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Applying Cognitive Development Theory in the Advising Setting

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INTRODUCTION

In recent years, several authorities have contended that academic advising needs redefinition, with an emphasis on developmental concerns and individual differences (Ender, Miller, and Winston 1982).¹ Developmental advising is a process broadly concerned with human growth and development. From a developmental perspective, one role of the advisor is that of an instructor guiding and teaching decision-making skills to advisees. To do this task effectively, the advisor must notice many aspects of student experience — that is, the intellectual, ethical, emotional, and interpersonal. One dimension in this integrated model, apparently especially applicable to the advising relationship, is assessment of the student's cognitive maturity. When speaking of cognitive development, we refer to sequential stages of intellectual maturation. Any one cognitive stage represents a unique way of perceiving knowledge, truth, values, and responsibilities. Each stage builds on the preceding one and is characterized by increasing levels of complexity in thinking about learning.

Research has been conducted on how college professors can best structure their classroom environments to accommodate these differences of cognitive maturity in their students (Widick and Simpson, 1978).² Peterson and McDonough (1985)³ suggested using an "integrated model of student growth" for dealing with undecided students. Virginia Gordon (1984)⁴ also suggested acknowledging the "differing characteristics, needs and rate of maturation unique to each student" in the advising setting.

1 R. Winston, Jr., S. Ender, and T. Miller, (Eds.) "Developmental approaches to academic advising." (San Francisco: Jossey-Bass Inc., 1982.)

2 C. Widick, and D. Simpson, "The uses of developmental concepts in college instruction," In Clyde Parker (Ed.) *Encouraging Development in College Students*. (Minneapolis, Minnesota: University of Minnesota Press, 1978) 27-59.

3 L. Peterson, and E. McDonough, "Developmental advising of undecided students using an integrated model of student growth." *Journal of the National Academic Advising Association*, Vol. 5, No. 1 (1983), 61-69.

4 V. Gordon, *The Undecided College Student: An Academic and Career Advising Challenge*. (Springfield, Illinois: Charles C. Thomas Publisher, 1984).

One is best able to teach when one is familiar with student needs and experiences. Cognitive developmental theory can enhance the "art of teaching" found in advising. Advisors often admit to being frustrated by working with students who seem immature or do not know how to "think like a college student." Understanding the cognitive stages of student development helps the advisor to appreciate a student's perspective, and also to encourage him or her to grow intellectually. This article, then, seeks to translate cognitive theory into useful advising strategies.

COGNITIVE DEVELOPMENT THEORY

William Perry and his associates at Harvard (1970)⁵ formulated a cognitive scheme, consisting of nine stages or positions, which focus on the intellectual development of college students. These stages are sequential, hierarchical, and qualitatively different.

Each successive stage broadens the student's "filter" of cognitive processing. Therefore, as they grow, students are capable of making more distinctions, using higher-ordered thinking, and integrating concepts. Each stage represents a more differentiated yet integrated structural organization, surpassing that of previous stages. Understanding how students progress through cognitive stages and how such changes occur may aid the advisor in providing guidance through this process. Also, by recognizing that certain events or crises in a college student's life might result in regression, in return to a simplistic perspective, or in resistance to change, the advisor might provide appropriate support.

DESCRIPTION OF STAGES

The Perry model describes a number of stages of intellectual growth each with predictable advisee concerns. The scale ranges from Dualism (1 and 2), through Multiplicity (3 and 4), to Relativism (5 and 6), and Commitment in relativism (7,8,9). Most college students range between Perry stages 2 and 4 (Dualism and Multiplicity), with most freshmen being stage 2 or 3 (Fouchton, et al. 1977)⁶.

In typical early stage thinking (stage 1 and 2) there is a desire for a high degree of order and structure. The student prefers measures of evaluation clearly delineated, fair, and easily quantified. Knowledge is perceived as collected information; the advisor or instructor is viewed as source or organizer of that information; and the student's role is to master the material presented.

At more sophisticated stages (stages 3 and 4), the student begins to accept more responsibility not only for mastering the material but also for thinking creatively and independently and developing viewpoints on issues. This stage values independent thoughts and opinions, and peers are perceived as more central in the process of developing ideas through discussion.

⁵ W. Perry, *Forms of Intellectual and Ethical Development in the College Years*. (New York: Holt, Rinehart, and Winston Inc., 1970).

⁶ J. Touchton, J. Cornfeld, K. Harrison, and L. Wertheimer, "Career planning and decision-making." Paper presented at the Annual American Personnel and Guidance Association Convention, Denver, Colorado, 1976.

FIGURE 1
The Perry Theory of Intellectual Development

Perry Stages								
1	2	3	4	5	6	7	8	9
dualism		multiplicity		relativism		commitment		
Dualism: Truth is certain.								
Stage 1: Uncertainty is an error.								
Stage 2: There are only right or wrong answers; no allowance for ambiguity.								
Multiplicity: More than one answer to a question might exist.								
Stage 3: Increasing awareness of alternative perspectives; reliance on a way or method to find the perceived "best" alternative.								
Stage 4: Flip into suspecting that <i>the best</i> way might not exist, absence of criteria for making judgments, questioning even the method; "all views are equal."								
Relativism: Knowledge is relative and contextual.								
Stage 4: Absence of criteria for making judgments — nothing is certain.								
Stage 5: Use of discriminating but non-absolute criteria.								
Stage 6: Application of non-absolute criteria to questions of interpersonal identity.								
Commitment: Comfort within Relativism								
Stage 7: Make initial commitment, despite lack of certainties.								
Stages 8 and 9: Experience implications of choice; see commitment as an ongoing, unfolding activity through which life assumes a shape, character, and meaning.								

MEASUREMENT OF COGNITIVE STAGES

How do we know where students are in their cognitive development? One manner of measurement is an instrument developed by Knefelkamp in 1975.⁷ This instrument is a series of sentence stems in which the student responds in essay form. Questions deal with student attitudes about the nature of learning, preferred instructors, means of evaluation, and favorite (or least favorite) classroom experiences.

Rather than requiring written responses, the advisor might employ sentence stems during an advising conference. For example, when a student arrives for an advising conference, a common question is: "How do you like your classes this semester?" Logically, one might follow up with questions such as, "What's your favorite class? Why?" and "What's your least favorite class? Why?"

Thus, the same words the advisee uses to answer such questions provide insight into the student's stage of development. By careful listening, the advisor may informally assess and thereby become a more valuable asset to the student. If an advisee indicates that he or she believes in only one right answer, that the professor should convey that answer, and that a high degree of structure comforts, then that advisee is probably a dualistic stage student. Classes providing strong support such as clear-cut assignments and an accessible teaching style will help this student gain confidence in school. A philosophical or abstract approach in the classroom might intimidate or confuse a dualistic student. The advisor's role should be to help students select appropriate courses according to their cognitive levels.

⁷ L. Knefelkamp, "A cognitive-developmental model of career development: an adaptation of the Perry scheme," in Clyde Parker (Ed.), *Encouraging Development in College Students*. (Minneapolis, Minnesota: The University of Minnesota Press, 1978), 135-150.

ADVISOR'S ROLE IN DEVELOPMENTAL CHANGE

Of course, a student should be challenged intellectually by material presented at college; and cognitive growth is both expected and desired. We are not in the business of making our students more comfortable. What circumstances conduce to fostering cognitive change? Nevitt Sanford's (1962)⁹ work suggests that growth is possible when elements of both support and challenge are present. That is, a student needs to feel secure enough to take risks and have appropriate challenges introduced to be "prodded" to grow cognitively. For intellectual change and growth to occur, the advisor needs to introduce a new way of thinking to the advisee. Many students in earlier stages of cognitive growth react with anger or depression when exposed suddenly to philosophies characterizing higher Perry stages (e.g., the professors' relativism conflicts with the students' dualism). When this academic challenge lies within one level of the student's level, the advisor can reassure the advisee that feeling threatened by new ideas is common, that threatening experience is itself growth, and that it is permissible to question what one held uncontested. The advisor can also suggest study techniques to help the student understand and complete required course tasks. Advisors can lead students to reflect upon experiences with question such as "If you were —, how would you feel about...?", or "what if —, then..." or "Might another way to think about that be..."

Through key phrases, the dualistic thinker might be prompted to accept the values of the multiplicitic thinker. Presenting alternate major, minor, and/or elective options affirms to the student that there exists more than one right choice and may inspire exploration of other interests.

Inviting and structuring experiential activities for the dualistic student is another way to challenge, support, and motivate. For example, for a student interested in becoming a lawyer, the advisor and advisee could brainstorm ways the advisee could obtain information about law. Hands-on activities such as checking-out referral sources (the library, career center, law school, a lawyer friend) are recommended. Simply suggesting a number of sources will generally fail. Often arranging a contract or agreement in conjunction with the student on steps they could complete between advising sessions, effectively structures activities for students. The more explicit, concrete tools for structure, the more likely the student will follow through to gain information. When the student reports back, the advisor should encourage the advisee to reflect upon insight gained from these experiences.

Thus developmental advising encourages the student to reflect upon cognitive experiences, thereby opening the door to thinking and learning in new ways. How rapidly can change occur in advisees? While isolated insights can occur in a moment, these changes become integrated in one's point of view more slowly. To encourage new levels of maturation, it is important to move one step at a time, challenging the student to see things one level above where the student stands. To leap beyond the next stage leaves the student behind, on the other side of a conceptual chasm with no bridge for stepping forward.

Progression through the cognitive milestones of development cannot be taken for granted. Cognitive theory provides three alternatives to forward progression throughout the stages. There is "temporizing," where a student delays in a stage; "escape," where the

student avoids responsibility of greater commitment; and "retreat," where a student returns to a dualistic orientation (King, 1978)⁹.

A predictable occurrence in cognitive developmental theory is that during crises, a person will regress to an earlier stage. Thus, a student may operate at stage 3 in the classroom and in other aspects of his life but when a crisis erupts, the student may slide back into stage 2 thinking. Thus, the academic advisor should not be disappointed to discern regression at such times, but rather view this behavior as predictable and workable.

IMPLICATIONS

The Perry scheme outlines environments best suited for a balance of challenge and support for 2, 3, and stage 4 students. As advisors assist students in scheduling courses, reaching career decisions, and choosing life alternatives, this support/challenge ratio should remain in mind. If a college course, for instance, would present too much challenge and would require thinking at two stages above the advisee's current level of thinking, the stage 2 student should wait on that particular course until he or she catches up with the level of cognitive thinking required in that course. In short, for dualistic students, environments providing maximum support include a high degree of structure and a warm and personal atmosphere. Environments providing appropriate kinds and amounts of challenge for the dualistic student include moderate diversity and direct experiential activities. The following chart (Table I) illustrates specific ways an advisor can utilize knowledge of cognitive stages and challenge/support variables to maximize advisee cognitive growth.

TABLE I
CHARACTERISTICS OF STUDENTS IMPLIED BY THE PERRY SCHEME

	DUALISM stage 2	EARLY MULTIPLICITY stage 3	LATE MULTIPLICITY stage 4	CONTEXTUAL RELATIVISM stage 5
ADVISEE'S VIEW OF KNOWLEDGE	KNOWLEDGE is known: Right/Wrong answers exist to all questions.	KNOWLEDGE is knowable; through the process of the RIGHT way of finding those answers.	KNOWLEDGE is uncertain; some truths are known, but all ideas are equally good and acceptable.	KNOWLEDGE is contextual, judged by rules of adequacy.
ADVISEE'S VIEW OF ADVISOR	AUTHORITY and Source of Knowledge. Should have all the answers.	MODELS the "way" to right answers.	USES evidence to assist in learning the way "They want us to think."	ONE of many authorities whose knowledge has been gained through experience.
ADVISEE'S VIEW OF LEARNER'S ROLE	RECEIVES information; stores & memorizes.	LEARN how to learn and to work hard to find the right answers.	THINK for one's self and be independent in that thought process.	PERCEIVE, JUDGE and EVALUATE information and apply to one's own situation.
EVALUATION ISSUES	prefers high levels of STRUCTURE and easily quantified systems; clear relationship between question and right answer.	FAIRNESS for one's hard work in discovering the right answer.	COURAGE to be independent & to support one's opinions.	OPPORTUNITY to learn from evaluation; self-worth is not tied into the evaluation.

⁹ P. King, "William Perry's theory of intellectual and ethical development." *New Directions for Student Services*. (San Francisco: Jossey-Bass Inc., 1978).

⁸ N. Sanford, *Where Colleges Fail*. (San Francisco: Jossey-Bass Inc., 1969).

TABLE I — CONTINUED

	DUALISM stage 2	EARLY MULTIPLICITY stage 3	LATE MULTIPLICITY stage 4	CONTEXTUAL RELATIVISM stage 5
ADVISOR STRATEGIES	Encourage independence. Increase personal insight and awareness of self. Use few absolutes in conversation. Structure experiential activities; have student report back and/or keep log of activities.	Generate alternative perspectives on issues. Use supporting evidence to challenge. Use handouts on how to do tasks, requirements, etc. Provide concrete experience of ideas. Encourage introspection on study techniques.	Help to discriminate between choices. Allow free approach, loose structure. Analyze and evaluate from own perspective and experiences. Use unstructured group experiences.	Synthesize skills. Focus on narrowing down the variety of choices. Encourage commitment.

By recognizing the student's intellectual advancement as a logical progression and incorporating the basic assumption that students develop sequentially, the advisor can better engage the student in discussions at appropriate levels of sophistication. By ascertaining the student's expectations, the advisor can stretch their notions to include more complex attitudes about learning and growth. Though growth ultimately depends on the student, the advisor serves as a valuable facilitator at each level of the student's intellectual growth and development.

CONCLUSION

Developmental advising occurs when advisors view the whole student and integrate that student's social, physical, psychological, and cognitive needs. Growth occurs when advisors find the stimulating balance of support and challenge ratio for each individual student. Knowledge of cognitive theory offers the advisor a tool for understanding and analyzing student concerns and problems.

As empirical and applied research findings in cognitive theory evolve, advisors can experiment and invent new and useful advising strategies. This experimenting and inventing, in turn, will produce the next round of questions for research, thus building a theoretical foundation for our profession.

Changes in Student Attitudes and Goals During the Undergraduate Years

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The changes in student attitudes and goals during the undergraduate years may be detected in the freshman surveys conducted annually at colleges and universities to determine whether freshmen are becoming materialistic and less liberal in their politics.

Annual surveys of first-time, full-time freshmen at colleges and universities throughout the United States have been conducted since 1966 as part of the Cooperative Institutional Research Program (CIRP) sponsored by the American Council on Education and the Graduate School of Education at The University of California at Los Angeles. According to Astin, Green, Korn, and Maier (1984), the results of these surveys reveal a steady trend between 1967 and 1984 towards material concerns and financial security and away from political liberalism on the part of entering freshmen.

Being very well off financially, for example, was an important personal goal for 71.2 percent of the freshmen surveyed in 1984 compared with 43.5 percent in 1967. In contrast, interest in developing a meaningful philosophy of life declined from 82.9 percent in 1967 to 44.6 percent in 1984. Freshmen who identified their political orientation as liberal declined from the peak of 38.1 percent in 1971 to 22.1 percent in 1984.

Although these freshmen surveys provide a useful picture of the characteristics of entering freshmen classes and how these characteristics change from year to year, they do not reflect the changes that occur for students as a result of their experience in college. Of the follow-up studies that have been conducted with students who participated in the CIRP survey as freshmen (Astin, 1975, 1976, 1977, 1982; Astin, Astin, Bayer, and Bisconti, 1975; Bisconti and Solomon, 1976; and Green, Astin, Korn, and McNamara, 1983), only Astin (1977) focused on changes that occur in students attitudes and goals during the undergraduate years. The students involved in his study became more liberal in their attitudes toward social and political issues and less traditional in their religious affiliations. The results did not reveal a definite trend in terms of whether the students' personal goals became more or less altruistic during the undergraduate years.