

Beware of Pidgin Minds: Pitfalls and Promises of Interdisciplinarity in Undergraduate Education

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Abstract: This paper discusses interdisciplinarity in undergraduate education. Having been involved with the design and administration of a major interdisciplinary program, the authors of this paper wish to describe the drawbacks inherent in attempting to catalyze integration simply by exposing undergraduate students to a disciplinary smorgasbord and by encouraging synthesis through application. As an alternative to this approach—which in their view may lead to the development of "pidgin minds"—they promise a model of pedagogic practice called "knowledge integration training" and involving the reflexive analysis of disciplinary perspectives in the context of team-taught courses.

DICTIONARIES DEFINE PIDGIN as a particular type of oral expression arising in situations in which different people who do not know each other's language want to communicate for specific purposes—such as trade (the word "pidgin" is in fact the pidgin Anglo-Chinese version of the English word "business"). Pidgin languages have a very limited vocabulary, built upon the simplification of a heterogeneous mixture of words coming from different languages. Also, pidgin languages have no native speakers, since they are always spoken in addition to a mother tongue; consequently, they are very rudimentary, and while they may serve as the lingua franca of large regions, they lack the versatility of true languages. The argument presented in this paper is that certain features of current undergraduate education lead students to thinking processes that may be analogous to pidgin forms of communication, at least insofar as they are artificial, simplified, heterogeneous, rigid, and very rudimentary. In our opinion, this results chiefly from the perpetuation of curricular components that traditionally aim at achieving just the opposite result: a broadening and enrichment of undergraduate education. In addition, it may also derive from equally well-meaning efforts at creating new programs of study heavily infused with interdisciplinary zest. In other words, and quite ironically, it seems as if interdisciplinarity may have the potential of both fulfilling its obvious promise as an intellectual leavener and of easily leading to serious pedagogical pitfalls.

General Education Requirements

The history of our undergraduate curriculum can not be understood separately from the history of American education in general, and this can easily be traced through some documents that came to shape it in fundamental ways. Four among them seem to be particularly illustrative. The first of these was published at the end of last century and is usually known as *The Report of the Committee of Ten* (National Education Association, 1893), the second is *Cardinal Principles of Secondary Education* (Kingsley, 1918), the third is the 1945 Harvard "redbook"

General Education in a Free Society (see Klein, 1990, p. 28), and the fourth is the much-discussed *A Nation at Risk* (National Commission on Excellence in Education, 1983). Taken together these documents, which both reflect upon the state of American education at the time of publication and give recommendations on how to improve it, attest to a back-and-forth movement between what may be the two fundamental preoccupations of American society: excellence and equity (Stocking, 1985, p. 239). Thus, while the 1893 Report emphasized the need for all students to be thoroughly grounded in a variety of substantive subjects (including Latin and Greek), the document published in 1918 stressed that the aims of education in a democracy are: 1) Health, 2) Command of fundamental processes, 3) Worthy home membership, 4) Vocation, 5) Citizenship, 6) Worthy use of leisure, 7) Ethical character (Hirsch, 1988, p. 118). Undoubtedly the compilers of the latter document emphasized social utility as a major educational goal out of a compassionate—and realistic—concern for the needs of a population whose characteristics had been profoundly changed by the great immigratory waves of the turn of the century. However, the shift in pedagogical attitudes they championed was indeed a major one, and one that according to some current commentators has contributed in a major way to the problems highlighted in *A Nation at Risk* (see Hirsch, 1988; Powell, Farrar & Cohen, 1985; Ravitch, 1985).

At least in regard to post-secondary education, though, the vocational emphasis characterizing the 1918 document did not go unchallenged. The 1945 Harvard "redbook" called for undergraduate "core curricula covering Western civilization, literary texts, scientific principles, and English composition, with an additional course in each of the humanities, social sciences, and natural sciences" (Klein, 1990, p. 28). It is in continued response to this call that most contemporary colleges and universities maintain a set of what is variously defined as "General Education," "Basic Studies," or "Breadth" requirements. We suggest that it is precisely the fulfillment of these requirements—usually achieved through the completion of a certain number of courses chosen from a cafeteria-style list of multiple "menus"—that sets the stage for the development of "pidgin minds," minds, that is, capable of grasping the general *formal* characteristics of a course, and of developing superficial, generalized skills permitting a rudimentary negotiation of its difficulties. In this view it is not surprising, then, that some less-sophisticated students occasionally blow their cover altogether and directly ask their instructors to please tell them what they need to do to pass the course! A reply implying that all they need to do is to study and learn its content usually leaves them bewildered and is totally discounted on the basis of the fact that they perceive the negotiation of *process* rather than the comprehension of *content* as the fundamental currency of education.

But why should programs aimed at catalyzing the students' intellectual growth through exposure to the richness of diverse forms of knowledge lead instead to mental rigidity and cynical expediency? One may think that the problem is really with the quantity of general education requirements, putting a heavy burden on the learning flexibility of students; or that breadth requirement courses suffer from being the ones students typically take at the beginning of their college career, in many ways a particularly stressful time; or that the mere fact that these are "requirements" makes them less interesting for students, no matter how many choices they have to select from. Also, in a more general way, one may blame students' inability to reap appropriate benefits from basic studies courses on the poor preparation they receive at the precollegiate level, where the school is often "a place dominated by the values of a semi autonomous youth culture in which athletic prowess and an active social life are more important than academic achievement" (Clark, 1980, p., 296). Finally, one may variously critique either the poor pedagogical skills of those who teach general education classes, or the disciplinary

fragmentation increasingly characterizing American academia, or the loss of the idea of the university as "a community of scholars" (Gaff, 1991, p. A48).

Interdisciplinary Programs

If the promises of interdisciplinarity are far from fulfilled through the passive multidisciplinary exposure encouraged by the tradition of breadth requirements, could study programs clearly organized around specific themes set the students on the path of disciplinary integration that seems so indispensable for intellectual maturation? Well, the answer seems to be a definite "maybe;" again, pitfalls and promises are equally likely to characterize such programs. The key factor for success is definitely the integrative impetus the program provides, but what ingredients go into the right type of impetus is still very much open to discussion. It could well be that, in fact, the ingredients change depending on the program's environment, the student population involved, even the national *Zeitgeist* at the time of program implementation. Certainly, interdisciplinarity became a major education trend in the experimental 1960s and early 1970s and has suffered in the more utilitarian period that followed. From the mid-1980s it seems to have entered a new period of growth, and a directory of undergraduate interdisciplinary programs compiled in 1986 lists 235 of them, spanning all four years of the curriculum and forty-nine of the fifty states (Newell, 1986). By and large, however, these programs use interdisciplinarity in the classic way, that is, as a mechanism to revitalize core curricula—especially in general education, humanities, and honors programs—through a declared attempt at fostering integrative skills.

Having been directly involved in the creation and administration of one such program the authors have experienced first-hand how elusive this process can be. At the same time, this experience has provided them with a new insight into the *level* at which interdisciplinarity needs to be presented to undergraduate students to trigger the integrative impetus. These conclusions may not be completely generalizable but they have the advantage of testability—and are in fact scheduled to be tested in the classroom in the near future—as well as a certain modesty of scope and ease of application. Indeed, it may be that some interdisciplinary programs set themselves up for failure either by not formulating in a clear way which specific learning outcomes they want to achieve or by setting objectives that are so lofty and ambitious that an expectation gap is created between the program's consumers (i.e., the students) and its administrators. On the other hand, whenever such programs depend for their existence on outside funding, they need to satisfy so many constituencies that a certain "design megalomania" inevitably sets in.

The program we administered on the campus of a major West Coast state university well illustrates this problem. At the beginning of the 1980s the National Endowment for the Humanities offered funding opportunities for programs aimed at revitalizing humanistic studies through their application in real-life settings. On the university campus on which we found ourselves at the time this attracted the interest of a center dedicated to the expansion of experiential learning through the academic supervision of internships. After consultation with several academic departments, this center submitted to the NEH a proposal for a pilot interdisciplinary program of "Applied Humanities and Chicano Studies." Its aim would be to provide students with a real work experience through an internship to be conducted within the local Chicano community. In the internship setting the students would apply the academic content of an interdisciplinary set of three academic courses through which they would become

familiar with the history of the ethnic community (their placement site), as well as with anthropological approaches to the understanding of ethnicity and urban communities, and to the application of field-derived knowledge to the amelioration of social problems. Such application would be achieved through the development of a personally-designed research project each student would conduct in the placement setting.

It was a wildly unrealistic plan but once it received funding it was just a question of finding some starry-eyed instructors eager for involvement in an exciting new program, and of recruiting for it the "right" group of students—which in this case meant students hoping to justify to themselves an interest in humanistic studies—in 1982—by combining a socially-relevant learning experience with the professional-development component provided by an internship. The authors of this paper were respectively one of these instructors—responsible for the anthropology component of the program, and the supervisor of the students' field placement—responsible for the academic application of their interdisciplinarily-derived knowledge in the internship setting.

So many things went wrong with this well-meaning but misguided program that to single out the complete failure of its interdisciplinary component seems grossly inadequate. But students did express particularly forcefully their frustration with three elements of the program: the lack of correlation among the three academic courses they took, the lack of correlation between these courses and the particular research project each of them chose to carry out, and the lack of correlation between the academic and "applied" part of the program, as provided by the internship. It is significant, we think, that all of these problems were directly connected with the students' inability to synthesize the knowledge offered to them in the classroom with the experiential learning accrued in the internship setting. On the other hand, we do not think that students can be blamed for such inability, just as students who hate general education requirements can not be blamed for missing the rich opportunity for intellectual growth that multidisciplinary exposure potentially offers.

Integrative intellectual work is very *hard* work, and telling students to "just do it" is very unlikely to lead them toward positive experiences. After all, as anyone who has attempted to work in interdisciplinary areas can readily attest, integrative work does not come easy to seasoned professionals—and, in fact, most new attempts at setting up truly interdisciplinary projects or programs have a consistent level of failure (Sjolander, 1985). Why should we expect undergraduate students to be more adept in this difficult enterprise? Possibly it is because we intuitively feel that knowledge is essentially unitary and that a young mind, unfettered by disciplinary proclivities, loyalties, or habits of thought may be able to grasp this unity more readily. The conclusion the authors have reached, on the basis of both a variety of teaching experiences and professional work in interdisciplinary areas, is quite the opposite. It is only mature and intellectually sophisticated minds, profoundly familiar with the epistemological implications of the intellectual discipline they practice *as well as* with the different epistemological attitudes typical of other disciplinary enterprises, that can identify the most efficient path towards the transcending of disciplinary boundaries and the building of intellectual bridges. Once this process is experienced, however, we think it can be analyzed, described, and applied in the undergraduate classroom. If this is combined with team-teaching, the integrative process can be incorporated into the structure of a single course and students can be led toward the appreciation of interdisciplinarity from the inside, so to speak, or in any case at a level totally different from the one they encounter in current programs of basic studies.

Knowledge Integration Training

To test the feasibility of this approach—which we call "Knowledge Integration Training"—we have designed a proposal for a course to be titled "Colonialism and Culture Clash." The course has met with the approval of our current institution and will actually be piloted in the near future. We shall shortly be able, then, to see whether the path we have identified leads toward more pedagogical pitfalls or permits us to avoid them. We are particularly intrigued by this test in view of the fact that our model is rather different from the ones that are currently considered most effective in achieving integrative aims. In the article "Learning Communities" the five leading models are described as 1) linked courses, 2) learning clusters, 3) freshman interest groups, 4) federated learning communities, and 5) coordinated studies (Gabelnick et al., 1990, p. 19). To greatly simplify, it could be said that these models fall either into a pattern of "organized multidisciplinary exposure," or one of "active interdisciplinary exchange." Thus, the first three models simply provide students with either pairing or clustering of (usually three) courses so that discrete learning cohorts of students can be created. It is such cohorts which then become "learning communities," tied together either by an ongoing "faculty teaching seminar," in which faculty discuss their respective pedagogical approaches, or by weekly meetings with a peer adviser. On the other hand, the latter two models actually aim at catalyzing interdisciplinary exchange. In the case of the "federated learning communities" this is attempted through the role of a "Master Learner," a faculty member from a discipline different from those of the three "federated courses," who is expected to take those courses together with the students and then convene and lead a regular discussion section through which the disparate material gets integrated. Finally, in the case of "coordinated studies," admittedly the most ambitious of these models, courses are radically restructured to fit a common theme and three to five faculty team-teach in formats typically involving a mix of plenary sessions and small-group work, as well as faculty discussion sessions aimed at securing the team aspect of instruction.

What all these models reveal is a clear understanding of the *cooperative* roots of all integrative intellectual work. Thus, their contribution is to call attention to the reflective work that either particular groups of students, or students with facilitators, or students and faculty together must engage in to achieve integration. In our view, however, and at least at the level of design, they all lack a *reflexive* component, by which we mean the creation of a relativistic framework for the topical content of the course through a cross-disciplinary discussion of epistemological perspectives. In the case of our proposed model this translates into having the two instructors—one a historian with additional training in area studies, and one a cultural anthropologist with additional training in literary criticism—present to the students independent analyses of each particular topic addressed by the courses as well as a discussion of the way such analyses derive from the epistemological premises of their respective disciplines. At the same time, through exposure to literary and filmic texts, students are led to familiarize themselves with "popular" views of these same topics so that by the time the discussion session of the course convenes, they can address both instructors with questions derived from at least three different perspectives. It is through this questioning that we see both integration and critical thinking likely to emerge.

We also think that through a whole array of such a course students could acquire the tools for perceiving—at least in a general way—the inherent connectedness of all knowledge, and start moving toward building, in a much-quoted definition, "a fish-scale model of

omniscience" (Campbell, 1969). In turn, such an exposure should prepare them for a deeper understanding of the disciplinary characteristics of their selected areas of specialization (the "major" and the "minor"). Above all, though, we think that this approach would considerably reduce "disciplinary ethnocentrism," by showing students how scholars develop, organize, and present their ideas on the basis of specific disciplinary training, but can also *transact* such ideas in the process of mapping a particular territory in cooperation with alien explorers. In this sense, the course topic we have chosen for the application of our integrative model is highly symbolic: modern Western colonialism created culture-clash situations of global dimension, and grew from roots of ignorance and ethnocentrism, but it also catalyzed the development of the very notion of cultural relativism, and created the impetus toward a new understanding of Western cultures themselves. The lesson imparted by this bloody phase of world civilization is fundamentally a lesson in humility—social, political, epistemological. We have learned to put truth in the sobering context of "group perspective;" that does not mean that—as some postmodern nihilists are wont to argue—there is no truth and there are only interpretations. Rather, there are many different "truths" and we must find a way to respect and honor them by searching for the common ground they share. In our view, this is the fundamental message of interdisciplinarity.

The Need for Integrative Skills

In this respect, it is encouraging to see that interest in this approach to knowledge seems to be growing (Klein, 1990, p. 180). It is sometimes argued that the contemporary expansion of integrative programs derives simply from practical reasons, such as, on the one hand the marketability of broader types of training over overly-specialized ones, and, on the other, the need for interdisciplinary cooperation created by the budgetary constraints increasingly affecting post-secondary education (Klein, 1990, p. 38). We choose to lean, however, in the direction of a broader explanation. Several commentators have pointed out the recurrent alternation of analytic and synthetic attitudes to knowledge in the Western tradition (see Winkler, 1987). Such alternation may be triggered by the level of complexity each phase reaches so that, at a certain point, it is simply adaptive to change mental gears for a while. But we would hazard a hypothesis that may throw some light on the integrative process at a different level. For a variety of reasons—deserving separate discussion—Western civilization has been profoundly and uniquely affected by some of its technological innovations. As a result, whenever a new form of technology—such as the printing press or electric light, the steam engine or television—came to shake the foundations of our civilization we have risked the type of widespread social alienation that may lead to collapse. This has been avoided—so far—by an almost automatic defense reflex leading to the cultivation of particular human qualities, such as ego-strength, tolerance for ambiguity, mental and social flexibility, originality, pattern sensitivity, and human empathy. These happen to be the traits generally associated with "the interdisciplinary individual" (Klein, 1990, p. 183) and they are certainly extremely necessary for efficient integrative work. It could be hypothesized, therefore, that whenever our civilization encounters an internally-created crisis our attitudes toward knowledge move in the direction of seeking integration. Perhaps initially this is simply a psychological reaction to anxiety but in the long run it implicitly leads to an increase in the type of people who have precisely the intellectual characteristics most useful to solving the impasse.

It may well be that we are now living through one of these phases. Certainly the calls of alarm

first sent out by *A Nation at Risk* (NCEE, 1983), and repeated in the last decade by a myriad of studies, address more than our alarmingly growing illiteracy rates. They also refer to more serious deficits in the areas of mental and social engagement in general, and they lament a growing tide of intellectual passivity of such proportions that teachers are beginning to despair about even just "reaching" their students (Healy, 1990; Pearce, 1992).

If the minds of our younger generations are truly becoming unable to benefit from our established forms of education how can more interdisciplinary training of college students help at all? Obviously we are dealing with a problem of such magnitude that any modest suggestion may seem inadequate, if not naive. The connection between the problem and the solution, however, has to do with how to adapt to massive social change. Whatever may have created the profound neural changes that are making our children "unresponsive to traditional teaching" (Pearce, 1992) needs to be adapted to, and that can only be achieved by favoring the development of qualities of intellectual flexibility and social sensitivity in those who can still be taught. We believe that "Knowledge-Integration-Training" courses have the potential to achieve this aim.

Conclusion

In concluding our discussion of how important integrative skills are and how best to achieve them, it is important to point out that in the model we are proposing disciplinarity is not scorned. On the contrary, we feel that it plays a most important role in an effective process of knowledge integration. In this sense we disagree with those who argue that interest in interdisciplinarity has to do with the realization that disciplinary fragmentation has been an artificial process and that true knowledge can only be found—to use a too-oft quoted expression—in the "blurring of genres" (Geertz, 1980). It is certainly true that the tremendous proliferation of fields of study in the last century has closely mirrored the highly specialized division of labor characterizing industrialization (Wallerstein, 1991, p. 241). It is also true that many of these fields can not and should not be defined as independent disciplines (Wallerstein, 1991, p. 239). But that does not mean, in our view, that disciplinary differences simply emerge from different uses of rhetoric in the creation of specialized texts.

The English word "discipline" comes from the Latin word meaning both learning *and* obedience-training. We think this is significant; even if in classical times very few fields were recognized as having independent value for the overall training of students, by the time the modern Western university developed at least seven separate subjects were included in the core curriculum: grammar, logic, and rhetoric for the *trivium* and music, arithmetic, geometry, and astronomy for the *quadrivium* (Klein, 1990, p. 20). What is striking in this differentiation is that these subjects seem to provide a most precise disciplinary parallel for what contemporary students of the human mind have identified as the seven fundamental types of "intelligence." In his pathbreaking work in this area, Howard Gardner has described the human intellect as having the potential of developing linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal and intrapersonal skills (Gardner, 1991, p. 15). This potential, however, can only be achieved through some appropriate forms of training, and that is where one of the values of disciplines comes in. The other fundamental value is in the fact that to be defined as such a discipline must possess all of the following specific features: subject matter, theoretical assumptions, level of analysis, and methodology. In other words, a discipline is a way to look at reality asking a unique set of what and how questions. Training the mind to systematically use a

particular and consistent set of questions for analyzing experience provides it with a coherent frame of reference which, at the intellectual level, has the same value as that of a mother tongue for linguistic expression.

In our view, then, it is essential that students come to get some form of disciplinary training *before* they are exposed to any program of knowledge integration. Indeed, it may be that our college students develop "pidgin minds" at least partly because of the lack of the intellectual anchor provided by sound disciplinary grounding. It is all the more important, then, that any integrative program highlight the independent value of the disciplines it clusters, just as it puts their perspectives in a relativistic framework. This approach is also a challenge to those critics who argue that, whenever people are engaged in interdisciplinary efforts,

. . . either they are engaging in straightforwardly disciplinary tasks that require for their completion information and techniques on loan from other disciplines, or they are working within a particular discipline at a moment when it is expanding into territories hitherto marked as belonging to someone else . . . ; or they are in the process of establishing a new discipline, one that takes as its task the analysis of disciplines, the charting of their history and of their ambitions.

(Fish, 1989, p. 21)

To this critique we would respond that, at least as regards the pedagogical application of the integrative process, it is quite possible to be engaged in yet another enterprise, one incorporating both the delivery of content and the reflexive analysis of process. Of course, this does require instructors who have both the character traits and the breadth of knowledge which can make integration-training a successful enterprise, but if the "survival-of-the-fittest" principle works at the intellectual as well as biological level, the stage is certainly set for their increasing emergence.

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