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The relationship of undergraduate cognitive development and academic advising preference at two small, private, liberal arts colleges

Vicki Van Vark Edelnant

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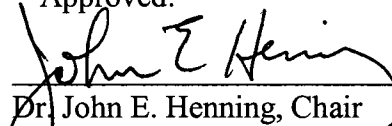
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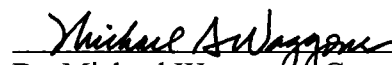
Doctor of Education

Approved:

Dr. John E. Henning, Chair

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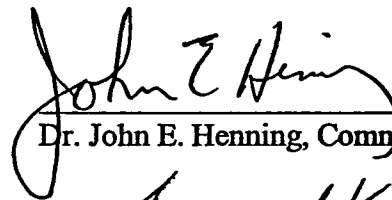# PRIVATE, LIBERAL ARTS COLLEGES

An Abstract of a Dissertation

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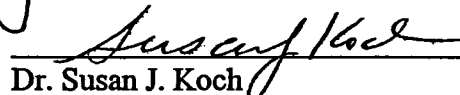
Of the Requirements for the Degree

Doctor of Education

Approved:

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University of Northern Iowa

May 2006

ABSTRACT

Though developmental advising has been widely accepted for some time, some recent studies have questioned whether this approach to advising is universally appropriate. The primary purposes of this study were to determine what, if any, relationship exists between students' preference for academic advising approach and either their level of cognitive development or their gender.

One hundred seventy-three students at two small, private, liberal arts colleges completed the Academic Advising Inventory (AAI) to assess their advising preferences and the Measure of Epistemological Reflection (MER) to measure cognitive development levels. A correlation coefficient of scores on the AAI and the MER indicated there is no significant relationship. Similarly, there was no statistically significant difference in mean scores on advising preference between men and women.

In response to additional research questions regarding other factors that might influence student preference for advising approach or affect students' advising experiences, MER results and information from interviews of twelve participants revealed that relational skills of advisers, student lack of experience with advising, and adviser accessibility influence student advising experiences.

Implications for practice in the field of academic advising and recommendations for further research are included.

ACKNOWLEDGEMENTS

There are so many people whose encouragement and contributions helped make this work possible.

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Thanks also to colleagues at the two institutions where I conducted my research for their assistance and cooperation. I would particularly like to acknowledge the thoughtful responses of reader Kayah-bah Malecek and the leg work of research assistants Lisa Lancaster, Cassie Breeggemann and Meghan Kluver. I have always admitted to being mathematically challenged, so I am deeply, humbly grateful for the assistance of Dr. Fred Ribich in analyzing and interpreting statistical results. I owe you more corned beef and pastrami than your cardiologist would ever let you eat! Thanks, too, to Dr. Kathy Kremer, for introducing me to Qualrus and helping me learn the ropes.

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To my dear, good friends, Jean Kimball, Dr. Cheryl Jacobsen, and Dr. Mary Jo Wagner: thanks for your editing, feedback, cheerleading, nudging, and exhorting, and to my family for your loving support.

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CHAPTER 1

INTRODUCTION

Introduction

My interest in and understanding of academic advising came about gradually. For years I have been both a faculty member and an academic adviser. Like many faculty who advise, I rarely gave advising much serious consideration. It was one of those chores we do along with serving on committees that is necessary, sometimes productive and even interesting, but it didn't seem integral to my profession of teaching; it seemed, for the most part, mechanical and/or clerical. That is, my job as an adviser was to serve as a kind of fact-checker: I was to help students put together a schedule of classes that would meet requirements and, as far as possible, match student interests and goals. Then I became director of an academic support center, and I attended the National Academic Advising Association (NACADA) Summer Institute. When I reflected on my own experiences in that new context, I came to understand more fully the potential power advising could have. I now believe that a good advising relationship between student and adviser affords opportunities for rich, rewarding teaching experiences as well as important assistance to students to find their calling. That is to say, I have come to realize that advisers, especially faculty advisers, but students and administrators as well, tend to underrate the importance of advising as a part of the teaching and learning enterprise.

As an undergraduate, I resisted valiant efforts by my own academic adviser to work with me. I was a theatre major. I never considered another major and I insisted that

I knew what I was doing. Mr. Jensen tried to get me to consider and articulate reasons for the decision I had made. I was completely uncooperative. I was what Belenky, et al. (1986) would call "prematurely foreclosed." It wasn't just that Mr. Jensen's timing was off. It was also my thinking that prevented me from being open to discussion with him. I thought I had all the information I needed. I resisted his attempts to get me to reflect on my values, skills, interests, and abilities, and what the choice I had made might mean for my day-to-day life.

I have since experienced similar conversations from the other side of the desk. Recently, I had a frustrating exchange with a student who was referred to me because he, too, said he wanted to be a theatre major and he needed to know what courses he should take next term. He was considering transferring from our institution where, admittedly, we do not have a strong theatre program. In an effort to help him make an informed and appropriate decision, I posed questions. The conversation went something like this:

"Why do you want to be a theatre major?

"I like to act, so I think I'll transfer to Iowa or maybe the community college close to my home."

"Humm. Those are two pretty different kinds of institutions. How will you choose?"

"Yeah, well, maybe then I'll just go to Hawkeye and get my gen. ed. out of the way."

"Tell me more about how you decided on theatre."

"Well, I like to be in charge, tell folks what to do, you know? So I thought maybe I'd like acting and being a producer."

"That's interesting. Tell me how you decided on producing rather than directing. What do you know about what producers do?"

"Look, I just need to know which math class to take so that it will transfer."

(Sigh.) "Take MA 107. That's a general collegiate math class likely to transfer anywhere."

Actually, this dialog went on some time longer, but the point is, it was clear to me he had no interest in discussing developmental issues such as long-range goals or even exploring what the implications were of the decision he had made. Yet exploring developmental issues is what has been recommended in the advising literature and by NACADA ever since the seminal work of Crookston (1972) and O'Banion (1972), popularized by Winston, Ender and Miller (1982) and Winston, Miller, Ender and Grites (1984). I had become convinced that developmental advising was/is the most advantageous approach to encouraging students' reflection upon academic choices (leading to life choices), but my own experiences and those of colleagues had told me that students may not always be receptive to what we think is best for them. I do not think the experience I have just cited is an isolated case either for adviser or student.

<u>Statement of Problem and Purpose of This Study</u>

In this research study, I have investigated factors that influence students' advising approach preferences. Students who resist developmental academic advising are turning away from the people and processes that colleges and universities have in place to assist

them. This study examines why some students are not making more use of this important service. Specifically, I examined patterns in student thinking in relation to the advising approach they prefer. Findings have implications for adviser development and practice, as well as for the design and implementation of academic advising programs.

Research Questions

In this study, I sought to answer these research questions:

1. Is there a relationship between student preference for either a prescriptive or developmental academic advising approach and a student's level of cognitive development?

2. What other factors influence student preference for academic advising approach?

3. Is there a relationship between gender and preference for academic advising approach?

4. What other factors affect students' academic advising experiences?

While academic advising has grown in importance as student populations have become more diverse and less familiar with expectations of higher education (Rooney, 1994), the experiences I described earlier seem to indicate a persistent reluctance on the part of some students to take advantage of the opportunity to examine their interests and goals. Furthermore, there have been consistent reports of student dissatisfaction with academic advising (Beasley-Fielstein, 1986; Boyer, 1987; Fielstein, 1992; Koerin, 1991; McLaughlin & Starr, 1982). Early theorists, especially Crookston (1972) and O'Banion (1972), suggested that student dissatisfaction was due to an inadequate "prescriptive"

advising approach and that was why "developmental" advising was embraced (Crockett & Crawford, 1989). More recently, some have questioned whether the pendulum has swung too far in the other direction by focusing too strongly on developmental advising and not being sufficiently prescriptive. Some have suggested that taking only the developmental approach may not be appropriate for all students all the time. In some studies, students have indicated a preference for developmental advising (Wankat, 1986; Winston & Sandor, 1984b), but both students and faculty advisers sometimes seem uncomfortable with the demands of developmental advising. While developmental advising continues to be the recommended approach (Grites & Gordon, 2000), in more recent years, researchers have begun to question whether one approach is adequate for the diverse populations we serve (Andrews, Andrews, Long & Henton, 1987), yet there is little evidence to suggest that advisers adjust their advising styles to meet the needs of individual students despite students' needs being so diverse. The fact that advisers fail to adjust their styles to individual students may, indeed, contribute to student resistance to participation in advising.

Alexitch (1997) suggested that there is a correlation between a student's advising approach preference and his/her learning orientation. However, Marcia Baxter Magolda's work on cognitive development has suggested that students' thinking about how learning takes place and who controls learning changes as they develop intellectually. When I apply the work of Marcia Baxter Magolda to academic advising, it seems to indicate that students' advising approach preference may be more fluid than previously assumed; i.e., it may change as students' thinking processes mature. If

academic advising professionals were to be guided by the theories of educators and psychologists who have described young adult cognitive development, they might question whether students are actually capable of relating to an adviser in the way developmental advising requires, because at early stages of development, students see advisers as authority figures from whom they receive answers, and decisions as events that have correct, fixed answers. The whole notion of many possibilities for their academic and future careers is almost literally unthinkable.

<div align="center">Definition of Terms</div>

Academic Advising

An academic adviser is one who "will assist the student in effecting a program of study consonant with the latter's interests and competencies, . . . assist the student in periodic evaluation of academic progress, . . . [aid] in initial exploration of long range occupational and professional plans" (Hardee, 1970, p. 11). Hardee (1970) further asserts that an adviser should coordinate the learning experiences of the student through the integration of all the institutional services available to the student.

Prescriptive Advising

Prescriptive advising is generally understood as advising that focuses almost exclusively on intellectual development of students primarily through scheduling of courses to meet institutional requirements for graduation. The adviser generally initiates contact, is in an authoritative position, controls the agenda of advising sessions, and takes responsibility for decisions made.

Developmental Advising

Developmental advising seeks to integrate a student's intellectual needs with his/her career and personal (social/emotional) goals and needs. Developmental advising is more organic and relationship-based; it begins with the adviser guiding students to explore their interests, skills, values, and personalities in order to identify appropriate goals and then craft an academic plan to meet those goals. It provides a balanced focus on both traditional intellectual development, career, AND personal development, i.e., interpersonal interactions, behavioral awareness, problem-solving, decision-making, and evaluation skills. The advising relationship in developmental advising is one of shared inquiry and shared responsibility. Authority is not an important issue.

Intrusive Advising

The phrase "intrusive advising" is used denote a situation in which advisers initiate frequent contacts with advisees rather than waiting for advisees to contact them. While this study will not focus specifically on intrusive advising, it is often intertwined with developmental advising in that the additional contact between adviser and advisee that results from adviser contacts often is seen as the basis for the development of the more personal relationship advocated in developmental advising.

Cognitive Development

Cognitive [or intellectual] development theories help explain "*how* people think, reason, and make meaning of their experiences" (Evans, Forney, & Guido-DiBrito, 1998, p. 124). These theories postulate that the mind has structures or sets of assumptions that allow people to adapt to and organize their environments and that these "structures

change, expand, and become more complex as the person develops" (Evans et al., 1998, p. 124). People advance through stages of development by incorporating new information into their existing structures or adapting structures to accommodate stimuli that will not fit into existing structures.

<p align="center">Need for the Study</p>

Some research (Broadbridge, 1996; Creeden, 1990) has indicated that students prefer developmental advising and there has been widespread advocacy of the developmental advising among practitioners (Crookston, 1972; Ender, Winston, & Miller, 1982; Miller & McCaffrey, 1982; O'Banion, 1972; Thomas & Chickering, 1984), yet both individual experience and research indicate that this advising approach is not being implemented as widely as advising theorists would like (Gordon, 1994; Habley, 2004; Habley & Crockett, 1988; Pardee, 1994; Saving & Keim, 1998; Winston, 1994). And while thoughtful advising practitioners (e.g., Gordon & Grites, 2000) have suggested that from the beginning the discussion was intended to make the distinction between developmental and prescriptive more a continuum than a dichotomy, there has been little discussion of how an adviser might determine what approach to use most effectively under which circumstances.

Other researchers have begun to investigate possible factors that might influence students' preferences for advising approaches. Only a little research has been done to examine whether there are specific types of students who have correlating preferences (Andrews, Andrews, Long & Henton, 1987; Milburn, 1994; Fielstein, Scoles, and Webb, 1992).

Alexitch (1997; 2002) has asserted that student preference in advising style was correlated with whether they were mastery learners (intrinsically motivated) or performance learners (extrinsically, grade oriented); performance learners preferred prescriptive advising; mastery learners preferred developmental. While Alexitch did not state it explicitly, she seemed to assume that learning orientation is more or less static and implied, then, that advising preference would be, too. In fact, when Smith (2002) studied first-year students and seniors, he concluded that students' preferences for advising approaches appear to change over time.

McAuliffe and Strand (1994) argued for an advising approach that first identifies students' meaning-making assumptions and then challenges those assumptions in order to encourage student growth in complex thinking.

Weir (2003) conducted a quantitative study in which she began investigating whether there is a relationship between advising approach preference and psychosocial development. Weir's work is related to the questions I have raised; however, since academic planning is a decision-making process, another important question is whether advising style preference is related to *cognitive* development. While psychosocial development theory is concerned with what issues people face and how they define themselves, cognitive development theory is concerned with the thought processes more than content—the *how* more than the *what*. It is important to look at how students are making academic decisions as well as what they are considering.

These recent studies seem to indicate a need for further research into the relationship between student development, and cognitive development in particular, and

which approach to advising might be most readily received by students. To date, no studies of this type examining the possibility of a relationship between students' level of cognitive development with academic advising have been conducted; therefore, this study seeks to fill a void in the literature by addressing cognitive development and the role that it plays relative to the approaches taken by academic advisers. The results of this study will have important implications for students and for their academic advisers, as well as for administrators of academic advising programs.

Study Design

This study sought to examine possible student preferences in academic advising approaches. A mixed methodological approach was used. Quantitative measures were used to ascertain the relationship between students' preferences for academic advising approach and their levels of cognitive development. Participants from two small, private liberal arts colleges completed two instruments: The Academic Advising Inventory (AAI) to measure their preferences for advising approach along a prescriptive to developmental continuum, and the Measure of Epistemological Reflection (MER) which assesses levels of cognitive development qualitatively. A further qualitative component, open-ended interviews, provided a deeper insight into students' thought processes regarding their advising approach preferences. Information gained through interviews was used to check the quantitative data in the study and offered additional variables for consideration. The combination of methodologies is a unique approach to the study of student preferences for academic advising approaches.

Organization of the Study

This study is organized into five parts: introduction; review of the literature; method and design; results; and summary, conclusion and recommendations. The introduction includes a discussion of the problem, the study's purpose and research questions, definition of terms, need for this study, and its organization and parameters. The review of literature includes a background on academic advising and advising styles and background on cognitive development theory. The method and design section includes a description of the institutional contexts for this study, a description of the participants, the instruments used, interview protocols, and procedures. The results section includes a summary and analysis of data collected. The final section includes discussion, conclusions, recommendations for further research, and implications and suggestions for practice in the field of academic advising.

Parameters of the Study

Obviously any study involving student behavior, and perhaps the behavior of young adults in particular, is a complex one. This study is limited to two relatively small, private, liberal arts, church-related colleges in the Midwest. I am studying only traditionally aged male and female undergraduate students. Furthermore, because both institutions are private and small, only faculty members serve as advisers; there are no professional advisers. Some participants will have had more than one adviser and some, especially first-year students, may have had limited experience with their advisers. Therefore, careful attention should be paid to context when applying conclusions of this study.

CHAPTER 2

LITERATURE REVIEW

Introduction

This chapter will provide an overview of the multiple literatures that undergird

this study. It will include a review of literature related to the definition of academic

advising and the importance of advising for today's students and institutions. Further, it

will examine literature that explains the differences in and history of prescriptive and

developmental advising approaches; the widespread acceptance of the developmental

approach, evidence of the efficacy of the developmental approach; and recent challenges

to universal implementation of developmental advising. Finally, the chapter will provide

a summary of the cognitive development theory as articulated by Marcia Baxter

Magolda, a useful conceptual framework for the discussion of the relationship between

academic advising and student development theory.

Definitions of Advising

Advising has evolved from "a simplistic, perfunctory course scheduling activity

performed primarily by teaching faculty to a more integrated and complex process

designed to facilitate student growth and development" (Crockett, 1985, p. 246). An

academic adviser/personal tutor is one "who provides a combination of academic,

professional, and personal assistance" (Broadbridge, 1996, p. 97).

Even as recently as 1990, there seems to be widespread disagreement of what

constitutes "good" advising and what the role of an adviser is. The definition shifts

depending on who is involved (what the expected role is for faculty advisers may be

different from full-time professional staff advisers or peer advisers) and where the student is in his/her program (advising may be different for declared majors versus those exploring major options) or where s/he is being advised (advising expectations differ from department to department, particularly in larger universities). Smaller institutions may assign a student to an adviser and expect the adviser and advisee to develop a relationship based on understanding the students' goals and abilities. At larger institutions advising may be more of a clerical function and the student may see a different adviser each time s/he has a question or needs a signature. Expectations regarding what constitutes advising change significantly depending upon whether one is asking advisers, particularly faculty advisers, or students. For example, in one study faculty indicated that they feel most qualified and interested in discussing academic plans and evaluating a student's academic progress and don't necessarily feel it is appropriate or that they are prepared to discuss life goals, develop decision-making skills or work with the student to enhance self-understanding (Creedon, 1990). However students in Creedon's study indicated that they wished advisers had discussed personal problems, life goals, choosing or changing majors, choosing instructors, study skills improvement options, tutoring and academic difficulties, decisions regarding withdrawing or transferring, graduation requirements, graduate school plans, and choosing a career, as well as their academic progress, scheduling and registration, and drop/add procedures.

Care must be taken not to confuse advising in this broader developmental sense with psychotherapy or personal counseling. "The focus of advisement remains a student's academic self, not simply in the narrow sense of one who absorbs knowledge,

takes courses, and completes requirements, but in the broader sense, which includes the integration of the academic self with one's other selves" (Crockett, 1985, p. 247). The idea is to integrate career/life planning with academic advising to "assist students in developing a personally relevant educational and career plan" (Crockett, 1985, p. 247).

Developmental advising should include assessing a student's interests, abilities, goals and values. Then students can use that self-information to explore and select appropriate educational and career goals. In the process, students are learning decision-making skills and means for implementing their plans.

"Academic advising is a developmental process which assists students in the clarification of their life/career goals and in the development of educational plans for the realization of these goals" (Crockett, 1985, p. 248). Important ingredients are decision-making, communication, information exchange. It is the responsibility of BOTH the adviser and advisee with adviser acting as facilitator of development and developing decision-making skills.

<u>The Importance of Advising in General</u>

Academic advising plays a key role in institutional interaction with students affecting their satisfaction, success and persistence. "Good advising may be the single most underestimated characteristic of a successful college experience" (Light, 2001, p. 81). According to the most recent ACT national survey on the state of advising, the majority of advising is still done by faculty (Habley, 2004), and students want more interaction with faculty (Light, 2001). While students Light interviewed reported being shy about seeking out an adviser, they repeatedly expressed the benefit of having an

adviser who knew them personally. Light further noted that especially new students are faced with many decisions and that the results of those decisions can either open or close future opportunities, so students need guidance. Advising is often the only guaranteed venue for out-of-class interaction. "Advising is sometimes the only structured relationship that links students with concerned representatives of the institution" (Frost, 1991a). Students who interact with faculty members are more satisfied with college experiences (Astin, 1977). Studies also indicated that students who have outside-of-class interaction with faculty have a number of positive outcomes. Successful students credited good advising with raising "unexpected questions" that were "critical to their success" (Light, 2001, p. 81). Pascarella's (1980) critical review and synthesis of literature related to informal faculty-student contact described studies from 1959 through 1980 that all indicated informal student-faculty contact has had positive effects on students including their educational aspirations, their attitudes toward college, their academic achievement, intellectual and personal development and institutional persistence. Additional studies focus specifically on faculty-student contact and academic achievement. A study by Centra and Rock (1971) at twenty-seven small liberal arts colleges measured, among other variables, the "extent to which students feel that the faculty are interested in teaching and in students as individuals" (p. 625). Their study controlled for incoming student academic ability, and the results showed that faculty-student interaction tended to be linearly related to achievement as measured by Graduate Record Examination scores. Pascarella and Terenzini's 1978 study at a large private institution established that the frequency and length of student-faculty informal

relationships may make a significant contribution to first-year student academic achievement (as measured by grade point average after controlling for in-coming variables) and students' own perceptions of their intellectual and personal development. Notably their study found that growth in these areas was most affected when interactions were focused on intellectual or course-related matters (as would be typical in an advising session) and interactions focused on career concerns correlated with students' perceived personal development. That type of discussion is exactly what has been suggested in the developmental advising model. Nevertheless, it should be noted that most of the studies discussed in this section do not focus on advising specifically, and that is, I think, a weakness in the literature in that the distinction is not clear between the effects of *any* type of informal student-faculty contact and advising interactions in particular.

In addition to affecting student satisfaction and success, advising is a meaningful retention tool (Crockett, 1978; Grites, 1979). Pascarella and Terenzini's 1980 study developed a model predictive of student persistence. They found that faculty accessibility, informal contact and students' perceptions of faculty concern for student development and teaching were correlated with student persistence. Habley (1982) developed a model which detailed factors related to retention and showed their relationship to advising specifically. He identified reasons students stay in college:

- programs that match students' educational goals,
- course work and other educational experiences that are related to those goals,
- an appropriate level of challenge to stimulate students and prevent boredom,
- demonstrated concern for the student as an individual

- a ratio of rewards consistent with efforts and abilities. If the ratio is low, either the students are not being sufficiently challenged or they are performing substantially below their expected level.

Each of these reasons is most often and most effectively addressed as advisers help students explore their goals, find programs to meet those goals, and choose course work within the academic program appropriate to their goals, interests, and abilities. The one-on-one advising relationship is conducive to demonstration of institutional concern for the individual student.

A major reason why advising is more important now than ever before is that there have been significant changes in the student population in the last 60 years. Because of the GI Bill of the late 1940s and the baby-boom expansion of the 1960s, there was a huge increase in the number of students attempting post-secondary education. "In 1940, there were approximately 1.5 million degree students enrolled in institutions of higher education; by 1955 the figure had grown to more than 2.5 million and by 1965 to more than 5.5 million. (In 1992, the number of students had increased to nearly 14.5 million.)" (Kaplan & Lee, 1997, p. 8). Larger numbers precipitated the need for new methods of delivering educational services. In addition to the growth in size of the student body, there were also significant changes in the demographics of those attending colleges and universities (Rooney, 1994). New federal financial aid spurred increased participation in higher education by new social, economic and ethnic groups. The prevailing attitude in society changed; college began to be viewed as a needed credential for personal and professional success. One consequence of the GI Bill was higher education took on the

air of a right rather than a privilege (Kaplan & Lee, 1997). Students whose families did not have experience with the conventions of higher education needed a different kind of guidance than those who grew up with the expectation that they would attend university. Thus, advising has had to adjust to meet the needs of more students from diverse backgrounds. It has also needed to address the sheer complexity of things—having more students has meant more complexity in terms of relationships and interrelationships and majors and choices and other phenomena.

Beginning in the 1980s, as demographics shifted again and the numbers of students hit a plateau, there was increased competition for students among institutions. Retention became a critical factor for institutions, particularly traditional liberal arts schools. So insofar as advising can help students meet their goals successfully and thus improve student persistence (Crockett, 1985; Hartman, 1991; Hornbuckle, Mahoney, & Borgard, 1979), advising is important from the point of view of the institution (Greenwood, 1984) as well as the individual student.

Survey research by Hornbuckle et al. (1979) revealed that students regard their advisers as "their personal link with the university or college organization" (p. 299). The researchers note that the importance of the advising relationship should not be underestimated as their study indicates students value the interpersonal relationship more than advisers' technical expertise in the curriculum and institutional policies. They assert that an earlier unpublished manuscript by Fidler, Gardner, Hiers, Zuidema, and Meabon (1978, University of South Carolina, *University 101: A model for student and faculty*

development) linked faculty advising to retention. Meaningful contact with advisers can

reduce student attrition (Astin, 1977; Cesa, 1980; Pascarella, 1980).

Conversely, studies also indicate that the lack of advising can be detrimental:

Inadequate counseling and advising were identified as major barriers to students'

satisfaction (in a study of advising needs of women engineering students; Anderson,

1995). In a series of interviews conducted in 1984, second and fourth-year students

indicated that they were more satisfied with the advising experience if advisers knew

them as people, i.e., knew them by name and recognized them in the halls and took an

active interest in the students (Beasley-Fielstein, 1986). Since it is widely agreed that

advising is important and influential, then the discussion turns to how advising should

best be accomplished.

<p align="center">Advising Approaches: Developmental v. Prescriptive</p>

The roots of the student development movement may be traced all the way back

to the Student Personnel Point of View (American Council on Education [ACE], 1937)

which "placed emphasis on the development of the student as a person rather than upon

his intellectual training alone" (p. 1). That approach both articulated and labeled what is

known in the field of college student personnel in higher education as "college student

development" and was reinforced in the 1949 revision: "The development of students as

whole persons interacting in social situations is the central concern of student personnel

work and other agencies of education" (NASPA, 1989, p. 1). However, this approach

was not directly applied to academic advising until Crookston made the connection in his

seminal article in 1972. He asserted that since advising is an extension of teaching and

since preparation for professional life should happen in the context of one's overall life plan, the goal of advising should be to "[facilitate] the student's rational processes, environmental and interpersonal interactions, behavioral awareness, and problem-solving, decision-making, and evaluation skills" (p. 12). He contrasted the traditional [historic] academic advising relationship, which he termed "prescriptive," with the student development-oriented academic advising relationship, which he termed "developmental." In the prescriptive approach, authority is held by the adviser, and the student's responsibility is to carry out the advice given about academic program plans. In the developmental approach, authority is shared between the student and the faculty adviser, and the advising is aimed at the building of a relationship between adviser and advisee that encompasses all spheres of the student's growth, that draws on resources across campus to facilitate the student's learning, and that is goal-related and collaborative. This shift in advising approach from faculty authority to shared authority was consistent with the political tenor of the late 1960s and early 1970s when rebellious students challenged faculty authority to dictate courses of study and insisted on "relevance" to their lives in their curricula. It was thus consistent with the decreasing *in loco parentis* role of institutions in regard to moral and ethical development of students. At about the same time, O'Banion developed a model of advising, in which he described five dimensions of developmental academic advising: exploration of life goals, exploration of vocational goals (life goals extended into the world of work), program choice, course choice and, finally, scheduling of courses (1972). O'Banion's model provided a concrete structure for the concept of developmental advising.

Widespread Acceptance of Developmental Advising Model

It is only relatively recently that academic advising has been recognized as a distinct field in higher education; the first national conference on the subject was convened in 1977. Yet from the early days, the concept of developmental advising has been embraced by theorists and practitioners in academic advising. As early as the third national conference, the same year that the National Academic Advising Association (NACADA) was incorporated, the theme for the national conference was, "Advising as a Developmental Process." Literature in the field rapidly adopted the concept. In their 1984 book, *Developmental academic advising: Addressing students' educational, career, and personal needs,* Winston, Miller, Ender, Grites and Associates described the theoretical foundations for developmental advising and outlined the processes and organizational structures needed to implement such an approach to advising. The developmental approach to advising remains the accepted norm to date. As of 2006, NACADA has over 9,100 members (Flaherty 2006). They are guided by the NACADA statement of core values, which describes the advising relationship in a way that is consistent with the developmental approach. The statement asserts that advising is a cooperative effort between advisers and students in which advisers help students

> become more responsible, set priorities and evaluate sequences of events, . . .
> encourage self-reliance by helping students make informed and responsible
> decisions, set realistic goals, and develop thinking, learning, and life management
> skills to meet present and future needs. Advisers work with students to help them
> accomplish the goals and objectives they have established for themselves.
> Advisers encourage students to be responsible for their own success and progress.
> (NACADA, 1994)

The Council for the Advancement of Standards in Higher Education, a book of standards endorsed by thirty-seven professional organizations and associations in higher education, states that "the primary purpose of the AAP [academic advising program] is the development of meaningful educational plans that are compatible with their [students'] life goals" ("Academic Advising: CAS Standards and Guidelines," 2005), a statement very similar to that contained in the O'Banion model of priorities in advising.

<u>Discrepancy Between Theory and Practice</u>

The acceptance of the developmental approach is recognized as an accepted ideal in the field (Gordon, 1994). However, it is not consistently practiced (Habley & Crockett, 1988; Saving & Keim, 1998). Gordon (1994) suggests reasons why this may be so:

1. Advisers do not have time for frequent contact with individual advisees due to large numbers of advisees.

2. Advisers, especially faculty advisers, often do not have the background or expertise in human development theory or the communication skills needed for developmental advising.

3. Advisers lack training in developmental advising skills, in the particular needs of diverse or high-risk populations, and in referral resources.

4. Students may not be motivated to participate in developmental advising as they perceive advising as being limited to scheduling and registration and advising sessions are not required by institutions.

5. Administrators may not understand the value of advising, particularly as it relates to retention, and so may not support or fund advising.

6. Especially in larger institutions, advising may be decentralized; therefore, it is difficult to implement a common advising approach across units.

7. There is neither time nor support for evaluating advising to determine how it is being delivered.

Pardee (1994) concurs that advising loads, lack of adviser training, evaluation, and rewards inhibit the implementation of developmental advising. She agrees that large advising loads preclude advisers from developing the types of trusting relationships with advisees conducive to developmental discussions. She further suggests that old habits are difficult to break, particularly if students and faculty do not see a need to change. Prescriptive advising is easy and efficient, and when benefits for all involved are long term rather than immediate, and are not considered in institutional reward systems (including tenure and promotion decisions), there is little incentive to engage in developmental discussions.

<div align="center">Efficacy of Developmental Advising</div>

There have been some studies indicating that developmental advising is effective. Frost's (1991a) work indicates that a system where faculty advisers and advisees share responsibility for the student's decisions and progress and where faculty advisers work with other divisions of the institution (such as student affairs) to provide resources for the student leads to student satisfaction and increased rates of student persistence. The concept of shared responsibility between adviser and advisee and across institutional

divisions is a characteristic of developmental advising. Kern and Engels (1996) described a change in a College of Business Administration advising program based on a review of literature and the results of a survey of their own students that indicated a preference for additional advising activities characteristic of developmental advising such as receiving assistance in development of individual goals, instruction in study skills, and information on and discussion of career options with a faculty adviser. Changes in the advising program included hiring additional advisers, staff development for current advisers, and the addition of an associate dean who had background in counseling and student development. A few studies have begun to look at the benefits of developmental advising for specific populations of students, including adult learners, women, people of color, and gays and lesbians (Raushi, 1993; Herndon, 1996); while a study of college freshmen (Crockett & Crawford, 1989) examined advising style preference by gender, race, and age.

<div align="center">Developmental Model Challenged</div>

Some critics feel it is time to reexamine the broad acceptance of developmental advising as being universally appropriate for all students. Several other writers have suggested the need to apply specific student development theories to developmental advising practice. Carberry, Baker, and Prescott (1986) recommended that advisers do an informal assessment of students' level of cognitive development on the Perry scale by asking students to complete sentence stems and then use the results to provide advising appropriate to the students' levels of cognitive development. McAuliffe and Strand (1994) argued that advisers can enhance students' development by identifying students'

meaning-making assumptions and challenging those assumptions while providing appropriate support. These authors acknowledge that others have suggested viewing advising as a developmental intervention, and they suggested that Robert Kegan's constructive development theory (1982) might be an especially appropriate framework to use in working with college students. They described Kegan's three stages or "balances" of adult development and indicated that the first two may be most useful to advisers. The stages are interpersonal, in which the young adult relies on others to define what is real and important; institutional, in which students seek to establish themselves and their own theories of how to think and act; and the interindividual balance, the final stage in which a dialectical relationship with the world in which evolving commitments can be made and reviewed. McAuliffe and Strand suggested formal and informal means of assessing students' stage or balance and argued that advisers of students in the interpersonal stage can challenge them to seek evidence and make decisions based on that rather than strictly on the opinions of family and friends. Students at the institutional balance need both challenge and support as they seek to define their own decisions. Jordan (2000) reviewed the work of E.H. Erikson and Chickering's vectors of development. She reminded practitioners that these theorists posit that development is recursive and so it is important for advisers to understand all stages of development so that they "can help students integrate their individual life cycles with life goals" (p. 24). Upcraft (1995) gave an overview of several categories of theories from the 1960s to the present. He included psychologists Skinner, Erikson, and Rogers; career theorists Parsons, Super and Holland; psychosocial theorists Chickering, Perry, and Kohlberg; and cognitive development

theorists Kolb, Kitchener and King, and Baxter Magolda. He suggested that an awareness of these theories will provide advisers with a context for advising and aid in building relationships with students. Similarly, DeVries and Tisinger at a NACADA regional conference presentation (2003) described the work of Sanford (1966), Chickering and Reisser (1993), Josselson (1987), Perry (1968), Belenky, Clincy, Goldberger, and Tarule (1986), and Kohlberg (1980) and suggested that knowledge of all these theorists' works would be useful to advisers. Fielstein (1987) also mentioned Kohlberg and Perry, and added Super, Erikson, and Loevinger. Grites and Gordon (2000) asserted that the work of Winston et al. (1984), early proponents of developmental advising, is "clearly based on developmental theories, notably those of Perry, Super, and Chickering" (p. 13). It is common knowledge that practice is or should be rooted in theory and that theory should inform practice. Yet little research has been done to examine the specific connection of these theories and advising practice.

Hemwall and Trachte (1999) criticized the acceptance of the developmental model of advising and suggested replacing it with the educational concept of praxis instead, since they believe developmental advising overemphasizes social and emotional development at the expense of intellectual development. However, their criticism was rebutted by Grites and Gordon (2000) who argued that Crookston's theory has been distorted to place an unbalanced emphasis on personal development and that the intention was always both that AND intellectual development, i.e., interpersonal interactions, behavioral awareness, problem-solving, decision-making, and evaluation skills.

Some have argued for a more sophisticated approach than a dichotomous arguing of the merits of either developmental or prescriptive advising. Brown and Rivas (1994) maintained that "Crookston erred in his presentation of the prescriptive versus relational aspect of advising. These two advising approaches should not be placed in opposition. Rather, they are better placed on a developmental continuum, one where an adviser at first notes that a student needs a more prescriptive advising relationship to get grounded both within the advising relationship and the college experience" (p. 109). Brown and Rivas went on to note that a prescriptive approach might be beneficial for less experienced advisees, such as some students of color, some international students, and first-generation college students. Fielstein (1994) cautioned that using the Academic Advising Inventory forces students to choose one style or the other somewhere along the continuum when in fact they may have preferred to answer that they want and need both authoritative information and assistance in making their own decisions or that they need prescriptive elements as pre-requisites to developmental advising. Jordan (2000) argued for recognition of the idea that student development is frequently recursive, so she suggested that advising may need to move along a prescriptive-developmental continuum to meet individual student needs. Laff (1994) also noted the complexity of developmental theories and argued that students grow when faced with crises or incongruities and advisers need to have specific strategies to support students in these times of transition.

Modify Advising to Meet Specific Student Needs

Some scholars have begun to question whether the needs of the student might not be better served if the advising approach were adapted based on specific student characteristics, particularly given the significant changes in demographics in the student population over the lasts two decades (Rooney, 1994).

Indeed, researchers have begun to investigate what characteristics might correlate with different advising approach preferences. Milburn (1994) found that while all students in his study reported a preference for a more developmental advising style, women preferred developmental advising to a statistically significant higher degree than did men and black males reported less preference for developmental advising style than white students. Fielstein, Scoles, and Webb (1992) found that non-traditional students (those outside the 17-24 age bracket) rated developmental advising as less important than traditional aged students. Younger students sought advising on career and personal counseling matters, topics typical of developmental advising, more frequently than older students in a study by Jaffe and Huba (1990). On the other hand, Crockett and Crawford (1989) found no difference in advising style preference based on age. They further established that there was a difference in strength of preference between men and women, and across different personality types. Students who were more intuitive and feeling on the Myers-Briggs Personality type indicator scales had stronger preferences for developmental advising. However, all the students in their study preferred developmental advising style; the difference was just in the strength of preference. A study by Andrews, Andrews, Long and Henton (1987) revealed that age and emotional

expressiveness were important predictors of students' advising needs with younger and more emotionally expressive students indicating a stronger need for information. In addition, they found that students with lower grade point averages expressed a need for more personal support and assistance. Broadbridge (1996) suggested that while students generally preferred a developmental approach, their "perceptions of the role of the adviser changed as they progressed through their academic career" (p. 105). She found that a caring approach and more adviser control were desired early in the relationship, but control became shared as the relationship developed (though this did, of course, vary among students). It is also notable that her study excluded first-year students. Yet her study reinforced the idea that students value both developmental and prescriptive approaches early on and grow more comfortable with a developmental approach as they mature. She suggested that advisers clarify expectations regarding the roles students and adviser play in the advising relationship early in interactions with new advisees.

Along similar lines, Smith (2002) suggested that most research had been done on upper-class students and since first-year students had often been excluded, their needs and how they differed from upper-class students had not been understood. His study concluded that while students wanted both mentoring and information, "prescriptive academic advising . . . meets student needs and expectations [and] can be used to initiate developmental interactions . . . " (p. 46). However, he conceded that men were over-represented in his study and therefore concluded that further research is needed. All these studies have identified a developmental or maturational element. In fact, Crookston (1972) and Winston, Ender, and Miller (1982) stated that advising needs change as the

relationship between adviser and advisee develops, but little has been written about when or how those changes could and should occur.

There has been a limited amount of research examining the connection between advising and development theory. Frost (1989) examined the effects of frequency of advising contacts and student cognitive development and found more frequent contact between students and advisers had a positive relationship with student cognitive development. Gordon and Kline (1989) studied ego-identity statuses of undecided and decided students and their perceived advising needs. They studied students who were both decided and undecided about their majors and assessed their identity development at one of four stages: diffusion (no commitment to major, but had explored options); foreclosure (committed to a major without exploration); moratorium (uncommitted, but exploring); and identity achieved (explored and committed to a major). They discovered that both undecided and decided students' desire for both information from their advisers and a caring environment varied in correspondence with their stage of identity development. The more a student is undecided and in moratorium, the more personal support was desired from the adviser. Students who had achieved identity status still needed both information and a caring environment. The authors asserted it was important to ascertain the degree of commitment a student had made. Matosian (1999) related psychosocial development as measured by the Student Development Tasks Lifestyle Inventory (SDTLI) to student satisfaction with advising, and he found that students ideally want to receive some developmental advising regardless of their college affiliation (College of Letters and Sciences or College of Agriculture and Life Sciences),

achievement of student development tasks, and decidedness of major. Weir (2003) researched advising preference and psychosocial development and found that while students in general prefer developmental advising, they may prefer both developmental and prescriptive advising depending upon the task at hand.

Alexitch (1997) examined student preferences for advising style related to learning orientation. She found that students who were more grade/performance oriented did not embrace developmental advising as readily as those who had a broader, more mastery/learning oriented approach. Those who were grade-oriented placed more emphasis on the need for policy and procedural issues than on life goals. She also found that female students had a desire for more frequency of contact with advisers and a more developmental approach. However, her research seems to assume that learning orientation is static and does not change with students' cognitive development.

Therefore, I think this is an area where further research is needed. In particular, since advising is aimed at helping students make reasoned decisions, there seems to be a need for measuring the relationship of prescriptive or developmental approaches to advising with cognitive development. This study is an attempt to do just that: measure the applicability of one cognitive development theory, that posited by Marcia Baxter Magolda (1992), to advising preference and then look at the implications for advising practice.

Baxter Magolda's Stages of Intellectual Development

Baxter Magolda developed a scheme of cognitive development that builds on the work of William G. Perry. In turn, Perry acknowledged that he was influenced by the

work of Piaget and other developmental psychologists such as Kohlberg. In order to make the connection to young adults, Perry also built on the work of Nevitt Sanford (1962, 1966) and Roy Heath (1964). Perry (1970) suggested that students' cognitive development progresses through four positions with respect to knowing, making meaning, and making commitment: dualism, multiplicity, relativism, and commitment to relativism. He asserted that development actually occurrs during the *transitions* between positions rather than within each one.

When at the dualism position, students view knowledge and authority as absolute. They see answers as coming from those in authority and questions as having answers that are clearly either right or wrong. When at a multiplistic position, students begin to recognize that on complex issues, even authorities may disagree. However, they are seldom able to analyze the strength of one authority's argument over another and hence adopt the attitude that any one opinion—whether their own, their peers' or an authority's—may be as good as another at least until additional information becomes available. When at a position of relativism, students begin to recognize a need for support for arguments and that it is possible to for one proponent to make a stronger case than another, yet sometimes reasonable people can disagree and there may be more than one valid argument. Beyond this stage, the development shifts from increasing cognitive complexity to ethical development as the student becomes committed within relativism. Perry further asserted that this growth is not a steady, linear process. There are periods of temporizing (a sort of pause for reflection), escape, which "involves an abandonment of responsibility characterized by alienation" (Evans et al., 1998, p. 133) and retreat moving

temporarily back into dualism. In the more detailed version of his model, Perry elaborates, further subdividing these positions into nine positions. The first four are elaborations on dualism; position five is pivotal, the point of contextual relativism and relational knowing; the last four are either in anticipation of or the experience of commitment (see Appendix O). While Perry's work is foundational, the population he studied was limited; he studied primarily white men at Harvard, so there were limitations not only of gender, but also of institutional type and socioeconomic factors.

Baxter Magolda's theory of cognitive development seems more useful for this study. Her work has built on Perry's and others. In addition to Perry, she urges scholars using her framework and assessment instruments to be aware of the work of Belenky, Clinchy, Goldberger, and Tarule (1986) as well as King and Kitchener (1994). Her work is qualitative, longitudinal, and synthesizes ideas from Perry, Belenky et al., and King and Kitchener. The early stages of her work, those relating primarily to undergraduates, are reported in her book *Knowing and Reasoning in College: Gender-Related Patterns in Students' Intellectual Development* (1992). In that work Baxter Magolda described four types of "knowing": absolute knowing, transitional knowing, independent knowing and contextual knowing. She included both men and women in her interviews and discovered gender-related patterns within each type.

Her absolute knowers, similar to Perry's dualists, viewed knowledge as certain. However, she subdivided this group into two: received knowing and mastering knowledge. Received knowers tended to be more private and silent, less expressive, have fewer interactions with instructors, and preferred abundant opportunities to demonstrate

their knowledge to their instructors. This style tends to be more typical of women.

Mastery knowers also viewed knowledge as certain but prefer to "talk it out" as a way of

processing. They challenged peers and instructors in order to get at the Truth. This

approach sometimes seemed competitive, emulative of authority, and was favored more

often by men. (Key differences include talking versus listening, the degree of

identification with authority, and mutual challenge versus mutual support among peers).

Baxter Magolda's transitional knowers accepted that some knowledge is

uncertain. Like Perry's multiplistic knowers, they came to recognize that even authorities

may disagree. However, within Baxter Magolda's transitional knowers category, she

again saw two patterns within this stage: interpersonal knowing and impersonal

knowing. Interpersonal knowers were more frequently women who tended to share and

collaborate on ideas and build rapport with their instructors while impersonal knowers,

more often men, tended to value being challenged to think independently and to test their

ideas by debating their merits. While there was less silence at this stage than among the

earlier received knowers, a difference in relationship to authority persisted between

interpersonal and impersonal knowers at this stage. The interpersonal knowers were less

quick to identify themselves with the authority than the impersonal knowers were.

Independent knowers have come to view knowledge as mostly uncertain.

Promotion of independent thinking and opinion exchange are valued. Again, Baxter

Magolda found a subdivision pattern that was gender related. Within the independent

knowers there seemed to be those she termed interindividual knowers (most often

women), who valued both their own ideas and those of others, and individual knowers.

While individual knowers acknowledge the importance of others' ideas (both peers and instructor), they prize thinking for themselves.

Contextual knowing is Baxter Magolda's final stage. At this stage, knowledge requires credible evidence and is constructed collegially in an environment conducive to learning. This stage is rarely reached by undergraduates. In her more recent work (Baxter Magolda, 1995) in which the author interviewed participants beyond their college years, she determined that the gender-related differences seem to merge at this stage.

Since academic advising is about decision-making (both in the short and long term), it seems only reasonable that knowing more about how students think and make decisions might have an impact on how best to go about advising them.

Conclusion

In this chapter I have reviewed the body of work pertaining to the definitions of advising, the overall importance of advising, the prescriptive and developmental approaches to advising, and trends in both thought and application within the field today. Finally, I have identified the relationship between cognitive development and students' preferences for academic advising approach as an area where further study is needed. In the next chapter, I will describe how I intend to approach that study.

CHAPTER 3

METHODOLOGY

Introduction

This chapter describes the methodology used in this study. I begin by reminding readers of the research questions and describing the rationale for the design of the study. Detailed description of the setting of and participants in the study is provided to allow readers to assess the transferability of the results. I describe instruments used in the study, procedures followed, and detail the process of data analysis.

Research Questions

The questions this study seeks to answer are:

1. Is there a relationship between student preference for academic advising approach along a prescriptive to developmental continuum and a student's level of cognitive development?

2. Is there a relationship between gender and preference for academic advising approach?

3. What other factors influence student preference for academic advising approach?

4. What other factors affect students' academic advising experiences?

Method and Design

This study combined quantitative and qualitative methodologies in order to obtain both measurable results in the post-positivist tradition and to allow for in-depth examination of the advising experience in the phenomenological tradition. In the first phase of the study, student preferences to advising approaches were measured using the

multiple-choice Academic Advising Inventory. Use of quantitative measures is consistent with a long tradition of scientific research and provides data that lend reliability and validity to this study.

Two qualitative approaches were used as well. The Measure of Epistemological Reflection, a short-answer instrument, was used to arrive at an assessment of each student's level of cognitive development, and representatives of those levels of cognitive development were selected to participate in semi-structured interviews. Use of the short-answer instrument and open-ended interview questions allows participants to construct their own responses to prompts and allows them to describe their learning and advising experiences in their own way. This constructivist approach recognizes that the advising experience, like all human experiences, is complex and may be better understood if participants are asked to respond to open-ended questions. Their comments were analyzed to look for unanticipated contributors to the advising experience.

Combining the two methodologies is consistent with the pragmatic philosophy of research. That is, knowledge can arise from situations inductively rather than deductively as in the post-positivist approach. In this case, I have observed what I believe is a problem in academic advising: some students are resisting taking advantage of the full range of advising services that could be to their advantage. To begin to shed light on this problem, I examined the situation in an attempt to gather data in multiple ways. The focus of the mixed methodology approach is on finding "what works" (Creswell, 2003). The qualitative approach complements the quantitative data. It "opens the door to

multiple methods, different worldviews, and different assumptions as well as to different

forms of data collection and analysis..." (Creswell, 2003, p. 12).

<div align="center">Setting and Institutional Demographics</div>

I conducted this study at two private, liberal arts, church-affiliated, mostly

residential institutions with undergraduate, largely traditional-aged (17-23) populations of

approximately 1,800 students each in the Midwest. At the time data was collected, the

student body at College A was 54.8% female and 45.2% male; at College B, 51.3%

female, 48.7% male. An additional similarity between the two institutions is that both

schools have concerns about persistence rates, particularly of first-to-second-year

students, and about male students specifically. While the two institutions are much alike,

they do have some differences that will add richness to the study. College A is affiliated

with the Evangelical Lutheran Church in America; College B is an Archdiocesan Roman

Catholic institution. The academic profile of entering students is somewhat different.

For fall 2004, the middle 50% of in-coming first-year College A students entered with

ACT scores ranging from 21-27 while new first-year College B students in fall of 2004

had a slightly lower academic profile; the middle 50% of students there had ACT scores

ranging from 20-25. This range had been relatively constant at both institutions for the

three years just prior to data collection. This is important because academic achievement

is one predictor of both student satisfaction and persistence to graduation and may,

therefore, have implications for recommendations advisers might make.

The settings for the two schools also have both similarities and differences.

College A is located in a Midwest town of approximately 10,000 people and attracts

primarily small-town students; over half the students come from high schools with graduating classes of fewer than 100 students. Nevertheless, the school has achieved strong diversity numbers for a college its size; while 75.6% of the student body were in-state students and another 13.9% from contiguous states, students have come from as many as 30 states and 5.4% of the student body were international students from 34 countries outside the U.S. College B is located in a larger metropolitan area (the county is 90,000 people; the city is 60,000+) and draws more students from a large city and its suburbs a few hours' drive away. It has had a significant transfer population (18.8% of College B undergraduates were transfer students in 2004. College A includes 7-9.9% transfer students in each new class.) Unlike College A, College B offers some graduate programs. Nonetheless, its student body is more homogeneous ethnically. College B has a smaller percentage of American ethnic (3% students of color both graduate and undergraduate compared to 6.5% of undergraduates at College A) and international students (2.3% from 11 countries) than does College A. However, in the final analysis, both institutions have small numbers of students of color.

Both institutions rely on faculty to deliver academic advising services. College A has committed significant institutional resources to adviser development since 1996. Adviser development has only recently been a focus at College B since a change in administration three years ago. Furthermore, the delivery model of advising for the two schools is different. College A assigns advisers based on students' indication of major preference from initial registration for their first year. College B assigns registration counselors on the basis of probable major interests, then first-year advisers who also

teach the first-year seminar in which students are enrolled. Once students move into their

second year and declare a major, they are transferred to advisers in their academic field.

However, approximately half of the second year students continue to work with their

first-year seminar professor as their adviser well into or even throughout their second

year. (Of the first-year students who entered College B fall of 2003, 50.4% are listed as

still being advised by their first-year seminar instructor/adviser at least during fall term

2004; H. Gao, personal communication, August 12, 2005; E. Waldstein, personal

communication, August 10, 2005).

<div align="center">Participants</div>

The sample for this study was selected from students enrolled in courses spanning

the four years, i.e., first-year courses, lower-division courses, and upper-division courses,

an intentional stratification designed in the hope of including students with varying levels

of cognitive development.

A total of 173 students participated. See Table 1 for information on distribution

of participants by institution, classification, gender, and educational background.

Participants included students studying 25 different academic majors. The

inclusion of men was particularly important as the two institutions from which I drew

participants for this study are faced with more attrition among males than females, so

gender-related patterns of decision-making were of interest. While a pool of participants

varied by ethnicity, socio-economic status, and sexual orientation would have added

interesting variables, those were beyond the scope of this study, particularly in light of

the fact that both institutions from which participants will be drawn have heavily

homogeneous populations.

Table 1

Demographic Characteristics of the Participants

Characteristic	Number	Percent
Institution		
College A	109	63
College B	64	37
Class		
1Y	52	30.1
2Y	51	29.5
3Y	39	22.5
4Y	31	17.9
Gender		
Male	84	48.6
Female	89	51.4
Educational Background		
First generation college	88	50.9
Parents with BA or higher	85	49.1
Total	173	100

<center>Instruments</center>

The instruments selected for this study provide data regarding students' preference

for advising style and level of satisfaction with the advising they have received and their

level of cognitive development. Data were obtained by administration of two

instruments: The Academic Advising Inventory (Winston & Sandor, 1984a) and the

Measure of Epistemological Reflection (Baxter Magolda & Porterfield, 1985; Baxter

Magolda, 1992).

<u>Academic Advising Inventory</u>

The Academic Advising Inventory (AAI), developed by Winston and Sandor

(1984a; Appendix A), is a standardized instrument in four parts designed to measure

students' satisfaction with advising and their preferences for advising style along a

continuum from prescriptive to developmental. It is a nationally normed test that has

been demonstrated to be valid and reliable for this purpose (Winston & Sandor, 2002).

The instrument takes approximately 20 minutes to complete. Its authors suggest that the

most consistent results are achieved when the instrument is administered in a group

setting.

Part I: Developmental-Prescriptive Advising. Part I assesses the advising

approach along a prescriptive-developmental continuum. It consists of 14 pairs of

statements; half of each pair represents developmental advising; the other half represents

prescriptive advising. Descriptions of each type of advising are randomly placed on the

left- or right-hand side of the page. Students choose the description from the pair

(prescriptive or developmental) that most closely resembles their advising experience and

then indicate to what degree that experience was true in their own cases. This scale is divided into three subscales: Personalizing Education (PE; 8 items), Academic Decision Making (ADM; 4 items), and Selecting Courses (SC; 2 items). Personalizing Education assesses the extent to which advising focuses on academic and personal interests such as career planning, co-curricular activities, personal issues, use of campus resources, and goal setting. Student scores in this section indicate whether overall developmental or prescriptive advising is prevalent. A high score (33 to 64) indicates developmental advising, an advising relationship that encompasses discussion of both in- and out-of-class student interests and activities, is mutually driven, trusting, and warm. A low score (8 to 32) reflects prescriptive advising that is more formal and distant. The second sub-scale, Academic Decision Making, assesses how decisions are made and who takes responsibility for making and implementing decisions. Again, a high score (17 to 32) indicates developmental advising in which "the adviser helps students evaluate academic progress and identify steps or consider alternatives. The adviser then trusts students to carry through and take responsibility for their own decision" (Winston & Sandor, 2002, p. 11). A low score (4 to 16) indicates advisers assume the responsibility for decisions and follow-through. The final subscale in this section, course selection, deals with choosing courses and arranging a schedule. Again, high scores (9 to 16) indicate developmental advising where decisions are made mutually by adviser and advisee; low scores (2 to 8) indicate more directive behavior on the part of advisers.

Part II: Adviser-Advisee Activities. Part II asks students to indicate the frequency of various tasks. It consists of 30 items describing activities which are "typical

of good academic advising" and asks students to indicate how frequently these activities

occur during an academic year with their advisers.

> The scale has five activity subscales: Exploring Institutional Policies (EIP; 5
> items), which looks at policies regarding transfer of credit, probation, dismissal,
> and related issues; Providing Information (PI; 6 items), which includes activities
> related to campus resources; Personal Development and Interpersonal
> Relationships (PDIR; 12 items), which relates to personal concerns about careers,
> value, goals, and activities; Registration and Class Scheduling (4 items), which
> looks specifically at the registration process; and Teaching Personal Skills (3
> items), which looks at teaching students how to study, manage time, and set goals.
> (Brown, 2003)

Part III: Satisfaction with Advising. This section is composed of 5 individual

items, one each asking about student satisfaction with advisers regarding accuracy of

information provided, notice of deadlines, availability for advising, amount of time

available, and overall satisfaction.

Part IV: Demographic Information. This final section asks for student

information on gender, race/cultural background, age, class standing, and type and

amount of advising received including the number of advising sessions and length of

typical advising sessions. Information on the quantity and duration of advising contact

was seen as important because literature suggests that student contact time and individual

attention from advisers can affect student satisfaction and success (Crockett, 1985).

Measure of Epistemological Reflection

The Measure of Epistemological Reflection (MER) was selected because it

measures a student's level of intellectual development. It was derived from the Perry

(1968) scheme of cognitive development and is built on work by Perry, Gilligan (1977),

and Kitchener and King (1981). The advantage of the Baxter Magolda (1992) scheme is

that it, unlike Perry's and Gilligan's schemes, includes gender-related cognitive development preferences of both men and women and it extends the work of Kitchener and King.

The Measure of Epistemological Reflection (MER) is a short-answer/essay questionnaire that may be administered either individually or in groups and takes approximately 45 to 60 minutes to complete. The questionnaire asks students to reflect on information and experiences relevant to six domains of intellectual development: (1) decision-making, (2) the role of the learner, (3) peers, and (4) instructor in learning, (5) evaluation of learning, (6) the nature of knowledge. This instrument, used with the permission of the author, is used in conjunction with interviews discussed below.

The cover page of the MER, like Part IV of the AAI, also asks respondents to provide demographic information. I added one question to this section asking students to identify their academic major. Students' majors were requested because different departments on each campus provide varying levels of faculty development in and emphasis on advising, so I wanted to be able to assess whether there were disparities in advising experiences in various majors.

Finally, no student comes to college as a "clean slate." Student attitudes toward and expectations of their college advisers are likely to be colored and to some degree shaped by the relationship (or lack thereof) they had with high school guidance personnel and by family familiarity with higher education. Therefore, two final questions were added to the survey asking students to describe their previous advising experience and the level of education completed by their parents.

Interview Protocol

Those selected for interviews were asked a standard set of questions in an attempt to ensure consistency across interviews (See Interview Protocol, Appendix L). Questions were arranged in two groups. Open-ended questions were developed asking about students' advising experiences and their perceptions of and satisfaction with those experiences. These questions were asked in order to explicate and augment the answers to the AAI and also to allow students to add information about advising not included in that instrument. In addition, they were asked questions regarding their understanding of the roles of teachers and peers and their own role as a learner. These paralleled the MER to give them the opportunity to elaborate on their answers to questions on that instrument. Interview results are also a means of cross-checking my initial assessment of the students' levels of cognitive development.

Procedure

Gaining Access

Through fifteen-years of employment at College A, I have established good relations with faculty colleagues; many were quite willing to facilitate my research by allowing me to request student participation through their classes. Through an acquaintance with a former colleague, I was invited to do some consulting work at College B and had developed relationships there as well.

Data Collection

Recruiting through courses. Courses were identified at each institution in which students from the target classifications (i.e., first-year, lower- or upper-division) were

enrolled and presentations were made based on instructor willingness to allow access. At College A, there are classes restricted to first-year students and to second-year students and third-fourth year students that meet both fall and winter terms, so the request to make a recruitment presentation was issued to all instructors of Inquiry Studies 101 (the first-year class), Inquiry Studies 201 (the second-year class) and ID (Interdisciplinary) classes (restricted to third and fourth-year students). At College A, there were eight sections of the first-year course; access was granted and presentations were made in three sections. There were seven sections of the second-year course; presentations were made in three of those. There were six sections of the upper-division courses; one professor granted permission to make a presentation there, so additional upper-class participants were recruited through presentations to the student staff of the writing center and in the academic support center at College A, which employs upper-class students as peer assistants. Since the courses selected are interdisciplinary and the students who work in the academic support center are recruited from a variety of departments, the study then included students whose majors were in a range of areas from across the curriculum.

College B has a first-year seminar but it was not taught during winter/spring term when data was collected and there were no classes restricted to just second-year or just upper-division students. Therefore, the Dean of the Faculty described the research project to division chairs (see Appendix F) and they agreed to share the request for participation. Faculty were asked to volunteer to allow presentations to be made in their classes for the purpose of recruiting participants. Twelve faculty from a variety of disciplines including physical education, sociology, chemistry, business, religion, and

college composition who were teaching courses to both upper- and lower-division students agreed to allow presentations (see College B Courses For Recruitment, Appendix H).

Gaining permission to present. At College A, I contacted the instructors of each of the identified sets of classes to ask permission to make short (ten-minute) presentations in their classes to explain the research project and solicit student participation. At College B, names of faculty willing to allow presentations were forwarded to me and I contacted them by e-mail to arrange a time for the in-class presentation by a student assistant. At both colleges, presentations were then made either by me or by a student assistant in each class where access was granted to explain the purpose of the study and invite student participation. A recruitment script was followed to attempt to ensure consistent tone in the introduction of the study across classes. (See Appendix I). At the end of each presentation, a sign-up sheet was circulated around the class on which students could indicate interest and sign up for a particular session to complete the instruments (See Appendix J). Students who signed up were sent e-mails reminding them of the time and location of the sessions and their commitment to attend.

Administering surveys. Surveys were administered during three scheduled evening sessions at College A and four evening sessions at College B during March 2005. The group administration of the instruments allowed for instructions for each instrument to be reviewed aloud and was in keeping with the suggestion that the AAI is more effectively administered in a group setting. Participants were given an informed consent form which was approved by the university's institutional review board (see

Appendix M). All participants signed the form and participated fully. Participants received cash compensation for their time.

Selecting interview participants. Following the administration of the two instruments, I read and placed an initial code on each student's MER response. That process is described further in the section below on data analysis. Based on that initial code, students were selected for interviews. A total of twelve students were selected for interviews from among students who indicated a willingness to participate in the second phase of the project, one male and one female at each of the first three levels of cognitive development described in the Baxter Magolda scheme from each of the two institutions. I selected those who seemed to fall clearly into one of the first three levels of cognitive development. I had not expected to find enough fourth level contextual knowers in the undergraduate population to be able to assess the strength of the relationship between their advising preferences and their levels of cognitive development and that was, indeed, the case. Other criteria for selection were students' willingness to participate and the thoroughness of their responses to the MER questions.

Conducting interviews. I contacted students by e-mail or telephone to request they participate in semi-structured interviews. Upon receiving their assent, I arranged to meet each student individually in the library at his/her institution at a time convenient for both of us. Each participant granted permission to audio-tape the interviews. I conducted each of these interviews following the open-ended interview protocol described by Baxter Magolda (1992; See Appendix K). Those who participated in the interviews were provided with additional compensation for their time.

Data Analysis

Analysis of the AAI Results

AAI results were obtained by electronic scanning of answer sheets. Interpretation was guided by the manual that accompanies the instrument, Evaluating Academic Advising (Winston & Sandor, 2002).

As noted earlier, Part I of the instrument asks students to indicate the advising approach they have experienced. A score on this section of the instrument was computed for each participant by first recoding selected items as indicated in the evaluation manual and then summing the participant's scores on those items to obtain a Developmental-Prescriptive Advising (DPA) score. In order to answer research question one, the DPA score was used as the primary measure of advising preference when calculating the correlation between students advising approach preference with their level of cognitive development as assessed by the Measure of Epistemological Reflection (MER). For Part I, the range of scores is from 14-112. Students who scored between 14 and 56 are considered as having experienced prescriptive advising; scores between 57 and 112 are considered to indicate developmental advising experiences. Scores were also computed for each of the subscores in this part of the instrument. In all cases, the higher the score, the more developmental the approach had been.

Part II of the AAI asks students to indicate the frequency of discussions of a variety of topics discussed in advising sessions. Categories of activities include personal development and exploring interpersonal relationships (PDIR); teaching personal skills (TPS); exploring institutional policies (EIP); registration and class scheduling (RCS);

academic majors and courses (AMC). Academic Advising Inventory items were grouped into each of these categories and a score indicating the mean frequency for discussion of those topics was computed. This also allowed a comparison of student reports of how frequently each category of responses was discussed. Advisees who discussed all these topics with advisers at least some of the time were considered as having been advised using a developmental approach. Those whose advising sessions had been limited to only institutional policy, registration, scheduling and academic program were considered as having been advised more prescriptively. Caution was exercised in the assessment of these items; when drawing conclusions, readers must remember that the results are limited to student reports and all items may not be applicable to all students.

AAI Part III assesses student satisfaction with their advising experiences. Items assessed overall satisfaction, satisfaction with accuracy and timeliness of information provided, and advising/adviser availability. Students were asked to respond on a 1 to 4 scale (1= strongly disagree and 4 = strongly agree) on five separate items. Each item was reviewed individually. Low scores (1-2) suggest dissatisfaction with the advising issue assessed by that item; high scores (3-4) indicate satisfaction with advising. The percent of respondents with high and low scores was computed.

AAI Part IV tabulates demographic information about the participants including gender, cultural/racial background, age, academic class standing, through what means advising was delivered, how many advising sessions they had had with one or more advisers, and the length of a typical advising session.

Results of Part I were used as a measure of students' experience of academic advising approaches along a prescriptive to developmental continuum. Part II was used to give more information on the specific types of discussions students perceived as having taken place. If students reported experiencing a particular type of advising in Parts I and II and then reported a strong level of satisfaction with their advising in Part III, the conclusion was reached that students, then, had a preference for that type of advising. For example, if students reported having an adviser who approached advising in ways characterized as developmental and activities reported in Part II were typical of developmental advising and students were highly satisfied with advising received, the conclusion was reached that the students preferred developmental advising.

To determine the impact of gender and institution on advising preference, a t-test was performed comparing means of AAI Part I scores for men and women. To examine the effects of classification on mean AAI Part I scores, an analysis of variance (ANOVA) was computed comparing mean scores of first-, second-, third-, and fourth-year students.

Analysis of MER Results.

The MER is hand-scored by trained raters following the protocol described by Baxter Magolda in her "Outline of the Constructivist Interpretation Process for the Measure of Epistemological Reflection" (Appendix D). She suggests a five-phase process:

1. Become familiar with the process through reading recommended resources.

2. Complete a holistic reading of the participant's response

3. Compare the respondent's reasoning with the table of responses provided in Baxter Magolda's *Knowing and Reasoning in College: Gender-Related Patterns in Students' Intellectual Development* (1992). She suggests comparing the participant's responses first in each domain, then across domains.

4. Extend the interpretations by reviewing results noting any gender-related patterns.

5. Dialogue with respondents.

I completed each of the first four steps with all participants, i.e.: I read all the materials she recommended, read each student's response holistically, then read domain by domain, and assigned a score, first, in the domains of which I was most sure, then put those responses in the context of the entire response again to assign an overall score. I then interviewed selected participants. After having rated all responses once, I waited a period of four months to allow for a "fresh" reading and rated the MER responses again. I was consistent in my rating for 123 of the 173 responses, so I considered those 123 "scored." For the remaining 50 responses, I either had rated them differently on the two readings or had been uncertain about what rating was most accurate. Then I met with a second reader for training. She also completed the training reading, and we reviewed responses until we were consistent in our ratings. She read the 50 responses for which I had not assigned a rating and rated them independently. After she completed scoring those responses, if her rating agreed with either of mine, we assigned that score. For those where there was disagreement, I reviewed the second reader's notes, and assigned

her rating (being persuaded by her interpretation) or we met and discussed the response until we reached consensus. In the end, each response was assigned to a category 1 through 7 representing the following levels of cognitive development:

1= absolute knower

2= in transition from absolute knower to transitional knower.

3= transitional knower

4= in transition from transitional knower to independent knower

5= independent knower

6= in transition from independent knower to contextual knower

7= contextual knower

In 2001, Baxter Magolda presented a constructivist revision of the Measure of Epistemological Reflection. She said, "The constructivist interpretation process proposed for the MER uses the epistemological reflection model as a foundation, but makes clear that the interpretation process is a continual effort to refine our construction of students' epistemological reflection . . ." (2001a, p. 526). In her "Outline of the Constructivist Interpretation Process for the Measure of Epistemological Reflection," Baxter Magolda (2000b) suggests that a way of knowing emerges through interpretation of the total response. Her example suggests that, "if four domains clearly point to transitional knowing and two point to absolute, you could interpret that your respondent still has some absolute ways of knowing but primarily uses transitional knowing" (p.7). She further states that it may be possible that "no clear connection to a particular way of knowing [may be] evident" (p. 7), and if that is the case, then "the respondent's

development [may not be] captured in the ER model" (p. 7). We were not able to assign

all responses to one of four categories as Baxter Magolda has done (See Appendix P,

MER interpretation chart) because a number of our participants' responses seemed to

have answers that were equally or very nearly equally distributed between two ways of

knowing. Both the second reader and I agreed that there were responses that had

characteristics of both absolute knowers (our level 1) and transitional knowers (our level

3) that resulted in our categorizing them as truly in transition between those two levels.

For example, one student's MER responses were evenly divided between responses

characteristic of an absolute knower and a transitional knower. On the one hand, she

responded as an absolute knower in the domains of roles of instructor, learner, and peers.

She saw her role as one of listening and taking in information from her professor, the

authority. She said,

> I enjoy lecture-based classes that include both the prof's opinions on topics and
> actual concepts and ideas. I am a good listener and absorb information that way.
> I prefer a lecture over class presentations or group work because I learn better
> when the info comes from one source. I prefer classes where students talk little. I
> feel the prof is the expert, so I'd generally rather hear the voice of the expert.

On the other hand, in the domains of decision-making, evaluation, and the nature

of knowledge, her responses focused more on understanding knowledge, and instructor

fairness in evaluation. She preferred classes that focus on ideas and concepts (as opposed

to factual information). She said, "I don't always remember specific facts, but I'm strong

on understanding concepts." She went on to say that when class was centered on ideas

and concepts, she was more attentive. She asserted that having a professor she knew in

and out of class was helpful to her learning. Having a professor who emphasizes

understanding, allows student involvement, and creates rapport with the student are

characteristics more typical of the transitional knower.

Similar determinations were made between positions 3 and 5 and between

positions 5 and 7, so rather than placing students in one of four levels of cognitive

development, we placed them in one of 7 levels. Though I assigned responses to seven

categories as opposed to four as Baxter Magolda has done, the process I used was

consistent with Baxter Magolda's philosophy. Baxter Magolda advocates a constructivist

approach to interpreting participants' responses. She says, "If no clear connection to a

particular way of knowing is evident at this point, it may be because the respondent's

development is not captured in the ER model" (2000, p. 7). She suggests that researchers

construct a description of their respondents' thinking and compare that with other models

of epistemological development to ascertain their usefulness or she indicates that a

completely new understanding of ways of knowing may arise. I do not believe that the

interpretations arrived at by my second reader and me suggest that the Epistemological

Reflection model does not capture the participants' ways of knowing. We did not see

characteristics different from those described by Baxter Magolda. Rather, we saw the

responses that contained characteristics of more than one way of knowing that were so

close to being balanced that identifying the respondent as being at one stage of

development or the next seemed arbitrary and inaccurate; some participants truly seemed

to be in transition. We believe that this description of the development of ways of

knowing as more of a continuum than an arbitrary placement into categories is in keeping

with the complex process of human development. Our categorization of levels of

cognitive development of our participants is a matter of degree of discernment rather than an indication of a different understanding of epistemological development from the Baxter Magolda scheme.

Correlating Results of AAI and MER

Developmental levels as determined by the MER were assigned a numerical value 1 though 7. A Pearson's Product Moment correlation was calculated to ascertain whether there was a correlation between levels of student preference along the continuum for style of academic advising (AAI Part I DPA score) and levels of student cognitive development (MER score).

Interpreting Interview Results

Interviews were audio-tape recorded and recordings were transcribed verbatim with individual line numbering and page numbering for quick reference. Transcriptions were then coded using Qualrus: The Intelligent Qualitative Analysis Program (2002). Qualrus allows the development of a manageable classification or coding scheme according to themes, patterns, classes or categories that emerge. "A good place to begin inductive analysis is to inventory and define key phrases, terms, and practices that are special to the people in the setting studied" (Patton, 2002, p. 454). Therefore, I looked for patterns in student responses as they described their advising experiences. As I saw similar responses being repeated, a code was assigned. In addition, because I was also using the interviews as a method of triangulating data collected through the AAIs and the MERs, I assigned codes to participant responses corresponding to any discussion of

student attitudes or activities that seemed to indicate an experience of or preference for either developmental or prescriptive advising and to the domains in the MER.

Not only does the Qualrus software allow the researcher to identify these themes or patterns in the interview transcripts, but it also provides a simple mechanism for counting numbers of responses in each category and for comparing coincidental codes.

Interview codes. As mentioned above, the purpose of the interviews was two-fold: to triangulate data collected from the AAI and the MER and to allow participants to share their own constructions of their advising experiences. Therefore, interview responses were clustered in four topic areas: discussion related to developmental or prescriptive advising activities or experiences that related to topics measured in the AAI, information related to cognitive development as described in the MER, information that described the advising experience itself, and information that emerged in interview conversations that was new and not previously introduced through either the AAI or the MER. (See Appendix Q for a complete list of codes.)

AAI Code Cluster. The first cluster of codes catalogued answers that corresponded with responses to the AAI. This cluster included comments that elaborated on activities that would have been categorized as either developmental or prescriptive. These included the nature of activities in advising sessions. If the participant said that the sessions were primarily limited to scheduling activities and institutional requirements such as declaration of major, that was coded as prescriptive. If discussion included academic progress, goals and career planning, it was coded as developmental. One example of a statement coded as indicating developmental advising was,

Um, most of my questions were regarding, 'OK, my grades are here. Am I good enough to get into med school?' . . . He was very motivating and encouraging. I've had, you know, thoughts about maybe transferring, you know, he's helped me get through that and explained to me how biology is a demanding field. And he was very encouraging and made me feel a lot better about my choices.

Other indicators of either prescriptive or developmental advising were whether the advisee or the adviser initiated advising contacts and controlled the conversation.

MER code cluster. A second cluster of codes corresponded to characteristics identified in the MER which Baxter Magolda used to categorize responses into levels of cognitive development. Codes corresponding with Baxter Magolda's gender-related patterns and with domains from the MER (decision-making; evaluation; learning environment; role of learner, peers, and instructors; and nature of knowledge) were coded as a means of locating instances in the interviews where those topics were discussed. Then those responses were analyzed and coded according to the Baxter Magolda criteria as being those of knowers at the absolute, transitional, independent or contextual levels. For instance, comments from one interview were coded as a transitional knower when the student described what he thought the role of the teacher and peers in class should be this way,

[group work] lets kids shoot ideas back and forth to each other as opposed to the teacher just sitting there kind of talking to you. I guess in a science class, I'd probably just rather have the science teacher up there just giving me straight information . . . so I can take it right down and learn it later, but in another class that doesn't involve science, I guess I'd rather have a little bit more . . . me and this guy talking back and forth, 'what do you think about this?' kind of thing.

Advising experience code cluster. A third cluster of codes catalogued student perceptions of the advising experience itself: the number of advisers with whom a

student had worked, the frequency and length of meetings, adviser accessibility, and overall satisfaction with advising.

    <u>Emergent code cluster</u>. The final cluster of codes emerged from statements by the participants of ideas that were unanticipated in either of the instruments. These included discussions of student comments on faith and its role in their lives, preferred adviser characteristics, including adviser empathy and attitude toward advising, and students' perceptions of the value of advising and their previous advising experiences.

<p style="text-align:center"><u>Summary</u></p>

    In this chapter, I have described the design of this mixed methodology research study. I used a combination of quantitative assessment of students' advising preferences and experiences, and short answer description to arrive at a qualitative assessment of their levels of cognitive development. Interviews were used to corroborate these assessments and to provide additional information. I have included thick description of the setting of this study so that others may judge the transferability of results of this inquiry. Similarly, the instruments used, methods for selecting participants, demographic descriptions of participants, and methods of analysis have been detailed. The next chapter will report the results of these procedures.

CHAPTER 4

RESULTS

<u>Introduction</u>

Results of the AAI completed by participants in this study confirmed previous

research that has indicated that students generally prefer developmental advising with

89.6% of participants scoring above 57 on the Developmental-Prescriptive Advising

score from the AAI Part I. A Pearson's Product Moment Correlation of AAI Part I

(DPA) scores and the MER scores showed no relationship between student preference for

academic advising approach and students' levels of cognitive development (r=.10, df 171,

p=.18). Comparing mean scores of men and women on AAI Part I revealed no

significant difference in preference for advising approach based on gender. Interviews

and short answers to the MER revealed other factors that should be considered when

assessing advising experiences include students' previous advising experiences and

whether they have a student-teacher relationship with their advisers.

<u>Academic Advising Inventory (AAI) Results</u>

<u>Part I</u>

The results of the AAI Part I indicated that there was a very strong preference for

developmental academic advising across genders, regardless of classification, institution,

or educational background. Just 10.4% of respondents fell into the preference for

prescriptive advising category with 89.6% scoring 57 or higher indicating a preference

for developmental advising. The preference for developmental advising is slightly

stronger among women than among men (see Table 2), but mean scores of both men and

women fell well within the developmental range and the difference was not statistically significant. Similarly, academic classification, i.e., first-year (1Y) through senior (4Y) does not appear to have an impact on academic advising approach preference. Nor does educational background affect advising preference. For the purposes of this study, students were defined as first generation students if neither of their parents had completed either a bachelor's degree or a registered nursing degree. All mean scores were well within the developmental range when broken down by student classification and educational background (see Table 2).

Table 2

AAI, Part I: Developmental-Prescriptive Advising (DPA) Scores

	DPA > 56	DPAMean	SD
All respondents	N=155 (89.6%)	73.79	14.98
Gender[a]			
Women	N=77 (86.5%)	75.35	17.03
Men	N=78 (92.9%)	72.13	12.32
Classification[b]			
1Y	N=48 (92.3%)	75.15	13.02
2Y	N=46 (90.2%)	72.98	15.41
3Y	N=34 (87.2%)	74.56	15.27
4Y	N=27 (87.1%)	71.84	17.23
Educational background[c]			
First generation	N=70	74.39	14.94
Parents with college education	N=103	73.38	15.05

[a] $t (171) = 1.42, p=.16$
[b] $F (3, 169) = 0.4$, ns.
[c] $t (171) = .433$, ns.

Part II

Results of Part II indicate student reports of the frequency of various types of activities engaged in during advising session ranging from 0 to 5 or more times. Responses that indicate the activity was engaged in five or more times are tabulated as 5.

Mean scores on a 0 to 5 scale based on students having answered at least all items in each sub-scale minus 1 are reported on Table 3. The minimum and maximum number of times any individual student indicated engaging in activities in a particular sub-group are also indicated. This indicates that registration and course scheduling are the most frequently addressed topics; these would be considered prescriptive activities. They were followed in order by discussion of academic majors and courses, personal development and interpersonal relationships, teaching personal skills which are activities categorized as typical of developmental advising. Exploring institutional policies, a more prescriptive category, is least frequently addressed.

Table 3

AAI, Part II: Academic Advising Activities

Advising Activities Categories	Minimum	Maximum	Mean	SD
PDIR[a]	.00	4.92	1.47	1.14
EIP[b]	.00	3.20	0.59	0.65
RCS[c]	.00	5.00	1.79	1.04
TPS[d]	.00	4.67	0.98	1.06
AMC[e]	.00	4.83	1.58	1.00

[a]PDIR = Personal Development and Interpersonal Relationship
[b]EIP = Exploring Institutional Policies
[c]RCS = Registration and Class Scheduling
[d]TPS = Teaching Personal Skills
[e]AMC = Academic Majors and Courses

Two t-tests were computed to compare academic advising activities by institution and by gender. No statistically significant difference in the frequency of these activities between the two institutions was found (see Table 4) indicating that developmental advising is preferred by students at both institutions.

Table 4

AAI, Part II: Academic Advising Activities by Institution

Advising Activities	College A		College B	
	Mean	SD	Mean	SD
PDIR[a]	1.24	1.03	1.87	1.20
EIP[b]	0.58	0.64	0.60	0.68
RCS[c]	1.80	1.10	1.75	0.95
TPS[d]	0.77	0.82	1.34	1.30
AMC[e]	1.50	1.01	1.71	0.96

[a]PDIR = Personal Development and Interpersonal Relationship
[b]EIP = Exploring Institutional Policies
[c]RCS = Registration and Class Scheduling
[d]TPS = Teaching Personal Skills
[e]AMC = Academic Majors and Courses

Likewise, results indicated that the frequency of advising activities is not significantly impacted by gender (see Table 5).

Table 5

AAI, Part II: Advising Activities by Gender

Advising Activities	Female		Male	
	Mean	SD	Mean	SD
PDIR[a]	1.59	1.23	1.35	1.03
EIP[b]	0.59	0.67	0.58	0.63
RCS[c]	1.78	0.97	1.79	1.12
TPS[d]	0.96	1.03	1.00	1.09
AMC	1.63	1.07	1.53	0.91

[a]PDIR = Personal Development and Interpersonal Relationship
[b]EIP = Exploring Institutional Policies
[c]RCS = Registration and Class Scheduling
[d]TPS = Teaching Personal Skills
[e]AMC = Academic Majors and Courses

Similarly, an ANOVA was computed and revealed no statistical difference in activities across classifications. (See Table 6 for summary data.) That is, the topics being discussed in advising sessions do not vary significantly regardless of whether the students is a freshman or a senior.

Table 6

AAI, Part II: Academic Advising Activities by Classification

	1Y		2Y		3Y		4Y	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
PDIR[a]	1.28	0.99	1.48	1.17	1.70	1.17	1.48	1.14
EIP[b]	0.60	0.68	0.68	0.66	0.69	0.71	0.28	0.36
RCS[c]	1.64	0.93	1.77	1.00	2.33	1.12	1.36	0.95
TPS[d]	1.17	1.12	0.87	0.98	1.05	1.10	0.75	0.97
AMC[e]	1.50	0.84	1.78	1.08	1.81	1.14	1.11	0.72

[a]PDIR = Personal Development and Interpersonal Relationship
[b]EIP = Exploring Institutional Policies
[c]RCS = Registration and Class Scheduling
[d]TPS = Teaching Personal Skills
[e]AMC = Academic Majors and Courses

Part III

For the five areas of satisfaction with advising (general satisfaction, provision of

accurate information regarding courses, programs and requirements, sufficient prior

notice of deadlines, policies and procedures, adviser availability, and whether the

adviser spent enough time with the student during advising sessions) measured in Part

III, students showed strong satisfaction with advising at both institutions with 72.9%

indicating a overall satisfaction level of 3 or 4 with even higher percentages in each of

the sub-categories of advising satisfaction (see Table 7). There was no statistically

significant difference in satisfaction between the two institutions, among classifications of students by year in school, or between genders.

Table 7

AAI, Part III: Satisfaction with Advising

Satisfaction with advising	% rating satisfaction high (in 3-4 range)
Overall satisfaction	72.9
Satisfaction with accuracy of information	78.6
Satisfaction with information on deadlines	85.2
Satisfaction with adviser availability	81
Satisfaction regarding having enough time with advisers	83.3
Overall satisfaction, College A	71.6
Overall satisfaction, College B	75.1
Overall satisfaction, 1Y students	69.3
Overall satisfaction, 2Y students	78.4
Overall satisfaction, 3Y students	69.2
Overall satisfaction, 4Y students	74.2
Overall satisfaction, women	70.8
Overall satisfaction, men	75.0

Part IV

In addition to demographic information (gender, cultural or racial background,

age, and academic class standing) which was reported in the Chapter 3 description of

participants, Part IV results reveal through what venues and how often students reported

receiving advising. The results for this section of the instrument indicated that 85%

(n=147) of the participants reported being advised individually, by an assigned or any

available adviser either in or outside an advising center; 1.7% (n=3) reported being

advised in a group; and 5.2% (n=9) reported being advised in conjunction with a course

or class in which they were enrolled. Furthermore, 70% of students reported that the

typical amount of time spent in each advising session was between 15 and 45 minutes

long with 20.8% indicating typical sessions were less than 15 minutes in length. Only

2.9% of students indicated that they had not met with an adviser at all this year (see

Table 8).

Table 8

AAI, Part IV: Minutes per Advising Session

	Frequency	Percent
Less than 15 min	36	20.8
15-30	87	50.3
31-45	34	19.7
46-60	15	8.7
More than one hour	1	.6
Total	173	100.0

Most students (43.3%) met two or three times with some adviser, though not necessarily their currently assigned adviser (see Table 9).

Table 9

AAI, Part IV: Number of Advising Sessions in Current Academic Year

	With current adviser		With any adviser	
	Frequency	Percent	Frequency	Percent
9 or more	6	3.5	12	6.9
0	10	5.8	5	2.9
1	34	19.7	22	12.7
2	45	26.0	39	22.5
3	33	19.1	36	20.8
4	20	11.6	23	13.3
5	15	8.7	16	9.2
6	3	1.7	9	5.2
7	4	2.3	5	2.9
8	1	.6	4	2.3
SubTotal	171	98.8	171	98.8
Missing	2	1.2	2	1.2
Total	173	100.0	173	100.0

Measure of Epistemological Reflection (MER) Results

In assessing the results of the MER surveys, both readers found students ranging

across seven categories of cognitive development rather than four as indicated in Baxter

Magolda's model. A significant number of responses seemed to have characteristics

that led us to believe students were truly suspended between categories, so we included

positions 2, 4, 6 as "in transition."

We did not find that men's and women's responses followed the gender-related

patterns found by Baxter Magolda.

In keeping with previous research (Perry, 1970; Baxter Magolda, 1992) which

has found that final developmental stages typically do not occur in traditional-aged

undergraduates, only 5 students (a total of 2.9%) were identified as either in transition

to the contextual level of development or as having achieved that level. The results of

the assessment of levels of cognitive development are displayed in the Table 10.

Table 10

Cognitive Development Levels of Participants

MER Category	Levels of Cognitive Development	N	%	Cumulative %
1	Absolute	48	27.7	27.7
2	A-T	21	12.1	39.9
3	Transitional	62	35.8	75.7
4	T-I	14	8.1	83.8
5	Independent	23	13.3	97.1
6	I-C	2	1.2	98.3
7	Contextual	3	1.7	100.0

A one-way ANOVA was used to compare mean MER scores of students in each class and a Scheffe post hoc test run to determine whether there was a significant difference between those mean scores. There was no consistent pattern of increased levels of cognitive development except between senior (4Y) students and all others. Seniors had a higher level of cognitive development than all other classifications at a statistically significant level (see Table 11).

Table 11

Mean MER scores by classification

Class	N	Mean	SD
1Y	52	2.35[a]	1.37
2Y	51	2.73[a]	1.19
3Y	39	2.54[a]	1.35
4Y	31	3.87[b]	1.75

[ab] Based on the Scheffe test, means with the same superscript are not significantly different while means with a different superscript significantly differ from the others using a p level of .05.

In addition providing an assessment of student levels of cognitive development, there were patterns of answers in the MER results that may also have implications for advising. MER responses described characteristics students desire in teachers which may also be qualities that would help students relate well to advisers. There were two consistent themes that seemed notable. The first was in response to the question that asked them what type of relationship with an instructor would help them learn best. The almost universal response to this question was that students desired instructors to be approachable, non-intimidating, caring, friendly, and "not scary." A second notable pattern was student thinking on how they should be evaluated on their work. Many responses indicated that students believed that they should be given credit for effort they expended. When pressed, the students either were not clear on how they thought effort could be measured or they believed that instructors would "just know."

One question added to the MER that was not used to assess student levels of cognitive development was the question related to students' prior experience with high school guidance counselors or academic advisers from previous institutions of higher learning. Results of this question suggested that students had limited experience with academic advising coming to college. The majority of the responses characterized their previous advising experiences as either non-existent or narrow in scope. They reported that they had had little or no contact with advisers or guidance counselors while in high school or that the contact had been limited to prescriptive, logistical matters of choosing and arranging their class schedules, registering for standardized tests, and making sure the students had the appropriate kind and number of credits to be eligible for college. Some respondents acknowledged that counselors tried to be helpful. They mentioned that counselors had assisted with the college preparation (ACTs), selection, and application processes. Several commented that high school counselors seemed well intentioned, but had too much to do and too many advisees to be effective. Only one student provided any detail about a high school counselor who had been helpful. That student indicated that her counselor had known her well, had helped her in choosing a college, discussed possible majors, and helped her obtain information about colleges and transfer of credits. The student said, "I felt comfortable with her and I know she had some impact on my college choice and what my interests were to pick a major."

Interview Results

Interview Results Related to AAI Parts I and II: Preference for and experience of advising approach

Discussion in interviews seemed to indicate that both the students' preference for and experience of developmental advising was generally consistent with the results of the AAI. Students described a range of activities in their advising sessions, but even when the discussion was focused on putting together a schedule of classes for a particular academic term (what could be considered a prescriptive activity), those course decisions were often made in a developmental context, e.g., selection of a particular course from among several that would meet a requirement was made not only based on course time, availability, and instructor, but also on students' interests, goals, and long-range career plans. Furthermore, all students interviewed indicated that advising sessions were either student directed or mutually controlled, another characteristic of developmental advising. One student expressed dissatisfaction when his advising had been too prescriptive: "My adviser freshman year wasn't very good. He was pretty much concerned with keeping me on pace to graduate and didn't have much interest beyond that." However, he was more satisfied with a more developmental approach taken by his second adviser: "I switched advisers my sophomore year and my current adviser is great. He leaves me in charge of my schedule and we discuss goals, career plans, and practice interviewing skills. Also, we have developed a personal relationship which makes my advising time even more meaningful."

In fact, when coding the interviews, developmental activities were mentioned more than 60 times across the twelve students interviewed while prescriptive activities were mentioned 47 times with 7 of those being coded as a mixture of both developmental and prescriptive activities. When prescriptive activities were described, they were often associated with registration for classes. An interesting result was that none of the students interviewed considered the registration for their first-term or first year of classes to be an advising session; nor did they consider the person who assisted them with that initial registration an adviser. In their minds, that was strictly an administrative procedure.

There were, however, some interview comments that suggested that students advising preferences for developmental advising were not as uncomplicated as the AAI results seem to suggest. While students' AAI results indicated a preference for developmental advising, interview results suggest they also seemed to appreciate having some direction from advisers. For example, one student said:

> He's [my adviser] been very helpful in kind of laying out my college career. Actually right when I met with him the very first time which would have been first semester my sophomore year, after I declared my major, he actually basically laid out the rest of my years for me and so it was very helpful. I feel like I'd definitely be a lot more lost and what kind of classes I had to take and how close I was to graduating if I didn't have an adviser. He kind of shows me what I've taken, the requirements that I've done, like the classes I have in front of me, and kind of, he gives me helpful ideas on what classes to take, what teachers are good teachers kind of thing, and just directs me in the right way to go.

One participant identified the relationship as a mentoring one, yet he described a more directive exchange. The student said,

he [his adviser] always made sure that I had my bases covered and was on my way to graduating and was going to graduate on time, but he didn't see to it that like I personally was succeeding or doing the best that I could or asking me like what I envisioned for myself or goals that I was going to set. I just made sure that I was getting by well enough. It's like the mentorship thing.

In fact, some participants expressed dissatisfaction if their adviser wasn't directive or concrete enough. For instance, one student who was considering a career in nursing didn't feel it was sufficient for her adviser to suggest she do some informational interviewing or job shadowing. She felt as if the adviser should have helped her make the contacts; she did not feel capable of figuring out how to do those tasks on her own. Yet another student was dissatisfied when her adviser expected her to have a draft of a schedule made when the student came to see the adviser. She said, "he didn't really help me. You know, he expected me to have it [schedule draft] done when I went in and he never really went over it, like the different classes I needed."

There were indications from some students that their advising needs changed over time although there was no correlation between cognitive development and advising preference. For instance, one student did indicate her recognition that her need for prescriptive advising had changed over time. A second-year student said, "I just didn't think he was that helpful with helping me. Cause I was a first-year. I needed a lot of help and a lot of guidance where I don't need as much now."

Interview Results Related to AAI Part III: Satisfaction with advising

Even though dissatisfaction with advising was mentioned occasionally, the interview results indicted that students were generally satisfied with the advising they received; that finding is consistent with AAI Part III findings. Students made 33 comments that indicated a high level of satisfaction with advising during interviews compared to 15 comments indicating medium satisfaction and 8 indicating low satisfaction. Strong satisfaction was expressed when students felt they were getting needed information on course sequencing and when they felt the advisers were monitoring their progress. One student said he liked having an adviser "[keep] on top of his grades." Another said, "My adviser is very helpful. She lets me know what I need to take and when. She's very organized and makes sure things get done."

Interview Results Related to AAI Part IV: Demographics and Logistics

Of the students interviewed, there was a variation in the number of advisers with whom students had worked while in college: four participants had had one adviser, seven of the participants had had two advisers, and one participant had had three advisers. Advisees also reported a variety in length of advising sessions with half the sessions being less than one-half hour and half longer than that. Similarly, advising sessions ranged from once or twice per year to several times per week. Most students reported checking in with their advisers approximately once per month except during weeks when preparing to register for classes when they met as often as necessary to complete those preparations, though several students mentioned that they felt confident in their own ability to read the catalog and ascertain whether they were meeting

institutional requirements themselves. Another busy time was as students prepared to graduate or apply for graduate or professional school or to begin their job search. The frequency of meetings increased when students were also enrolled in a class taught by their advisers and when the adviser's office was in a building where the student attended class or lab.

Interview results related to the MER

One purpose of the interviews was to provide triangulation and verification that the MER assessments of students' levels of cognitive development were accurate. Yet interview results were not consistent with MER results in assessing levels of cognitive development. For two participants, there were no comments made in the interview that were able to be coded as related to MER levels. Seven of the participants seemed to indicate at least some difference in the level of cognitive development of those participants when compared with the participants' final MER results (see Table 12).

Table 12

Consistency of Cognitive Development Assessment over Time and Method of Assessment

Participant Code	Initial MER Assessment	Final MER Assessment	Interview Results	Consistency
611136	T (3)	T (3)	A-T	Partial agreement
632123	I (5)	T-I (4)	T-I	Agreement
641173	I (5)	I (5)	T	Disagreement
642126	A (1)	T-I (4)	A-T	Partial agreement
611161	A (1)	A-T (2)	No codes in MER cluster	Inconclusive
612147	T (3)	T (3)	A	Disagreement
94258	I (5)	I (5)	T-I	Partial agreement
91193	A (1)	T (3)	A	Disagreement
9213	T (3)	A (1)	A	Agreement
92172	I (5)	I (5)	I	Agreement
91231	A (1)	A (1)	No codes in MER cluster	Inconclusive
93219	T (3)	T (3)	T-I	Partial agreement

Although the interview results did not always confirm the assessment of the

levels of cognitive development concluded from the MER, student comments in

interviews regarding qualities that facilitated building relationships (either with

instructors or advisers) were consistent; student descriptions of desirable qualities of

advisers were similar to the characteristics they identified as helpful to their learning in

teachers. On the MER, students indicated that they found teachers who were approachable and non-threatening helpful. Similarly, qualities of advisers frequently mentioned both as being desirable and as being present in their advisers were accessibility and availability, i.e., someone not too busy to see the students, and someone who is not intimidating or likely to make the student feel stupid. Students hoped for someone trustworthy and reliable, someone they respected, but also someone with a sense of humor. Students were quick to point out that they did not expect the adviser to be a friend.

Independent Interview Results

In addition to triangulating data from the AAI and the MER, a final purpose of conducting the interviews was to provide the opportunity to gather data on the advising experience in general. One final new finding emerged. Students whose advisers were also teachers of a class in which the advisee was enrolled seemed to have a somewhat better relationship with their advisers. They reported feeling less awkward with their advisers because they had already gotten to know each other and established a relationship between them. Advisees had more frequent contact with advisers because they would see them two or three times each week and sometimes stop before or after class to ask an advising question. The professor might require the student to meet with him/her for an activity for class and that gave the advisee one-on-one time with the adviser and an opportunity to discuss other topics beyond the class assignment. A student found the occasional professor comment in class encouraging students to stop in and see her/him motivating. "It's been helpful in ways like encouraging us to go in and

talk to her so it's been really helpful." This finding is related to the desire for

approachability reported above in both MER and interview results.

Moreover, because the adviser knew the student's work habits and had first-

hand knowledge of the student's academic performance in at least one class, the adviser

was in a better position to discuss strategies for academic success and academic

progress. One participant described it this way:

> You get to know somebody well they're your teacher and they know your work
> and they know your personality and then they get to be friends with you and
> then there's other stuff that comes with it, and, um, that would be nice, like if
> they would assign an adviser that you actually have as a teacher, cuz you
> develop a certain kind of closeness cuz you know what they expect, you know
> how far they want you to take it, you know a lot more about 'em.

This student went on to say that without this type of relationship, she wouldn't

feel "comfortable to just walk in and be like, 'hey, guess what happened this weekend?'

Cuz I don't even know her."

Another student cautioned that being enrolled in a class taught by her adviser

could be a hindrance to the advising relationship if the student had not done well in the

teacher's class. However, for most students this wasn't a problem. At College B, the

first-year students were assigned to be advised by the teacher of their freshman seminar

course (called MOI, Modes of Inquiry) and they chose sections of that class by topics

that were of interest to them. In addition to providing frequent contact, this tended to

connect students and teacher/advisers with similar interests.

There is some indication that this class connection may make additional

advising possible. Some students mentioned that they ended up being informally

advised by teachers with whom they had developed close relationships through classes

but who were not their officially assigned advisers. "I don't usually talk to my adviser cuz I would go to the teacher I was closest with at the time."

Summary

This study produced findings in four areas: student preference for developmental advising, student experience of developmental advising, the lack of relationship between advising preference and cognitive development, and information on factors that affect students' experience of academic advising.

Data in this study confirm findings of earlier studies (Broadbridge, 1996; Jaffe & Huba, 1990; Milburn, 1994) that indicate that students preferred developmental advising, and preference for academic advising was not impacted by institution, classification, gender, or educational background. Unlike findings in earlier studies (Habley & Crockett, 1988; Saving & Keim, 1998) which indicated that developmental advising is not consistently practiced despite its being recommended, the majority of students in this study reported having experienced developmental advising. Their responses to Part II of the AAI indicated that they discussed topics with advisers that would be categorized as developmental. Students also indicated that their level of satisfaction with this advising was moderately high.

There was no correlation between level of cognitive development and advising approach preference.

Finally, there were findings in this study that indicated that students are, indeed, participating in advising, and there are several factors that may influence participation. The majority of participants reported attending at least two sessions per year of

approximately 15 to 30 minutes. Adviser accessibility was a key factor in how frequently students availed themselves of advising opportunities. Having an adviser who was approachable, whom students perceived as someone who knew and cared about them as individuals, and who recognized the efforts students are expending also seemed to have a positive impact on the advising experience. Advisees being assigned to advisers who teach one of the advisee's classes may facilitate the development of interpersonal relationships students find helpful in advising relationships. Finally, students' lack of experience with academic advising results in their having little understanding of the potential benefit of a strong advising relationship.

CHAPTER 5

DISCUSSION

Introduction

In this chapter, the results of the AAI, the MER, and the interviews are discussed

and applied to the research questions posed in this study. Implications of the study's

results and recommendations for practice are presented. The chapter closes with a

discussion of the methodological limitations of the study and suggestions for further

research that may add to the body of knowledge and enhance advising practice.

This study produced findings in three areas: Student experiences with

developmental advising, the efficacy of assessing cognitive development to use to adapt

advising approaches to individual student needs, and insights into how previous

experiences, attitudes, and opportunities to build relationships with faculty affect

students' experience of academic advising.

Discussion of Results

AAI Results Discussed

This study indicates that students have experienced developmental advising, have

discussed developmental topics with their advisers, and are satisfied with the advising

they have received; therefore, I concluded that participants have a strong preference for

developmental advising. The results confirm what was discovered in previous research:

students generally prefer developmental advising (Broadbridge, 1996; Milburn, 1994).

However, the description of the degree to which participants are experiencing

developmental advising was surprising. The literature has indicated that even though

developmental advising is embraced as the preferred approach (NACADA, 1994), there has often been a disconnect between recommendations and practice (Habley & Crockett, 1988; Gordon, 1994; Pardee, 1994; Saving & Keim, 1998). It is unclear at this point whether this increase in implementation of developmental advising is a change from practices at the time earlier studies were conducted or whether the extent of developmental advising is unique to the small private college setting. It is notable that advising preference in this study did not vary by institution, across genders, across classes, or by educational background. This finding would seem to reduce the need for assessment of needs and adjustment of advising approaches suggested by some previous researchers (Fielstein et al., 1992; Jaffe & Huba, 1990).

Despite my own experiences, both as advisee and adviser, the numbers of students participating in advising indicates that my suspicion that students were resisting participating in developmental advising is not supported. All but 2.9% of participants reported having met with their adviser at least once and over 40% met two or three times during the year when data was collected (see Table 9). It is interesting to note that the students were not, however, consistently meeting with their assigned advisers (see Table 9). This seems consistent with student assertions that being able to develop a comfortable, trusting relationship with an adviser is important. That type of relationship may develop more naturally with some faculty, perhaps those with whom students work frequently, than with those to whom students were assigned. Eighty-five percent of participants reported being advised individually, and both institutions report that advising is done almost exclusively by faculty. That is consistent with the promises made at small

college of individual attention to students by faculty. It is curious to me that fewer

students reported being advised in conjunction with a course since that is the model for

all first-year and many second-year students at College B. However, that result may be a

function of how that question was structured on the instrument. Students were instructed

to choose the answer that BEST described their advising situation, so it is possible that

their having worked with their faculty adviser one-on-one was more important to them

than the fact that that adviser was also the teacher for a course in which they were

enrolled.

MER Results Discussed

MER results provided interesting insights into qualities students find desirable in

faculty; it is reasonable to assume those would also apply to advising relationships;

however, the MER assessment of levels of cognitive development did not prove useful in

predicting student preference for academic advising approach.

MER results indicate a strong desire on the part of students for teachers who

know them well and care for them as individuals. Students indicated that their learning

was enhanced by faculty they found approachable. Comparable sentiments were

expressed about advisers in the interviews reinforcing the relational tenets of

developmental advising (Crookston, 1972).

The responses to the question that asked students about their previous experiences

with academic advisers or high school guidance counselors added to the MER in this

study indicated that students had little experience on which to base their expectations of

academic advising for college. Their experiences typically were restricted to assistance

with logistical matters including scheduling, graduation audits, and registration for standardized tests. While several students indicated that their advisers were well intentioned, pleasant people, the students seemed to understand that the number of advisees served by guidance counselors mitigated against their spending much time with individual advisees. One said, for example, that the adviser "had to do too much to really do a good job." This seems to set up expectations for college advising as well. Attitudes brought with students to college seem to inhibit the development of the advising relationship. Several students mentioned not wanting to "bother" their advisers, recognizing that advisers are busy people. Their past experiences also seem to limit the student expectations of the scope of the advising relationship. Previous experiences limited to scheduling and testing seemed to perpetuate the notion that advising can and perhaps should be limited to scheduling-related activities.

Levels of cognitive development indicated by the MER were somewhat unexpected. While I had not anticipated a perfect correlation between development levels and class, I thought that finding a more steady progression through the levels of cognitive development as students aged was likely. Instead I found a variety of levels of cognitive development in all classes, freshmen though seniors. There was, however, a statistically significant difference in the cognitive development of the class of seniors as a group when compared to the other classes. Perhaps I should not have been surprised by this outcome since the participants in this study were traditional-aged college students. Baxter Magolda has written that this more complex type of meaning making comes primarily after their college graduation (Baxter Magolda, 2003). Knowing that there is a

difference at the senior level suggests that advisers can anticipate having a different kind of relationship with fourth-year students. Since seniors are somewhat more consistent in having a more mature level of cognitive development, advisers can anticipate that responsibility will be shared and advisees may take the initiative in the advising relationship. While this type of responsibility and self-advocacy may be expected to be present more consistently among seniors, advisers should be aware that it may also occur in selected students from other classes.

While the MER responses provided interesting insights applicable to academic advising practices, the results of this study indicate that regular assessment of cognitive development of advisees is not likely to be helpful to advising practitioners at least in contexts similar to those of this study. Since I found no correlation between the advising approach preference and participants' levels of cognitive development, this assessment may be unnecessary. Even if cognitive development assessment were related to advising preference and therefore useful, it is impractical. Qualitative data are interesting, but they are messy. The inconsistencies found between the MER assessments and the assessments of cognitive development of those students who were interviewed suggest that accurate assessment of cognitive development is not likely without the interview component. The interview process is lengthy and often not practical for advisers. That impracticality limits the usefulness of the MER in advising practice. Even relying just on the paper and pencil instrument is problematic. My research assistant and I had difficulty discriminating among the levels of cognitive development and placing students definitively in one meaning-making system or another. In fact, we felt that the results fell

more naturally into seven categories which included transitional phases rather than the four levels described by Baxter Magolda. This may be because of insufficient rater training or practice, but even so, the difficulty we experienced suggests that this is not a practical instrument for routine use by busy faculty advisers. Furthermore, since no gender-related patterns emerged in our results, this instrument does not provide useful information for institutions attempting to address a disparity in retention of male and female students.

Interview Results Discussed

Interview results were less clear cut on student preference for developmental advising than were the AAI results. Interview responses revealed that students want and experience a mixture of both developmental and prescriptive activities. Their preference seemed to depend on the situation. Prescriptive advising was preferred earlier in the students' careers when they seemed to feel overwhelmed with information and in need of clear guidance. Perhaps ironically, seniors also seemed to appreciate clear guidance as they once again moved into less familiar territory of finding jobs and applying to graduate and professional schools.

In the interviews, participants described being more satisfied with advising if they had a good relationship with their adviser. They indicated that having an adviser who knew them as individuals and cared about them were the important factors in building that relationship. As mentioned above, this parallels the MER finding regarding instructor qualities that students see as facilitating learning. Students indicate that they perceive an adviser to be interested in them as individuals if the adviser knows advisees

by name outside the advising setting, attends student events, is aware of students' co-curricular activities and inquires about them. Conversely, students reported a hesitation to seek advising from faculty whom they saw as intimidating.

The interviews provided interesting insights that address the final research question which asked students to identify other factors that affected their advising experiences. For this population, i.e., traditional-aged undergraduates at small, private institutions, the length (see Table 8) and the number (see Table 9) of advising interchanges has a broad range across individuals. Participants indicated that the frequency of contacts with their advisers was tied to issues of access, convenience, and student needs. Students reported seeing their advisers most often without appointments. They described stopping by the adviser's office before or after class if the office was in the same building where the student had class. Students also said they sought out their advisers when the student had a decision to make such as choosing classes in which to register or needing advice on the graduate school or job application process. Some interviewees indicated that the frequency of their meetings with advisers declined as they gained confidence in their own abilities to navigate the higher education system, read the catalog, and follow written directions. They distinguished between "needing to get signatures" and "true" advising where they had developed a mentoring relationship with the adviser and sought guidance in decision-making.

<u>Research Questions Addressed</u>

In the next section, the results discussed above will be applied to the research questions posed in previous chapters.

The first question asked was whether there is a relationship between student preference for academic advising approach along a prescriptive to developmental continuum and a student's level of cognitive development. I found no relationship between these two variables, despite my expectation that such a relationship would appear. Therefore, there appears to be no need for advisers to approach students at different levels of cognitive development with different advising strategies. However, this question may no longer be relevant since such a preponderance of participants seemed to so strongly prefer developmental advising.

Results also indicate a negative response to the second research question. When assessing whether there is a relationship between gender and preference for academic advising approach, the results indicate that there is not. There was no statistically significant difference in the advising preferences of men when compared to women' advising preferences. Therefore, again, advisers have no need to consider a more developmental or prescriptive approach in order to be more or less effective with men or women in advising relationships.

After determining that gender was not a factor in advising preference, I examined results to answer the third research question regarding what other factors might influence student preference for academic advising approach. Similar to the findings in response to question two, results indicated that student preference is not a function of academic classification, major, institution, or educational background. So once again, advising adjustments based on these demographic factors seem not to be indicated though it

should be recognized that these conclusions are based on only one type of institution as well as a relatively small number of student participants.

In response to the final research question, two factors were found that might affect students' academic advising experiences. First, students' expectations for advising seem to have been limited by their lack of expectations of academic advising among college students. In contrast, providing students with mechanisms for building relationships with their advisers (such as having students enroll in a class taught by their adviser) can augment the advising experience.

To summarize, the results of this study indicate that there appears to be no need for adaptation of advising approach to individual students based on level of cognitive development or gender, so advisers may feel confident employing a developmental model of advising. To employ that approach most effectively, advisers will need to polish their relational skills and foster the development of mentoring relationships between advisers and advisees. Suggestions for implementing this developmental advising approach are discussed in the next section.

<u>Implications and Recommendations for Practice</u>

<u>Continue Developmental Advising</u>

Student preference for developmental advising has implications for faculty advisers' practice and development. Since a majority of participants in the study expressed this preference regardless of academic classification or gender, and because it shows no correlation between cognitive development and academic advising preference, advisers should feel confident in approaching most advisees developmentally. Adviser

confidence in this approach may be reinforced by the literature on developmental

advising efficacy (Crocket & Crawford, 1989; Frost, 1991b; Kern & Engels, 1996;

Raushi, 1993). While the majority of students in the sample were satisfied with academic

advising at these two schools, more students rated their level of satisfaction as a 3 than a

4 on a four-point scale (see Table 7), i.e., "satisfied" as opposed to "very satisfied." One

possible way suggested by this study to strengthen satisfaction even more might be to

increase the number of discussions of topics that are more developmental in nature, that

focus on personal development, interpersonal relationships, and building personal skills.

Taking a developmental approach simplifies the advisers' task. Rather than

having to assess advisees' cognitive development stage and adapt advising strategies

accordingly, advisers should feel free to approach undergraduate advisees confident that

the developmental approach will be appropriate for and preferred by the overwhelming

majority of students.

Balance Advising Approach

That said, advisers should realize that prescriptive advising techniques do still

have a place in advising on occasion; it will be important to listen to students and meet

their expressed needs. Quantitative results indicated student preference for

developmental advising, yet student comments made in interviews seemed to indicate a

desire for both developmental prescriptive advising as called for by the occasion. That is,

sometimes advisees want elements of what would be considered prescriptive advising so

that they feel they have been given guidance with concrete direction on how to

implement advice. As one interviewee put it, "All my life I've had people walk me

through step by step and tell me what to do and I was comfortable with that." In one instance, an advisee was dissatisfied with a suggestion her adviser made related to job shadowing someone in a career she was considering. Instead, she wanted her adviser to give her specific instructions to follow on how to do that and to provide her with a contact to facilitate that experience. "Maybe have the advisers encourage them from that point to start. You know, just tell them, you know, 'if this is what you want to do, go out there and get some experience. . . . ' Kind of like push the students to do it, just to kind of . . . then even more directions with the resources like names, like, 'go talk to this person. They have a lot of experience.'" However, advisers must be careful to temper specific advice with an openness to hearing the students' wishes. It is crucial not to be perceived as being too dictatorial. One interviewee reported changing advisers because her first adviser was "so opinionated." Meeting the needs of advisees appears to require sensitivity and careful balance.

Provide Adviser Development

Even though participants in this study indicated they are often experiencing developmental advising, many advisers tend to be more comfortable with advising tasks strictly related to reviewing students' progress through their academic program (Gordon, 1994). In fact, results from Section II of the AAI in this study indicate that activities in registration, class scheduling, and discussion academic majors and course selection are being discussed more frequently than are items related to personal development, interpersonal relationships, and development of personal skills. Therefore, additional training and resources are needed in order to build adviser confidence and skill in

developmental advising. Since developmental advising demands a broader scope of activities including advice on study strategies, goal setting, and career planning, institutions need to provide advisers with guidelines for and practice in discussions with students. Graduate programs do not typically address these topics. Faculty are immersed in their content areas and may receive some training in pedagogy, but student development is not generally included in higher education programs for faculty, yet faculty are doing the advising at small colleges. Institutional policies and requirements for majors and programs of study are outlined in college catalogues, but availability of resources in developmental areas for advisers is haphazard. Colleges do not consistently make advising manuals available, and when manuals are available, their content varies widely, ranging from simple statements of academic policies to more comprehensive resources which include instruction in relational aspects of advising as well. Consistent availability of references for advisers in these more developmental areas is needed.

Advisers would also benefit from having a background in student development. Even though it is not necessary to assess the level of cognitive development of individual advisees, it would be helpful for advisers to be aware of the foundations of students' meaning-making at all levels of cognitive development in addition to development in the relational aspects of advising. Since this study indicated no statistical difference in the levels of cognitive development among undergraduates until they reach the senior year, understanding that some students view knowledge as absolute and view authority figures as sources of right or wrong answers would be useful to advisers as they work with students. Being cognizant of students' meaning-making structures can help advisers

understand students' decisions and can provide advisers with opportunities to assist with advisees' growth and development. The advising interchange, in which advisers guide student decision-making, may, in fact, provide the perfect circumstances for facilitating student movement into more complex thinking and increased responsibility.

The finding that there is not a predictable difference in levels of cognitive development until the senior year has implications for advisers of students beyond the first year as well. Advisers need not, in fact cannot, assume that sophomores and juniors are approaching decision-making in ways that are more cognitively complex. If advisees are viewing knowledge as absolute and advisers as authorities, this presents a challenge for advisers attempting to advise developmentally where decision-making is accomplished mutually with advisees.

Clarify Advising Expectations

This study suggests some possibilities for how best to facilitate the development of the advising relationship. When the advising relationship begins is a puzzle. While it would seem logical that a relationship should begin with the initial contact between advisers and students at freshman registration, at both institutions students were clear in saying that they did not consider that initial registration experience "advising." Institutions may need to be more intentional about highlighting advising during new student orientation programs or presenting informational sessions on advising through classes and other venues, perhaps residence halls, early in the fall of the first year.

Perhaps addressing advising should begin before students even enter college. Study results confirm the need to educate students on what they might expect and how

they might benefit from advising. Interview participants, like responses to the question added to the MER, indicated that they had had little or no experience with this type of relationship in high school and seemed to have no understanding of what advising can/should be beyond scheduling of classes and meeting graduation requirements. When students' expectations are met, they tend to be more satisfied, and satisfaction is linked to persistence, so institutions would benefit from helping students establish clear and reasonable expectations.

Even though students interviewed asserted that they were unsure of what to expect of advising, their interview responses indicated that they were making some assumptions about what good advising would be, though they could not articulate them. The suppositions ranged from anticipating a close personal relationship and frequent individual attention to having complete autonomy but with an omnipresent safety net, and they were sometimes unrealistic. For instance, interviewees said, "I had a guidance counselor in high school and I feel my adviser now is more concerned with actually academics where my guidance counselor was more concerned with how my life was." "I had a very involved academic adviser that was always there in high school. I find here they don't care as much." "My first adviser here was opinionated, but helped me whenever I asked." "My adviser has helped me plan my courses accordingly, but it's still up to me to find a major. But she has helped me rule out majors and helped me articulate on my talents and interests." The array of these remarks seems to indicate that students making these comments may be expecting advisers to be more involved or to provide more direction than ought to be expected or than is even appropriate. Baxter Magolda

has written, "Academic advising is an arena in which many educators struggle to find the balance between guiding students and encouraging students to take responsibility for academic decisions and progress" (Baxter Magolda, 2003, p. 241). If advising is seen as an extension of teaching, advisers may well have different expectations from students about student responsibility and agency than the students have of themselves. The adviser can facilitate student learning and problem-solving abilities by challenging students to find experiences for themselves, make their own decisions, and participate in crafting their own meaningful academic and life plans while providing appropriate support, resources, and guidance.

Build an Advisee-Instructor/Adviser Connection

Student experiences described in interviews confirmed that one mechanism that seems to facilitate building positive relationships between advisers and advisees is having the students be enrolled in a class that is taught by their advisers. This provides frequent contact opportunities and a natural avenue for getting acquainted with each other through the student's work and participation in class discussions and activities. Institutions might consider connecting advising to a course in which students, particularly first-year students, are enrolled at least until a relationship between adviser and advisee is established.

However, it appears that simply enrolling students in a class taught by their adviser may not be sufficient. All students at College B (except those who transfer in after their freshman year) are enrolled in a freshman seminar where they are advised by their seminar instructors. In addition to introducing students to collegiate level learning,

one stated function of that class is to provide academic support and guidance and facilitate the transition into the living and learning environment of the college. Another goal of that experience is to foster the close student-faculty interaction advocated by Astin (1977). Yet at least one of these explicit functions of the first-year seminar course at College B is not being fully perceived by students. Only 5.2% of all study participants reported being advised in conjunction with a course in which they were enrolled. These students seem to be distinguishing between discussions related to class assignments and advising. However, it is not clear to me whether it is important that students perceive discussions as "advising" so long as they are meeting regularly with their adviser, building a relationship, and having meaningful exchanges.

Among the students participating in this study, there was no statistically significant difference in the number of advising contacts across academic classifications, so advisers should not be tempted to succumb to what might seem like a common sense conclusion that more experienced advisees may need fewer advising meetings. That conclusion is not born out in this study. Advisers would do well to remember that upper-division students are facing the bookend to the transition faced by new first-year students and may need as much advice, though topics will likely vary. Perhaps an advising relationship in a senior capstone class would be productive.

Nurture the Advising Relationship

The advising relationship appears to be a fragile one. Because they are not aware of the benefits and sometimes lack persistence, students will not pursue what they perceive to be difficult or off-putting. MER results indicate a strong desire on the part of

students for advisers who know them well and care for them as individuals. That

perception may be fostered by something as simple as the adviser asking about the

student's family or congratulating a student on an academic or co-curricular success.

Having only a few hurdles seems to be sufficient to inhibit the flourishing of a strong

mentoring relationship, so easy access to the adviser seems important. It also appears

crucial that advisers respond in a timely fashion to student inquiries. One student who

expressed dissatisfaction with her adviser and eventually changed advisers said, "I sent

him two e-mails, stopped by his office, and he never got back to me."

Another quality that helps cement the advising relationship is for students to feel

confident in the ability of their advisers to provide them with accurate, timely

information. If the adviser is knowledgeable about college requirements and policies,

that inspires advisee confidence. Students want to be sure they are making satisfactory

progress toward graduation. One interviewee said, "She lets me know what I need to take

and when. She's very organized and makes sure things get done." Even though

discussion of college policies is more characteristic of prescriptive advising, it is an

important component of advising, and it is the area students report is least frequently

addressed (see Table 3).

Limitations

The results of this study are limited by several factors. Having participants'

scores so heavily skewed in favor of receiving developmental advising may also have

minimized any range that might have correlated with cognitive development more

clearly. While the preference for developmental advising is consistent with prevailing

sentiments in the academic advising community and with student preferences reported in Creedon's 1990 study as reported in Chapter 2, the results were more skewed than I had anticipated. That is, more students preferred developmental advising and the preference was more pronounced than I had expected. Further research needs to be done to find out whether this strong preference is typical or a result of sampling error or a quality unique to the populations at small, liberal arts colleges.

Future researchers using the MER may gain confidence in their findings if additional training in interpreting results were to be made available.

<div align="center">Recommendations for Further Research</div>

The participants in this study had a very strong preference for developmental advising. Further research is needed to determine whether this is typical, or unique due to the characteristics of the participants in this study. It might be productive to determine whether that was due to the character and approach to advising taken at this particular type of institution.

Further research as to whether there is also a lack of correlation between advising preference and cognitive development at a larger institution where students may be expected to be more independent or where advising is delivered by professional advisers rather than academic faculty might prove interesting. Since the pool of participants was restricted to traditional-aged undergraduates, there was no statistically significant difference in levels of cognitive development across classes. Additional research with a broader pool of participants may yield findings that are different.

When assessing frequency of advising interactions, an area unaccounted for in the AAI usage statistics is electronic communication. There is anecdotal evidence that suggests that the number of advising contacts reported in Part IV of the AAI in this study is low. The question asked, "how many advising sessions [students] had" either with their current adviser or any adviser during the year. I suspect students did not interpret that to include e-mail exchanges they may have had with their advisers. Faculty, particularly those at College B which is a campus which provides laptop computers to all students, have reported a marked increase in electronic communications (e-mails and through electronic course management systems). Therefore, more research is needed to get a more complete picture of the whole range of advising interchanges.

Additional research on the efficacy of connecting academic advising to a first-year seminar may answer questions raised about whether the having advising relationship connected to a course is more beneficial to the advising relationship because of regular contact though class or less beneficial because of the grading relationship of teacher/adviser to student/advisee.

Finally, since the quantitative results indicated a strong preference for developmental advising, but the results of the qualitative results suggested that the preference may be more complicated than a dichotomous preference, additional research would be useful. Since data was collected for this study, a new section of the AAI has been developed. Part V measures preference for developmental and prescriptive advising as two separate constructs rather than one continuum has been developed. Researchers

might investigate whether students may have need of *both* approaches to advising, and, if they do, who are those students and when is each approach to beneficial.

Conclusion

The findings of this study reinforced the widespread endorsement of developmental advising and suggest that this approach may, in fact, be being implemented more frequently than previously thought. While advisers can and should use a developmental approach, meeting the needs of individual students at particular times still requires sensitivity, though not a formal assessment of levels of cognitive development. Instead, in order to facilitate the building of strong mentoring relationships institutions should provide frequent opportunities for adviser-student contact. Advisees need to be instructed in the benefits of advising, and advisers should be provided with the resources needed to polish advising skills.

REFERENCES

Academic Advising: CAS Standards and Guidelines. (2005). Retrieved March 8, 2006 from http://www.nacada.ksu.edu/clearinghouse/Research_Related/CASStandardsForAdvising.pdf

Alexitch, L. R. (1997). Students' educational orientation and preferences for advising from university professors. *Journal of College Student Development, 38*(4), 333-343.

Alexitch, L. R. (2002). The role of help-seeking attitudes and tendencies in students' preferences for academic advising. *Journal of College Student Development, 43*(1), 5-19.

American Council on Education. (1937). Student personnel point of view. Retrieved March 6, 2006 from http://www.naspa.org/gradprep/StudAff_1937.pdf

Anderson, V. (1995). Identifying special advising needs of women engineering students. *Journal of College Student Development, 36*(4), 322-329.

Andrews, M., Andrews, D., Long, E., & Henton, J. (1987). Student characteristics as predictors of perceived academic advising needs. *Journal of College Student Personnel, 28*(1), 60-65.

Astin, A.W. (1977). *Four critical years.* San Francisco: Jossey-Bass.

Baxter Magolda, M. B. (1992). *Knowing and reasoning in college: Gender-related patterns in students' intellectual development* (1st ed.). San Francisco: Jossey-Bass.

Baxter Magolda, M.B. (1995). The integration of relational and impersonal knowing in young adults' epistemological development. *Journal of College Student Development, 36*(3), 205-216.

Baxter Magolda, M. B. (1999a). Constructing adult identities. *Journal of College Student Development, 40*(6), 629-644.

Baxter Magolda, M. B. (1999b). The evolution of epistemology: Refining contextual knowing at twentysomething. *Journal of College Student Development, 40*(4), 333-344.

Baxter Magolda, M. B. (2000). Interpersonal maturity: Integrating agency and communion. *Journal of College Student Development, 41*(2), 141-156.

Baxter Magolda, M.B. (2001a) A constructivist revision of the measure of epistemological reflection. *Journal of College Student Development, 42*(6), 520-534.

Baxter Magolda, M.B. (2001b). *Making their own way: Narratives for transforming higher education to promote self-development.* Sterling, VA: Stylus Publishing.

Baxter Magolda, M.B. (2003). Identify and learning: Student affairs' role in transforming higher education. *Journal of College Student Development, 44*(1), 231-247.

Baxter Magolda, M.B. & Porterfield, W.D. (1985). A new approach to assess intellectual development on the Perry scheme. *Journal of College Student Personnel, 20,* 343-350.

Beasley-Fielstein, L. (1986). Student perception of the developmental advisor-advisee relationship. *NACADA Journal, 6,* 107-117.

Belenky, M.F., Clinchy, B.M., Goldberger, N.R, & Tarule, J.M. (1986). *Women's ways of knowing: The development of self, voice, and mind.* New York: Basic Books.

Boyer, E.L. (1987). *College: The undergraduate experience in America.* New York: HarperCollins.

Broadbridge, A. (1996). Academic advising--traditional or developmental approaches?: Student perspectives. *British Journal of Guidance and Counseling, 24*(1), 97-111.

Brown, Robert D. (2003). *Tenth Mental Measurements Yearbook.* (Review). Lincoln, NE: University of Nebraska Press.

Brown, T., & Rivas, M. (1994). The prescriptive relationship in academic advising as an appropriate developmental intervention with multicultural populations. *NACADA Journal, 14*(2), 108-111.

Carberry, J. D., Baker, M., & Prescott, D. L. (1986). Applying cognitive development theory in the advising setting. *NACADA Journal, 6*(2), 13-18.

Centra, J. A., & Rock, D. (1971). College environments and student academic achievement. *American Educational Research Journal, 8*(4), 623-634.

Cesa, T. (1980). Undergraduate Leavers and Persisters at Berkeley: Results of a Telephone Survey Conducted in Spring 1979. (ERIC Document Reproduction Service No. ED187294)

Creeden, J. E. (1990). "Components of good advising: Differences in faculty and student perceptions". *NACADA Journal, 10*(2), 30-36.

Creswell, J.W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches.* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Crockett, D. S. (1978). *Academic advising: A cornerstone of student retention.* San Francisco: Jossey-Bass.

Crockett, D. (1985). Academic advising. In L. Noel, R. Levitz, D. Saluri & Assoc. (Eds.), *Increasing student retention: Effective programs and practices for reducing the dropout rate* (pp. 244-263). San Francisco: Jossey-Bass.

Crockett, J. B., & Crawford, R. L. (1989). The relationship between Myers-Briggs type indicator (MBTI) scale scores and advising style preferences of college freshmen. *Journal of College Student Development, 30*(2), 154-161.

Crookston, B. B. (1972). A developmental view of academic advising as teaching. *Journal of College Student Development, 13*(1), 12-17.

Ender, S. C., Winston, R. B., & Miller, T. K. (1982). Academic advising as student development. In R. B. Winston Jr., S. C. Ender & T. K. Miller (Eds.), *Developmental approaches to academic advising.* San Francisco: Jossey-Bass.

Evans, N.J., Forney, D.S., & Guido-DiBrito, F. (1998). *Student development in college: Theory, research, and practice.* San Francisco: Jossey-Bass.

Fielstein, L.L. (1992). Differences in traditional and nontraditional students' preferences for advising services and perceptions of services received. *NACADA Journal, 12*(2). 5-12.

Fielstein, L. L. (1994). Developmental versus prescriptive advising: Must it be one or the other? *NACADA Journal, 14*(2), 76-79.

Fielstein, L. L., Scoles, M. T., & Webb, K. J. (1992). Differences in traditional and nontraditional students' preferences for advising services and perceptions of services received. *NACADA Journal, 12*(2), 5-12.

Flaherty, R. (2006). NACADA memories and milestones. *Academic Advising Today,*
29(1), Retrieved February 20, 2006 from
http://www.nacada.ksu.edu/AAT/NW29_1.htm

Frost, S. (1989). *Academic Advising and Cognitive Development: Is there a Link?*
(ERIC Document Reproduction Service No. ED 317 113)

Frost, S. (1991a). *Academic Advising for Student Success: A System of Shared*
Responsibility. (ERIC Document Reproduction Service No. ED339 272)

Frost, S. (1991b). Fostering the critical thinking of college women through academic
advising and faculty contact. *Journal of College Student Development, 32,*
359-366.

Gilligan, C. (1977). In a different voice: Women's conceptions of self and of
morality. *Harvard Educational Review, 47,* 481-517.

Gordon, V. (1994). Developmental advising: The elusive ideal. *NACADA Journal,*
14(2), 71-75.

Gordon, V., & Kline, D. I. (1989). Ego-identity statuses of undecided and decided
students and their perceived advising needs. *NACADA Journal,* (Spring), 5-
15.

Greenwood, J. D. (1984). Academic advising and institutional goals: A president's
perspective. In R. B. Winston Jr., T. K. Miller, S. C. Ender, T. J. Grites &
Assoc. (Eds.), *Developmental academic advising* (pp. 89-118). San Francisco:
Jossey-Bass.

Grites, T. (1979). *Academic Advising: Getting Us through the Eighties.* Washington,
D.C.: American Association for Higher Education.

Grites, T., & Gordon, V. (2000). Developmental academic advising revisited.
NACADA Journal, 20(1), 12-15.

Habley, W. (1982). Academic advisement: The critical link in student retention.
NASPA Journal, 18, 45-50.

Habley, W. (2004). *The status of academic advising: Findings from the ACT sixth*
national survey. (Number 10 ed.). Manhattan, KS: NACADA.

Habley, W. R., & Crockett, D. S. (1988). In Habley W. R. (Ed.), *The third ACT*
national survey of academic advising. . Iowa City, IA: American College
Testing.

Hardee, M. D. (1970). *Faculty advising in colleges and universities* (9th ed.). Washington, D.C.: American College Personnel Association.

Hartman, J. E. (1991). *Student perceptions of factors in academic climate which encourage persistence at selected four-year United Methodist college in the southeastern United States.* Dissertation, Memphis State University.

Hemwall, M. K., & Trachte, K. C. (1999). Learning at the core: Toward a new understanding of academic advising. *NACADA Journal, 19*(1), 5-11.

Herndon, J.B. (1996). Student preferences for advising style in community college environments. *Journal of College Student Development, 37*(6), p. 637-648.

Hornbuckle, P. A., Mahoney, J., & Borgard, J. H. (1979). A structural analysis of student perceptions of faculty advising. *Journal of College Student Personnel, 20*, 296-300.

Idea Works, Inc. (2002). *Qualrus: The intelligent qualitative analysis program.* Thousand Oaks, CA: Sage Publications, Inc.

Jaffe, W. F., & Huba, M. E. (1990). Engineering students' use of and satisfaction with faculty and professional academic advising systems. *NACADA Journal, 10*(2), 37-43.

Jordan, P. (2000). Advising college students in the 21st century. *NACADA Journal, 20*(2), 21-30.

Kaplan, W. A., & Lee, B. A. (1997). *A legal guide for student affairs professionals. (adapted from the law of higher education, 3rd ed.)* (Adapted from 3rd ed.). San Francisco: Jossey-Bass.

Kegan, R. (1982). *The evolving self: Problem and process in human development.* Cambridge, MA: Harvard University Press.

Kern, C. W., & Engels, D. W. (1996). Developmental academic advising: A paradigm shift in a college of business administration. *Journal of College Student Development, 37*(1), 95-96.

Kitchener, K.S., & King, P.M. (1981). Reflective judgment: Concepts of justification and their relationship to age and education. *Journal of Applied Developmental Psychology, 2*, 89-116.

Koerin, B.B. (1991). Improving academic advising: Strategies for change. *NASPA Journal, 28*(4). 323-327.

Laff, N. S. (1994). Reconsidering the developmental view of advising: Have we come a long way? *NACADA Journal,* 46-49.

Light, R. (2001). *Making the most of college: Students speak their minds.* Cambridge, MA: Harvard University Press.

Matosian, M. C. (1999). *Academic advising: Assessing psycho-social development, advising theory and student satisfaction: A comparative analysis of the college of agriculture and life sciences and the college of letters and science at the University of Wisconsin-Madison.* (Doctoral dissertation, University of Wisconsin-Madison, 1999). *Dissertation Abstracts International, 61* (01), 46A. (UMI No. 9939707)

McAuliffe, G. J., & Strand, R. F. (1994).) Advising from a constructive developmental perspective. *NACADA Journal, 14*(1), 25-31.

McLaughlin, B.M. & Starr, E.A. (1982). Academic advising literature since 1965: A College Students Personnel Abstracts review. *NACADA Journal, 2*(2), 14-23.

Milburn, S. D. (1994). *An analysis of the influences of gender, race and age on student preferences for the delivery of academic advising services.* (Doctoral dissertation, University of Kentucky, 1994). *Dissertation Abstracts International, 55*(10), 3107A.

Miller, T. K., & McCaffrey, S. S. (1982). Student development theory: Foundations for academic advising. In S. C. Winston, S. C. Ender & T. K. Miller (Eds.), *Developmental approaches to academic advising* (No. 17 ed.). San Francisco: Jossey-Bass.

National Association of Student Personnel Administrators (NASPA). (1989). *Points of View.* A Perspective on Student Affairs, 1987. (ERIC Document Reproduction Service No. ED336654)

O'Banion, T. (1972). An academic advising model. *Junior College Journal, 42,* 62-69.

Pardee, C. (1994). We profess developmental advising, but do we practice it? *NACADA Journal, 14*(2), 59-61.

Pascarella, E. (1980). Student-faculty informal contact and college outcomes. *Review of Educational Research, 50*(4), 545-595.

Pascarella, E., & Terenzini, P. (1978). Student-faculty informal relationships and freshman year educational outcomes. *Journal of Educational Research, 71*(4), 60-75.

Pascarella, E., & Terenzini, P. (1980). Predicting freshman persistence and voluntary dropout decisions from a theoretical model. *Journal of Higher Education, 51*(1), 60-75.

Patton, M.Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Perry, W.G., Jr. (1968). *Forms of ethical and intellectual development in the college years: A scheme.* (Reprinted 1970 &1999). San Francisco: Jossey-Bass.

Raushi, T. M. (1993). Developmental academic advising. *New Directions for Community Colleges, No. 82.* San Francisco: Jossey-Bass.

Rooney, M. (1994). Back to the future: Crookston and O'Banion revisited. *NACADA Journal, 14*(2), 35-38.

Saving, K. A., & Keim, M. C. (1998). Student and advisor perceptions of academic advising in two Midwestern colleges of business. *College Student Journal, 32*(4), 511-521.

Smith, J. S. (2002). First-Year student perceptions of academic advisement: A qualitative student and reality check. *NACADA Journal, 22*(2), 39-49.

Thomas, R. E., & Chickering, A. W. (1984). Foundations for academic advising. In R. B. Winston, & and Assoc. (Eds.), *Developmental academic advising: Addressing students' educational, career, and personal needs.* San Francisco: Jossey-Bass.

Upcraft, M. L. (1995). Insights from theory: Understanding first-year student development. In L. Upcraft, & G. L. Kramer (Eds.), *First-year academic advising: Patterns in the present, pathways to the future.* Columbia, S.C.: University of South Carolina.

Wankat, P. (1986). Current Advising Practices and How to Improve Them. *Engineering Education,* 76(4). 213-216.

Weir, S. B. (2003). *The relationship of psychosocial development to preferences for academic advising using a two-dimensional measure.* (Doctoral dissertation,

Oklahoma State University, 2003). *Dissertation Abstracts International* *64*(06), 2006A. (UMI No. 3094089)

Winston, R.B., Jr. (1994). Developmental academic advising reconsidered: Chimera or unrealized potentiality? *NACADA Journal, 14*(2), 112-116.

Winston, R.B., Jr., Ender, S.C., & Miller, T.K. (1982). Developmental approaches to academic advising. *New Directions for Student Services, no. 17,* Jossey-Bass Higher Education Series. San Francisco: Jossey-Bass.

Winston, R.B., Jr., Miller, T.K., Ender, S.C., Grites, T.J. & Assoc. (1984). *Developmental academic advising.* San Francisco: Jossey-Bass.

Winston, R.B., Jr., & Sandor, J.A., (1984a). *Academic Advising Inventory.* Athens, GA: Student Development Associates.

Winston, R.B., Jr., & Sandor, J.A. (1984b). Developmental academic advising: What do students want? *NACADA Journal, 4* (1), 5-13.

Winston, R.B. Jr., & Sandor, J.A. (2002) *Evaluating academic advising: Manual for the Academic Advising Inventory.* Athens, GA: University of Georgia.

APPENDIX A:

ACADEMIC ADVISING INVENTORY

Academic Advising Inventory (AAI)

> Nationally normed, this instrument is available to
> NACADA members without cost providing they adhere
> to the guidelines listed. NACADA members have
> permission to use AAI Parts I and II in their entirety,
> but individual items may not be removed from these
> two parts for use in other instruments. Users have
> permission to use individual items from Parts III and
> IV. Items in Parts III and IV may be altered or
> eliminated to fit local conditions.

http://www.nacada.ksu.edu/Clearinghouse/Links/assessment.htm
Accessed December 8, 2003

1

ACADEMIC ADVISING INVENTORY
Roger B. Winston, Jr. and Janet A. Sandor

PART I

Part I of this Inventory concerns how you and your advisor approach academic advising. Even if you have had more than one advisor or have been in more than one type of advising situation this year, please respond to the statements in terms of your current situation.

There are 14 pairs of statements in Part I. You must make two decisions about each pair in order to respond: (1) decide which one of the two statements most accurately describes the academic advising you received this year, and then (2) decide how accurate or true that statement is (from *very true* to *slightly true*).

Mark your answers to all questions in the *Inventory* on the separate optical scan answer sheet provided. Use a number 2 pencil. If you need to change an answer, erase it completely and then mark the desired response.

EXAMPLE

80. My advisor plans my schedule. **OR** My advisor and I plan my schedule together.

A-----------B-----------C-----------D		E-----------F-----------G-----------H	
very	slightly	slightly	very
true	true	true	true

RESPONSE ON ANSWER SHEET:

A B C D E F G H I J
80 (0)(1)(2)(3)(4)●(6)(7)(8)(9)

EXPLANATION: In this example, the student has chosen the statement on the right as more descriptive of his or her academic advising this year, and determined that the statement is toward the slightly true end (response F).

---

1. My advisor is interested in helping me learn how to find out about courses and programs for myself. **OR** My advisor tells me what I need to know about academic courses and programs.

A-----------B-----------C-----------D		E-----------F-----------G-----------H	
very	slightly	slightly	very
true	true	true	true

OR

2. My advisor tells me what would be the best schedule for me. My advisor suggests important considerations in planning a schedule and then gives me responsibility for the final decision.

A-----------B-----------C-----------D		E-----------F-----------G-----------H	
very	slightly	slightly	very
true	true	true	true

OR

3. My advisor and I talk about vocational opportunities in conjunction with advising. My advisor and I do not talk about vocational opportunities in conjunction with advising.

A-----------B-----------C-----------D		E-----------F-----------G-----------H	
very	slightly	slightly	very
true	true	true	true

2

4. My advisor shows an interest in my outside-of-class activities and sometimes suggests activities.

A------------B------------C------------D
very   slightly
true   true

OR

My advisor does not know what I do outside of class.

E------------F------------G------------H
slightly   very
true   true

5. My advisor assists me in identifying realistic academic goals based on what I know about myself, as well as about my test scores and grades.

A------------B------------C------------D
very   slightly
true   true

OR

My advisor identifies realistic academic goals for me based on my test scores and grades.

E------------F------------G------------H
slightly   very
true   true

6. My advisor registers me for my classes.

A------------B------------C------------D
very   slightly
true   true

OR

My advisor teaches me how to register myself for classes.

E------------F------------G------------H
slightly   very
true   true

7. When I'm faced with difficult decisions my advisor tells me my alternatives and which one is the best choice.

A------------B------------C------------D
very   slightly
true   true

OR

When I'm faced with difficult decisions, my advisor assists me in identifying alternatives and in considering the consequences of choosing each alternative.

E------------F------------G------------H
slightly   very
true   true

8. My advisor does not know who to contact about other-than-academic problems.

A------------B------------C------------D
very   slightly
true   true

OR

My advisor knows who to contact about other-than-academic problems.

E------------F------------G------------H
slightly   very
true   true

9. My advisor gives me tips on managing my time better or on studying more effectively when I seem to need them.

A------------B------------C------------D
very   slightly
true   true

OR

My advisor does not spend time giving me tips on managing my time better or on studying more effectively.

E------------F------------G------------H
slightly   very
true   true

10. My advisor tells me what I must do in order to be advised.

A------------B------------C------------D
very   slightly
true   true

OR

My advisor and I discuss our expectations of advising and of each other.

E------------F------------G------------H
slightly   very
true   true

11. My advisor suggests what I should major in.

A------------B------------C------------D
very   slightly
true   true

OR

My advisor suggests steps I can take to help me decide on a major.

E------------F------------G------------H
slightly   very
true   true

12. My advisor uses test scores and grades to let him or her know what courses are most appropriate for me to take.

A------------B------------C------------D
very   slightly
true   true

OR

My advisor and I use information, such as test scores, grades, interests, and abilities, to determine what courses are most appropriate for me to take.

E------------F------------G------------H
slightly   very
true   true

13. My advisor talks with me about my other-than-academic interests and plans.

OR

My advisor does not talk with me about interests and plans other than academic ones.

A-------------B-------------C-------------D
very   slightly
true   true

E-------------F-------------G-------------H
slightly   very
true   true

14. My advisor keeps me informed of my academic progress by examining my files and grades *only.*

OR

My advisor keeps informed of my academic progress by examining my files and grades and by talking to me about my classes.

A-------------B-------------C-------------D
very   slightly
true   true

E-------------F-------------G-------------H
slightly   very
true   true

PART II

Directions-Consider the following activities that often take place during academic advising. During this academic year, how many times have you been involved in each activity? Use the code below to respond to questions 15-44 on the separate answer sheet.

A=None (0 times)   C=2 times   E=4 times
B=1 time   D=3 times   F=5 or more times

How frequently have you and your advisor spent time...

15. Discussing college policies

16. Signing registration forms

17. Dropping and/or adding course(s)

18. Discussing personal values

19. Discussing possible majors/academic con-centrations

20. Discussing important social or political issues

21. Discussing content of courses

22. Selecting courses for the next term

23. Planning a class schedule for the next term

24. Discussing transfer credit and policies

25. Discussing advanced placement or exempting courses

26. Discussing career alternatives

27. Discussing probation and dismissal policies

28. Discussing financial aid

29. Identifying other campus offices that can provide assistance

30. Discussing study skills or study tips

31. Discussing degree or major/academic concentration requirements

32. Discussing personal concerns or problems

33. Discussing studies abroad or other special academic programs

34. Discussing internship or cooperative education opportunities

35. Talking about or setting personal goals

36. Evaluating academic progress

37. Getting to know each other

38. Discussing extracurricular activities

39. Discussing job placement opportunities

40. Discussing the purposes of a college education

41. Declaring or changing a major/academic concentration

42. Discussing time management

43. Talking about experiences in different classes

44. Talking about what you are doing besides taking classes

PART III

Considering the academic advising you have participated in at this college this year, respond to the following five statements on the answer sheet using the code below.

A = Strongly Disagree	C = Agree
B = Disagree	D = Strongly Agree

45. I am satisfied in general with the academic advising I have received.
46. I have received accurate information about courses, programs, and requirements through academic advising.
47. Sufficient prior notice has been provided about deadlines related to institutional policies and procedures.
48. Advising has been available when I needed it.
49. Sufficient time has been available during advising sessions.

PART IV

Please respond to the following questions. Continue marking your responses on the same answer sheet.

50. What is your sex?
    (a) male
    (b) female

51. What is your cultural/racial background?
    (a) African American/Black   (c) Asian American or   (e) White/Caucasian   (g) Other
    (b) Hispanic American/Latino/a   Pacific Islander   (f) Biracial/multiracial   (h) Decline to respond
                                  (d) Native American

52. What was your age at your last birthday?
    (a) 18 or younger   (c) 20   (e) 22   (g) 24   (i) 31 or older
    (b) 19   (d) 21   (f) 23   (h) 25 - 30

53. What is your academic class standing?
    (a) Freshman (first year)   (c) Junior (third year)   (e) Irregular/Transient/Special Student
    (b) Sophomore (second year)   (d) Senior (fourth or more years)   (f) Other than any of the above

54. Which of the following best describes the majority of the academic advising you have received this academic year? *Select only one.*
    (a) Advised individually by assigned advisor at an advising center
    (b) Advised individually by any available advisor at an advising center
    (c) Advised individually, not through an advising center
    (d) Advised with a group of students
    (e) Advised by a peer (student) advisor
    (f) Advised in conjunction with a course in which I was enrolled
    (g) Advised in a manner other than the alternatives described above
    (h) No advising received

55. Approximately how much time was generally spent in each advising session?
    (a) less than 15 minutes   (c) 31-45 minutes   (e) more than 1 hour
    (b) 15-30 minutes   (d) 46-60 minutes

56. How many academic advising sessions have you had this academic year in your current situation?
    (a) none   (c) two   (e) four   (g) six   (i) eight
    (b) one   (d) three   (f) five   (h) seven   (j) nine or more

57. How many academic advising sessions in total have you had this year?
    (a) none   (c) two   (e) four   (g) six   (i) eight
    (b) one   (d) three   (f) five   (h) seven   (j) nine or more

APPENDIX B

RELIABILITY AND VALIDITY OF ACADEMIC ADVISING INVENTORY

AAI RELIABILITY AND VALIDITY

"Reliability and validity estimates are provided for the Developmental-Prescriptive Advising Scale. . . . Cronbach's alpha for the total scores, based on 476 students, was .78. Subscale coefficients were .42 for Selecting Courses, .66 for Academic Decision-Making, and .81 for Personalizing Education. Interscale correlations ranged from .02 to .64. Validity support comes from two sources reported in the manual. Once source was comparison of responses of 53 students in a relatively intensive program to 74 regularly admitted students. This study found statistically significant difference on the Developmental-Prescriptive Advising Scale and the Personalizing Education Scale but none on the other scales. Another validity source the authors present is examination of correlational relationships between the advising subscales and the activities scales. Except for the subscale dealing with selecting courses, the advising scales correlated moderately (range .16 to .60, median .35) with the activities scales.

"Part II, Advisor-Advisee Scales, is not intended to be viewed as psychometically unitary scales, and, in fact, the authors strongly suggest that for evaluative purposes, users examine the results from each item of this scale. Confirmation of the scale structures was reported in a 1986 Addendum to the Manual. Factor loadings for items ranged from .43 to .79 for their assigned scales and all items loaded highest on their assigned scale. Intercorrelations among items are provided for Part III, Satisfaction with Advising, and these are moderately high. The authors note as well that the more

developmental the advising relationship is portrayed by the student, the greater the

satisfaction with the advising" (Brown, R.D. 2003).

APPENDIX C:

MEASURE OF EPISTEMOLOGICAL REFLECTION (MER)

Protocol # _____

Measure of Epistemological Reflection

INSTRUCTIONS: The questionnaire that follows has to do with you perspective on learning in college. Each of the questions on the following pages asks for your opinion or choice on a given subject and the REASONS why you have that particular perspective or opinion. We are interested in understanding your perspective as fully as possible. Please give as much detail as you can to describe how you feel about each question. Feel free to use the backs of pages if you need more space. Thank you!

Please Write Your Responses Legibly and In Ink

Name: _____

Today's date: _____

Your age: _____   Sex (circle one):   male   female

College major(s): _____

Classification (circle one)   1Y (Freshman)
                                   2Y (Sophomore)
                                   3Y (Junior)
                                   4Y (Senior)
                                   Other _____

What is your religious affiliation if you have one? _____

Are you eligible to receive a Pell Grant? (Circle one)   Yes   No   Not sure

Father's job: _____

Mother's job: _____

Highest level of education completed by your father: _____

Highest level of education completed by your mother: _____

Six students will be selected for follow-up interviews. If selected, would you be willing to participate in a follow-up interview? Interviews will take approximately one hour, will be conducted in a library study room, will be tape-recorded, and will be held at a mutually arranged time yet this semester if possible. Interview participants will be compensated for their time at a rate of $10.00/hour.

_____Yes, I would be willing to be interviewed if selected

_____No, I prefer not to be interviewed.

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Measure of Epistemological Reflection

INSTRUCTIONS: The questionnaire that follows has to do with your perspective on learning in college. Each of the questions on the following pages asks for your opinion or choice on a given subject and the REASONS why you have that particular perspective or opinion. We are interested in understanding your perspective as fully as possible. Please give as much detail as you can to describe how you feel about each question. Feel free to use the backs of pages if you need more space. Thank you!

Please Write Your Responses in Ink

Name: _____

Age: _____

Sex: (circle one)   male   female

College major: _____

Father's job: _____

Mother's job: _____

Today's date: _____

Class rank: (circle one)   Freshman
                             Sophomore
                             Junior
                             Senior
                             First-year master's
                             Second-year master's
                             Doctoral student
                             Ph.D.
                             Other _____

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Measure of Epistemological Reflection   Protocol #_____
Page 2

Think about the last time you had to make a major decision about your education in which you had a number of alternatives (e.g., which college to attend, college major, career choice, etc.). What was the nature of the decision?

_____

_____

What alternatives were available to you?

_____

_____

_____

_____

How did you feel about these alternatives?

_____

_____

_____

_____

How did you go about choosing from the alternatives?

_____

_____

_____

_____

What things were the most important considerations in your choice? Please give details.

_____

_____

_____

_____

Measure of Epistemological Reflection   Protocol # _____
Page 3

Do you learn best in classes that focus on factual information
or classes that focus on ideas and concepts?

_____

_____

Why do you learn best in the type of class you chose above?

_____

_____

_____

_____

What do you see as the advantages of the choice you made above?

_____

_____

_____

_____

What do you see as the disadvantages of the choice you made
above?

_____

_____

_____

_____

If you could give advice to anyone on how best to succeed in col-
lege course work, what kind of advice would you give them? Talk
about what *you* believe is the key to doing well in college courses.

_____

_____

_____

_____

Measure of Epistemological Reflection   Protocol # _____
Page 4

During the course of your studies, you have probably had in-
structors with different teaching methods. As you think back
to instructors you have had, describe the method of instruction
that had the most beneficial effect on you.

_____

_____

_____

_____

What made that teaching method beneficial? Please be specific
and use examples.

_____

_____

_____

Were there aspects of that teaching method that were not bene-
ficial? If so, please talk about some of the aspects and why they
were not beneficial.

_____

_____

_____

_____

What are the most important things you learned from the in-
structor's method of teaching?

_____

_____

_____

Please describe the type of relationship with an instructor that
would help you to learn best and explain why.

_____

_____

_____

Measure of Epistemological Reflection   Protocol # _____
Page 5

Do you prefer classes in which the students do a lot of talking or where students don't talk very much?

_____

_____

Why do you prefer the degree of student involvement/participation that you chose above?

_____

_____

_____

What do you see as the advantages of your preference above?

_____

_____

_____

What do you see as the disadvantages of your preference?

_____

_____

_____

What type of interactions would you like to see among members of a class in order to enhance your own learning?

_____

_____

_____

_____

Measure of Epistemological Reflection.   Protocol # _____
Page 6

Some people think that hard work and effort will result in high grades in school. Others think that hard work and effort are not a basis for high grades. Which of these statements is most like your own opinion?

_____

_____

_____

_____

Ideally, what do you think should be used as a basis for evaluating your work in college courses?

_____

_____

_____

Who should be involved in the evaluation you described above?

_____

_____

_____

_____

Please explain why you think the response you suggested above is the best way to evaluate students' work in college courses.

_____

_____

_____

_____

_____

_____

Measure of Epistemological Reflection   Protocol # _____
Page 7

Sometimes different instructors give different explanations for historical events or scientific phenomena. When two instructors explain the same thing differently, can one be more correct than the other?

_____
_____

When two explanations are given for the same situation, how would you go about deciding which explanation to believe? Please give details and examples.

_____
_____
_____
_____
_____
_____

Can one ever be sure of which explanation to believe? If so, how?

_____
_____
_____
_____
_____

If one can't be sure of which explanation to believe, why not?

_____
_____
_____
_____
_____
_____

Protocol # _____

Briefly describe your experience with academic advisors or guidance counselors prior to coming to this institution.

_____
_____
_____
_____
_____
_____
_____
_____
_____

APPENDIX D:

OUTLINE OF THE CONSTRUCTIVIST INTERPRETATION PROCESS FOR
THE MEASURE OF EPISTEMOLOGICAL REFLECTION

Outline of the Constructivist Interpretation Process for
The Measure of Epistemological Reflection[1]
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Introduction

This document serves as an overview of the constructivist interpretation process for the Measure of Epistemological Reflection (MER). It is intended for use in conjunction with a fuller description of the interpretation process and extensive descriptions of epistemological development. These sources are noted throughout the document. Use of the MER requires permission; forms for seeking permission are attached.

Phase One: Learning the Process

The constructivist interpretation process outlined here hinges on an in-depth understanding of existing theoretical perspectives of epistemological development in young adulthood. These perspectives frame the interpreter's ability to make meaning of students' responses to the MER, both in terms of existing theory and new possibilities. The primary framework used to guide this constructivist interpretation of the MER is the Epistemological Reflection model. To study this model, read:

1. Baxter Magolda, M. B. (1992). *Knowing and reasoning in college: Gender-related patterns in students' intellectual development.* San Francisco: Jossey-Bass. This book sketches four possible ways of knowing in college based on a longitudinal study of 100 students. It also sketches gender-related patterns within three of those ways of knowing. The book primarily contains stories generated from annual interviews to provide narrative descriptions of these ways of knowing and patterns within them.
2. Baxter Magolda, M. B. (1999). The evolution of epistemology: Refining contextual knowing at twentysomething. *Journal of College Student Development, 40*(4), 333-344. This article portrays the on-going epistemological development of the same group of students from college to age 30.

In addition to describing these possibilities for epistemological development, I have also described these students' stories about how they view themselves and their relations with other people. The next two articles and book help extend the Epistemological Reflection model to include these dynamics:

1. Baxter Magolda, M. B. (1999). Constructing adult identities. *Journal of College Student Development, 40*(6), 629-644.
2. Baxter Magolda, M. B. (2000). Interpersonal maturity: Integrating agency and communion. *Journal of College Student Development, 41*(2), 141-156.

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[1] For a full description see Baxter Magolda, M. B. (2001). A Constructivist Revision of the Measure of Epistemological Reflection. Journal of College Student Development, 42 (6).

3. Baxter Magolda, M. B. (2001). *Making their own way: Narratives for transforming higher education to promote self-development.* Sterling, VA: Stylus Publishing.

Although I do not advance the MER as a tool to assess development on other models of epistemological development, studying those models also helps gain useful perspective on the concept of epistemological development. Primary sources to read include:

1. Belenky, M., Clinchy, B., Goldberger, N., & Tarule, J. (1986). *Women's ways of knowing: The development of self, voice, and mind.* New York: Basic Books.
2. King, P. M., & Kitchener, K. S. (1994). *Developing Reflective Judgment: Understanding and promoting intellectual growth and critical thinking in adolescents and adults.* San Francisco: Jossey-Bass.
3. Perry, W. G. (1970). *Forms of intellectual and ethical development in the college years: A scheme.* Troy, MO: Holt, Rinehart, & Winston.
4. Hofer, B. K., & Pintrich, P. R. (1997). The development of epistemological theories: Beliefs about knowledge and knowing and their relation to learning. *Review of Educational Research, 67*(1), 88-140.

Finally, understanding of the constructivist interpretation process in the context of interpreting the MER is necessary. That process is described in:

1. Baxter Magolda, M. B. (2001). A Constructivist Revision of the Measure of Epistemological Reflection. *Journal of College Student Development, 42* (6), 520-534.

Effective use of this process hinges on careful study of these materials prior to interpreting MER responses.

Phase Two: Identify the Central Reasons for the Respondent's Thinking

Now that you have an understanding of the various possibilities of *how* students make meaning of knowledge, it is time to read the MER responses of your particular students.

1. Read the entire response across the six pages to get a sense of the overall response.
2. Return to read the entire response per page to identify the central reasons the respondent gives for her/his thinking in each domain.

Turn to the next three pages for one students' example MER responses and possible interpretations of her central reasons with these three domains.

Consider the example below regarding the role of the learner:

DO YOU LEARN BEST IN CLASSES WHICH FOCUS ON FACTUAL INFORMATION OR
CLASSES WHICH FOCUS ON IDEAS AND CONCEPTS?

I like classes that focus on factual information because I like to know the answer.

_____

WHY DO YOU LEARN BEST IN THE TYPE OF CLASS YOU CHOSE ABOVE?

If I can come up with an answer I like to know if it is the right one. I don't like to

rely on theories and concepts which could be wrong.

_____

WHAT DO YOU SEE AS THE ADVANTAGES OF THE CHOICE YOU MADE ABOVE?

It gives instant self-recognition, because either your answer is right or it isn't.

If it is wrong you can go back and get it right.

_____

WHAT DO YOU SEE AS THE DISADVANTAGES OF THE CHOICE YOU MADE ABOVE?

In all conditions it is not always appropriate to get a "right" answer. So

theories are often good to learn.

_____

IF YOU COULD GIVE ADVICE TO ANYONE ON HOW BEST TO SUCCEED IN COLLEGE
COURSEWORK, WHAT KIND OF ADVICE WOULD YOU GIVE THEM? TALK ABOUT
WHAT YOU BELIEVE IS THE KEY TO DOING WELL IN COLLEGE COURSES.

Being in class and paying attention is not enough, you must go through your

notes after class and make sure you understand them because the classes

move quickly and if you don't understand one point, it may lead to other

confusing ideas.

This respondent, whom we will call Fran, suggests that her role as a learner is to get the
right answer. In explaining this preference, she conveys that right answers are available
in factual information but not in theoretical information, yet there is some value to
learning theories. Finally she points out that understanding is crucial. Thus the central
reasons for Fran's thinking can be interpreted as getting the right answer when there is
one and understanding when a right answer is not appropriate. [See the next phase for
interpreting what these reasons might tell us about her epistemological development.]

Here is another page of Fran's MER, this one focused on the role of peers:

DO YOU PREFER CLASSES IN WHICH THE STUDENTS DO A LOT OF TALKING, OR
WHERE STUDENTS DON'T TALK VERY MUCH?

I like classes where the students do a lot of talking.

WHY DO YOU PREFER THE DEGREE OF STUDENT INVOLVEMENT/ PARTICIPATION
THAT YOU CHOSE ABOVE?

I like to hear what other students have to say, and if they are thinking the same

things I am.

WHAT DO YOU SEE AS THE ADVANTAGES OF YOUR PREFERENCE ABOVE?

When the students are involved there is more interest in the class and I think

more learning takes effect. It is better than a boring lecture.

WHAT DO YOU SEE AT THE DISADVANTAGES OF YOUR PREFERENCE?

Maybe the amount of material needed to be covered is not done because

of too much class participation.

WHAT TYPE OF INTERACTIONS WOULD YOU LIKE TO SEE AMONG MEMBERS OF A
CLASS IN ORDER TO ENHANCE YOUR OWN LEARNING?

I do not feel that group discussions are effective, but I do feel, as I said above,

that class participation including the teacher is very effective and helpful.

Fran's interest in hearing her peers talk is aimed at hearing their ideas and seeing if they think the same things she does and making the class more interesting. The teacher must be included in these discussions for them to be effective, and potential drawbacks exist in the loss of covering needed material. Thus the central reasons for Fran's thinking about peers could be interpreted as exposure to others ideas to see if hers are on track and to make class interesting, yet not believing that her peers have valid knowledge. [See the next phase for interpreting what these reasons might tell us about her epistemological development

Finally, consider this last example from Fran, this one about the nature of knowledge:

SOMETIMES DIFFERENT INSTRUCTORS GIVE DIFFERENT EXPLANATIONS FOR HISTORICAL EVENTS OR SCIENTIFIC PHENOMENA. WHEN TWO INSTRUCTORS EXPLAIN THE SAME THING DIFFERENTLY, CAN ONE BE MORE CORRECT THAN THE OTHER?

No because they may have gotten their info from two different sources.

WHEN TWO EXPLANATIONS ARE GIVEN FOR THE SAME SITUATION, HOW WOULD YOU GO ABOUT DECIDING WHICH EXPLANATION TO BELIEVE? PLEASE GIVE DETAILS AND EXAMPLES.

Go ask the teacher where they got their info. Maybe talk to them about why

they feel that way, and then decide if you think they are right. Look it up.

It may be a fact discrepancy or a theory evaluation.

CAN ONE EVER BE SURE OF WHICH EXPLANATION TO BELIEVE? IF SO, HOW?

Yes, I could go and look up the information myself and decide on my own

which explanation to believe or make my own evaluation.

IF ONE CAN'T BE SURE OF WHICH EXPLANATION TO BELIEVE, WHY NOT?

Maybe it is completely a judgment call and 2 professors feel very differently

about the subject. The only solution is just to learn each teacher's

explanation for that class.

Here Fran conveys that the two instructors may disagree because they got information from different sources. She further describes the possible disagreement as a fact discrepancy or a theory evaluation. She indicates that she could look up the facts and make a choice, or could make her own theory evaluation to choose. She clarifies that in the case it is "completely a judgment call" the only option for her as a student is to learn the appropriate explanation for each class. Thus Fran's central reasons for her view of the nature of knowledge could be interpreted as some knowledge is factual, in which case one can find an answer, and some knowledge is theoretical, in which case the evaluation is a judgment call. [See the next phase for interpreting what these reasons might tell us about her epistemological development.]

Phase Three: Interpreting the Central Reasons re: Epistemological Reflection

Using Table 2.1[2] consider the degree to which the respondent's reasons resonate with the central reasons of each of the four ways of knowing: absolute, transitional, independent, and contextual. Table 2.1 contains the central reasons relevant to each way of knowing in each of the six domains assessed by the MER.

1. Begin by comparing the reason you identified on a particular domain response to that row in the table; it might be helpful to start with those domains in which you were most confident about your identification of the central reasons. Although you will have already read the stories accompanying Table 2.1 that reveal the fuller thinking from which these phrases emerged, you might want to refer to these stories as you compare your MER data to the central ideas in each way of knowing. There are also extensive stories for each way of knowing that will give you a context from which to understand ways of knowing and how your response might relate. If your response reflects contextual knowing, it would be useful to refer to the phases of the journey toward self-authorship[3] that describe the refinement of contextual knowing.

   For example, let's return to Fran's responses about the role of the learner. The central reasons I interpreted in Phase Two initially look like obtaining knowledge from the instructor which is characteristic of absolute knowing. However, considering her whole response suggests that this is only possible in factual arenas, implying that knowledge is certain in those arenas. Because Fran argues that it isn't always appropriate to get a right answer, this implies that some knowledge must be uncertain. Added to her focus on understanding, a more reasonable interpretation is that Fran's comments reflect transitional knowing.

2. Repeat this process for each of the remaining domains. Although reading by domain is helpful for focus and depth of understanding, sometimes reading across domains is necessary as well. If you are uncertain about the respondent's thinking in a particular domain, reading how it relates to others might further your understanding. For example, thinking about the role of the learner is sometimes clarified in the context of the person's response about the role of peers.

   For example, let's return to Fran's response regarding the role of peers. The central reasons I interpreted in Phase Two were that Fran thought other students' ideas were interesting but she did not regard them as valid knowledge. This suggests either absolute or transitional knowing because in independent and contextual she would regard her peers as capable of valid knowledge. Fran does not appear to focus on getting explanations from her peers, but rather on actively exchanging ideas to avoid

---

[2] The tables noted here as well as stories from which they were constructed are found in Baxter Magolda, M. B. (1992). Knowing and reasoning in college: Gender-related patterns in students' intellectual development. San Francisco: Jossey-Bass.

[3] See Baxter Magolda, M. B. (2001). Making their own way: Narratives for transforming higher education to promote self-development. Sterling, VA: Stylus Publishing.

boredom. Thus her reasons are closer to transitional knowing. This interpretation is supported by her earlier comments on the role of the learner.

Looking at Fran's comments on the nature of knowledge helps solidify the transitional knowing interpretation. In that response she conveys the notion that knowledge is partially certain and partially uncertain, again a core assumption of transitional knowing.

3. If you think that your respondent's reasons can be understood using the ER model but you are uncertain how to choose between ways of knowing for a particular set of reasons, it might be helpful to read those reasons in the contexts of other reasons from other domains on the MER. Sometimes a set of reasons is unclear until it is put in the context of other parts of the person's response. If you are confident about some of the domain interpretations, consider whether the ones about which you are uncertain could make sense from those vantage points (i.e., if you are confident that the nature of knowledge response reflects independent knowing, consider whether a response in the role of the learner could reflect independent knowing).

4. At this point, a way of knowing may emerge as a reasonable interpretation of the total response (i.e., if four domains clearly point to transitional knowing and two point to absolute, you could interpret that your respondent still has some absolute ways of knowing but primarily uses transitional knowing). If this is the case, proceed to the next phase on *Extending Your Interpretation*.

If no clear connection to a particular way of knowing is evident at this point, it may be because the respondent's development is not captured in the ER model. Construct a description of the respondent's thinking using the reasons you identified from each domain. You can then compare this description, generated from the students' own response, to other models of epistemological development to see if they offer useful frameworks for understanding this response. It might also be the case that you have data that suggests a new possibility in our understanding of epistemological development. Regardless of these potential outcomes, you still have a description from which to understand the respondent's thinking. If you have multiple respondents whose thinking is not captured by any existing model, you may have insights for a new theoretical model.

Phase Four: Extending Your Interpretation to Include Additional Dynamics

Gender-related patterns have emerged in some epistemological development research. These are believed to be *styles* or preferences that exist *within* ways of knowing. Thus the patterns hold equal complexity within a way of knowing rather than indicate a different way of knowing. However, patterns and structures can be hard to distinguish. To gain a fuller understanding of your respondent, you can further interpret the MER response via gender-related dynamics. [Note that gender-related means patterns may be more prevalent among women or men, but they are not exclusively used by a particular group. This is another example of development being context-bound.]

1. Reread your MER responses to refresh your sense of the style evident in the response. Using Tables 3.2 (absolute knowing patterns), 4.2 (transitional knowing patterns), and 5.2 (independent knowing patterns), see if you can extend and strengthen your interpretation of ways of knowing by finding consistencies between the responses and the patterns within each domain. If you do find consistencies, it extends your understanding of the respondent's thinking. This process might also clarify an interpretation about which you were uncertain in the first step of interpreting ways of knowing. For example, you might find a pattern that matches a response that you interpreted earlier as a different way of knowing. This would prompt you to reconsider to decide on the most reasonable interpretation.

Returning to Fran, for example, look at the transitional knowing patterns to see if her response indicates one of these patterns. Although we have minimal commentary from her on each domain, reading across the three included here gives us a possible sense of her style [and we would have three more in an actual MER]. She focuses on hearing other students, does not mention debate, prefers student involvement in learning, would resolve uncertainty by personal judgment. Taken together, these notions might mean she leans toward the interpersonal pattern.

2. Although the ER model has not identified patterns related to other dynamics to date, other models might offer opportunities to further understand whether race, class, ethnicity, sexual orientation or other dynamics play a role in understanding your respondent. For that matter, other models may offer additional interpretations of gender as a mediator of epistemological development. Useful resources for exploring the dynamics of race, class, ethnicity, and sexual orientation include:

Baxter Magolda, M. B. (Ed.). (2000). *Teaching to promote intellectual and personal maturity: Incorporating students' worldviews and identities into the learning process.* (Vol. 82). San Francisco, CA: Jossey Bass. [includes chapters on race, culture, gender, and sexual orientation]

Belenky, M., Bond, L. A., & Weinstock, J. S. (1997). *A tradition that has no name: Nurturing the development of people, families, and communities.* New York: Basic Books.

Evans, N. J., Forney, D. S., & Guido-DiBrito, F. (1998). *Student development in college: Theory, research, and practice.* San Francisco: Jossey-Bass. [an overview of current research]

Goldberger, N. R. (1996). Cultural imperatives and diversity in ways of knowing. In N. R. Goldberger, J. M. Tarule, B. M. Clinchy, & M. F. Belenky (Eds.), *Knowledge, difference, and power: Essays inspired by Women's Ways of Knowing* (pp. 335-371). New York: Basic Books.

Jones, S. R., & McEwen, M. K. (2000). A conceptual model of multiple dimensions of identity. *Journal of College Student Development, 41*(4), 405-413.

Jordan, J. V. (Ed.). (1997). *Women's growth in diversity: More writings from the stone center.* New York: Guilford Press.

Luttrell, W. (1997). *Schoolsmart and motherwise: Working-class women's identity and schooling*. New York: Basic Books.

Ortiz, A. M., & Rhoads, R. A. (2000). Deconstructing whiteness as part of a multicultural educational framework: From theory to practice. *Journal of College Student Development, 41*(1), 81-93.

Phase Five: Dialogue with Respondents

Dialogue with respondents is recommended to heighten the accuracy of the interpretation. I do not recommend asking respondents if absolute knowing, for example, captures their thinking but rather sharing a description of that perspective to ask if it resonates with their thinking. These dialogues, whether individual or with groups, serve to refine the interpretation and ensure its quality prior to using it to shape educational practice.

A Note on Goodness of Constructivist Interpretation Processes

There are numerous approaches to insuring the goodness of constructivist interpretation – using methods that result in quality data from which to construct an interpretation, using multiple analysts, multiple methods or checking interpretations with respondents to heighten the accuracy of interpretation, and to provide sufficient context for others using the interpretation to judge its transferability.[4] Incorporating some of these approaches is essential to creating a quality assessment of epistemological development.

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[4] For suggestions on the approaches I advocate for the constructivist interpretation process for the MER see Baxter Magolda, M. B. (2001). A Constructivist Revision of the Measure of Epistemological Reflection. Journal of College Student Development, 42(6), 520-534.

APPENDIX E

AGREEMENT FOR USE OF MEASURE OF EPISTEMOLOGICAL REFLECTION
(MER)

Agreement for Use of the Measure of Epistemological Reflection (MER)
©Baxter Magolda & Porterfield 1982, Baxter Magolda 2000

The following conditions apply to the use of the MER in order to ensure that the instrument is appropriate for the proposed use and interpreted adequately. The MER is copyrighted and thus reproduction or use of the instrument requires written permission. Permission will be granted for its use providing the proposed study is an appropriate use of the instrument and the interpretation is consistent with the interpretation guidelines.

I agree to comply with the conditions below in exchange for permission to use the MER in the study entitled: ___The Relationship of Undergraduate Cognitive Development and Academic Advising Preference at Two Small, Private, Liberal Arts Colleges

The principal investigator(s) will provide a completed MER Usage Proposal Form to request permission for use.

The principal investigator(s) will reproduce the copies of the MER needed in the study. The instrument must be used in its original form and must include the cover page.

The principal investigator(s) will learn the qualitative interpretation process that accompanies the MER and use it to interpret the MER responses, taking care to implement the suggested means for establishing goodness of the interpretation.

The principal investigator(s) agree to provide a summary of the completed study within one year of the completion of data collection.

The principal investigator(s) will not release the instrument to others or utilize the instrument for purposes other than those specified in this agreement.

Name of Principal Investigator: __Vicki Edelnant__ Signature: _Vicki Edelnant_

Marcia B Baxter Magolda
Marcia B. Baxter Magolda

Date:

To request permission to use the MER send completed form and Proposal Form to:
Marcia B. Baxter Magolda, Department of Educational Leadership,
350 McGuffey Hall, Miami University
Oxford, Ohio 45056; (513)-529-6837

From: Marcia Baxter Magolda [baxtermb@muohio.edu]   Wed 3/29/2006 9:21 AM
To: Vicki Edelnant
Subject: Request permission to include materials

Dear Vicki,

Congratulations on the preliminary approval! You have my permission to include a copy of the MER and the Outline of the Constructivist Interpretation Process for the MER in the appendices of your dissertation.

I'm eager to learn about your findings. Best wishes on April 12!

Marcia

APPENDIX F

INTRODUCTION OF RESEARCH PROJECT TO DIVISION CHAIRS

E-mail sent Wednesday, February 16, 2005 9:49 AM

Subject: Academic Advising Research

Colleagues,

Last August, several of you met my former colleague from Wartburg College who is completing a dissertation on academic advising: student preferences and institutional models and will be using data from both Wartburg and Loras. She has completed an IRB (for research with human subjects) at Loras, at Wartburg, and at UNI and is ready to begin data collection.

The initial step is a survey. For the survey, she needs 90 respondents of 30 first-years. 30 second years, 30 juniors-seniors; and a balance of men and women. This is where I need your help in identifying appropriate classes to contact or individual faculty to solicit FY and advisee email lists. The survey will require about 1 ½ hours to take and will be administered during an evening session. Students will be paid ($15, I think) to participate.

The surveys will be followed with individual interviews with a small number of students. Vicki will do these interviews, and she will pay students to participate.

The Process is as follows:

After identifying classes or e-mail lists,
1. Make presentation in class to recruit participants and ask them to sign up for one of three times to administer surveys
2. At three evening sessions, have students complete informed consent form
3. Distribute surveys, answer questions, collect completed surveys
4. On one of the surveys, students will indicate whether they are willing to be interviewed
5. Follow up and arrange interviews with students to include: 6 Loras students for interviews (3 men, 3 women at various levels of cognitive development as identified in one of the instruments they'll complete).
6. Conduct interviews

I am most interested in this research since it focuses on academic advising related to students' cognitive development and how developmental stages affect advising preferences. We have argued that the MOI instructor-advisor model is especially important and successful because of its focus on the unique FY academic issues and

transition. I think we have a bit of "hole" in our advising system in the second year/switch to major advisors that this research may help us to address. In addition, I'm hearing some calls for letting seniors and even juniors do their own scheduling/registration. Again knowing more about the developmental aspects of advising may make our decisions about upper-class procedures clearer.

Please send me suggested classes or faculty for her to approach that will achieve her demographic needs.

Thank you for your quick response and help on this project. Cheryl

APPENDIX G

FACULTY REQUEST LETTER

Home Address

<Date>

Dear Colleague:

My name is Vicki Edelnant. I am a doctoral student at the University of Northern Iowa. I write to solicit your assistance in recruiting research participants for my doctoral dissertation study. The purpose of this study is to assess whether there is a relationship between students' preference in advising style and their level of cognitive development.

I would be grateful if you would allow me to invite the students in your _____ class to participate in this research. Please review the attached presentation script. I will be contacting you in the near future to ask for your class's participation in the study.

Sincerely,

Vicki Edelnant
e-mail address
telephone numbers

COURSES FOR RECRUITMENT COLLEGE B: SPRING 2005		
DEPT.CATNO.SEC	TITLE	STUDENT MAKE-UP
L.PHE 145 01	Concepts of Wellness	1Y
L.PHE 222 01	Physiology of Exercise	2Y
L.LIB 105 06	College Writing-FW	1Y
L.LIB 105 07	College Writing-FW	1Y
L.LIB 105 08	College Writing-FW	1Y
L.SOC 115 01	Intro to Sociology	1Y
L.SOC 115 04	Intro to Sociology	1Y
L.SOC 282 01	Environment & Society-CH	2Y-3Y
L.BUS 331 01	Organizational Behavior	3Y
L.BUS 331 02	Organizational Behavior	3Y
L.BUS 488 01	Business Policies	4Y
L.BUS 488 02	Business Policies	4Y
L.BUS 494 03	Business Internship	4Y
L.BUS 494 04	Business Internship	4Y
L.CLA 215 01	Ancient Greek Tragedy-AI	2Y-3Y
L.LIB 135 01	Catholics Jews Buddhists-MC	1Y-2Y
L.LIB 135 02	Catholics Jews Buddhists-MC	1Y-2Y
L.LIB 135 06	Catholics Jews Buddhists-MC	1Y-2Y
L.ENG 239 01	Creative Nonfiction Writing-AA	2Y-3Y-4Y
L.EXP 295 03	Dubuque Center	2Y-3Y-4Y
L.LIB 130 04	Monastery Voices-MC	2Y
L.BUS 120 01	Intro Computing Technology	1Y
L.BUS 120 02	Intro Computing Technology	1Y
L.BUS 321 01	Data Applications/Analysis	2Y-3Y
L.BUS 325 01	Network Management	2Y-3Y
L.CSC 120 01	Intro Computing Technology	1Y
L.CSC 120 02	Intro Computing Technology	1Y
L.PHE 145 02	Concepts of Wellness	1Y
L.PHE 367 01	Sport Law	3Y
L.PHE 397 01	Indep Study: Sports Law	3Y
L.CHE 389 01	Junior Seminar	3Y
L.CHE 448 01	Adv Biochemistry Lec/Lab	3Y-4Y
L.CHE 448L 01	Adv Biochemistry Lab	3Y-4Y
L.ACC 225 02	Prin of Accounting I	3Y
L.ACC 350 01	Accounting Systems	3Y
L.ACC 394 01	Accounting Internship	3Y
L.ACC 450 01	Auditing	4Y
L.BUS 489 01	Computer System Implement	4Y
L.BUS 494 02	Business Internship	4Y
L.BUS 497 01	Indep Study: System Implementa	4Y
L.BUS 350 01	Intro to Financial Mgmt	3Y
L.BUS 350 02	Intro to Financial Mgmt	3Y
L.BUS 354 01	Personal Financial Planning	3Y
L.BUS 487 01	Adv Applications in Finance	4Y

APPENDIX I

RECRUITMENT SCRIPTS

COLLEGE A

Hello. My name is _____. I am here on behalf of Vicki Edelnant. While some of you may know her as the Director of the Pathways Center, she is also a doctoral student in educational leadership at the University of Northern Iowa. I am here to invite you to participate in her research study. The purpose of this study is to assess student preferences in academic advising style and to assess whether those preferences correspond with your decision-making processes in general. If you choose to participate in the study, you would need to attend one group session where you will complete two surveys. The session will take approximately one and one-half hours. You will have a choice of three session times:

Dates, times and locations will be listed:

1. Monday, March 14, 7:00-8:30 PM, WBC 116

2. Tuesdays, March 15, 7:00-8:30 PM, LH 330

3. Wednesday, March 16, 7:00-8:30 PM, LH 330

If you are interested in participating, but cannot attend at any of these times, Ms. Edelnant would be happy to make other arrangements that fit your schedule.

Those who participate will complete two survey instruments. There are no right or wrong answers. She is simply interested in your thoughts and opinions.

You will be compensated for your time at the rate of $10.00/hour. (Total=$15.00 since the anticipated time is 1-1/2 hours).

In addition, 6 students who complete the surveys at two institutions will be invited to participate in an individual follow-up interview that will last approximately one hour scheduled at a time mutually agreeable to you and the interviewer to be conducted in a group study room in the college library. Those interviews will be tape recorded and transcribed; transcriptions will be coded to protect the identity of those interviewed. If those invited agree to participate in this further research endeavor, they will receive an additional $10.00 compensation for their time.

This class has been selected for participation because you are representative of a certain stratum of the college's student body and I would be most grateful for your participation in this study. Nevertheless, I want you to understand that participation in this research effort is completely voluntary and there will be no negative consequences if you choose not to participate.

If you have any questions, please contact Vicki Edelnant 352-8376 or 277-6607 or vicki.edelnant@wartburg.edu. Thank you for your time.

COLLEGE B

Hello. My name is _____. I am here on behalf of Vicki Edelnant, a doctoral student in educational leadership at the University of Northern Iowa. I am here to invite you to participate in a research study. The purpose of this study is to assess

student preferences in academic advising style and to assess whether those preferences correspond with your decision-making processes in general. If you choose to participate in the study, you would need to attend one group session where you will complete two surveys. The session will take approximately one and one-half hours. You will have a choice of three session times:

Dates, times and locations will be listed:

1.

2.

3.

Those who participate and complete the AAI (Academic Advising Inventory) and the MER (Measure of Epistemological Reflection) will receive $15.00 compensation for their time.

In addition, 6 students who complete the surveys at two institutions will be invited to participate in an individual follow-up interview that will last approximately one hour scheduled at a time mutually agreeable to you and the interviewer to be conducted in a conference room in the college library. Those interviews will be tape recorded and transcribed; transcriptions will be coded to protect the identity of those interviewed. If those invited agree to participate in this further research endeavor, they will receive an additional $10.00 compensation for their time.

This class has been selected for participation because you are representative of a certain stratum of the college's student body and I would be most grateful for your participation in this study. Nevertheless, I want you to understand that participation in this research effort is completely voluntary and there will be no negative consequences if you choose not to participate.

APPENDIX J:

SIGN-UP SHEETS

Sign up to participate in Academic Advising Research at [College A]. 7:00-8:30 PM

I will participate in this research study. I provide my e-mail address below so that you may send me an e-mail reminder. I understand that all information I provide will be kept strictly confidential and I will not be identified individually in the reporting of any of the research results.

Name (please PRINT)	E-mail (please PRINT)	Class 1Y, 2Y, 3Y or 4Y	Gender M or F	Check ONE date below Mon, 3/14 WBC 116	Tues, 3/15 LH 330	Wed, 3/16 LH 330

150

Sign up to participate in Academic Advising Research at [College B]. All sessions will be 7:00-8:30 PM.

I will participate in this research study. I provide my e-mail address below so that you may send me an e-mail reminder. I understand that all information I provide will be kept strictly confidential and I will not be identified individually in the reporting of any of the research results.

Name (please PRINT)	E-mail (please PRINT)	Class 1Y, 2Y, 3Y or 4Y	Gender M or F	Check ONE date below Wed. 3/16	Thurs. 3/17	Mon. 3/21

APPENDIX K:

INTERVIEW PROTOCOL (BAXTER MAGOLDA)

BAXTER MAGOLDA INTERVIEW PROTOCOL

The following interview protocols describe how the interviews were introduced and the questions asked of participants at varying levels of anticipated cognitive development. All questions are to be used, but the order is not rigidly prescribed. If the student introduces an area of interest in the course of another response, the interviewer is free to make a transition to that subject, particularly when it concerns knowledge discrepancies (included in the interview protocol starting in year two). If the student introduceS the topic of knowledge discrepancies, the interviewer will pursue that line of thinking to avoid suggesting the subject. The follow-up questions noted throughout are to be used only when the student does not initiate discussion of those areas.

Interview Protocol: First-Year Students or Received Knowers?

Introduction

This interview is intended to solicit your ideas about your learning as a student and about your experiences in academic advising. It will be an open-ended interview in order to allow you every opportunity to offer your ideas on each aspect of the learning experience that we discuss. Feel free to talk about any experiences or ideas that come to mind as we discuss each area.

Note to interviewer

The student will be encouraged to talk freely and elaborate or explain as necessary after each question to allow maximum freedom of response. The interviewer asks general questions and encourages the student to describe experiences and ideas to avoid structuring the student's thinking.

Questions

1. Tell me about the most significant aspect of your learning experience in the past year.

2. As you think about yourself as a learner in the classroom, what role do you prefer to play to make learning more effective for you?

3. Let's talk about instructors. What do you expect from them to help you learn effectively? (Follow up if necessary: What relationship do you think instructors and students should have to make learning effective?)

4. What about other students in your classes? What kinds of experiences have you had with them that help you learn? (Follow up if necessary: What kinds of interactions would you like to have that would help you learn?)

5. As you think back over the work you've done in your classes the past year, talk about how you think learning should be evaluated in order for you to learn effectively.

6. Discuss your perspective on the value of the things you have learned in the past year. (Follow up if necessary: What things have you learned that you think are important? What concerns have you had about some of the things you have learned?)

7. I am interested in your perspective on how best to make decisions. Can you describe an important educational decision you made in the last year and talk about how you went about it?

8. Would you change anything about the learning environment you have experienced over the past year? If so, what?

9. As you think of yourself as an advisee, what role do you prefer to play to make advising as effective as possible?

10. Let's talk about advisors. What do you expect from them to help you most effectively? (Follow up if necessary: What relationship do you think advisors and advisees should have to make advising most effective?)

11. Is there anything else you would like to share to help me understand your perspective on the learning and advising you have experienced over the past year?

Closure

Thanks very much for your time and willingness to share your ideas. As you recall, your identity will be kept confidential.

<div align="center">Interview Protocol: Year Two Students</div>

Introduction

Thanks for your participation in this study. You willingness to participate makes it possible to study how students' learning and advising preferences change in college. This interview is intended to solicit your ideas about your learning and advising experiences as a student. It will be an open-ended interview in order to allow you every opportunity to offer your ideas and thoughts on each aspect of the learning and advising experiences we discuss. Learning experiences probably have occurred both in class and in co-curricular experiences. Feel free to talk about any experiences or ideas that come to mind as we discuss each area.

Questions

1. Now that you have experienced your first and part of the second year of college, tell me about the most significant aspect of your learning in the past year.

2. As you think about yourself as a learner in the classroom, what role do you prefer to play to make learning more effective for you?

3. Let's talk about instructors. What do you expect from them to help you learn effectively? (Follow up if necessary: What relationship do you think instructors and students should have to make learning effective?)

4. What about other students in your classes? What kinds of experiences have you had with them that help you learn? (Follow up if necessary: What kinds of interactions would you like to have that would help you learn?)

5. As you think back over the work you've done in your classes the past year, talk about how you think learning should be evaluated in order for you to learn effectively.

6. This past year you have probably heard and/or read a great deal of information. Usually with that amount of information, you run across some discrepancies. Has this happened to you? If yes, how do you decide what to accept or believe? If no, what do you think you would do if you did?

7. Let's talk about decision of a different nature. Can you describe an important educational decision you made in the last year and talk about how you went about it?

8. Discuss your perspective on the value of the things you have learned in the past year. (Follow up if necessary: What things have you learned that you think are important? What concerns have you had about some of the things you have learned?)

9. Would you change anything about the learning environment you have experienced over the past year? If so, what?

10. As you think of yourself as an advisee, what role do you prefer to play to make advising as effective as possible?

11. Let's talk about advisors. What do you expect from them to help you most effectively? (Follow up if necessary: What relationship do you think advisors and advisees should have to make advising most effective?)

12. Is there anything else you would like to share to help me understand your perspective on the learning and/or advising you have experienced over the past year?

Closure

Thanks very much for your time and willingness to share your ideas. As you recall, your identity will be kept confidential.

Interview Protocol: Students in Third or Fourth Year

Introduction

Thanks for your participation in this study. You willingness to participate makes it possible to study how students' learning and advising preferences change in college. This interview is intended to solicit your ideas about your learning and advising

experiences as a student. It will be an open-ended interview in order to allow you every opportunity to offer your ideas and thoughts on each aspect of the learning and advising experiences we discuss. Learning experiences probably have occurred both in class and in co-curricular experiences. Feel free to talk about any experiences or ideas that come to mind as we discuss each area.

Note: Start each area A through E by asking for general observations. Follow up questions are used if necessary to prompt elaboration.

Questions

1. As you think about the last year, what is the most significant learning experience that comes to mind?

   a. What made it significant?

   b. Why is it more important than other experiences?

2. You spend a lot of time in classes. Let's talk about the classes you've had this past year.

   a. Instructors

      i. What things have they done to help you learn?

      ii. What things did they not do that would have helped?

      iii. What interactions have you had with instructors? Did these help you learn?

      iv. What relationships have you had with instructors? Did these affect your learning?

      v. What suggestions do you have for change?

b. Other students

    i. What interactions have you had in class with other students? Were there interactions helpful?

    ii. What interactions have you had out of class with other students? Were there interactions helpful?

    iii. What interactions with other students do you prefer? Why?

c. Yourself

    i. What methods of learning have you found that work for you?

    ii. Why are these effective?

d. Evaluation

    i. What have you experienced that is helpful?

    ii. What have you experienced that is not helpful?

    iii. What should have been done? Why?

e. Varying points of view

    i. Have you experienced these?

    ii. If so, how do you decide?

    iii. What is the source of discrepant information?

3. You learn outside the classroom as well, so let's talk about that.

    i. What aspects of your environment have helped you learn? Why?

    ii. What aspects of your environment have not helped/hindered your learning? Why?

4. Is there anything you would change about any aspect of the environment here to make learning more effective?

5. Decision making:

    a. What is the most important decision you made last year?

    b. Why is that one most important?

    c. How did you go about it?

    d. Are you finding decision making easier or harder as you are in college longer?

6. Are you different in any way as a result of your learning experience last year? If so, in what way? How did it happen?

7. What role, if any, has your advisor played in your decision-making this year?

8. Has the role your advisor played been helpful? Not helpful? Why? What changes might you suggest, if any?

9. Anything else of importance I missed?

Closure

Thanks very much for your time and willingness to share your ideas. As you recall, your identity will be kept confidential.

APPENDIX L

EDELNANT INTERVIEW PROTOCOL

Questions specific to advising

Our meeting today isn't about individual advisors, but about advising. Leave names of faculty and advisors out. I'm going to ask you to tell me about your experiences with academic advising.

1. How many advisors have you had at this college?

2. How often do you meet with your advisor? In the last semester?

3. How long was each advising session?

4. How were advising meetings arranged? When you met with your advisor, who instigated the meeting? (you, your advisor, mutual)

5. Describe a typical advising session.
   a. What topics do you and your advisor discuss? (For example, course selection and scheduling, academic program requirements, academic standing, progress toward graduation, institutional resources and academic support services, co-curricular activities, summer job and internship opportunities)
   b. Who directs the conversation (you, your advisor, both)?

6. How do you feel about the types of interactions you have with your advisor?

7. What are the characteristics of a good advisor? What type of relationship with an advisor would be most helpful to you?

8. What are the advantages of the types of interactions you have with your advisor?

9. What are the disadvantages of the types of interactions you have with your advisor?

10. How have your advising experiences worked for you?

11. Have you been satisfied with your academic advising? If so, why? If not, why?

12. Describe how you chose your major.

13. Think of a time when you had to make a challenging decision regarding your academic program. How did you go about making that decision?

14. How open do you think you've been to advising? Do you think you've ever resisted the process?

15. How does your advising compare to what you hear from your friends about their relationships with their advisors?

16. Is there anything else I should know on your thoughts about advising?

APPENDIX M

INFORMED CONSENT

UNIVERSITY OF NORTHERN IOWA
HUMAN PARTICIPANTS REVIEW

Project Title: Advising Preference and Cognitive Development: Implications for Small, Private, Liberal Arts, Church-Affiliated Colleges

Name of Investigator(s): ___Vicki Edelnant_____

Invitation to Participate:
You are invited to participate in a research project conducted through the University of Northern Iowa. The University requires that you give your signed agreement to participate in this project. The following information is provided to help you make an informed decision about whether or not to participate.

Nature and Purpose: This study is designed to learn more about student preferences for academic advising styles, the students' decision-making processes, and whether there is any relationship between the two.

Explanation of Procedures:
In order to learn more about student preferences for advising styles, participants will complete the Academic Advising Inventory (AAI), a machine-scored inventory which takes approximately 30 minutes to complete. In order to learn more about student decision-making processes, participants will complete the Measure of Epistemological Reflection (MER), a short-answer instrument which takes approximately one hour to complete. Selected participants may be invited to be interviewed to provide the researcher with more in-depth answers on these two topics. These interviews will take place in the campus library within 60 days of the administration of the original surveys. Interviews will take approximately 60 minutes and will be tape recorded. Tapes will be transcribed and transcriptions coded so that individual identity will be protected. The researcher may consult with advisors to substantiate that participants have met with their advisors. Data may be used in a future study. At the conclusion of the project, research data will be stored in a secure location for up to 10 years.

Discomfort and Risks:
There are no appreciable risks involved in participating in this study.

Benefits:
There are no direct benefits to the participants in this study beyond compensation for their time.

Participants in this study will receive compensation for their time: $5.00 for completion of the AAI; $10.00 for completion of the MER. Those selected for interview who choose to participate will receive an additional $10.00 in compensation for their time. Participation in the interview in no way affects the initial compensation for completing the AAI and/or the MER.

Confidentiality:
Information obtained during this study which could identify you will be kept strictly confidential. Data may be used in further research. Aggregate results of this or future studies may be published in an academic journal or presented at a scholarly conference, but participants will not be identified.

Right to Refuse or Withdraw:
Your participation is completely voluntary. You are free to withdraw from participation at any time or to choose not to participate at all, and that by doing so you will not be penalized or lose benefits to which you are otherwise entitled.

Questions:
The investigator will answer any questions you have about your participation. If you desire information in the future regarding your participation or the study generally, you can contact Vicki Edelnant at 319-277-6607 or (if appropriate) the project investigator's faculty advisor Dr. Carolyn Bair at the Department of Educational Leadership, Counseling, and Postsecondary Education, University of Northern Iowa 319-273-6208. You can also contact the office of the Human Participants Coordinator, University of Northern Iowa, at 319-273-2605, for answers to questions about rights of research participants and the participant review process.

Agreement:

> **I am fully aware of the nature and extent of my participation in this project as stated above and the possible risks arising from it. I hereby agree to participate in this project. I acknowledge that I have received a copy of this consent statement. I am 18 years of age or older.**

_____   _____
(Signature of participant)   (Date)   (Printed name of participant)

_____   _____
(Signature of investigator)   (Date)

_____
(Signature of instructor/advisor)   (Date)

APPENDIX N

HUMAN PARTICIPANTS CLEARANCE

APPENDIX N

HUMAN PARTICIPANTS CLEARANCE

Human Participants Review Committee
122 Lang Hall
University of Northern Iowa
Cedar Falls, IA 50614
319.273.6148

Date: June 18, 2004

To: Vicki Edelnant
         2517 Rainbow Drive
         Cedar Falls, IA 50613

From: Dr. Mary E. Losch, Chair
         UNI Human Participants Review Committee
         (Institutional Review Board)

Title: Advising Preference and Cognitive Development: Implications for Small,
         Private, Liberal Arts, Church-Affiliated Colleges

Re: ID# 03-0249

Your project, "Advising Preference and Cognitive Development: Implications for Small,
Private, Liberal Arts, Church-Affiliated Colleges," has been deemed minimal risk and
reviewed by the IRB through the expedited review procedure authorized by 45 CFR
46.110. For your project, the applicable expedited category referenced in 45 CFR 46.110
of the federal regulations is:

Research on individual or group characteristics or behavior (including, but not limited to,
research on perception, cognition, motivation, identity, language, communication,
cultural beliefs or practices, and social behavior) or research employing survey,
interview, oral history, focus group, program evaluation, human factors evaluation, or
quality assurance methodologies.

You may begin enrolling human research participants in your project. If you modify
your project in a way that increases the physical, emotional, social, or legal risk to the
participants or you change the targeted participants, you should notify the Human
Participants Review Committee in the Graduate College Office before continuing with
the research. Additionally, your project must be reviewed annually. You will receive a
notification and continuing review form approximately 10 months from now asking for
an update on your project. If you complete the project before that time, please complete a
project closure form (available at http://www.grad.uni.edu/research/ClosureForm.doc)
and submit it to the Human Participants Office.

If you have any further questions about the Human Participants Review policies or
procedures, please contact me at mary.losch@uni.edu or David Walker, the Human
Participants Committee Administrator, at 319.273.6148 or email david.walker@uni.edu.
Best wishes for your project success.

cc: Institutional Review Board
         Carolyn Bair

APPENDIX O

PERRY'S COGNITIVE DEVELOPMENT POSITION

Position 1 Basic Duality	Position 2 Multiplicity Pre-legitimate	Position 3 Multiplicity Subordinate	Position 4 Multiplicity Correlate Or Relativism Subordinate	Position 5 Relativism correlate, Competing, or diffuse	Position 6 Commitment Foreseen	Position 7 Initial Commitment	Position 8 Orientation in Implications of Commitment	Position 9 Development Commitment(s)
Assumption of dualistic structure of world taken for granted, unexamined. Right vs. wrong, we vs. others, good vs. bad, what They want vs. what They don't want. All problems soluble by Adherence: obedience, conformity to the right and what They want. Will power and work should bring congruence of action and reward. Multiplicity not perceived. Self defined primarily by membership in the right tradition.	Multiplicity perceived, but only as alien or unreal. As alien it assimilates easily to error and otherness: "Others are wrong and confused (M)." Assimilated to Authority, it leads to Opposition: "I am right; They (Authority) are needlessly confused (M)." As unreal, M is mere appearance, e.g.: "They want us to work on these things (M) to learn how to find the answer." Here Opposition sees Authority not as wrong but simply as failing in its mediational role. In either case M is perceived but not as a signal of legitimate, epistemological uncertainty.	Multiplicity perceived with some of its implication. Authority may not have the answers yet on some of it, perhaps, because the relevant Absolutes are not yet in view. But trust in Authority, at least in the ideal, is not threatened. Exercises in M may be enjoyed (A) or disliked (Ad); Authority is presumed to evaluate them on skill of presentation (not on structural properties). Ad may fear they are judged on glibness, influence, or pull. Opposition here: "They judge all wrong." Self defined over against Authority and in similar structural terms.	Duality restructured in complex terms: right-wrong vs. M. Absolutes may be doubted in M area / or considered so inaccessible as to be impossible to bring to bear on human affairs in any reasonably foreseeable future. In M, therefore, "anyone has a right to his own opinions." M is acknowledged as relevant to self, by being confusing, liberating, intriguing, etc. Or Relativism perceived in M and assimilated to Authority: A ®. That is: Authority can make judgments in M on discernible relations of propositions to each other (coherence) or to date (congruence). However, this is still "how they want us to think," rather than a consequence of the nature of all knowledge.	Relativism perceived as way of perceiving, analyzing and evaluating, not because "They want us to think this way," but intrinsically. Authority perceived as authority in R. In R Correlate, world divided into those areas where Authority has the answers (e.g. physics or morals) and those in which R must be used (e.g. English papers). In R Competing, R perceived as applying to whole world (with binary answers a sub-class), but this world view alternates with a previous one. In R Diffuse, the most fully developed of these structures, R is accepted generally but without implications for Commitment.	R accepted for all secular purposes including binary judgment and action. Commitment may be perceived as a logical necessity for action in an R world and/or "felt" as needed (with or without explicit statement of a logical necessity). The realization may bring various reactions: eagerness, ambivalence, dismay, sturdiness, turmoil, simple acceptance.	First Commitment(s) or affirmation(s). Acceptance of their origins in self's experience and choices, some intimations of implications. Note on religion: In Commitment involving a religious faith in an absolute, the same distinctions re Commitment apply (cf. theological distinction between belief and faith). The structural solutions for relating an absolute and relativism are varied and not outlined here in all of themthe crucial criterion for the integrity of the R orientation is the attitude toward people with other absolutes.	Some implications of Commitment relalized: tension between feelings of tentativeness and finality, expansion and narrowing, freedom and constraint, action and reflection. Prospect of (or even experience of) membership with authority in areas of Commitment (values, address to others, occupation, etc.) Identity sensed in both content of Commitment and in personal style of address to Commitment. Implications Experienced: R world Authority and all of us Values in degrees and frames C 1,2, Identity in Commitments and style of address to them	Commitments expended or remade in new terms as growth. Balances are developing in the tensions of qualitative polarities of style, especially alternation of reflection and action. Acceptance of changes of mood and outlook within continuity of identity. Sense of being "in" one's life. R world Authority and all of us Values in degrees and frames C 1,2,3,...n Developing balance of style

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APPENDIX P

MER INTERPRETATION CHARTS

Epistemological Reflection Model

Baxter Magolda, (1992), P. 107.

Domains	Absolute Knowing	Transitional Knowing	Independent Knowing	Contextual Knowing
Role of learner	• Obtains knowledge from instructor	• Understands knowledge	• Thinks for self • Shares views with others • Creates own perspective	• Exchanges and compares perspectives • Thinks through problems • Integrates and applies knowledge
Role of peers	• Share materials • Explain what they have learned to each other	• Provide active exchanges	• Share views • Serve as a source of knowledge	• Enhance learning via quality contributions
Role of instructor	• Communicates knowledge appropriately • Ensures that students understand knowledge	• Uses methods aimed at understanding • Employs methods that help apply knowledge	• Promotes independent thinking • Promotes exchange of opinions	• Promotes application of knowledge in context • Promotes evaluative discussion of perspectives • Student and teacher critique each other
Evaluation	• Provides vehicle to show instructor what was learned	• Measures students' understanding of the material	• Rewards independent thinking	• Accurately measures competence • Student and teacher work toward goal and measure progress
Nature of knowledge	• Is certain or absolute	• Is partially certain and partially uncertain	• Is uncertain—everyone has own beliefs	• Is contextual; judge on basis of evidence in context

Epistemological Reflection Model

Baxter Magolda, (1992).

Domains	Absolute Knowing		Transitional Knowing		Independent Knowing		Contextual Knowing
	Receiving	Mastering	Interpersonal	Impersonal	Interindividual	Individual	
Role of learner	• Obtains knowledge from instructor		• Understands knowledge		• Thinks for self • Shares views with others • Creates own perspective		• Exchanges and compares perspectives • Thinks through problems • Integrates and applies knowledge
MER P. 2-3	Listens and records information	• Participates in interesting activities • Shows instructor that student is interested	• Collects others' ideas • Is involved in learning • Stresses learning practical materials	• Understands versus memorizes • Is forced to think • Exchanges views via debate	• Thinks for self	• Thinks for self • Focuses on a way to think	
Role of instructor	•Communicates knowledge appropriately •Ensures that students understand knowledge		• Uses methods aimed at understanding • Employs methods that help apply knowledge		• Promotes independent thinking • Promotes exchange of opinions		• Promotes application of knowledge in context • Promotes evaluative discussion of perspectives • Student and teacher critique each other
MER P. 4		•Uses interesting methods	• Creates rapport with student • Allows student involvement and self-expression	• Focuses on understanding versus memorization • Challenges students to think	• Promotes sharing of opinions	• Allows student to define learning goals	
Role of peers	•Share materials •Explain what they have learned to each other		• Provide active exchanges		• Share views • Serve as a source of knowledge		• Enhance learning via quality contributions
MER P. 5	•Talk to created relaxed atmosphere •Ask questions to relieve pressure	• Act as partners in debating and quizzing each other to further learning	• Provide exposure to new ideas • Become involved with others, hear their views	• Express their opinions • Debate views	• Share views	• Think independently	
Evaluation	• Provides vehicle to show instructor what was learned		• Measures students' understanding of the material		• Rewards independent thinking		• Accurately measures competence • Student and teacher work toward goal and measure progress
MER P. 6	•Is based on knowledge of material •Affords multiple opportunities to show knowledge	•Provides feedback from instructor to help student improve •Can be inaccurate	• Should make personal decisions based on individual differences	• is fair, based on practicality	• Is mutual process between student and instructor	• Is based on independent thinking	
Nature of knowledge	• Is certain or absolute		• Is partially certain and partially uncertain		• Is uncertain—everyone has own beliefs		• Is contextual; judge on basis of evidence in context
MER P. 7	•Involves different opinions regarding the facts •Is resolved by personal interpretation	•Involves different degrees of detail •Is resolved via research and asking authorities	• Focuses on uncertainty • Resolves by personal judgment	• Involves balanced focus on certainty/ uncertainty • Is resolved by logic and research	• Contains discrepancies due to interpretation or bias	• Contains discrepancies because everyone has own belief	

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APPENDIX Q

INTERVIEW CODES BY CLUSTER

Code Cluster	Definition, followed by individual codes
AAI	Definition: Student descriptions of activities or attitudes that could be categorized as typical of either developmental or prescriptive advising. This included topics discussed and control of advising sessions. Codes: Academic goal, advising limited to or mostly for scheduling, control of advising session (advisor, student, mutual), declaration of major, developmental activity or attitude, initiates meeting (adviser, student, mutual), prescriptive activity or attitude
MER	Definition: Student descriptions of attitudes or opinions consistent with characteristics of MER levels of cognitive development (absolute, transitional, independent or contextual knowers) the gender-related patterns within those levels (receiving/mastering, interpersonal/ impersonal, interindividual/individual), or with any of the domains in the MER (decision-making, role of learner, role of instructor, role of peers, nature of knowledge) Codes: Absolute, contextual, decision-making, evaluation, impersonal, independent knower, individual, interindividual, interpersonal, learning environment, mastering, nature of knowledge, practical consideration, rapport, receiving, role of instructor, role of learner, role of peers, teaching methods, transitional knower,
Advising Experience	Definition: Student descriptions of the number of advisers with whom they worked, the length and frequency of advising meetings, accessibility of the adviser, and student's satisfaction with advising Codes: Accessible adviser, frequency of meetings (few, medium, many), intrusive, length of advising session (short, average, long), non-accessible or non-responsive adviser, number of advisers, receptivity to advising (high, low), satisfaction with advising (high, medium, low)
Emergent	Definition: Student descriptions of unanticipated topics; not directly addressed by AAI or MER Codes: Effort, empathy, faith, previous advising experiences, preferred advising relationship, preferred advisor characteristics (caring, knowledgeable), role of adviser, satisfaction with classes, self-disclosure, adviser v. registration counselor, student perception of advisers' attitudes, adviser=teacher, value or benefit of or need for advising