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The Editor’s Page

You have in your hand a “double number” of Interdisciplinary Perspectives. Such a device is not a sign of a strong, healthy publication. In this instance, my resorting to a somewhat deceptive ploy results from the normal turmoil of publication complicated by mail delays, secretarial strikes, and the vagaries of our contributors.

The public and professional press cries doom and disaster for an entire academic generation as a result of falling enrollments, rising inflation, and, I suppose, horizontal promotion. One might conclude that—somewhere out there—there toil hundreds of ambitious alert intelligent ‘junior’ faculty desirous of fattening their essential bibliographies. I read of other journals with backlogs of three and four years of material; I read of publication charges of twenty dollars a page (!); I receive shoddy manuscripts, ill-written, ill-proofread, ill-conceived, and mis-directed. My editorial board is distressed and threatens mass resignation; my executive board (a most supportive and understanding group) suppresses its unasked questions; my wife wonders why I continue these chores; I wonder why I continue.

Perhaps an editor’s lot cannot be a happy one.

Yet I continue to believe (against much evidence to the contrary) that this journal, and the organization of which it is a voice, must serve a vital role in American Higher Education or American Higher Education will go the route of the public schools. Therefore, the membership of the organization, if it believes as I do, must redouble and treble its efforts to provide interesting, well-written, sharply focussed content for this voice.

At the end of 1980 I will make a recommendation to the Executive Committee of the Association for General and Liberal Studies. The nature of that recommendation will depend upon my judgment of the success of the journal. Please seek out your gen-ed colleagues; provide them with copies of the journal; ask them to set down their ideas and views for the benefit of the rest of us.

SEND MANUSCRIPTS

G.F.E.
The Greek poet Pindar stated that the wise man is one who knows by nature, while those who know merely because they have been taught are to be scorned. The suggestion that there is intuitive knowledge or an elevated type of common sense is not new; however, I would argue that we must study and ponder the wisdom of the past if we would be wise today or in the future. Many liberal arts colleges have detracted from this wisdom by dropping classical studies and catering to the whims of an ahistorical generation of students. To gain the insights that Pindar admires we need to preserve a liberal arts education that includes the wisdom of all of the traditional fields represented in our faculties. These traditional studies are still valid and valuable; the mistake that American higher education has made is assuming that an 18 year old person will be able to choose what he needs from this noble list of studies. We, as specialists in higher education, must think seriously about the relationship between liberal studies and contemporary society and help the students choose wisely. Each one of us must be committed to the idea that a liberal education is valuable and useful for our students.

There was a time when we could blithely define the liberal arts in a vague and pious way and satisfy the American public. That time has passed; now we must justify liberal arts study not to a poetic Pindar, but to people of the market place. To merely tell the laymen that liberal arts are studies that liberate or free someone is like telling them that a lubricant—lubricates. Today increasingly the value of a college education is measured in economic terms rather than by humanistic standards.

How then can we show the worth of the liberal arts in our contemporary society? It is important to review the historical cycle that has determined the value of liberal studies. The greatest danger in our society is that we want to make education an idea for all seasons and all reasons, rather than giving it historic strength and meaning. In this day when we emphasize human “roots,” let’s look at the “roots” of education in western civilization. Far be it from me to disappoint those of you who would expect a historian to subject you to at least a brief journey with Clio.
At the beginning of western civilization, Plato in his *Gorgias* defined knowledge for the good life:

> We are at issue about matters which to know is honorable and not to know disgraceful; to know or not to know happiness and misery—that is the chief of them. And what knowledge can be nobler?—or what ignorance more disgraceful than this?

To understand life itself is the goal. This means a thorough understanding of ourselves, and, through this, an understanding of the human condition. To know happiness and misery for the Greeks meant more than having factual knowledge; it involved education in morals and values. Therefore, two educational objectives appear in western civilization from the very beginning. They are: (1) training in the practical arts and skills necessary for the good life and (2) the values and morals necessary to know happiness and misery and thus the good life. The freedom to know and to learn are the very nuclei of western educational philosophy. In stating that morals, ethics, and values should be a part of an education for the good life, we do not mean a narrow, sectarian definition of them, nor even confining them to western civilization alone. Western man has much to learn from Eastern cultures; for example, the Arab definition and understanding of hospitality to the stranger has much to teach western mankind. Certainly the West can learn from the East and vice versa, but it is still essential for a civilization to be true to some of the goals and values that make it distinctive. Not to honor some basic principles and values destroys a civilization's *raison d'etre* and leads to a collapse into nothingness. Many of today's economic and social problems are global; especially, energy and pollution are good examples of these. Global cooperation will be necessary to solve these problems, but this in no way suggests that the western world should abandon a heritage, which may contribute to the solution of some of these universal difficulties that are obstacles to a more humane world.

For the West, the Greek word *aretē* is vital to the topic of morals and values. Although this term can be translated as virtue, its real meaning is general excellence. The Greek hero, who expressed perfect *aretē*, was both a warrior and an orator equally suited for the battlefield and the court. It is important to notice that *aretē* is not a passive idea; it demands action, one must do the excellent, not sit around and contemplate it. Respect for justice, personal honesty, and integrity, and the search for truth are the main qualities of *aretē*. This concept led the Greeks to the formation of an ideal man. They were not primarily concerned with the individual alone, but with the general laws of human nature in every man. Early then education became the shaping of character in accordance with an ideal, which embraced both practical and moral values. To the Greeks knowledge required prudence as well as study. Socrates, like Pindar, placed the greatest emphasis on the "intuitive" discovery of truth and quarreled with the sophists, who traveled about the Greek world expounding a more practical type of education.

In the Middle Ages the emphasis on the seven liberal arts, as seen in the trivium and the quadrivium, was a strong expression of the need for the scholar to understand the nature of life, as it were "to know." The scholastic professor of the Middle Ages passed on knowledge in an authoritarian manner to his students. He spoke the "truth" and it was accepted in the spirit of deductive reasoning, Aristotelian logic dominated. When the more practical-minded Renaissance scholars took the trivium and emphasized grammer and rhetoric over the medieval emphasis on logic, a broader concept of education emerged. They extracted the ideas from classical rhetoric and grammar and did not merely use these subjects as grammatical exercises in Greek and Latin. Now the whole person was to be educated for a role in society as a clergyman, government official,
lawyer, athlete—after all, the humanists were the first to see the value of physical education for more than just the elite. Women, that is those of noble lineage, were to be educated. Unlike the medieval thinkers the Renaissance scholars saw mankind's position on God's great chain of being as one that could be improved and not as a fixed position. Think of the important ramifications for education—mankind could improve and move closer to the angels on the great chain of being. We see that one cycle has already taken place. Renaissance education for a purpose and not just "to know" has reached over the Middle Ages to the classical concepts of all around excellence or areté. With the coming of industrialization and the changes which radiated from it, it was inevitable that the tension between liberal arts and career education would grow.

The current criticism of a liberal arts education is not only coming from the general public, but from educators themselves and, yes, our own graduates. The former United States Commissioner of Education, Dr. Bell, wrote, "The college that devotes itself totally and unequivocally to the liberal arts today is just kidding itself. Today, we in education must recognize that it is also our duty to provide students with salable skills." Harvard Professor Christopher Jencks, recently called a college diploma, "a hell of an expensive aptitude test."

Let's admit that the pressure for career education is beginning to bombard the liberal arts college. What is our response? What does the future hold? To survive liberal arts education must go through a neo-renaissance. This neo-renaissance would hold to the historic values of the liberal arts and see where they can be of great value to the educated person in our present society. There are five essentials for a good liberal arts education:

1. To offer students an understanding and appreciation of the achievements and failures of the human race;
2. To create an atmosphere in which students have the freedom and the encouragement to examine who they are and hopefully to find answers to personal as well as societal problems;
3. To make students sensitive to and able to learn from their scientific, natural, aesthetic and cultural environment;
4. To see that students examine their attitudes and acquire the necessary skills in writing, oral communication and analytical thinking;
5. To deal with morals, ethics and values.

To elaborate briefly on this last component, please hear the words of President Tucker of Dartmouth College, as he talked to his students about values:

Seek, I pray you, moral distinction. Be not content with the commonplace in ambition or intellectual attainment. Do not expect that you will make any lasting or very strong impression on the world through intellectual power without the use of an equal amount of conscience and heart.

This quote is a fine expression of Greek areté or excellence. John Stuart Mill expressed it this way:

Men are men before they are lawyers, physicians or businessmen, and if you educate them to become capable and sensible men, they will make themselves capable and sensible lawyers or businessmen.

I believe that beyond this it is our responsibility to help our students understand more clearly the strengths and weaknesses of liberal education when it has to compete in the
world outside of the academy. For example, recently I received a letter from the Thunderbird Graduate School of International Management stating that a member of their staff considers an undergraduate major in history as the best preparation for their degree. Now, this would be a fine opportunity for students, but they would have to be counseled early that they should plan on graduate work. Colleges should create a course on the freshmen or sophomore level that will give students guidance in planning a career. They must understand what they may need to add to their basic liberal arts education in order to meet their career goals. Obviously, we can not change the adverse aspect of our national economy, but we should help our students understand the situation. Let none of our students be able to complain that they were misinformed and led blindly into an impasse. Think of the problems ahead in this nation, if a sizable group of students and their indebted parents say that a liberal education is a "rip-off."

The U.S. Department of Labor predicts that total employment will increase by approximately 20 per cent between 1974 and 1985, from 85.9 million to 103.4 million. Throughout the mid-1980's, there will be a continued growth of white-collar and service occupations, a slower than average growth of blue-collar occupations, and a marked decline of farm workers. The question now becomes, what can a liberal arts education contribute to the growing number of white-collar workers?

We cannot just do business as usual, we must show that liberal education can produce the type of white-collar workers needed for the 1980's. Like the ancient Greeks and the Renaissance humanists, we must show the useful aspects of a liberal arts education. We need to think seriously about the skills and knowledge that our graduates will need in the future.

A liberal arts education that teaches a student to think clearly, to solve problems, and to understand society and people is practical. This is education for leadership, and we sorely need leadership in all areas. Some argue that even in our depressed economy a liberal education is valuable because it makes the person versatile enough to adapt to many kinds of occupations. In a sense, a liberal education is preparation for the unexpected. It will take persons in the world of humanities and social sciences to help solve such problems as pollution, poverty, crime, breakup of the family, and even issues of war or peace. We are inundated with "people problems." If a more humane life is to be preserved, the Western World must afford to meet both its vocational and liberal arts needs. It will take a dedicated faculty and administration with the wisdom of a Pindar to assure a future for liberal learning.
PERCEPTIONS OF COLLEGE AND THE PURSUIT OF LIBERAL EDUCATION

Victor L. Worsfold

In their recent book, *Revolving College Doors,* Robert G. Cope and William Hannah have argued that "it is the fit between student and college that accounts for most of the transferring, stopping out and dropping out" amongst our present student body. This idea when taken to be correct, gives the lie to what is usually averred to explain the rapidly increasing phenomenon of attrition amongst those wishing to attend college, namely, financial stringency. Cope and Hannah would have us believe that "lack of money is a socially acceptable reason to discontinue attending school regardless of actual financial position." Thus, explicating the lack of fit between students and their college and not the lack of dollars becomes the task of those of us who must care about the future of the society's institutions of higher learning.

In pursuing the task of explication, I want to call attention to one aspect of this discordance not addressed by Cope and Hannah, which I believe has singular consequences for those involved in the teaching tasks of liberal education. I should like to consider the lack of fit between the perceptions of college held by college professors and the perceptions of college held by college students. It is because these two sets of perceptions clash, in my opinion, that I shall want to argue that the very justification for professors pursuing their teaching, namely, their being authorities on what they teach, is called into question. For teachers engaged in providing students with a liberal education I believe this challenge may affect the propagation of the very means whereby such an education can be gained.

But I anticipate too much of my argument. First, I want to sketch the particular, perhaps "peculiar" is a better description, situation from which my thinking is born. Secondly, I shall try to elucidate my sense that there is a clash in the way college is perceived by teachers and students by attempting to give an account of these perceptions from both sides. Then, I shall want to say why I think this clash is so significant to the tasks of teachers and, therefore, to the way in which the purpose of education is perceived both by those engaged in its process, and by society itself. And, finally, I shall
I want to make some specific remarks about the importance of this disharmony in perceptions for the pursuit of liberal education itself.

I teach, and am an administrator, at The University of Texas at Dallas, which is an upper-level university. This means that we offer the last two years, only, of a normal four-year undergraduate program, together with a full range of graduate instruction. Thus we are placed in a relation of dependency to other institutions of higher learning for our undergraduate student body. In Dallas these institutions are community colleges, for, while we have many students who have chosen to transfer to the University from regular four-year institutions, over two-thirds of the undergraduate student body come as graduates of the seven local community colleges of the Dallas County Community College District.

As a result, it was my task as chief liaison officer for community college relations to begin to establish, through a joint effort with my community college colleagues, a program of study which complements and expands upon the programs already developed by the community college system. Because the Texas Legislature mandated us to do so, the University of Texas at Dallas responds to the needs of a student body whose average age is 29, whose place of residence is the greater Dallas area, and whose circumstances usually include holding a job and family responsibilities. Thus the faculty of the University has been asked to join the faculties of the community colleges in the development of curricula which combine liberal and practical studies in an educative way for students whose first priority is not "going to college." When we consider the faculties' aspirations for the effect of these courses, however, then the lack of their centrality in the students' lives inevitably raises mutual questions about the institution's purpose and its freedom to pursue this purpose.

Many of our students characterize college as something of a resource center whose facilities are expected to be responsive, accepting, and above all, nearby. Perhaps there is a historical explanation for these present-day underlying assumptions of the nature of colleges. In the fifties, if Richard Sames is correct, in their search for an identity distinct from that of established universities the newly founded community colleges adopted as their raison d'etre "teaching people what they wanted to know." By having their perceived needs met, particularly in the vocational-technical areas, students came to see these colleges as intellectual supermarkets. Now, however, because of their link to community colleges, many universities like The University of Texas at Dallas are bedevilled by the same consumeristic characterization so that students in both community colleges and universities have come to expect our institutions, like rather posh shops, to possess revolving doors through which they pass at their ease. Many, indeed as many as 30 to 40 percent, of our customers stop hardly long enough to buy our goodies, yet in light of their notion of a university, they develop conceptions of us and our work which are at best unflattering and at worst so false as to make us doubt the very validity of our enterprise.

For example, like the consumer who wishes to know the conditions under which he can buy his chosen product, many students want only to know the conditions under which they will pass. Gone for these students is the sense of tackling the amount of work a thorough intellectual investigation might require to them, or, even worse, giving of the best of which they are capable. There appears little sign amongst many of our students of the kind of self-motivation teachers might hope by their efforts to engender. Nor—and this may hurt yet more—is there much evidence of the kind of caring for subject-matter and pride in its mastery on the part of students which teachers have themselves acquired and, presumably, are most anxious to purvey. In fact, when students stop to consider these teachers, rather than perceiving them as the committed educators which professors take themselves to be, students tend to see them as hired hands, available to respond to
the students' every need. Perhaps such a view is the result of many of our students' previous method of education. For if they are the products of the inquiry method which is still so popular at the earlier and, in my view, most crucial, elementary and junior high-school levels of education, then they have learned to view teachers as equal participants in a dialogue evolving from the teachers' responses to the students' interests. Implied in this method of education are two ideas which could give rise to the kinds of perceptions of teachers which I aver college students come to hold.

First, there is the notion that students are as likely to be as productive of knowledge by their work as the teacher is; all the teacher possesses, in this view of educational method, are the resources, and perhaps competence, to set up a learning environment in which such knowledge can be generated. There is no sense that there might exist a body of knowledge of which the student is ignorant but which the teacher has mastered, and about which the teacher may be very enthusiastic. Indeed, it almost seems that for the teacher to apprise the students of the existence of such a body of knowledge amounts to an exercise of self-indulgence on the teacher's part!

Secondly, there is embedded in this method of teaching, a conception of education as a process of shared experience between equal partners working together towards finding things out by following wherever their discussion leads them. The thinking of John Dewey is usually thought to lend credence to such a view, thinking about education which has as its focal point the idea that the process of education should be democratic—democracy being for Dewey "primarily a mode of associated living, of conjoint communicated experience."7 The practice of education, therefore, must be patterned after this system of co-operation and common understanding. Whether this view adequately explicates Dewey's ideas cannot be dealt with here, although elsewhere8 I have tried to indicate it does not. What the view does connote, however, is a relativism with respect to what is worthwhile teaching. For there is no sense here of teachers as authorities on subject-matter worth inquiring into. As Mrs. Warnock says, when commenting on this view, "anything will do...provided only that the pupils are enthusiastic about it."9 It is only a short step from learning that education is a kind of free enterprise amongst equals to coming to perceive those who are its main purveyors as servants to those to whom it is purveyed. In my opinion, there are few students who perceive their professors with the kind of professional respect they happily accord their doctors or even their bankers. Faculty have come to be one more facility the college has to offer. Familiarity can, after all, breed contempt.

Yet there will be some who will say I am overstating the case, noting my frequent use of "some" or "many" when referring to students. In response to those who would argue in this way, I would say that it is clearly not the case that all students perceive faculty as a facility, and certainly not the best amongst our students. But it must be remembered that the best are by definition a vast minority so that I believe I can persist in thinking that the attitude of students towards college which I sketch is, at least at my own university, a prevailing one.

But what of the professors' perceptions of college? Can one detect a prevailing attitude amongst them?

I believe that most professors accept college posts because they wish to be involved in the pursuit of their chosen field of study. For these men and women that pursuit is, at its best, an expression of themselves. Professors, I would argue, see their subject-matter as intrinsically worthwhile so that those who actively engage in research and teaching are engaged in enterprises which they view as good in themselves. Education, the voluntary initiation of students into the forms of knowledge by which they understand themselves and their predicament, that enterprise which gives college its purpose, needs no extrinsic justification for them, therefore. Professors do not view themselves as salesmen
dispensing knowledge to those who feel they need it in order to get on in the world. Rather, many professors possess an idealized attitude towards college so that the institution for them is perceived as something of a sanctuary where they can pursue their work of learning and teaching in an atmosphere of mutual respect. And they have good reasons to hold fast to this perception. For without it I believe the avowed purpose of education may be radically changed, and the freedom to pursue that purpose may be placed in jeopardy.

The reluctance to treat any inquiry as educationally more worthwhile than another—a reluctance which the recent curricular reforms at Harvard University seem designed to combat—leads to education being justified less in terms of intellectual competence, the mastery of conditions embodied in the forms of knowledge by which we understand the world, and more in terms of social adjustment, personality development, and the ability to participate fully in social intercourse. This trend is supported by those for whom the purpose of education is purely subjective in nature so that it is "not what [the learner] discovers but the fact that he discovers it, not the self that he expresses but merely the act of self-expression,"¹⁰ as Brian Crittenden says, that justifies the pursuit of education. The major function of education, following from this last account of the process, can become its value as an instrument of socialization, that is, the adapting of an individual to the character of the society in which he or she lives. For the emphasis in this view is solely on the self that is emerging from the process of education, rather than on the mastery of standards immanent in the subject-matter which forms the self. As a result, the freedom of academics to pursue these standards themselves by scholarship and teaching may be curtailed. For if their task is to be defined by the values to which society desires its emerging individual members to adhere, then the liberty to explore the desirability of these values in general and their adoption in this society in particular may be compromised.

Academic freedom is a special right dependent upon the voluntary agreement of society to support the scholarly pursuit of the forms of knowledge by which we come to understand our human predicament. Without such an agreement there would be no right to academic freedom. If society were to decide that it valued socialization—or any other of the alternative characterizations of education presently in vogue, the satisfying of the child’s felt needs or unfolding the child’s potentialities, for example—then the notion of scholars pursuing knowledge for its own sake, unimpeded, and teaching the results of that scholarship to their students in an equally uncircumscribed fashion, would vanish. For professors to abandon this idealized perception of college as a sanctuary for the advancement of knowledge is for them to invite society in general to replace the intellectual values which their work proclaims with a conception of education more utilitarian in nature: precisely the kind of conception of education to which students’ perceptions of college as supermarkets can lead. Ultimately, the consumeristic view of college reduces education to a process in which students take only what they perceive they need to survive in their society. Most students do not stop to consider the undesirability of mere survival as the justification for fulfilling the demands of the process, and therefore cannot appreciate the kind of vision of college which I believe many professors have and which provides the alternative justification for its rigors. A clash between the perceptions is inevitable. The problem is to understand the significance of the disharmony between them.

To me, the most important aspect of the clash of perceptions is its effect upon the quality of the interaction between professors and students. For in their effort to engage their students in the process of education, professors can frequently be thwarted by student demands, sometimes implicit, more often explicit, for a justification of the tasks they set, to such an extent that the very validity of the enterprise of educating is doubted.
When this level of doubt is raised, the professor's authority to pursue the demands of education becomes the central issue. Professors, if they are to retain students, must meet this challenge to their authority as educators.

A professor's authority is best understood as a duality. A professor is both “in authority” in his or her classroom and “an authority” on what he or she teaches. Professors are “in authority” because they are authorities and they are such because they have met the standards of mastery their disciplines dictate. It is these standards which constitute “the holy ground” — A. N. Whitehead’s phrase — towards which students with their professors are supposedly groping. Thus, the educational relationship between professors and students is triangular (with the discipline at the apex) and it is this very triangularity which provides professors with a justification for why they do what they do with their students. Put more simply, it is because their relation to students is not a direct relation of power, but rather an indirect relation of authority, mediated by the dictates of the subject-matter which they profess, that professors have the right to make demands of students. It is their understanding of these dictates that makes their teaching of the subject-matter authoritative and grants them thereby their rights of demand. To challenge professorial authority to follow these dictates is to challenge the validity of the subject-matter at hand.

Making such a challenge, however, is, I suspect, what the egalitarian method of education, construed at its best, amounts to. It assumes that education has become a matter of those who have gained authority in their subject-matter holding sway over those who have not. It also assumes that the specialization which becoming an authority in a subject-matter necessitates leads not to an authoritative relation between professors and students but to an authoritarian one. Such a challenge to the authority of professors can lead not simply to the kind of questioning of what it is appropriate to teach in college, which was earlier discussed, but also to the more extreme position in which students are encouraged to doubt the professor's ability to defend an absolute standard of truth in the subject-matter at hand. For on the anti-authority argument professors have no more right to be heard than students and if they choose to use reason to establish their version of the truth “this reason is only one among a variety of possible weapons (the one preferred by the bourgeois academic) and no more absolutely to be preferred than any other.” What began as a challenge to the professor's authority appears to have become a challenge to the pursuit of the rational, therefore.

Meeting such a challenge, in my view, amounts to more than merely pointing out the illogicality implicit in the anti-authoritarian’s argument, namely, that he or she is proposing irrationality on rational grounds. Rather, meeting the challenge demands that those who doubt the validity of the exercise of the professor's authority come to understand how it is that the pursuit of the rational life is to be preferred to the pursuit of the irrational, that is, that they understand the value of liberal education. It is because so many students cannot perceive the intrinsic worthwhileness of such an education, I want to argue, that they cannot accept the dictates entailed by the pursuit of such an education, and embodied in the authority of those who have already achieved it.

Before the nature of these dictates is investigated, however, perhaps the effect of having to meet this kind of challenge on the professors' attitudes towards students might be mentioned. Clearly, to have to argue continuously in defense of pursuing their subjects robs professors of the status of patently worthwhile professionals. Furthermore, professors may be required to spend so much time persuading their students of the validity of undertaking to fulfill the demands of “the holy ground” that they and their students never reach the “holy ground” itself. I suspect, incidentally, that many of the goodhearted intentions of so-called radical educators are squandered on just such exercises. Most importantly, however, to be harassed by this kind of challenge on the
part of students inevitably produces in professors an attitude of resentment towards their charges. I should like to suggest that for professors to have their professional validity on trial will erode their sense that they are in a role relationship to their students—a role relationship which the demands of their subjects dictate, and which permits them to effect the critical processes of student evaluation necessary for the achievement of the students’ education. It is this erosion which will ultimately cause the breakdown of the triangular relation of student and teacher to subject-matter. Instead of persevering in the role which their task requires, professors will, I fear, come to feel personal alienation first from their students and then from the very task itself. In the end, the unflagging challenge to a professor’s authority will destroy the possibility of an educative experience for the students by defiling the professional educative energies of the professor.

Professors involved in the pursuit of liberal education are, as I have hinted already, peculiarly subject to this kind of alienation. Because their educational efforts are directed towards the development of capacities for disciplined critical inquiry and independent judgement in their students rather than towards making their charges adapt to the current social milieu, their work cannot be subjected to criticism on the grounds that it fails to mould students in prevailing societal patterns. Thus professors teaching the subject-matters of liberal education are frequently asked to provide justification for their work both by those who understand their task but question its worthwhileness, and, more likely, by those who are incredulous that their task cannot be justified on utilitarian grounds.

Such challenges to the authority of liberal studies professors, however, do not simply constitute threats to the pursuit of particular subject-matters. Rather, in my view, they are a direct challenge to the validity of education itself, or, more precisely, to being educated. To be educated is, surely, to have achieved the means to the literate life, that is, an understanding of the forms of knowledge by which each of us can act in the ways that are distinctively human—virtuously, imaginatively, and with a sense of the worthwhileness of the tasks we choose to undertake. I believe, like several other contemporary philosophers of education, that the pursuit of education, if the notion is construed in this way, needs no external justification. While it may be argued that the liberal education of all the citizens of a democracy is an ideal, I do not believe that this belief affects the intrinsic worthwhileness of the pursuit of education. Education’s value needs no instrumental validation for justification; there can be no better reason for individuals to engage in its process than that mastery of the subject-matters by which the process is effected equips them to flourish as themselves.

Yet, generally in our society, literacy, the underpinning of the educated life, is not valued. There are no public prizes for elegance of style or clarity of thought. As a result, there is no real commitment to the skills necessary to produce literacy—reading, writing, nuance of vocabulary, syntactical correctness and, above all, style. One does not need reminding how the beautiful people of television and the politely pornographic glossies have eroded any sense that such skills are essential to self-expression. Fewer and fewer students, therefore, are willing to struggle to comprehend unfamiliar texts or master the means to do so. Rather, egged on by the success of their superstars, not to mention the pressures of their peer group, many, perhaps most, students prefer the instant gratification of attending a movie or watching television. Why? Because they are living in a society in which inarticulate orality as a means of self-expression has replaced literacy, and the student body’s rejection of the demands of literacy is merely a measure of how ingrained that change has become.

Thomas Farrell, writing on the topic of literacy has said, “community colleges are faced with large numbers of students who have not interiorized literate modes of thought.” So serious is this lack of literacy that Farrell can continue by averring that
teachers, who have interiorized these modes, may not understand how "unnatural" reading and writing are to their highly oral students. If Farrell is correct, and students are so lacking, then I suspect that I want to argue that in not possessing these modes of literacy what students really lack is the means to develop the kind of conceptualizing ability which the literate life demands. Indeed, perhaps it may be this lack which begins to explain why students endlessly argue about the demands teachers of literacy place on them: they cannot conceive of the worth of the exercise of acquiring the modes of literacy because they cannot conceive of the merit of literacy itself. Little wonder, then, that the authority of liberal studies professors is so under attack. There are, however, means to combat these attacks.

Despite the societal pressure not to, professors involved in liberal studies must be at pains to care and, perhaps more importantly, to be seen to care about the value of the literate life. For me this means that they must be willing to make their vision of such a life, shaped by the subject-matter, rather than the teaching methods necessary to encourage it, the center of their discussion with students. Walter Kaufman's recent chastening analysis of the kind of limited mind so prevalent amongst academics notwithstanding, I believe that professors have aspirations for their subject-matters and possess the judgement necessary to decide what is worth pursuing. It is the assumptions underlying these aspirations, together with an understanding of why discipline is so crucial in coming to terms with the structures of the forms of knowledge liberal studies purveys, that professors in this area must share with their students. Too often, it seems, professors are bogged down in deciding which technique, with its accompanying gadgetry, will best produce a particular aspect of literacy; so that remedial reading and writing courses become a substitute for the direct inculcating of literate modes of thinking.

Kaufman has admirably demonstrated how vital the correct kind of textual reading is in the development of such thinking. "Dialectical reading"—reading which involves the comparative study of texts reflective of differing underlying world views, reading which is committed to an understanding of the texts, whether it is in agreement with our own point of view or not, reading which is, above all, considerate of the intellectual context within which the writer is working and so presenting in this particular text—is the major tool for the development in students of the kind of vision the literate life demands. Even if liberal studies professors only involve their students in debating the worthwhileness of pursuing the development of this vision, as distinct from giving in to the harassing challenge of why a particular demand is made and the professor's right to make it, then they are far from doing a disservice to their subject-matter.

More positively, perhaps, professors must be willing to undertake whatever interdisciplinary study the theoretical and practical investigation of the problems at hand requires—no matter how unsettling this kind of study may be to those immersed in that particular specialization. Problems relating to real life (problems which seem to me so much a part of liberal studies) lend themselves naturally to this kind of integrated treatment. It is Kaufman, once more, who points out that, "As matters now stand, it has been said that in a modern urban hospital the only generalist is the patient. In the modern university the only generalist is the undergraduate." Surely the quality of life overall cannot but be enhanced by a change in this state of affairs. The development of the vision of those who pursue the literate life by interdisciplinary study will aid in this change. For this, surely, is the product of such study. Perhaps the virtues of classical humanism can be confidently affirmed once more, for it is the notion of the literate life as central to the development of the whole person which permeates that tradition.

To effect these measures, however, demands that professors shut off the continuous questioning of their authority. If it is a fact that colleges, both community and university,
stand at the interface between the orality of our present culture and the cultivation of literate patterns of thinking upon which traditional culture is based, then I think professors of liberal studies have a special responsibility for doing so in light of what such a challenge amounts to. Hopefully, students will end this questioning themselves as they become involved in the pursuit of the literate life which liberal studies purveys. For they will come to see the intrinsic value of such a life for themselves as they learn the self-criticism and creative judgement derived from the kind of reading the pursuit of literacy entails.

Professors must adopt teaching methods which foster involvement in the literate life—I believe the Socratic method, dedicated as it is to self-examination, best serves this critical creative purpose—but they may fail in their attempts to persuade their students of the intrinsic worth of the rigors of liberal studies. Some students may simply choose to be unpersuaded. For them, such a choice is the choice of illiteracy, a choice which, while I believe professors have an educational duty to explain the consequences of such a decision to their students, I think students have a right to make for themselves. If students understand that by deciding for illiteracy and thereby against the literate life, they are denying themselves the opportunity for self-knowledge and access to the normal means of comprehending their human predicament, then I suspect teachers must simply stand aside and allow them to effect their choice. I believe there is no alternative for professors, for I think that when students make such a decision there is no hope of ever changing their perceptions of the nature of college life, perceptions which give rise to this kind of choice and which, I fear, are very likely those with which I credited most students earlier in my discussion.

In conclusion, then, if asked to comment on what liberal studies professors must do in meeting the demands of their profession, I should say that what is needed is a reaffirmation of the values which first generated their commitment to college teaching. If community colleges and universities are to emerge as "egalitarian public utilities," characterized by a concern for each individual in the community in which they find themselves, a concern which the open admissions policies of so many of them appear to connote, then I think those who teach in them must be prepared not to defend these values but to allow them to stand for themselves as intrinsically worthy of pursuit. Liberal studies professors must lead this endeavor for it is they, first amongst all, who must remind society of the elegance of life to which the literate aspire.

NOTES

1 This paper is an expanded version of my paper entitled "Perceptions of College and the Pursuit of Literacy," presented to the College English Association at their Meeting in April 1978. The section on authority owes some of its ideas to the ideas I received in the discussion of this earlier version. In addition, the revised version of the paper was presented at the Association for General and Liberal Studies, Eighteenth Annual National Conference, October 1978.


3 Ibid., p. 3.

4 Ibid., p. 8.


6 Cope and Hannah, op. cit., p. 1.
7 Quoted by Mary Warnock in *Schools of Thought* (London: Faber and Faber, 1977), p. 65.
9 Warnock, op. cit., p. 70.
11 The following remarks draw upon the discussion of authority contained in R. S. Peters, *Ethics and Education* (London: George Allen and Unwin, 1966), Chapter IX.
12 Warnock, op. cit., p. 75.
15 Ibid.
17 Ibid., p. 61 ff.
20 Same, op. vit., p. 358.
TAPPING THE POTENTIALS OF INTERDISCIPLINARY STUDIES IN A FRESHMAN CORE PROGRAM

William A. Sadler, Jr.

Preface

This article will discuss an innovative Interdisciplinary Freshman Core Program that has been developing for five years at a small liberal arts college in the New York metropolitan area. The significance of this program extends beyond the campus of Bloomfield College, for it exemplifies one way to meet productively some of the serious issues now confronting higher education across the country. Before examining this program, let me introduce you to this College in terms of its precarious position at the start of its second hundred years of existence.

The Setting

In what now looks like understatement, Fred Hechinger commented in writing about educational crises in the seventies that little Bloomfield College was exhibiting many of the big problems facing higher education in this decade. In 1973, plans for an expanded campus had to be abandoned as our student population dropped by over 50%. Our Board of Trustees moved decisively to manage retrenchment by eliminating tenure throughout the College and retaining only those faculty deemed necessary by a Faculty Council’s analysis of requisite positions. The AAUP then sued the College on the grounds that financial exigency was insufficient to warrant dismissing tenured faculty. Although the AAUP won its suit, the College did go bankrupt and operated under Chapter Eleven for two years. An anxious, demoralized, and polarized faculty found that not only did it have many fewer students, but that the quality had declined proportionate to the
quantity. Mean scores of daytime students' ability dropped from above the 40th percentile (i.e., in terms of standardized test scores, nearly 60% of college students nationwide scored higher than our average student in 1972) to the 20 percentile. Faculty faced heterogenous classes with large proportions of what we have come to call nontraditional students. Mean reading and writing scores were at the ninth grade level. Combined mean SAT scores were below 800. Most students were poorly prepared by high schools for college. More than half our freshmen came from minority groups and from ghetto schools. An increasing number of students have had ESL problems, coming from strong ethnic backgrounds and/or foreign countries. And a growing number of our students have been adults who have been away from formal education for many years.

These new students primarily came to college for job preparation. Most have chosen to major in business, accounting, or nursing. Pressure to drop general requirements led to the College's adopting a common distributional choice of liberal arts courses, which in fact permits more concentration in career courses. Thus the liberal arts tradition has been declining. For example, a strong religion department in this Presbyterian college that only fifteen years before had a seminary has been reduced to one professor who works half time in the library. Also part of the decline are philosophy, foreign languages, physics, and a host of other upper division courses in traditional majors.

Many faculty have been unhappy about their losses, resentful of the new type of students, apprehensive of the future and their jobs, and frustrated by administrative pressure to teach well all students whom the College has managed to recruit. The plight of this College for some time resembled that of "Our Gal Sunday": can a little college so unprepared for big crises survive in the press of issues in the world of the seventies? The answer now seems to be: yes. In many respects the College, now two years out of Chapter Eleven, is stronger than it was five years ago. In part the present strength of the College is due to the way our interdisciplinary program has met the challenges of these turbulent times.

Issues and Objectives

While the story of Bloomfield College is not typical, there are features of it that suggest we have indeed been confronting issues commonly found in higher education. These issues include an unresolved conflict between a liberal arts tradition and careerism, a clash of expectations between traditional faculty and nontraditional students, enormous pressures placed upon teaching because of complex, chronic economic problems, the fragmentation of general education and an increasing competitiveness throughout academia, and a demoralized condition of faculty and students who manifest a sense of having lost touch with a meaningful community and those closely related symptoms of lack of dedication, purpose, and conviction.

Our Interdisciplinary Freshman Core Program can be seen as part of this College's attempt to respond creatively to many of these issues. In so far as many of us face common issues underlying our own specific local problems, then what we have learned from our special program can have general interest. We have learned much from our experience; in part this was due to an unanticipated windfall from Washington. In the midst of our crisis the College was fortunate to obtain a large federal HEW grant that totally subsidized this new venture in a Freshman program for four years. It has allowed us not merely to survive but to experiment, reflect, reformulate, adapt, and grow. The grant greatly lessened the heavy economic pressures, so that we could concentrate upon substantive educational issues. We have thus been privileged to have an unusual learning experience, which we are now ready to share with others facing similar problems.

The focus of our Core program has been directed towards the marked change in our
student population, primarily in terms of academic preparation and interests. In spite of grave academic deficiencies, most of our students have serious intentions of completing college and moving into "white collar" careers. One question underlying our Core Program is: how can we help these students and provide them with a college education at entry point without lowering academic standards or diluting the quality of higher education? Our answer is this program carefully adapted to students' needs, limitations, and aspirations. Equally important to us, and relevant to the mission of the College, is that this Program combines values of a liberal arts tradition with objectives of career education. Depending on how the latter are interpreted, we do not believe that the two are necessarily incompatible.

In designing this Core Program our aim was to create an integrated, encompassing learning environment, which provides frequent, consistent reinforcement for learning, self-discipline, and personal development. We have done this by constructing a set of four Interdisciplinary Studies (IDS) courses that are required of all day students and which are supplemented by other courses, seminars, workshops, tutorials and advising. These four courses that constitute the central part of the Core bear the title: Analysis and Communication. The emphasis in all IDS courses is upon skill development. Students are not tested for memorizing content but for their ability to reason and to communicate. In all Core courses we aim to help students become actively and responsibly involved in their own learning. A measurable objective in these IDS courses has been to bring a majority of our Freshmen up to college level performance in ability to analyze and communicate as well as in basic skills by the end of the first year. At the same time our objective is to provide them with a foundation of knowledge and understanding for upper division courses and to foster in them a serious interest in college level learning.

The Evolving Structure of the Core

One set of courses (IDS 101-102) concentrates upon literature and social sciences in a two semester sequence. These courses continually evolve; the curriculum has never been the same. Teachers representing various disciplines, including literature, history, philosophy, political science, psychology, and sociology have worked closely together in this part of the Core. Different disciplinary perspectives contribute to the richness of the courses; however, interdisciplinary differences are now much more apparent in our weekly training and planning sessions where teachers discuss the assigned material among themselves before doing so with students. Unlike other interdisciplinary programs where students are confronted with differences between disciplinary viewpoints, we have learned that it is less confusing and more constructive to emphasize what disciplines have in common, such as a concern: to read material carefully; to reach an understanding of it by following elements in the material to form an appropriate and coherent viewpoint; and to express one's understanding of the material in clear, coherent statements that are supported by evidence. Whether reading a story by Baldwin or Kafka, a play by Ibsen or Albee, or a study by Freud, Erikson, or William Whyte, the objectives are the same. Effective performance in all these disciplines involves careful observation, competent analytical thinking, individual synthesis, and communication that elicits and learns from feedback.

Another two semester sequence (IDS 103-104) concentrates upon math and natural science. Again the teachers represent a variety of disciplines. Their emphasis in class is also upon essential elements in scientific discovery, thinking, and reporting. The method of teaching stresses learning by experimentation. Analysis and Communication set the framework; the objectives include learning by carefully examining evidence, discovering basic structures and ingredients and how they work, testing formulations, and arriving at
an analytical understanding based upon one's own work. In all IDS courses, there is consistent emphasis upon careful observation, drawing conclusions based upon evidence, seeing connections, resolving problems, and communicating one's understanding clearly and effectively.

Recently we have tried another innovation with a group of thirty-five students who have been totally involved in a more concentrated interdisciplinary track that has been built around Bronowski's text, THE ASCENT OF MAN. While there have been serious problems with the text (not so much because of difficulty as because of the author's biased and sometimes superficial treatment, which run counter to course objectives), the basic results of the experiment have encouraged us to start planning an even tighter integration of all four courses. In this experiment, professors of chemistry, literature, and history have worked closely as a team with the students, emphasizing skill development along with understanding scientific and historical progression. It has proven to be extremely useful to have professors of humanities reinforce objectives in science labs and vice versa. Again, our interdisciplinary thrust emphasizes commonality and complementarity rather than differences.

Learning to focus upon students' development in both advanced and basic skills simultaneously has led us to discard some conventional pedagogical methods and to concentrate upon others. For example, even though we have a number of highly articulate, exciting lecturers, we have virtually eliminated the lecture method. It has proven to be the least effective way to achieve our educational goals. Instead our teaching is done in small classes using either the laboratory experiment approach or small group discussions. Short talks are given when necessary and useful in small classes. Tutorials and individual conferences are also frequently used. We have experimented with a variety of simulation games and media techniques, and we have drawn from the rich pool of professional talent in the New York area for special projects; but we have learned that our sometimes dazzling innovations have too easily diverted attention rather than reinforce our objective of active, involved student participation. Putting the student rather than the professor into the limelight has been one of our most difficult adjustments. To new faculty members in the Core our present parsimony in methods at first appears drab. But we have emphasized a rich diversity of approaches and viewpoints in the past only to find that these satisfied teachers much more than they helped students. Nevertheless we regularly experiment with curricula and methods in order to improve our Core learning experience.

Tightly integrated into our interdisciplinary Core courses is a vigorous Learning Support Workshop, which has been designated a model program by Washington. Students are given diagnostic tests upon admission to the College by the Workshop personnel. These tests determine where students will be placed in the Core as well as providing an information basis for measuring growth. We now have a developmental reading and writing course (IDS 100) for students whose skill levels are not yet sufficient for them to be admitted into IDS 101; about 15% of our students are expected to be placed here in the future. Math scores determine placement in particular tracks within IDS 103-104. Scores in reading and writing determine whether students may elect one or two other courses in addition to Core courses. All students are required to participate in weekly workshops until they test out of them. The workshop sequence is part of the Core courses. The workshop personnel are active in planning and evaluating Core courses. They regularly advise classroom teachers about appropriate materials and approaches, and discuss with them skill problems of individual students. It is in the workshops that students are given concentrated assistance in mastering basic skills in math, reading, and writing to support their learning in IDS courses. Both workshops and classes utilize a developmental approach. Synchronizing the pace of these two aspects of the Core has
been a slow, difficult process; but we have learned that it is possible to integrate remedial work with significant classroom learning, provided there is frequent communication and cooperation between all involved personnel. The integration of workshops with IDS courses is a distinctive element of our Core Program.

**Developments Within the Core**

I have been attempting to describe how the IDS Core focuses upon student development. The central part of the Core concentrates upon development of analytical and communication skills; the Learning Support Workshop upon basic skills. In addition there is a set of optional Life Planning Seminars, which are aimed at developing a student’s self-confidence, self-awareness, sense of responsibility for one's own learning, and interpersonal communication skills.

When the Core began we placed more emphasis upon thinking in the courses and upon self-awareness in these seminars. We have since learned to place more emphasis upon communication throughout the Core. George Herbert Mead’s theory of Symbolic Interaction provides a theoretical foundation for our emphasis. He maintained that communication is the basis for both good thinking and a strong self-image. We have found that our students, upon entering college, often manifest both a weakness in thinking ability and a low self-esteem. The growing emphasis given to interpersonal communication and a developmental approach throughout the Core, especially in these informal Life Planning Seminars, grows out of our attempt to raise students' sense of self along with their thinking abilities.

Personnel in these seminars have helped teachers become more sensitive to personality and interpersonal factors that can enhance or detract from students' learning. Currently these seminars are being redesigned to give even more support to the Core courses. At the same time academic advising is also being more closely coordinated into the Core, with Freshman teachers constituting a sizeable number of advisors.

The intended result of this evolving Core Program is facilitation of student development for college level learning in the Freshman year. This program has worked with non-traditional students. It has also been very successful with very bright, competent students, who have thrived under the flexibility and concentration upon their own intellectual and personal development.

A distinctive feature of this Core is the degree of integration of services within it. Another feature is a consistent commitment to skill development in all courses. Usually the term Core signifies a core of knowledge and values that students are expected to acquire as educated men and women. Often this goal has been sought through divisional and interdisciplinary programs. In contrast, our program has emphasized not knowledge but know-how. This stance has brought no small amount of criticism from more traditional, disciplinary minded faculty, even within our own College. Criticism has prompted us to analyze our own position more carefully and to think through both short and long range objectives.

We believe we have good reason to concentrate upon skill development. A common complaint about students today is that they are too passive in the classroom and when doing assignments. Many textbooks are geared to passivity and tend to promote it. We believe students need to become active learners. Presenting them with a body of knowledge does not seem to be the most appropriate way to activate them. Following Jerome Bruner’s cognitive theory, which suggests that knowledge is a model one uses in dealing with repeated aspects of experience, we emphasize learning how to build cognitive models through observation, generalization, and application—that is, learning through analysis and communication. Admittedly there are other types of learning; but
certainly analytical thinking is fundamental to all sound disciplines of knowledge in the liberal arts tradition. It is also a requirement for careers in the modern world. In writing about the turbulent situation at Harvard, where the notion of a core has again been given serious attention, Susan Schiffelbein commented: "Time and its technology are sweeping us into a future filled with challenges that will require analytical ability even more than operational skills. The 'educated man' who knows isolated facts but cannot apply them will be of little use in such a future." (Saturday Review—April 1, 1978.) We take such a comment as positive reinforcement for our innovative skills’ approach.

Results of the Core

A much more important reason for continuing to develop this Core has to do with how the students who have been involved in it have fared academically and personally. What has been the impact upon our students? In the Spring of 1976 an evaluation report indicated the Program had met some of its goals but narrowly missed others. One goal is to have at least 50% of the Freshmen students operate on a college level in three areas—math, science, and humanities. The result in 1976 was:

- 60% achieved college level in Science
- 47.3% achieved college level in the analytical skills of the Humanities
- 40% achieved college level in Math.

A more experienced staff did a better job in 1976–77:

- 60.8% performed overall academic work at college level (111% of goal)
- 66.8% tested at a college level of math (121% of goal)
- 65.3% tested to indicate college level knowledge of Science (119% of goal)
- 75.6% tested to indicate college level knowledge in Humanities.

By self report, students in IDS 102 indicated that:

- 66% made progress in understanding and appreciating the liberal arts.
- 78% made progress in understanding other people and cultures.
- 82% made progress in psychological and sociological thinking.

The measures for evaluation were both objective (standardized tests and analytical tasks) and subjective (self report through in-depth questionnaires).

The latter evaluations are particularly important; for, our aim is not only skill improvement but also attitudinal and motivational development. It is our belief that a poor attitude towards themselves as learners constitutes a serious hindrance in the education of many students. Thus, the following self reports show a significant success in our Program:

- 73% feel better about themselves as students;
- 86% feel the instructors' criticisms are fair and helpful;
- 92% feel the instructors are interested in their students;
- 65% are more interested in reading;
- 50% are more interested in writing;
- 63% are more interested in college;
believe IDS is helpful in developing skills needed for future courses;
report progress in learning basic concepts and how to apply the courses to problem-solving decision making and other life issues.

The students' performance is in accord with their self perceptions. In a final test of analytical skills in social science in 1977, the majority successfully identified major points. They did slightly better than two control groups consisting of freshmen at a State college where the average SAT scores are 200 points higher than our own.

**Advantages of an Interdisciplinary Framework**

An outside evaluator rated the IDS Core very highly. In the summary of his evaluation, he pointed out that the IDS Core provides a service which we believe constitutes one of our most important functions:

"Indeed, what IDS does is to provide both definition and balance in the Bloomfield curriculum, perhaps, assuring that what has traditionally been called "General Education" can exist as a viable and vital force for a student body that faculty assume to be obsessed with vocationalism. . . . the IDS component stands out as a process of convincing the student that "qualifiability" and not mere "employability" is the outcome of any education that respects both the whole person and his/her future."

The evaluator's comment also point to the creative potential of an interdisciplinary program such as this to confront productively major issues in higher education. There are several reasons why an interdisciplinary core can be so adaptive to specific situations and special problems. An interdisciplinary structure is much more flexible than a disciplinary one. A discipline has a specific commitment to a tradition of knowledge and methods, which must be imparted to students. An interdisciplinary program should be respectful of these traditions. Yet we have found that in IDS we can be freer than the disciplines to concentrate upon student development and to cooperate in establishing a common ground in learning. What an interdisciplinary core can emphasize is the general commitment to highly valued ways of thinking and communicating. It is in this general commitment that we have found our basis for a general education program that stays in tune with changing needs of students and society.

For all its strengths, we are aware that there are several serious deficiencies in this Core. We have given too little attention to the development of critical and reflective thinking. We have tried to build the foundation upon which these higher forms of thinking operate; but if our students at some point do not experience and cultivate critical thinking and mature reflection they will surely not have tasted the ripeness of a liberal arts education. Nor have we fostered creative self-expression though we have worked to support a basis for it in developing powers of synthesis and communication. There is very little emphasis upon the past within our curriculum, though we consistently try to convey a historical approach to understanding reality. In short, we have developed a program that is very good, but far from perfect. We have learned to be content with modest gains, as we have discovered with bitter disappointment that trying to do too much results in accomplishing very little. Growth for most of our students is a very slow process; we are gratified that we have been able to facilitate that growth as much as we have. What we have done here is not necessarily what will be most
appropriate at another place. What we have now may not even be appropriate for Bloomfield College in five or ten years. But I am convinced that for an effective response to important problems an interdisciplinary framework has the greatest potential for adaptation to specific situations and that it is particularly suitable for an educational program that sets student development as a primary objective.

Confronting Major Issues

As mentioned earlier, our interdisciplinary program has enabled us to confront instructively several major issues in higher education. One of these is the conflict between the liberal arts tradition and career programs. As socio-economic factors intensify pressures upon college students to find careers in specialized areas quite separate from those of liberal arts and general studies, a competitive situation has arisen which has put the latter on the defensive and in a seriously weakened position. In contrast to widespread competitiveness, we have learned to specify our learning objectives so that both liberal arts and the career programs are supported. Developed abilities in analytical thinking and communication are required for advancement in both. Our common interdisciplinary goals serve the needs of students to grow as persons and to prepare for careers. In honesty, however, the interdisciplinary program has not lessened the tension. The fluid curriculum of IDS courses makes it suspect especially to career program faculty. Furthermore, we have not given in to the narrowness that is bred by careerism; on the contrary the development of thinking in the Freshman year has led many students to question their original choice of careers and majors. Life Planning Seminars in the second year continue to provide opportunities to examine alternative careers and to explore the implications of career choice. The Core experience has also generated new ideas for upper division courses that allow students to concentrate upon issues in types of careers, such as moral implications of public policy, the ethics of medicine, the role of women in a career world, etc. But we see in our skills oriented program a basis for cooperation rather than a perpetuation of a sterile competition that has become so commonplace in higher education.

Another issue that we had to confront was the conflict in expectations between traditional faculty and non-traditional students. The vast majority of teachers in the interdisciplinary Core entered it as specialists in their own disciplines. Most of us were distraught by our experiences in the classroom and by grading papers and exams. We felt the need for a change in us rather than to sell out and contribute to academic inflation. Faculty in this Core are for the most part highly dedicated to teaching students effectively. Two years ago we spent several months in an intensive faculty development program that paralleled our emergent Core Program. Faculty development has continued to be an instrumental part of this Program, with participating faculty meeting twice each week for sustained training, consultation, planning, and evaluation. We see in this situation a challenge to learn new ways of adapting to a situation that is as risky and confusing to us as it is to our students. Along with students we have had to learn new skills, such as becoming very clear in establishing our instructional objectives, relating positively to students from cultural backgrounds different from our own, running small group discussions productively, stimulating students to develop a sense of responsibility and study skills, not to mention enticing them to find learning through reading and writing exciting and inherently worthwhile. We found that as we changed our teaching approach to that of co-learners with students in a common situation that is tough, risky, and challenging for all of us, we have begun to bridge the gap that looms between so many teachers and students.

Still another issue that our interdisciplinary program has met constructively is the
current demoralization among faculty. Our very heterogenous faculty members have now become a team of collaborators with a common set of objectives, a sense of purpose, and an opportunity for frequent interaction that provides feedback and personal support for effective teaching. One consequence of a highly flexible program is that the process and curriculum are in a constant state of flux in order to keep the Core adapted to the emergent needs of students throughout each year. This means that we regularly have to plan the courses, examine and reset specific objectives, and redefine our curriculum each semester. There is a Pirandello quality to planning meetings; our faculty is constantly in search of a curriculum. From a bureaucratic standpoint constant revision is inefficient; but a more important consequence is that faculty members develop a vital sense of ownership by shaping an evolving program that constantly provides them with a deep sense of satisfaction. Many faculty have commented that participation in the Core program has ended a growing sense of isolation and provided an experience of camaraderie not experienced since graduate school. Being involved in an interdisciplinary core is a liberal education for faculty as well as for students and one which facilitates the development of a community of learners.

A fourth major issue confronted by this Interdisciplinary Core Program is the fragmentation within general education today. A common complaint is that liberalizing in the sixties has left the liberal arts tradition in disarray. We have found that our endeavor has overcome much of the dissolution through establishing common goals and finding a common work. The interdisciplinary structure of our Core relieves competitive pressure between disciplines and fosters a sense of cooperation in learning the essentials underlying specialization. When our Core functions at its best, chemists and biologists reinforce the learning in history and literature, just as social scientists and humanists reinforce the learning of careful analysis and generalization required in the natural sciences. What students experience here is not fragmented specialties but a collaborative approach to learning and human development.

Conclusion

By being sensitive to the crisis in our classrooms in the early seventies we put together an interdisciplinary program that is notable for its concentration upon skills, integration of disciplines and various services, innovative teaching that is clearly focused and consistent, close and frequent interaction between participants, openness to adaptation, and substantial student progress. In so doing we have learned to tap the rich potentials in an interdisciplinary core that is reaching both traditional and nontraditional students and at the same time is helping resolve issues threatening the viability of higher education.
Most academic disciplines have a clear relationship between the research that is done and the content of courses that are taught. In the area of general education and liberal studies, however, the reciprocal relationships between teaching and scholarly investigation are much less well understood. (In this paper general education refers to courses that are taught and liberal studies to the scholarship related to this course work.) The author believes that there is difficulty because the domains of general education and related liberal studies have been poorly articulated. The problem is particularly acute in general education and liberal studies in science.

The lack of clear definition and an understood reciprocity between research and teaching presents two problems. One is that there is no adequate agreement on material appropriate for general education science courses. The other is that there are no general guidelines for scholarly development and evaluation of general education faculty.

Curriculum

In countless faculty and committee meetings conceptual difficulties occur which center around the meaning of general education. It is clear that most university faculty view general education as a sampling of traditional disciplines. College catalogues and the literature on general education offer innumerable permutations of the facts and ideas of science as the best combination for general education. Yet most faculty with experience in liberal studies view general education as something quite different. The latter see many inadequacies in a simple survey approach to science.

Part of the problem lies in the history of development of general education science. The liberal/general idea of education has a long history, going back, of course, to the ancient trivium and quadrivium. In the present century the principal justification for general/
liberal education is that too specialized an education results in a constricted intellectual perspective. Despite difficulties and often failures in various ways of liberalizing higher education, the need is perhaps more significant than ever. The two chief ways of responding to the need have been distribution requirements and the development of general education courses. For the most part general education science courses have taken the form of representative highlights from a variety of scientific disciplines.

Many general education faculty have found the idea of simply assembling some areas of knowledge from the traditional disciplines to be an inadequate and unsatisfactory view of liberal education. They have come to recognize that teaching general education science involves orders of generalization and interrelations that are not a part of the regular scientific disciplines.

Faculty

General education science requires a specially trained (or trainable) professor. While much debate has been given to the content of courses, little attention has been paid to the education of professors to teach those courses or to their appropriate development as scholars. This has significance in evaluating general education faculty. In most university departments, a faculty member is judged by his general scholarly preparation, his knowledge and productivity in his scholarly specialty, and his teaching effectiveness. The latter includes both mastery of the material and the ability to engage students in it.

In evaluating general education science faculty (indeed, most general education faculty) teaching effectiveness is heavily considered, scholarly productivity is observed, but general scholarly preparation is seldom examined systematically. Even scholarly productivity is sometimes measured only in terms of the traditional disciplines. In some institutions faculty must live with a variety of blind prejudices about the nature and quality of the scholarship in which they are engaged. Yet these faculty are part of an important tradition of scholarship.

Unfortunately, the academic structures of colleges and universities fail to recognize this. In some schools teaching faculty for general education are drawn on a part-time basis from regular science departments. Their rewards are not for development as generalists in liberal studies but as specialists in their traditional discipline. In other cases there are separate general education departments, but their role in the university is viewed as almost exclusively teaching. Because of that, and since the most widely held view of general education is that it is a presentation of elementary disciplines, little recognition is given to the considerable scholarship that goes into the development of the modern general education course. In fact, unlike some disciplinary areas where course preparation involves assembling an appropriate grouping of existing knowledge in the area, developing a good general education course often involves considerable scholarly creativity in the process. This scholarship often goes unrecognized because of the lack of understanding of general education.

The faculty development and evaluation problem has the same roots as the curriculum structure problem: There is no clear articulation of that body of knowledge or area of scholarly exploration appropriate for such faculty.

Liberal Studies in Science

In recent decades there has been a great growth in scholarly fields which are rooted in science, but which go beyond the basic science disciplines. Collectively these constitute an area often called liberal studies in science. This scholarly area has general education as its teaching counterpart. The area provides social, historical, and philosophical dimen-
sions that are much needed in understanding the role of science in human affairs.

While the area of liberal studies in science is vigorous and productive, little specific attention has been given to the development of a descriptive classification for it. Yet a clear understanding of its structure is necessary in order to judge and guide curricular structure in general education and to measure and direct faculty development. The next section of this paper suggests such a classification, covering the scope of liberal studies in science and, therefore, the source of much of the material for general education teaching in science.

A Classification of Liberal Studies in Science

To understand liberal studies in science as a separate academic area is to recognize that there exist important ideas and areas of knowledge related to science which are not dealt with by the traditional scientific disciplines, or which need to be integrated in new ways. They are so all-encompassing or broadly interdisciplinary that the traditional disciplines cannot cover them. Investigating these areas is the domain of the liberal studies scholar and teaching about the nature of the questions investigated, and the accepted or provisional answers, is the domain of the general education science teacher.

It will be obvious in the following classification that there is considerable overlap in the categories, but that is necessary in searching for general relations.

I. The Organization of Scientific Information

A. The content of the disciplines
   1. empirical content (classes of facts)
   2. major concepts and theories
   3. reciprocal relationships between facts and concepts

Although this paper argues that liberal studies science is more than the traditional disciplines, these studies are nonetheless science based. Both teaching and research must recognize the central core of science that is being examined.

B. The disciplinary organization of science

   This area concerns itself with the way the major questions and classes of facts in the sciences are divided. In its simplest form it would be a cataloging of the disciplines of science. More importantly, this area deals with the reasons for and values of particular ways of separating the disciplines.

C. The interconnections of the disciplines

   This area deals with the ways in which the questions asked in various disciplines interrelate and the ways in which advances in various areas catalyze or otherwise interact with other areas.

D. Current trends and innovations

   Liberal studies in science must have a particular sensitivity to current activities in order to interpret them in the larger context of the history of science and its social role.

II. The Intellectual Context of Science

A. The history of science

   History of science is, of course, a respected intellectual discipline in itself, but the more general facets of the area are of particular value for the liberal studies scholar.
B. Interpretations of the history of science
   It is one thing to report the history of science. It is another to interpret that
   history in general frameworks. The efforts of Kuhn, Toulmin, and others in that
   direction are highly significant to liberal studies in science.

C. Scientific biography
   Biographical studies are of value in liberal studies since they may reveal much
   about the actual practice of science, and the character of the people who
   participate in it.

D. The relation of ideas in science to the general history of ideas
   It is self-evident that science has played an important role in the history of
   ideas. Unfortunately the dimensions of its influences have often been sketchily or
   inaccurately reported.

E. Methods in science
   Epistemology is a legitimate concern of the scientific generalist as well as the
   philosophical specialist.

F. Science and world views
   Science has shaped and been shaped by shifting world views. These interrela-
   tions are an important area of concern to the generalist.

G. Other aspects of the philosophy of science
   Epistemology and metaphysics have been areas of such special interest to the
   scientific generalist that they are indicated in separate categories. The importance
   of the philosophy of science as a whole to the generalist can hardly be over-
   estimated.

H. Creativity and science
   The nature of the creative process in science is intriguing and significant to the
   liberal studies scholar.

I. Science and particular other disciplines or human concerns
   Many generalists find themselves involved in studying the relationship of
   science and particular other disciplinary areas or scholarly or artistic activities.
   For example, there is rich literature on the relations of science and religion. There
   is a growing literature on the influences of science on literature.

III. The Social Organization of Science

A. Scientific organizations and their role
B. Science as a social structure
   Interaction of scientists individually and in groups.
C. The interaction of the governmental, academic, and private sectors in science
D. Communications in science
   Role of meetings, research literature, reviews, and other secondary literature,
   informal communication and public popular forms of communication.
E. The interaction of "basic" and "applied" science
F. The individual and the practice of science
   This concerns itself with the problems of intellectual capabilities, rewards,
   social pressures, etc., that motivate, discourage, enhance, or restrict the individ-
   ual in the practice of science.

IV. The Social Milieu of Science

A. The social context of support for science
   For what interests or purposes do the public or special interest groups support
   scientific activity?
B. Funding of science
For what purposes or interests will the public or special interest groups fund scientific activity?

C. The social impact of scientific information
What effect will the technological implications of scientific findings have on social structures?

D. The ethical implications of scientific findings
In terms of public awareness of science, nothing is of more concern than the ethical questions arising out of new technologies, especially in bio-medical areas.

Use of the Classification in General/Liberal Education Curricula

The taxonomy proposed argues against any view of general education in science that limits it to samples of the traditional disciplines. This holds true if the sampling takes place in integrated "natural science" courses or by elected introductory courses in a variety of traditional disciplines. It by no means excludes, and in fact even demands, the use of the information contained in the scientific disciplines. But it attempts to relate this information to larger questions.

It is apparent in looking over the taxonomy that no reasonable number of general education courses could cover the range of areas in the list. Therefore, selection must take place. Less apparent, but no less true, is that there is no easily selected group of concerns that "must" be in general education.

If staff and budget allow, a variety of courses emphasizing one or more facets of the described domain would be offered, with students selecting courses that range from the more scientifically technical to the more socially, historically, or philosophically reflective. If only a restricted number of courses can be offered, then the best route is to design courses which expose a number of points on the list, but do not attempt too much.

Use of the Classification in Faculty Development

There is no such thing as a Ph.D. in liberal studies in science. All traditional science training emphasizes the facts and ideas of a particular discipline. Unfortunately, it seldom gives attention to the more general questions of the nature of science and its social role. Advanced degrees in the history or philosophy of science have dimensions that basic science degrees lack, but often leave the graduate with little acquisition of the basic subject matter in any of the sciences. Degrees in science education give the graduate a valuable advantage in the techniques of teaching effectively, but general preparation in the sciences or in the history and philosophy of science may be weak.

Given that no degree is the "right" degree to begin a career in general studies in science, faculty growth and development on the job become extremely important. The problem is on what basis to encourage, measure, and reward this development. In circumstances where general education faculty are attached to regular science departments, the evaluation of the faculty is done on the same basis as within the established disciplines, thus making general education contributions an unrewarded adjunct. But even in cases where general education faculty have their own department, evaluations are too often made with inadequate attention to scholarly growth as a generalist. The proposed taxonomy could be used as a standard against which to measure such growth.

With any criterion of faculty performance there are difficulties in measuring development along the lines indicated. But there are some measures. Publications are obviously one, with the range of publication an indication of extent of growth. Other measures are use of professional time uncommitted to routine duties, contributions to course and
curriculum development, course material development, and breadth of scholarship as indicated in intellectual exchanges with colleagues.

It is obvious, of course, that a given faculty member can have a scholar’s understanding of only a part of the domain of liberal studies in science. But this is no different from any other major academic area. A synthetic organic chemist may know little of the special areas of the physical chemist, even though both are legitimately called chemists. Liberal studies teacher-scholars would have their areas of specialty. These scholars should, however, recognize the range of key problems with which the generalist in science concerns himself, just as the specialist in an area of chemistry has some understanding of the general domain of chemistry.

Besides the range of scholarly specialization that is tabulated in the taxonomy, the roles of scholar and educator can be combined in the following ways:

I. Development of educational literature
   Suitable texts for general education teaching are nowhere near the state of development of texts for traditional disciplinary courses. The liberal studies teacher/scholar has an open field for contribution here.

II. Curriculum Development
   The educator/generalist may develop courses and curriculum for teaching the ideas of liberal studies in science.

III. Interpretation of science
   The generalist in his educational role may deal with how to put scientific ideas in forms understandable to the layman, but with minimum distortion.

IV. Popular literature
   In a role as educator, the scientific generalist may be concerned with the nature and production of popular literature in science.

General Studies and the Organization of the University

As indicated above, it has been the case all too often that scholarship in liberal studies science lacks institutional identity and is considered a separate function from general education teaching within the university. This is, of course, a generalization to which exceptions are found. Despite these exceptions, most institutions could use a new kind of organization. The taxonomy of liberal studies science given above could serve as an organizational tool for the formation of a true general studies department, combining both the scholarly and educational components.

It might be argued that the activities of the generalist could be subsumed into existing academic departments. The rigidity of the academic disciplines is too well documented to suppose that this could be successful. The best arrangements are in those institutions where separate general education departments exist. There, liberal studies scholars-teachers can be brought together, vigorous interaction of scholarly thought can take place, and appropriate curricula can be derived. The often isolated general studies scholars can have greater interaction with each other, and are in a better position to contribute to effective teaching. The general education teacher has a greater opportunity for scholarly recognition and activity.
LIFELONG LEARNING AND
THE WORLD OF WORK*

Ivan Charner

In 1933 an editorial appeared in the *Ladies Home Journal* about a relief education program initiated during the depression. The editorial described the program, its objectives, and its participants. To help set the theme for my comments, I would like to present parts of that editorial.

In recent years we have heard a great deal of talk about adult education, but we have seen very little of it in practice. Now, however, an action demonstration is underway, and it has already proved the truth of the assertion that "an adult can learn anything at any stage of life provided there is a definite desire.

The free classes for adults in vocational and cultural subjects that have been set up by the New York State Temporary Emergency Relief Administration are for grown-ups who are fitting themselves for better things in better times.

Go to any of the twenty-one centers and you will see men and women, some young, some middle-aged, concentrating as you never saw a group of students concentrate before. They are struggling to improve their skill in office work, in journalism, in commercial law, in foreign language, in purchasing and selling, or in mechanical industry, so that they will be better prepared to fight the economic battle. Homemaking courses, too, have been set up in many centers. But the work is not all utilitarian. Some fifteen percent of the registrants are studying sculpture, painting, drawing, music, jewelry designing, pottery and so forth for the sheer joy of discovering a latent talent or a new cultural interest. (August 1933)

This editorial answers three basic questions about the relief education program. Why

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the program is important? how the program operates? and who participates in the program? A similar editorial could be written today about the growing number of learning opportunities available to workers and the growing number of participants in such programs. This essay represents such an effort. Although in more breadth and in more detail than the 1933 editorial, I will focus on the same basic questions. First, why should lifelong learning for workers be advanced? Second, how have opportunities for learning been made available to working adults? and Third, who are the adult participants in learning activities and what are the reasons for participation or non-participation? My goal is to provide a comprehensive picture of the objectives, programs and patterns of learning activities for workers which will serve as the basis for a program and policy agenda to meet the needs of workers for the lifelong learning which I will propose.

I. Why Advance Lifelong Learning for Workers

The adult workforce, through their numbers, labor, and taxes are clearly one of the cornerstones of our society. They should have the opportunity to grow in their work, and in their cultural and social roles. Learning opportunities would seem to provide one means for such growth. From a social perspective then, one could argue that we have a moral obligation to support lifelong learning for workers. Rather than explore the pros and cons of such a position I would like to examine some of the possible consequences of lifelong learning for the worker and the society. That is, instead of suggesting that we advance lifelong learning for workers because we owe it to them, I will look at some of the specific benefits of learning as the basis for a rationale advancing lifelong learning for workers.

For the worker learning is important for career and individual growth. At a very basic level, learning a job, advancing on a job, keeping pace with changing technologies or preparing for a new job are all dependent on learning. Without opportunities for learning, or more specifically, training, workers would be unable to grow in their work roles.

The growth of the middle-age cohort and the concurrent tightening of the labor market, however, has resulted in limiting the opportunities for upward mobility. There is a need for new responses from the public and private sectors to facilitate horizontal mobility for workers. New programs and approaches need to be explored which consider alternatives to existing career patterns and the design and initiation of individual career development planning which consider new options for individual mobility and growth. Lifelong learning can provide workers with the skills and knowledge to avail themselves of such opportunities. By learning new skills or adapting existing skills to new situations workers can move horizontally to new positions at parallel levels in the workforce. Such movement would seem to have considerable implications for the satisfaction and productivity of workers and the flexibility of the workforce.

Mobility between institutions is a second alternative. Offering educational leaves or sabbaticals would allow workers to move horizontally from one system (work) to another system (education) and then back again to work. Again, such a process would seem to affect satisfaction, productivity and flexibility by enabling the worker to change roles and be mobile.

While learning is clearly important from a workplace perspective to qualify workers for new, different or better jobs, or to increase satisfaction productivity and flexibility, learning also, and perhaps more importantly, fosters individual growth and self-development. More specifically, the likely benefits of learning to the worker's individual growth include:
- literacy or basic skills (for some workers)
- skills and knowledge as consumers, as parents, as spouses, and as participants in politics (national, state, and local);
- general information; particularly about options available for education, work, community and social roles;
- increased self-esteem and self-worth;
- changes in social attitudes and values;
- for older workers, planning for retirement and post-retirement activities;
- leisure time pursuits (cultural, artistic, esthetic); and
- credentials

Participation in learning activities then can provide opportunities for workers to grow in their work roles and in their personal development. For these reasons alone it would seem to be advantageous to advance lifelong learning for workers. These benefits to the individual worker, however, have parallel or related benefits which accrue to the society as a whole, which provide added support for advancing lifelong learning. At the most basic levels the society benefits by having a literate population (reading, writing, verbal communication, math skills). In addition, a generally knowledgeable workforce provides informed and skilled citizens vis a vis the family, the marketplace and politics. Related to the economic side of the society, lifelong learning can increase the availability of trained human resources, increase productivity and revenues, and maintain a flexible workforce that can rapidly respond to technological changes. Finally, at a social level advancing lifelong learning for workers may reduce welfare dependency, improve general health, and provide a more equitable distribution of wealth and other life annuities.

It is my belief that lifelong learning for workers should be advanced. It can provide workers with an opportunity to grow as a worker, a consumer, a citizen and as an individual which may in turn, improve the general well-being of the society, socially and economically.

II. How Are Learning Opportunities Made Available to Workers?

Learning opportunities are being made available to workers through a large number of diverse channels. While we know that more and more adult workers are participating in learning activities being offered by or through educational institutions, employers, and unions, the landscape of these opportunities has not been completely surveyed. Such a task may be impossible; I would like, however, to put together a mosaic of the present structure of learning opportunities. Despite the growing number of adults engaged in informal learning and the increased awareness of the potential acceptance of such activities, I will focus here on the more formal modes of delivery of learning to adult workers—formal education institutions, employer provided learning, and union supported programs.

Formal education institutions offer learning activities to adults of all levels of prior educational experience. Adult education programs offered by local school districts are aimed primarily at adult workers who have not completed 12 years of schooling and who wish to earn a high school degree by passing the General Education Development (GED) test. Also offered at this level are adult basic education courses for basic literacy, English-as-a-second language course and a variety of occupational skill courses, most of which are at a basic level.

For adults with at least 12 years of schooling or an equivalent, post-secondary schools are more appropriate. At these levels, there are three primary institutional sponsors of programs for adult workers: non-collegiate vocational, trade or business schools; 2-year
colleges and technical schools; and 4-year colleges and universities.

Non-collegiate vocational, trade and business schools offer programs to adult workers for career preparation or for leisure pursuits or personal interests. Such programs do offer certificates or diplomas but they are usually not degree-granting institutions and this can affect the outcome of such programs for participants. That is, many employers use degrees as screening devices and this can affect placement. Despite this, the rapid changes in the labor market has resulted in an expansion of these schools which is expected to continue into the decade of the 80s.

Two-year post-secondary institutions for adults generally fall into one of four categories: (1) the junior college—a two-year institution offering a liberal arts program or occupational/career training in specific job areas; (2) the branch campus—a two-year institution offering a program acceptable toward the B.A. and directly affiliated with a state university; (3) the technical institute—a two-year institution requiring a high school diploma or equivalency for admission and emphasizing occupational programs; and (4) vocational-technical center—a school which offers occupational programs almost exclusively and does not require a high school diploma for entrance.

While many of these programs are for younger traditional age participants, a number of institutions offer part-time programs which attract older adult workers. Community and junior colleges also offer courses in career retraining and skill upgrading for adult workers and will often provide special courses to meet the needs of industry or unions in a local area.

Four-year colleges and universities are increasingly drawing from older cohorts of individuals. While a growing number of adults are participating in traditional full-time programs, the long established continuing and extension programs and the newer non-traditional programs are more attractive to most adult workers. Most colleges and universities operate continuing education or extension programs offering a wide range of courses, usually not for credit.

At the same time that such programs are growing, so are the more non-traditional programs for adults. Some of the modifications being made to accommodate adult non-traditional students include:

1. Scheduling classes at times other than during the morning or afternoon, when the majority of adults are at work. More classes are now being held at night or even on weekends.

2. Offering classes at locations other than just the main campus. Courses are being given at regional campus centers as well as in libraries, employment sites, union halls, and even on commuter trains!

3. Using the media to transmit courses, lectures, and reading materials. A number of courses are being given through local newspapers; others are televised and are shown, through the use of cable TV, several times during the week. Another use of television involves taping lectures so that students may come in and view the tapes at times convenient to their schedules.

4. Easing admissions requirements and formal entry qualifications for certain courses of study, including the granting of credit for life experience.

5. Encouraging greater use of independent study which may be more challenging and appropriate to the needs of adult learners.

From basic skills to advanced skill training or career preparation, then, the formal education establishment has tried to provide a wide array of learning opportunities to working adults. (Fraser, 1979, provides a more detailed discussion of this.)

At the same time that opportunities for lifelong learning have increased at educational institutions, employer-provided education and training has grown. In fact, employer-provided learning represents the largest portion of the opportunities available to adult
workers. It has been estimated that industry spends between $2.2 billion and $100 billion annually for the education and training of workers. These estimates differ so drastically because the first includes only direct expenditures while the second includes lost time, staff time, and other cost factors. Regardless, it is obvious that industry spends a great deal on learning activities for workers.

There are two primary reasons for industries' investment in such efforts. First, new employees need to learn how to adapt previously acquired skills and knowledge to their current position. This often includes an orientation to the policies, rules and structure of the organization and its operating units as well as the more specific task of learning how existing skills are to be used to undertake the routines of the job. Second, present employees often need to complete the process of skill acquisition, to make up for deficiencies or to keep pace with changes in technologies related to their jobs.

Generally, there are four types of learning programs offered to workers by employers: informal training, on-the-job training, internal education and external education. By far, the largest and least specified of these is informal training. Little is known about such programs because of their informal nature and any discussion of them would be speculative at best. It should be noted, however, that most workers learn their jobs by doing them and informal training is therefore a critical element in employer-provided learning and one which should be better understood. Formal on-the-job training programs are a second means by which employers train workers. These programs, like informal training, usually teach workers the specific skills that are needed to perform the tasks of a job. On-the-job learning often involves employees being taken through discrete and formal learning steps while performing the duties of their job.

In addition to informal and on-the-job training there are internal and external education programs offered to workers by their employers, both during working hours and after hours. By combining the type of program (internal or external) with when it is offered (during or after hours), four circumstances of formal employer-provided learning occur: after-hours external, during hours external, after-hours internal, and during hours internal (Lusterman, 1977).

Under after-hours, external education are tuition aid programs where the employee chooses a program of study and financing is made available by the company as a tuition advance or reimbursement. Such plans, however, account for only 10% of the corporate dollar spent on education. An additional 10% is spent on external during-hours programs. Under these programs, employees, usually from managerial or professional ranks, are allowed time off to take classes, participate in workshops or attend conferences for educational or learning purposes.

The remaining 80% of corporate expenditures goes to internal programs, both during and after hours. These funds pay for full-time training and development personnel and the services and materials related to internal training for employees. Most internal training takes place during hours and is geared to managers/supervisors or technical skill upgrading. However, a growing number of internal courses are concerned with the occupational health and safety of workers.

Employer-provided learning, then, is different from the more traditional adult education in the following ways. First, employer education and training is usually job or work related in that it trains workers to adapt skills to work situations, socializes the worker to the company or organization and helps workers keep pace with changing technologies. Second, with employer-provided learning, the learning and doing usually take place in the same setting (the workplace). Finally, employer-provided learning is pragmatic, used as a means of increasing productivity and as a tool for recruiting and maintaining a competent workforce.

Employer-provided learning is a large and growing component of the lifelong learning
system for workers. At the same time organized labor has a long standing interest in the education of their members. Whether as a desire for vocational training, as a vehicle for social change, as a means of developing more effective unionists, or as an aid in the development of the individual, unions have and continue to support learning activities for other workers. While actual figures are unavailable, it has been estimated that unions spend millions of dollars annually for education and training programs at the national, regional, and local levels. Through union education departments and as fringe benefits provided through collective bargaining agreements, financial resources and educational programs are made available to union members.

Unions make educational programs available to workers through arrangements with colleges or universities or through their own education departments. The most obvious and widespread example of this is the university or college labor studies program. These are generally of two types: degree programs and “tool” courses. Currently, there are forty-seven institutions of higher education that offer a major or concentration in labor studies. In addition, there are many part-time degree programs that have been developed in cooperation with unions. Most of these degree programs have the following commonalities: (1) the target population is adult union members; (2) unions are active in sponsoring or advising the programs; (3) liberal arts courses are combined with labor-related subjects; and (4) admission policies are “open.” It is important to note, however, that within this broad framework, the programs vary in structure, content, and focus. (Gray, 1977).

In addition to degree programs, most labor studies centers conduct short courses, conferences, workshops and resident schools to provide “tool” courses to unionists. These tool courses are usually developed at the request of and subsidized by local unions. Thousands of workers participate in such courses every year.

A second example is the union-run labor studies center. These centers, sponsored by unions for their members, offer tool courses and degree programs. The degree programs are either in labor studies or liberal arts with an emphasis on labor-related issues and are made possible through affiliations with accredited institutions of higher education. Most courses are tuition-free and focus on areas of study which can provide the skills and knowledge required for effective union functioning.

A third example is courses made available by union education departments independent of any school or center. Courses and “institutes” are subsidized and conducted through the education departments of national and international unions to help unionists in their roles as stewards, committee people, fiscal officers, parliamentarians and officers of local unions. These institutes and programs provide workers with opportunities for increased knowledge and understanding of economic, social, and political issues.

A final example involves cultural programs offered to workers through their unions which can offer many learning experiences to workers. The bread and roses program of district 1199 of the Hospital and Health Care Employees in NYC offers musical performances, shows, art exhibitions, oral histories and other cultural programs to its members and their families. (Charner, 1979, presents a more detailed discussion of union programs.)

In addition to these specific education, training, and learning programs, unions, through collective bargaining agreements, have made financial assistance available to workers. The most obvious examples of this are negotiated tuition-aid plans which offer workers financial assistance to pursue educational activities through loans and scholarships, education leave plans or tuition advancement/reimbursement plans. Unions, employers and educational institutions offer a wide array of learning programs and services to adult workers. The question is who participates?
III. Who Participates and What Are the Reasons?

In the last twenty years, the United States has witnessed a significant growth in the participation of adults in education and learning experiences. The demographic and social reasons for this growth are multiple. First, the adult population is larger than it has ever been. In 1976, almost 137 million people were age 21 or older. By the year 2000, the median age of the U.S. Citizenry will be 34.8, with an estimated 187 million people age 21 or older. This demographic shift to an older citizenry has already impacted the educational system which has witnessed a growth in the number of adults participating at all levels. A second reason is the changing role of women in society over the past decade. The increasing numbers of women re-entering the "paid" labor force or desiring to do so has resulted in an increase in educational participation to help ease this transition.

The declining enrollments of traditional college-age students combined with ever growing fiscal crises is a third reason. Institutions of higher education are seeking out new clients and the adult learner represents a new market for these institutions. A fourth reason may be increased amounts of available leisure time. With more free time, educational and learning activities become an option for more adults. The higher levels of education attained by the adult population will also cause increases in educational participation. Education appears to be addictive, with those having more wanting more. Finally, the tightening of the labor market results in mobility patterns that are horizontal rather than vertical. That is, rather than being able to move up on a job or in a career, workers will have to change careers, which will require, in many instances, additional education or training.

Estimates of the total level of adult participation in learning activities vary depending on the nature of the activity being studied. When adult learning is looked at, which includes informal or unorganized as well as formal or organized activity, estimates range as high as 32 million adult participants. When the informal/unorganized activities are excluded and only adult education participants studied, the estimate is 11 million or 11.6 percent of the adult population. While the numbers are quite striking, the demographic patterns suggest that participation in adult education suffers from inequality. Specifically:

- Younger adults participate at higher rates than older adults with those 24–34 participating in education at a rate of 20.6 percent and the rate decreasing steadily to a rate of 2.3 percent for those 65 or older. (Boaz, 1978)
- Blacks participate in education at a considerably lower rate than whites—6.9 percent versus 12.1 percent. "Other" racial groups (Hispanics and Asian Americans) participate at the highest rate (13.4%) and the increase in their participation has been the greatest over the past decade. (Boaz, 1978)
- There are no real differences in participation rates between men and women. This is, however, a recent phenomenon with women increasing their rates steadily over the last 10 years. Most of these gains, however, were for white women and not for black women. (Boaz, 1978)
- Prior educational attainment is most closely related to participation in education. With every increment in education, participation increases from 3.3 percent for those adults with less than a high school diploma to 28.3 percent for those with 4 or more years of college. (Boaz, 1978). Adults with post-secondary education are twice as likely to participate in learning than those without such education. (Carp et al., 1976)
- Employed adults are more likely to participate in education and learning than unemployed adults or adults keeping house (15.4% for those employed, 10.8% for those unemployed, and 7.7% for homemakers). (Boaz, 1978)
• As income level increases, there is a marked increase in participation rates with 5.0 percent of those earning less than $5,000 participating compared to 17.7 percent for the $25,000 or more group. (Boaz, 1978)

• Professional, technical, and managerial workers participate at higher rates than other occupational groups. The more highly paid, highly skilled, highly educated occupational groups have higher rates than those groups which are lower paid, less skilled, and less educated. (Boaz, 1978)

Generally, then, younger, white, well-educated, higher income, higher occupational status adults currently have the highest rates of participation in education and learning activities. By looking at the reasons for participation and non-participation we can begin to understand the basis for these patterns.

The reasons given by workers for participation are numerous but generally fall into four broad categories: job or career related; for personal development or general information; social or recreational; and political or community. Job and career related reasons (53.3%) followed by personal/general information (41.4%) are given by the largest percentage of adults who participate in education. Social/recreational and community/political are given as reasons by considerably fewer participants: 7.8 percent and 2.6 percent, respectively. (Boaz, 1978)

Within the job or career related category, mobility (horizontal, vertical, and within job) is an important reason for participating. Learning new skills to meet the changing technology is also a primary objective within this category. Some differences between groups of workers are evident. As level of education increases, the percentage participating for career or job reasons increases while the percentage participating for personal or general information decreases. Blacks participate to get new jobs more often than whites. Men have higher percentages than women for job or career related reasons while women had higher percentages for general information reasons.

As with reasons for participation, there are many reasons for non-participation. These barriers are classified under the headings situational, social-psychological and structural (Cross, 1978). Situational barriers are those factors which arise out of one's position in a family, the workplace or social group at a given time. Such factors are most often reported as barriers and within this category costs, lack of time, age and level of education, head the list. When demographic differences are looked at, the following factors emerge. Costs are problems for women, younger workers, Blacks, and those with less education. Lack of time, on the other hand, is a problem for men, middle-age workers, whites, and workers with higher levels of educational attainment.

Social-psychological barriers are those factors related to the attitudes and self-perceptions one has to the influence of significant others (family, friends, etc.) on the actions of the individual. Only small proportions of workers report such factors as barriers to their participation in educational or learning activities (5.20%). Included in this category are lack of confidence in ability, feeling of being too old, lack of interest, and lack of support from family or friends. Only minor differences between groups of workers are reported for these factors.

Institutional barriers are policies and practices of organizations that overtly or subtly exclude or discourage workers from participating in learning activities. These factors fall between situational and social-psychological barriers in the proportion of workers reporting such factors as deterring their participation.

The array of structural factors can be grouped under the following areas: Scheduling problems (course and work); Location and Transportation problems; Lack of courses or relevancy of courses; Procedural problems (red tape, credit, admissions, full-time); and Information/counseling problems. Of these factors location, scheduling, and lack of courses are most often mentioned as barriers. Information was also cited as a major
problem but is probably more critical than reported because many of the other structural problems may ultimately be due to lack of information about the options that do exist.

What do the reasons for participation and non-participation suggest about the inequality in the patterns of participation discussed earlier? It is clear that many of the reasons for non-participation are related to socio-economic status and prior educational attainments (particularly those of costs; fears; motivation; and to some extent, information). At the same time, the main reasons for participating are most often related to occupational mobility or personal development. If those who do participate meet their objectives, then the gap between the "haves" (who tend to be the participants) and the "have nots" (who tend not to be the participants) will widen.

IV An Agenda for Change

In the preceding discussion I have outlined the array of opportunities available to workers for lifelong learning, detailed the patterns of adult participation in learning activities, and examined the reasons for and barriers to participation by adults. The picture that emerges is, on the one hand, optimistic when we look at the growing number of learning opportunities available to workers through their employers, unions, and educational institutions and the relatively large and increasing population of adults participating in such activities. Yet, on the other hand, there is cause for pessimism when we look at the demographic patterns of participation which suggest a growing elitism in adult learning, and when we examine the factors that act as barriers to participation in learning activities for many workers. The agenda for change which I am proposing tries to take the optimism and pessimism surrounding lifelong learning for adult workers into account. The agenda has three major components: Data Needs, Policy Considerations, and Program Initiatives.

Data Needs

Under data needs, my first recommendation revolves around the general need for a better and more comprehensive data base broadly related to lifelong learning for adult workers.

Currently, there does not exist a single data base which examines patterns of participation in adult education and learning, industry, and union-sponsored education and training; reasons for participation; and barriers to participation. Such a data set on a large number of workers from all sectors of the workforce is clearly needed. Because of their growing numbers in the workforce and their unique sets of problems, care should be taken to include adequate representation of women and minorities in developing the sampling plan for such an effort. With such a data set, a more complete picture of the attitudes, plans and behaviors of adults vis-à-vis learning could be developed. In planning such a study, thought should be given to adding a longitudinal component which would emphasize patterns of occupational mobility; attitudinal and behavioral change; and patterns of learning, education, and training. This type of longitudinal information could provide valuable insights on a) tracking patterns of adult participation in learning activities, b) assessing the long- and short-term nature of barriers to participation, c) the impact of different learning experiences on mobility, attitudes, and behavior, and d) the affect of institutional, as well as local, state and federal initiatives that have been developed to increase the learning opportunities for adults.

Related to this first recommendation is the need for alternative methods of data collection, particularly with regard to the measurement of barriers. The traditional
survey approach suffers from what has been termed response bias due to social acceptability or unacceptability of certain responses. That is, the nature of the factor reported as a barrier may affect the responses by adults. Many situational factors may represent socially acceptable responses to "why a person does not participate in educational activities" while social psychological factors may be less socially acceptable. Specifically, lack of time or money, which are situational factors, are more acceptable socially as reasons not to participate than would be lack of interest or lack of self-confidence. In addition, some of the situational, social-psychological and institutional factors that are reported as barriers may ultimately be due to lack of information about the options that do exist. These problems suggest that alternative approaches are needed to better assess the social-psychological, situational and institutional reasons for non-participation in learning by adults. Small scale studies with intensive interviews can be used to begin to better understand these problems. From this new survey instruments can be developed which better assess the "real" reasons for non-participation in learning activities by adult workers.

A final recommendation related to data needs is proposed. Case studies of different adult learning, industry-provided, union-sponsored, and support service programs should be undertaken. These case studies could help to identify and document those components that respond to the learning needs or eliminate barriers of different groups of adults. The National Manpower Institute has used this approach to study three very successful tuition-aid programs: Kimberly-Clark's Educational Opportunities Plan (see Rosow, 1979); Polaroid's Tuition Assistance Plan (see Knox, 1979); and D.C. 37 of AFSCME Education Fund (see Shore, 1979). In each instance, the case study uncovered a number of critical factors which are related to the high rates of worker participation in education at these three organizations. For example, the 40% participation rate at Kimberly Clark, which considerably outdistances the national average of 5%, was found to be a direct consequence of upper level managements' support and encouragement, a built-in counseling program, and a plan that is flexible and adaptable to individual employee needs. D.C. 37 has a branch of the College of New Rochelle in their Union Hall. Decision-makers in educational institutions, business or government can use information from these case studies for the development of new programs or the modification of existing programs to enable them to better meet the needs of adults for learning.

Policy Considerations

Many proposals in the policy arena, related to lifelong learning and the world of work, could be put forth which would involve significant federal expenditures. I have chosen to focus my remarks here on three policy options which are modest in the amount of resources required but which could have significant consequences for expanding the learning opportunities available to workers and for increasing the rate of participation of workers in learning activities.

The first policy proposal emerges from the need for continued experimentation at the local level to find solutions to many of the problems associated with lifelong learning for workers. The proposal is for a worker education experimentation and demonstration projects act (Barton, 1979 a ). The act would support the development, on a broad front, of innovative projects in adult education, adult counseling, service delivery, financing, and work-learning transitions. The aim would be to encourage private initiatives which could be continued after initial federal support for development subsidies. An example of this type of program is already operating for youth. The Youth Employment and Demonstration Projects Act of 1977 uses this method to enhance the future employability
of youth through a wide variety of locally oriented initiatives. The adaptation of this legislation to a new population and problem (that of adults and education) would seem feasible and beneficial.

A second policy proposal is for the initiation of a new federal loan program. While there are a number of education grant and loan programs currently in operation, there is a need for a revolving tuition-aid loan fund for individual workers. (Barton, 1979b) Most large and many small companies offer tuition-aid benefits to workers. Most of these plans offer reimbursements for tuition costs which are provided after course completion. At the same time, many workers report that they are unable to pay in advance for their tuition. A revolving loan fund could be set up to provide low or no interest loans for workers who have applied and been accepted for tuition-aid benefits from companies. A variation on this proposal which entails no government interaction would be for educational institutions to defer tuition payments or accept "chits" or offer forms of IOU's for workers covered under tuition-aid provisions. Wayne State University has worked out such an arrangement with the United Auto Workers.

My final recommendation here is for a countercyclical education and training policy to deal with recessions (Barton, 1979c). This proposal has two separate elements which have relevance for adult workers. The first would give individuals an option of learning while drawing unemployment insurance. On a case-by-case basis, unemployment insurance claimants would be permitted to enroll as students in a wide range of secondary and post-secondary institutions while continuing to draw all or part of their unemployment insurance benefits. Since many unemployment insurance claimants "are not likely to be re-employed during recessions with their existing skill and education levels" (Barton, 1979c), this would allow them to develop new skills, upgrade skill levels or improve their educational credentials.

The second element involves the use of education and learning as an alternative to layoffs. During periods of reduced operation, workers would be transferred to education or training status. Employers would be required to identify skill needs and workers could choose learning as an alternative to layoff. Workers would be paid a stipend, the costs of which would be shared by the employer and the government. The costs to the government, under this approach, would be less than outlays for unemployment insurance and related costs of food stamps, medical, and welfare costs. For employers, costs for stipends and training would be offset by savings in unemployment insurance taxes and future benefits including:

- maintaining an experienced workforce which would otherwise have to be reassembled and trained,
- enlarging the productive capacity of their workers, and
- increasing the loyalty of employees who may recognize the effort to avoid unemployment.

Program Initiatives

The final items on my agenda are a series of program initiatives for lifelong learning and the world of work. The first initiative involves improved linkages between institutions and between worker and learning opportunities. Unless a system of linkages is developed, the alternative, which is already operating, is for the major new education user institutions of labor and industry to develop their own educational delivery system. From my earlier discussion, it is clear that industry and, to a lesser extent, unions have developed and supported their own education and training programs to meet the needs of workers, the workplace, and the union. While much of this education and training can
be considered legitimate and necessary functions of business and unions, there is obvious overlap with the traditional educational institutions and an inefficiency in terms of delivery and costs. A new system of linkages needs to be developed between industry and labor on the one hand and education suppliers on the other to examine their roles and responsibilities for providing learning opportunities to workers.

One of the problems for many workers is a lack of understanding of the higher education system and what educational opportunities are available. As part of an improved linkage system, education institutions should consider ways of improving the delivery of educational information to workers. Included should be information about educational benefit programs available through companies, unions, educational institutions and the government, program and course offerings, and available education and training institutions. In addition to this factual information about educational opportunities, there should be information on career ladders and progressions, the consequences of technology for specific jobs or occupations and more general information on education for leisure, for retirement, and for "learning's sake."

The Educational Information Centers authorized under the Higher Education Amendments of 1976 and Educational Brokering Centers represent a potential means for supplying these services to workers. Institutions of higher education must work closely with these centers in terms of outreach, information provided, and methods of delivery. Outreach programs should be developed that reach diverse groups of workers at the workplace or in their communities. Information must be appropriate to the needs of workers, and methods of delivery should be appropriate for the type of information and the audience of workers receiving the information.

Related to this lack of understanding of the higher education system by workers is a problem with the ability of educational institutions to respond to the needs of industry and to the needs of workers as students, particularly with regard to program content and delivery.

The educational establishment, in large part, is uninformed about the training needs of industry and the learning needs of adult workers. While some higher education institutions have developed programs and methods to respond to the needs of workers and industry, many others have tried to fit this new student population into the existing system, which is geared to a full-time, younger student body. For the worker, new courses and programs need to be developed and scheduling and location of courses altered. Innovative part-time programs, like The Weekend College of Wayne State University, need to be made available to enable workers to pursue education while remaining full-time in the labor force. In some instances, tutoring or remedial assistance may be required for those workers who lack proficiency in certain skill areas. Credentialing requirements may also need to be reviewed and credit for knowledge acquired through experiences and accomplishments considered. For industry, courses and programs need to be developed which respond to the specific training and skill needs of employers.

The solution to many of these problems may be found through an improved linkage system which could assist educational institutions in responding to the needs of workers, unions, and industry. A critical element of such a system are work—education councils or other local collaborative efforts. Work-Education Councils operate at a community level with no direct institutional affiliation. Through a collaborative process, the Work-Education Council, comprised of representatives from industry, education, labor, and community organizations, can develop policies which improve the linkage between educational institutions and workers (Barton, 1976). To accomplish this, the Councils can undertake a number of activities, including the development of:
• an inventory system of education and training opportunities available to workers;
• an inventory of financial assistance programs available to workers through employers, unions, government, and education institutions;
• dialogues between industry, unions, and education providers on needs, services, financing, delivery and outreach to enhance the learning opportunities for workers;
• a program to help determine the educational interests and needs of workers and to communicate them to educational suppliers;
• an educational information/brokering service for adult workers; and
• support services (child care, counseling, tutoring, etc.) for workers interested in pursuing education.

A second program initiative involves improving the support services for adult workers. Perhaps the most critical need is for information and brokering services and these were discussed under improving linkages. Another needed service is related to time. For many workers, lack of time is reported as a major situational factor for their non-participation in learning activities. For women, the time factor is often related to home or child responsibilities, while for men it is more often related to job responsibilities. These findings suggest on the one hand, the importance of expanding the availability of good child care services to enhance the opportunities for women to participate more fully in educational activities and on the other, experiments on educational leave (paid and unpaid). Both approaches could free up more time for workers to participate in learning activities.

A third support service which may be important for many workers is closely linked to improved information and brokering. Personal counseling may be critical for many workers. Low self-esteem, lack of confidence, and other personal factors are preventing many workers from pursuing learning activities. Through group and peer counseling approaches, services can be made available to a large portion of workers to help them overcome some of these psychological barriers to learning.

Instruction, related to adult learners, is the area of my last set of program initiatives. Many of these were discussed earlier so I will only review them here. Among the more significant structural reasons given by workers for non-participation in education are scheduling and location problems. Despite the fact that scheduling and location changes are the oldest and most common response of education institutions, these are still cited as problems for many adult workers. Educational institutions need to experiment with delivery in new places (community agencies, work site, union hall) and with scheduling which is convenient to workers.

Other areas related to instruction which need to be rethought are admissions and certification. Open admissions policies seem to be critical for many adult workers who have been away from the educational establishment for a long time. By opening admissions, more diverse opportunities can be made available to adult workers. Credit and non-credit options must also be increased to broaden the opportunities for workers. Credit for experience and external degree programs seem to be approaches which many workers could benefit from. New degree programs, in areas that are relevant to working adults, need to be explored. These may include programs in labor studies, consumerism, or parenting, but relevance to everyday situations is very important. Finally, there is a need to examine the learning styles of adults to determine if current pedagogical approaches are appropriate or if modifications are necessary.

These program initiatives, policy considerations, and data needs are by no means exhaustive. Rather, they represent a modest set of proposals related to lifelong learning and the world of work.

In recent years, adult participation in learning activities has been increasing. At the same time, opportunities for lifelong learning through traditional education institutions,
employer-provided programs, and union initiatives have been growing. Lifelong learning for workers can affect the personal development of the worker, the quality of the workplace, and the educational system. Success is dependent on the ability of industry, labor, government, and education to cooperate and to work together toward increasing the participation of workers in learning activities by overcoming the barriers faced by workers and by better responding to the diverse learning needs of workers. How lifelong learning for workers will affect the educational establishment and how lifelong learning programs will impact the lives of those workers who participate in them will continue to remain an open question as the directions that these programs take continue to change.

In 1933, as the editorial on relief education from the Ladies Home Journal concluded, the hope was for so successful an experiment in adult education not to be allowed to pass with the emergency. Forty-six years later, the hope is that the growing number of experiments and programs in adult learning be successfully passed on to workers to enrich or benefit them economically and personally.

REFERENCES

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