics. Other elements, however, did appear to make a difference.

Among other program features, the presence of a formal (and at least weekly) seminar proved to be the single strongest factor in explaining positive student change. This was particularly true on measures of social and intellectual development. Interestingly, there was no clear relationship between a seminar and growth in measures of personal growth such as self-esteem. Perhaps students can make personal meaning of their experiences on their own, but if this meaning is to affect their broader social attitudes and intellectual skills, systematic and directed reflection must be added.

Other factors which consistently related to positive student change were length and, to a lesser degree, intensity. Experiences lasting a full semester (18 weeks) were relatively stronger than shorter experiences, as were those in which students were in field placements 2 or more hours, 4-5 days

per week. Of these two factors, that of length was stronger than intensity though even in combination they were not as powerful predictors of change as was the presence of a seminar. It must be emphasized, however, that all of these factors collectively did not predict more than about 5% of the variance (by regression analysis) in pre-post change scores.

### Student Characteristics

The student characteristics analyzed were age, grade-point-average, and socio-economic status. These were even less influential than program features, accounting for only about 3% of the variance between pre-post scores. Among the characteristics, only age showed any influence at all, with older students showing somewhat greater growth than younger students, especially on issues of social development. Neither student GPA nor socio-economic status were at all significant in predicting change. One other relevant fact which should be mentioned is that there did turn out to be a positive reaction between maturity (as measured by the Complexity/Empathy Scale) and the degree of approval given to an experience-based program.

The general finding of no strong relation between student demographic characteristics and program effectiveness does support one common contention of experiential education: that such experiences can benefit a wide variety, if not all kinds, of students.

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### Characteristics of Experience

One of the major problems in educational research and evaluation is that the assumption often has to be, or at least is, made that the program has been implemented as described and that all students participating in it have had the same experience. That neither is usually the case can be attested to by anyone closely associated with educational programs. Thus it was an aim of this study to go beyond gross program descriptors and examine more directly the specific experiences of students within the programs. It proved to be a fruitful search.

Compared with program features and student characteristics, the specific characteristics of an individual's experience proved the more powerful predictors of pre-

post gains. While the former two categories combined explained no more than 8% of the variance in change scores, the latter consistently accounted for from 15 to 20 percent of variance. The finding lends credence to the notion that individuals experience educational programs idiosyncratically and that this is especially likely to be true in experience-based programs. The specific pattern of impact is outlined below.

The first issue examined was the relation between characteristics of experience and general rating of the program. The characteristics contributing most strongly toward a student rating their program as "excellent" or "good" was that the experiences were rated as being "interesting" and that the student felt s/he was "appreciated for their work."

While feeling appreciated and doing interesting things contributed to favorable program ratings, these characteristics had little or nothing to do with whether students grew from their participation in a program. The factors which contributed most strongly to pre-post gains were, rather, a mixture of features describing a combination of autonomy (e.g., "did things myself") and a collegial relationship with adults (e.g., "discussed experiences with teachers"). The 13 characteristics which made any appreciable impact on student growth are listed, by rank, in Table 2.

Table 2

**Relative Effect of Characteristics of Experiences on Mean Gain Scores for All Tests Combined**

| Rank | Characteristics of Experience                      |
|------|--|
| 1    | Discussed experiences with teachers.               |
| 2    | Did things myself instead of observing.            |
| 3    | Adults did not criticize me or my work.            |
| 4    | Had adult responsibilities.                        |
| 5    | Developed personal relations with someone on site. |
| 6    | Had freedom to explore own interests.              |
| 7    | Discussed experiences with family and friends.     |
| 8    | Felt I made a contribution.                        |
| 9    | Had a variety of tasks.                            |
| 10   | Was free to develop/use own ideas.                 |
| 11   | Got help when I needed.                            |
| 12   | Made important decisions.                          |
| 13   | Had challenging tasks.                             |

It should be noted that the characteristics that the experiences were "interesting" did not make this list. Even more significantly, characteristics which describe a more typical student-adult relationship (esp., "given enough training to do my tasks" and "I was given clear directions") did not contribute to pre-post gains and, in fact, correlated negatively with them on several scales.

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*The most important implication for secondary schools is that experience based programs should be adopted and expanded. This is a significant departure from the overwhelming trend in public education to return to "the basics".*

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The characteristics of experience were further examined to see if certain ones contributed more to one kind of growth than another. In Table 3 the strongest contributors to social growth are listed next to the strongest influences on indices of personal development.

As evident on the following page, it turned out that the characteristics suggesting autonomy (e.g., "free to develop and use own ideas") were more influential in promoting personal growth (e.g., self-esteem) than in social growth (e.g., responsibility). Conversely, the characteristics suggesting a collegial relationship with, and even guidance by, adults, showed the opposite pattern of influence. In short, personal growth was stimulated most by dealing autonomously with challenging tasks while social development accrued more from interaction with adults—as long as it was in a non-student role.

Analysis of student responses to an open-ended question asking them to explain why they rated their program as excellent or good revealed another interesting pattern. The majority of responses described personal benefits to the participant (e.g., "personal sense of improvement") while only a small minority cited more socially-relevant gains (e.g., "affected another person," or "increased understanding of others' needs").

It goes only slightly beyond the data given to argue that the analysis suggests that students will rate a program highly if the experiences are interesting, if they're shown appreciation for their effort, and if they sense some personal gain from the experience. Similarly, students will make the strongest **personal** gain when they are given some autonomy to act on their own and to use their own ideas. In

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*In many areas of the country, declining enrollment and declining resources have led school systems to discontinue all but the most traditional classroom instruction. This study indicates that dropping experiential programs is a serious mistake.*

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**Table 3**  
**Relative Influence of characteristics of Experience on Social and Personal Growth**

| Social Development                                | Rank | Personal Development                               |
|---|------|--|
| Discussed experiences with Teachers               | (1)  | Did things myself instead of observing.            |
| Discussed experiences with family and friends     | (2)  | Free to develop and pursue own ideas.              |
| Adults did not criticize me or my work            | (3)  | Had challenging tasks.                             |
| Had adult responsibilities                        | (4)  | Developed personal relations with someone at site. |
| Made important decisions                          | (5)  | Free to explore my own interests.                  |
| Felt I made a contribution                        | (6)  | Discussed experience with teachers.                |
| Had a variety of tasks                            | (7)  | Felt I made a contribution                         |
| Free to explore own interests                     | (8)  | NS   |
| Developed personal relations with someone at site | (9)  | NS   |

contrast, positive change in social attitudes and reasoning skills requires more interaction with adults—where the involvement is collegial, not patronizing, and when they can initiate the contact.

In summary, it was found that the most powerful predictors of growth were the **characteristics of the experiences** of individual students, with features suggesting autonomy being most productive of personal development and features suggesting a collegial relationship with adults and others being most productive of social development. Among **program** features, the most powerful positive factor was the existence of a regular seminar. Of somewhat less influence was length of program (especially if 18 weeks or longer); even less influential was intensity (better if 2 or more hours 4-5 days a week). There was a small positive relationship between age and growth on social and intellectual measures. No significant relationship was found between student growth and general type of program, on the characteristics of student GPA or socio-economic status.

One final word may be the most significant of all. 95% of the participants in experiential programs rated their own program as either excellent (49%) or good (46%). Perhaps no further comment is needed.

### Implications

It is not presumed that this study has definitively answered the central questions of educators. Nonetheless, its findings, combined with others reported within it, do contain implications that merit consideration and application even before "all the facts are in." Central among these are: 1) the demonstrated value of continuing and expanding experiential programs; 2) the importance of a developmental focus for education; 3) the need for direct experience to meet developmental goals; 4) needed changes in teacher education; and 5) the possibility and need for simultaneously working toward personal growth and social improvement.

#### Value of Experiential Education

The clearest and most significant conclusion of this study is that experiential programs are a powerful educational vehicle for promoting personal **and** intellectual development and can do so more effectively than classroom instruction. The most important implication for secondary schools is that experience based programs should be adopted and

expanded. This is a significant departure from the overwhelming trend in public education to a return to "the basics". The usual—and in our view—narrow meaning of "the basics" is classroom instruction in symbolic representation of experience. The consistent finding that classroom instruction in a traditional mode, as represented by the comparison groups, showed no improvement in personal and intellectual development in contrast to consistent, strong growth for experiential programs should lead educators and the general public to rethink the notion that only classroom instruction is legitimate and effective. The strong positive showing of the experience-based programs do warrant schools offering such experiences. At the very least, experiential programs currently in existence should be maintained. In many areas of the country, declining enrollment and declining resources have led school systems to discontinue all but the most traditional classroom instruction. This study indicates that dropping experiential programs is a serious mistake. On the contrary, well-constructed programs, as those in this study, warrant a significant and expanding role in secondary schools.

#### Development Focus for Education

The first implication—that experiential programs are effective in promoting development and should be adopted by secondary schools—assumes that development is a legitimate aim of education.

It is through a peculiar misuse of the English language, or perhaps a symptom of something deeper, that the comprehension of symbols and the manipulation of mediated experience has come to be identified as learning the "basics". Such an interpretation of what is fundamental ignores the source of learning (experience), the nature of the

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*If significant experience is truly a critical element in development, it ought not be restricted to isolated doses in the later school years but be a central focus from the elementary years and on.*

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learner (especially development), and the purpose of learning (personal growth and social improvement). Theorists such as John Dewey (1902/1964) and Lawrence Kohlberg (1972) have made cogent arguments for considering development to be the aim of education; research on the effects of schooling (Heath, 1978; McClelland, 1973) has demonstrated the predictive power of personal development (in contrast to academic achievement) for adult success; the present study and others have shown the viability of promoting such development through deliberate educational interventions. It would seem more than reasonable for educators to act on this information. The aim and effect

would not be the denigration of more traditional goals, but to imbue them with new vitality and purpose. For experiential educators as well, a focus on development can provide both a framework for organizing activities and a goal—that of promoting social, psychological, and intellectual development.

#### The Need For Experience

Educators who are serious about development as an aim of education may also have to be serious about adopting experiential methods for achieving that goal. Developmental

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*It would seem more than reasonable for educators to act on this information. The aim and effect would not be the denigration of more traditional goals, but to imbue them with new vitality and purpose.*

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theory, from the time of Dewey to the present, has stressed that development requires interaction, transaction, conflict, cognitive dissonance, consequential choices and action on behalf of those choices. The more that children and adolescents are isolated from broad, varied, and significant experiences in the social environment, the more must schools encourage such involvement to successfully work toward facilitating development.

Furthermore, if significant experience is truly a critical element in development, it ought not be restricted to isolated doses in the later school years but be a central focus from the elementary years and on.

Finally, the provision of more meaningful participation cannot be met by the schools alone. The findings of this and other studies that experiential programs can promote development must not be overdramatized. It would be foolish to argue or believe that a change in school practice is enough to substantially counter the effects of impoverished experience and prolonged childhood and adolescence. Ways must be found to share the educational mission with the broader society and to provide opportunities for children and youth to be more seriously involved in their communities.

#### Changes in Teacher Education

Education through experience, and for human development, implies a new kind of teacher training. Needed is an emphasis on understanding adolescence and human development in contrast to the current emphasis on teaching a discipline. Needed also is increased knowledge of, and involvement in, the wider community by teachers themselves—partly for increasing their capacity to facilitate experiences within it, and partly for their own renewal and continued development.

### Personal Growth and Social Improvement

As the material of genuine development is that of human contacts and associations, so the end, the value that is the criterion and directing guide of educational work, is social. The acquisition of skills is not an end in itself. They are things to be put to use, and that use is their contribution to a common and shared life. (Dewey, 1934/1964, p. 11)

Americans have always had an enormous faith in education: that it would improve the individual and also make for a more prosperous, more just society. The above statement by John Dewey may serve as a gentle reminder that both goals are essential for either to be achieved. Perhaps one of the greatest strengths of experiential education is that it provides the opportunity to work on both goals simultaneously. As the individual grows from direct experience in the community, so may the community benefit, and not just in the long run, from the participation of youth in it. The study indicated that personal growth is a more automatic outcome of experiential education than is social development. To accomplish the dual goals of personal and social improvements, a new kind of relationship between student and teacher is necessary—a collegial mentorship.

There is much left to be learned about human development, about experiential education, and about how to bring about a better society. This study and the others cited within it do not tell us all we need to know. They provide a beginning and some idea of how to proceed. Again, John Dewey (1932) said it best:

The sources of educational science are any portion of ascertained knowledge that enter into the heart, head and hands of educators, and which, by entering in, render the performance of the educational function more enlightened, more humane, more truly educational than it was before. But there is no way to discover what is 'more truly educational' except by the continuation of the educational act itself. The discovery is never made, it is always making.

(pp. 76-77)

### Further Questions for Practice and Research

William Perry is fond of pointing out that people are bigger than the theories used to explain them. In like fashion, issues of education and human development are larger than can be contained in or investigated by one study. Therefore, it would be well to cite some important issues that require further examination.

#### Impact on Others and the Wider Community

If students are truly involved in significant experiences with real consequences, it should then be possible to detect the effects of their activities on others and on their com-

munities, as well as on themselves. While the assertion is rather commonly made that experiential education programs can contribute to meeting the real economic, social and educational needs of communities and the nation (National Commission on Resources for Youth, 1974) relatively little evidence has been assembled to date. An investigation into the social and economic impact of youth participation would seem particularly important as discussion of the utility of a national Youth Service Program grows more serious (Landrum, 1979).

#### Who Benefits?

Important questions remain concerning who benefits most from experience-based educational programs—and why. For example, to what degree is maturity, or advanced development, a cause or a consequence of learning through experience? If the exercise of autonomy leads to growth, is the demand for it a factor of the experience or setting itself, or do certain kinds of individuals carve out autonomous roles within the experiences made available to them? Is there a relation between cognitive style and ability of propensity to learn from experience? What are the specific skills and habits that enable a person to learn and grow from experience? Can these be isolated, and then taught and learned in the way that skills in learning from symbols have been? Such questions require a deeper, more focused examination of individuals and specific experiences than was possible or intended in this study.

#### How to Guide Experience and Reflection

As instructive as it may be to know that experience must be accompanied by reflection, it is not practically useful without more precise information on how best to structure, guide, and encourage such reflection. In addition, more information is needed to identify the kinds of off-campus activities which are most effective for achieving particular developmental and academic goals. One important issue, for example, is whether work-study (and other job experience) programs have effects similar to programs located in the general academic curriculum such as were the focus of this study.

#### Effect on Academic Knowledge and Skills

The antidote to being information-rich and experience-poor is not to reverse the condition. More insight is needed to understand how direct experience and personal development may enhance the traditional academic aims of schooling—and vice-versa.

#### Long-term Effects

The investigation of the impact of experience on development must be enriched by the study of, in Dewey's terms, "its influence upon later experiences," the degree to which "they promote having desirable future experiences" (1938/1962, p. 27). Clearly it would be important to know if

patterns established in the program—of learning from experience, of participating in the community, of exercising autonomy—were continued. Also of interest would be students' assessment of what aspects of their experiences seemed particularly valuable a year or two after as opposed to during or immediately following the experience.

### Research Methods

An important problem in the investigation of experiential education has been the lack of appropriate methods and instruments. The Social and Personal Responsibility Scale and the Problem Solving Inventory were developed to help fill this gap. The results indicate they were useful measures and merit further development and refinement.

Results from this study demonstrated that paper and pencil tests can be useful in detecting important effects of experiential education. They also demonstrated some of the limitations of this approach. Evidence from this and other studies suggests that such measures are less than satisfactory for some students, particularly those with a history of negative experiences with testing. In addition, such measures do not adequately capture the small individual changes, the critical incidents, the nuances, the sense and sensibility of experience. Thus additional techniques must be developed and used. Interviews, observations, analyses of journals, ethnographies, and case studies could be used both to triangulate and to see beneath the findings from paper and pencil measures. Such measures could uncover, in Dewey's terms, "the qualitative characteristics of things as they are originally and 'naturally' observed" (1929/1960, p. 90).

### Programs

An important aim of the study was to include schools that would represent a variety of program orientations (service, career internship, community study, outdoor adventure); of school types (independent, parochial, public); geographic area and type of community (urban, suburban, small town); of program structure (seminar—non-seminar, short and intermittent experience to long-term and intensive); and of student populations (poverty level to affluent, low to high grade point average).

Within these general guidelines, the chief criteria for inclusion in the study were that the program have a reputation for excellence, have been in operation for at least four years, that it be an integral part of its school's academic program, and that there be a local interest in being included. Potential participants were identified out of the project directors' working knowledge of experiential programs, nominations from the sponsoring organizations (NAIS, NASSP, NCEA), and recommendations from the National Commission on Resources for Youth, Inc., and from the National Center for Service Learning. Of the schools finally contacted, only three chose not to be included. Of those who were included, three were unable to complete the testing

(one independent, one parochial, and one public). The latter were replaced by schools which applied on their own initiative and met the criteria for inclusion.

The final roster of programs were as representative as might have been hoped for. The chief imbalances were an underrepresentation of schools from the West and South and of programs which had outdoor adventure (a la Outward Bound) as an exclusive program focus. By all other criteria the programs were relatively balanced.

It must be noted, and cannot be too strongly emphasized, that any success achieved by this project was in no small measure due to the efforts of the individual program directors and administrators. They were responsible for identifying the key outcomes of experiential learning, defining the focus of the study, administering the tests themselves, and helping to interpret the data. Without such capable, willing, and energetic people there is no possible way that a study of this scope could have been carried out short of a twenty-fold increase in staff and budgets—and then it's doubtful.

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Schools included in the Project are: **Independent:** Dana Hall School, Wellesley, MA; Francis W. Parker School, Chicago, IL; Carolina Friends School, Durham, NC; Duluth Cathedral High School, Duluth, MN; **Parochial:** St. Benedict's Preparatory School, Newark, NJ; Bellarmine High School, Tacoma, WA; Ward High School, Kansas City, KS; **Public:** Eisenhower High School, Hopkins, MN; Mitchell High School, Colorado Springs, CO; Minneapolis Public Schools; Allegheny Intermediate Unit, Pittsburgh; St. Paul Open School; South Brunswick High School, Monmouth Junction, NJ; Rochester, Minnesota Public Schools; Bartram School of Human Services, Philadelphia, PA; Beverly Hills High School; Ridgewood High School, Norridge, IL; Kirkwood High School, Kirkwood, MO; North Central High School Indianapolis, IN.

**Editor's Note:** A preliminary report of the Evaluation of Experiential Learning Project was published earlier in the AEE Journal under the title: "Johnny Says He Is Learning . . . Through Experience," spring 1977, Vol. 2, No. 1. We are pleased to offer here the complete results of the study.

A summary of this study and/or the **Project Instrument and Scoring Guide** are available at a cost of \$3.00 each from the Center for Youth Development and Research, 48 McNeal Hall, University of Minnesota, St. Paul, MN 55108.