This paper examines educational research on student development and discusses some of the reasons why this research has had so little impact on actual educational innovation. These include: (1) failure to anchor research within a more general model of development; (2) lack of in-depth descriptive and phenomenological studies of students that would identify what types of changes occur more prominently than others in what types of colleges; (3) too much emphasis on objective, highly focused tests of the developmental process; and (4) absence of adequate methods to assess the specific types of educational programs that produce different types of psychological effects of development. The paper then reviews the principal features of one developmental model based on five interrelated dimensions of maturing: symbolization, allocentricism, integration, stability, and autonomy, and explores the model's implications. (AF)
Issues and Implications of a Model of Maturing

for Educational Research

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This paper was prepared for the 55th Annual Meeting of the American Educational Research Association (February 4-7, 1971, New York City).
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Definition of Developmental Dimensions

Symbolization: A maturing person becomes more able to symbolize his experiences. He becomes more aware of his own thought processes, e.g. more reflective and understanding; he becomes more aware of himself and his awareness becomes more accurate; he becomes more aware of his values and of other people and his relationships with them.

 Allocentricism: The process of development is from primary to secondary process (a Freudian term that says thought becomes less dominated by personal needs and more reality oriented) from self-to other-centeredness. A maturing person incorporates the society's mode of thought and grammar and so develops more logical communicative and cognitive skills; he develops a concept of himself that includes an indentification with other human beings and in which he is able to take another person's view of himself; his values become more other-centered, less egoistic; and his relationships become more acceptant and tolerant.

Integration: A maturing person is open to new information which he seeks to make consistent with his self. His intellectual interests deepen, become more differentiated and integrated; he is able to think more relationally and make integrated synthesis. His concept of himself becomes more congruent with what he believes other persons think of him so he no longer has to play "roles." He develops a more consistent philosophy of life. And he develops increasingly the capacity to be open in his relations with others, to experience a sense of collaborative intimacy of "weness."

Stability: A maturing person becomes more stable in his cognitive skills. They are less easily disrupted by stress and if disrupted he can recover his cognitive efficiency more readily than a less mature person. His concept of himself becomes more stable (not rigid) as Erikson is talking about in part when he uses the term identity. His values become more stable and he is able to establish some enduring interpersonal relationships.

Autonomy: A person's maturing is dependent upon the prior stabilization of his self-structures. He becomes "freed" of the formative conditions that led to their development, so he becomes more selectively in control of what influences him. His self-concept is not too readily modifiable by what others say of him; he can stand up to pressure that goes against his values; he is not so dependent in his relationships that he violates his integrity in order to secure affection.

<table>
<thead>
<tr>
<th>Model of Maturing</th>
<th>Developmental Dimension</th>
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(Coming book: Heath, D. H., Educating for maturity, (tentative title), Hayden Book Co., Inc., 116 West 14th Street, New York, N.Y. This will discuss...
We are to discuss student development and examine issues that may divide our different theoretical approaches and confound our findings. Obviously, we can look at the educational process from a great many different viewpoints as Dr. Feldman suggests. I want to focus on development, make some general observations, briefly review one developmental model that may not be known to many, and explore some of its implications.

A great deal of research has been done on the college student, but Newcomb and Feldman's (1968) critique of it generated so few generalizations about types of change that I wonder if we researchers haven't created a credibility gap between ourselves and educators. Recall they concluded that college students tend to become less authoritarian, more liberal, more sensitive to aesthetic experiences, less inclined to hold orthodox religious beliefs, and perhaps more independent, more self-confident, and more ready to express their impulses.

But those of us who teach and who are close to students believe colleges have more powerful effects than these few findings suggest. Certainly, we believe colleges should have more impact. Why, then, this gap between what research suggests and what we believe? And why does our research have so little impact on actual educational innovation?

First, most of us have failed to anchor our research within a more general model of development. We have ignored the systemic implications of Piaget's model, the complexity of Lois Murphy's descriptive studies of healthily developing children, and Bernice Neugarten's distillation of the changes in middle age. We have focused on only a few years of a person's life—17 through 21, and lost perspective about other types of development that may be actually going on that college may accentuate or retard. So my first point is that we may not have been studying many of the potentially more important types of developmental changes that colleges may accentuate or modify.

Second, we have not done the in depth descriptive and phenomenological studies of students that, say, a Piaget has done on the development of children to identify what types of changes occur more prominently than other types of changes in what types of colleges. Our typical procedure has been to take some
readily available method or test to measure before and after effects. Few researchers have developed measures specifically designed to test some of the types of effects that educational philosophers claim occur when a person is being liberally educated. Much more may be happening to a person being powerfully educated than is measured by the Study of Values, OPI, or CPI.

Third, after spending much of my professional life developing objective, highly focused tests to measure dimensions of maturing, I now believe this route to assessment of development is premature and not very illuminating - certainly in comparison to the amount of resources and time involved in using such tests. Too focused objective measures have limited rather than expanded our understanding of the developmental process. Too focused information may actually distort the complexity of the growth process. It shapes us to think in terms of specific isolable unidimensional traits and ignore that the meaning of any test score is dependent upon the pattern or context of the other traits of the person. For example, I just don't know how to interpret the Impulse Expression scale of the OPI. The items that showed change on that scale from freshman to senior year in Katz's studies were declining religious beliefs and increased drinking of alcohol. We cannot so easily say increased IE scores in seniors mean increased freedom to express impulses more generally. We need to know about the degree of awareness of impulses, types of controls used, and the maturity of their own values. Only then can we interpret the healthiness of their allegedly greater "impulsiveness."

Finally, such faddish reliance on more psychometrically pure trait measures means we may fail to identify other types of more important changes not yet amenable to such precise measurement. I am now "retreating", some of you might say, to rely much more heavily on focused but probing in-depth interviews so designed to be objectively and reliably coded.

Finally, much of our research has so concentrated on isolable psychological changes that we have not developed adequate methods to assess the specific types of educational programs that produce different types of psychological effects on development. To know that a college produces less authoritarian students is not very
useful to the educator who wants to know what was it about the college's experience that produced that effect. The consequence, of course, is that our research findings dangle in mid air. Educators don't know how to make specific changes to produce more or less authoritarianism, aesthetic sensitivity, or flexibility.

My own studies of development in college have been part of a larger program attempting to test a model of healthy development or maturing. The studies have been done on criterion groups of mature and immature young adults, have involved studies in different countries to test the generality of the model, and have been extended to the development of adults through the twenties and early thirties. I will only highlight the model's principal features for my intent is to discuss central issues and then suggest questions we need to research in the future. The model was induced from developmental studies of Piaget, ego psychology, studies of change in therapy, and is, in many respects, similar to Chickering's recent formulations. The model is described on the sheets I've distributed. Very briefly, the person is a system continuously adapting and changing. Five inter-related dimensions define the development of the system. Studies of criterion groups of mature and immature persons confirm that the maturely developing person is more able to symbolize his experience, is more allocentrically developed (that is, has internalized social reality and is able to take another person's viewpoint more accurately), more integrated, stable, and autonomous. If we now talk about how an individual develops, say in his self-concept, we can hypothesize his self-concept will become more accurately symbolized, allocentric (that is, thinks of himself as not just unique but also more human, sharing other human problems), integrated, stable, and autonomous.

The model makes several powerful assumptions which are issues most developmental theories must confront. Too extended development in one dimension, relative to development on other dimensions, distorts and produces unhealthy development. Too extended symbolization, for example, produces an obsessive introspection not integrated with action. Too allocentric development produces conformity, superficial gregariousness, and may lead to unstable and dependent relationships. Therefore, the maturity of a person is not defined
by just the magnitude of his score on a scale measuring one
trait or dimension. You must consider the relationships of that
score to others for it is the maturity of the entire system that
is critical for assessing the maturity of a particular dimension.
Of course, if we view a person only as a collection of unrelated
traits and the development of a trait defining maturity as linear
than we presumably must assume more of that trait is "good" or
worthy.

A second powerful assumption is that the model is perfectly
general. Any person, regardless of sex, ethnic background, or
cultural background will, if he is growing healthily, develop in
these ways. This is a hypothesis. It has been tested in several
different religio-cultural areas, including American Protestant-
Jewish samples, Italian and Sicilian Catholics, and eastern and
western Turkish Moslems. Generally, the model has successfully
distinguished between mature and immature persons in these
types of samples. I would argue that it is a value choice to
educate for maturity, or adjustment to society, or creativity, or
any other specific goal. I would argue, however, that once one
has selected the goal of educating for maturity, then the dimensions
that specify healthy growth are empirically descriptive and do not
involve the choice of values. Of course a society or educational
system might value one aspect of healthy development more than
others and thereby risk distorting the growth of a person — as
has been happening in our own schools in the past decades. I claim
the model is an approximate description and not an evaluative
prescription of how a person develops healthily.

A third assumption is that within any limited time period a
healthy adaptation has a sequential nature to it. That is, I view
the spur to development to be a problem that requires some new
response — that is, some adaptation. I believe Katz's studies of
Berkeley and Stanford students found those who faced more crises
showed greater development. I distinguish between adjustment which
is the accommodation of one's self to the expectations of the
school or society and adaptation which is the development of some
optimal relation between the expectations of others and one's own
needs. The effort to adapt is triggered by a problem that, in
Dewey's words, incites "shock, confusion, perturbation, uncertainty." One is then provoked to think, plan, locate the problem – symbolize. The next stage in solving the problem is to examine alternatives, take other points of view – become more allocentric. Then, one hypothesizes a solution, a guideline, a synthesis – becomes more integrated. It is tested out and begins to stabilize. Once it fits, becomes habitual, then that habit or skill becomes more available for use in other situations than the one in which it was learned. It has become more autonomous. Energy now becomes freed. For this reason, the more manifest signs of a mature person are surplus energy expressed in enthusiasm and joy as well as a sense of inner freedom. One implication of this assumption is that it becomes very difficult to assess whether a particular person's score on a test is a sign of health or maturity. For example, freshmen are typically quite confused and disorganized in their first months at college. As one student said, "I feel like a thousand pieces going in a thousand different directions." But such adolescent turmoil may in fact be very healthy if it leads to the development of greater reflection and efforts to develop new adaptive patterns. A student who scores low on a measure of disorganization at this point in his life may well be uneducable and have a very poor prognosis for maturing further.

A fourth related assumption is that a growing person moves to different but temporary levels of equilibrium. New problems disrupt that level and the system may become disorganized. In fact, a more mature person can allow himself to become disorganized, that is, regress, but the disorganization is under his control. The ego psychologist talks of regression in the service of the ego. My own research supports the idea that the more mature person is able to allow himself to regress more readily than the immature person. This is why we have to examine more carefully the meaning of test findings that some freshmen six months into the college year or that some seniors are more disorganized. The disorganization may be under their control and therefore not really pathological. Researchers have not distinguished between what I call educable and non-educable types of disorganization (Heath, 1968). Erikson makes a similar distinction between neurotic and normative crises.
The model does seem to comprehend most of the types of changes students report in interviews about how they have developed in college. Of course, colleges may fixate development, induce regression, or so accentuate development on some dimensions that the change we note in our research is unhealthy. My own studies of Haverford College indicate it had differential effects on its students. The sheet I've distributed indicates the rank order of the college's effects. The ranks are based on combinations of coded interview scores and specially designed measures of each dimension. The findings are very crude, but with such a model it is possible to get some comparative understanding of a college's principal effects. Using other types of procedures it was possible to secure indices of what types of educational or institutional programs induced what types of specific development. A principal conclusion that complicates all of our research is that no one institutional determinant produces only one type of maturing effect and no one maturing effect is caused by only one type of educational determinant. At Haverford, it was a close relation with a neighboring Bryn Mawr girl that was a more powerful determinant of the widest number of maturing effects than was the case for any specific educational determinant at Haverford.

The point of this brief summary is not to defend one particular model. It has many limitations. My point is to identify some of the types of issues that confound our interpretations of differing results from different types of studies.

The model does provide some guidelines or implications for future research. For example, educational philosophers have long identified one of the central effects of a liberal education to be the development of the capacity to take a multiplicity of viewpoints or perspectives toward a problem. This is a manifestation of allocentricism — to be able to take a variety of roles, pose alternatives and possibilities. I know of no adequate test of such a hypothesized effect, though a measure of authoritarianism may tap into one aspect of such a fundamental capacity.
Much research has been done on the changes in the content of a person's values as he progresses through college. But just because a person becomes more liberal, can we therefore say his values are more mature? We have no independent criteria that such is the case. Certainly it is possible for one to have maturely formed conservative beliefs. However, the model suggests an alternative way by which to talk about mature values. As a person becomes more mature, his values become more symbolized and explicit, they come more allocentric (that is, tolerant, respectful, even globally concerned as validated, by the way, now in three different cultures), more integrated, stable (but not more rigid) and autonomous. So if we are examining the development of a person's values in college, I suggest we not be as preoccupied about the change in their specific content. That route leads to few meaningful generalizations, except in terms of their increased social liberalism. Rather, the potentially more profitable route is to ask if a student has become more aware of what he believes, developed a more consistent Weltanschauung, as well as more central enduring values, and then has he maintained such values in the face of opposition and criticism? Comparison of my own methods for assessing the maturity of a person's values and my own results with those of Kohlberg suggest there may be considerable validity to this type of approach to the problem. Persons with more mature values are more mature in many other aspects of their lives, like their marital and vocational adaptation.

If research on student development is not to remain disembodied it must be integrated with a more general model of healthy development. If such research is to be useful to educators, it then must be related to specific educational and institutional factors. How else is an educator to know how to change his institution to promote healthy development — if that is the goal he selects to implement (Heath, 1971).
References


