A Comparison of Intrusive and Prescriptive Advising of Psychology Majors at an Urban Comprehensive University

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To investigate whether intrusive advising is effective for nontraditional students at an urban comprehensive university, we compared it with prescriptive advising in a 3-year trial of randomly selected psychology undergraduates (N = 126). We hypothesized that advisees in the intrusive track would feel more satisfied, more connected to the department, and be more academically successful than those in the prescriptive track. Secondary questions concerned the relationship of advising preferences and demographic characteristics. Students receiving intrusive advising reported greater satisfaction with advising, felt more connected to the department, but were not more academically successful than those in the prescriptive track.

Academic advising has been identified as one of the most powerful institutional levers to reduce college student departure and enhance students' acclimation to their majors and disciplines (Braxton & Mundy, 2001). Advising services are a key responsibility of faculty members and some staff persons, and it can be supplemented effectively by Web-based advising resources and through trained undergraduate peer advisors. Yet many individual faculty members are tossed into the role of advisor with relatively little training, and most build their expertise from the bottom-up; that is, they learn to advise through many individual interactions with a diverse array of students. Very few faculty members have the resources to implement assessments of different advising techniques, and because of their responsibilities related to teaching, research, and service, even fewer have the time to collect and assess data related to advising. Yet Creamer (2000, p. 18) pointed out that successful advising depends on "valid explanations of complex student behaviors and institutional conditions to assist college students in making and executing educational and life plans." Assessments of advising tracks can help advisors and administrators gain a better appreciation of the institutional conditions that foster student success. Dissemination of this information may enable faculty members to build at least some of their expertise in a top-down manner.

As the number of students juggling multiple responsibilities of work, family, and school continues to increase, particularly on nonresidential campuses, the methods faculty members use to deliver academic advising services to students may need to be refined and expanded (Gordon & Habley, 2000). Enrollments at colleges and universities across the United States increased at an average rate of 14.4% between 1986 and 1996 (Wilds & Wilson, 1998). However, when ethnic and minority students are considered, enrollment increases are substantially higher (Native Americans, 48.9%; Asian Americans, 83.8%; Latino/Hispanic, 86.4%; African American, 38.6%). In contrast, enrollments of white students increased by 3.1%. More students are studying part-time, and more students, especially women over the age of 25, are "stopping out" (taking time away from college); women comprised 55.4% of the U.S. undergraduate population in 1997. Students between the age of 25 and 44 represented approximately 30% of the undergraduates enrolled in 1997 (Chronicle of Higher Education Almanac, 1999). Systems of academic advising need to be continually assessed in light of such rapidly evolving demographic trends.

Most faculty members' notions of the typical college student are out of date. Hodgkinson (1985) reported that by the mid-1980s, a distinct minority (approximately 17%) of students in college were full-time students between 18 and 22 years old and were living in on-campus residence halls. Cultural forces that have impacted college student profiles over the course of the last several decades include family dynamics (e.g., higher proportions of single parents, blended families), lack of academic preparedness resulting in an increase in the need for remediation, and the growing financial burden of attending college (for a more complete review of these issues see Upcraft & Stephens, 2000). This change in the demographic profiles and educational patterns of students in higher education has had a marked effect on the responsibilities of academic advisors. As Upcraft and Stephens (2000) pointed out, the original advising method of helping students with course choices and scheduling has been replaced with a complex process that requires

that advisors have a multitude of counseling skills. Advisors must deftly assess student needs and flexibly step in and out of roles in which they assist with course scheduling, help underprepared students with remediation, provide counseling on career and graduate school plans, aid in unraveling the complexities of financial aid, and even provide personal counseling and referrals.

Academic Advising Models

Two principal models for academic advising are traditionally noted in the literature (Crookston, 1972). Developmental advising is grounded in student and adult developmental theory, career development theory, and decision-making and learning theory (Gordon, 1992). It describes a process that focuses on student exploration of life and vocational goals, program choice, and course choice and scheduling (O'Bannion, 1984). Furthermore, under the approach, faculty members are encouraged to develop relationships with students (Crookston, 1972), and students should be compelled to maximize the benefits of their education (Crockett, 1979; Grites 1979). Because the developmental approach is intensive, advisors must receive broad-based training in student development theory (Creamer, 2000). Consequently, advisors utilizing such a method must put forth considerable effort to acquire these skills and adopt practices that consistently engage advisees. Administrators see the considerable cost in terms of time and financial resources of developmental advising. Therefore, the positive outcomes associated with the developmental approach must be consistently presented and weighed against the clear costs.

The other traditionally described approach is relatively nonintrusive. Prescriptive advising has been referred to as the "McDonaldization of Advising" (Matheson, Moorman, & Winburn, 1997) and is unquestionably quick and efficient. Using the prescriptive advising approach, advisors react to student needs for advice on matters related to course and major choices. They do not try to engage the student in a dialogue regarding their long-term goals, but rather advisors respond to the immediate concerns or questions of the student. The sessions are more structured than are developmental advising appointments, ensuring that accurate academic information is given to facilitate and expedite students' progress though the degree program. At an extreme, prescriptive advising may involve no contact with a live advisor. Instead, students may download transcripts, program requirements, and advice in the form of FAQ (frequently asked question) lists from Web-based advising systems. Research suggests that most students prefer the developmental approach (Winston & Sandor, 1984). For instance, Herndon, Kaiser, and Creamer (1996, p. 646) found in the community college setting that "Regardless of their major, race, gender, or enrollment status, [*students*] preferred developmental advising." Moreover, they found that a statistically significant greater number of women than men preferred developmental advising.

A third advising model has received somewhat less attention in the literature. Intrusive advising (Garing, 1992; Glennen, 1975) shares the individualized characteristics of developmental advising practices, but under this model, student-advisor contact is inevitable and is not dependent on student initiation. Intrusive advisors are encouraged to contact students at critical points in the first year of study and beyond. For instance, an advisor may call, E-mail, or send a letter to the student encouraging him or her to meet with the advisor soon after entering the degree program. Subsequent contacts may include the advisor assessing the student's developmental level and providing appropriate challenges or questions to help the student become oriented to career planning. The approach is deliberate, generally developmental in nature, and serves as a catalyst for advisors to build relationships with students (Garing, 1992).

A number of positive outcomes have been attributed to intrusive advising. Glennen (1975) reported that application of intrusive advising reduced attrition rates, increased the number of students on honors lists, decreased the number of students on probation, and reduced the number of withdrawals from the school. Emporia State University has been particularly successful in implementing intrusive advising. Both retention and graduation rates have improved since its inception, presumably because students feel more connected to the faculty and other segments of the institution as a result of the intrusive approach (Glennen, Farren, & Vowell, 1996). Other researchers have reported that intrusive advising had a positive impact on freshman (Glennen & Baxley, 1985) and minority student retention (Glennen, Baxley, & Farren, 1985).

Research Objectives

While intrusive advising appears to build successfully on the advantages of developmental models, few studies have assessed its efficacy across a variety of institutional types. Our goal was to assess the relative effectiveness of intrusive and pre-

scriptive advising practices at a large, urban, comprehensive university: Indiana University Purdue University, Indianapolis (IUPUI). IUPUI serves an extremely heterogeneous student body that varies from traditional universities by age, care-giving responsibilities, employment status, and degree of academic preparedness. Only a very small minority of students lives on campus; most commute from within 1 hour of Indianapolis.

Advising models developed on more traditional residential campuses may not be applicable to urban commuter campuses. On one hand, older, nontraditional students, who may be motivated to strategically select courses aligned with particular career goals, might find intrusive advising to be invasive at best, and patronizing, at worst. On the other hand, traditionally aged students, who are relatively less academically prepared and who spend little time on campus outside of class, may be particularly vulnerable to attrition. For these students, intrusive advising could provide a vital connection with faculty and might ultimately lead to successful graduation. Intrusive advising practices entail relatively high institutional costs, so their efficacy must be assessed across student demographic categories as well as across institutional types.

Over the course of 3 academic years (1998 through 2001), students admitted as psychology majors at IUPUI were randomly assigned to receive either intrusive or prescriptive advising procedures. Because of our interest in assessing the relative efficacy of the two advising models across student demographic categories, we implemented a stratified random assignment procedure in which students were first categorized based on a taxonomy developed for IUPUI Psychology majors by Rajecki and Metzner (1991), and then we randomly assigned each student to one of the two advising tracks. Students were identified in one of seven categories: a) direct entry, b) internal transfer, c) external transfer, d) major elsewhere (i.e., substantial progress toward completion of the psychology degree had been completed prior to admission), e) short-term stop-out (one or two semesters), f) long-term (more than two semesters) stop-out, and g) prior baccalaureate degree earned. Approximately equal numbers of students from within each of these categories were assigned to the intrusive and prescriptive advising tracks.

We tested the following predictions:

1. Based on previous accounts of student dissatisfaction with prescriptive advising (Herndon, Kaiser, & Creamer, 1996), we anticipated that satisfaction with advising would be greater for students receiving intrusive advising than for those in the prescriptive track.
2. In accordance with Glennen and Baxley's research (1985) on connectedness, we anticipated that students in the intrusive advising track would feel more connected to the department than would students in the prescriptive track.
3. Based on Glennen (1975), we expected that students in the intrusive advising track would experience greater academic success than would students in the prescriptive track.

Although previous research has not specifically addressed variations in advising efficacy as a function of student characteristics, we formulated two research questions based on anecdotal evidence provided by experienced advisors at IUPUI:

1. We expected to find a significant interaction between type of advising received and age of advisee on satisfaction with advising. We expected older students (>25 years) to be most satisfied with prescriptive advising, while we expected younger students to be most satisfied with intrusive advising.
2. Students who were more academically successful, as estimated through current overall grade-point average (GPA), were expected to report greater satisfaction with prescriptive advising than students who were less academically successful.

Method

Participants

Participants were students who had been accepted as majors in the psychology department during the academic years 1998–99 through 2000–2001. Participants included those directly admitted from high school, transfer students from within IUPUI, and transfer students from other universities. While over 800 newly admitted students were randomly assigned to the parallel advising tracks, approximately 3% did not matriculate. A large proportion of these students never began taking courses at IUPUI (because they were accepted late to a different campus or because they enrolled at a different campus within the Indiana University system), while others changed their major prior to meeting with an academic advisor. Due to the transient nature of IUPUI students, we adopted a stringent criterion for inclusion in our study: Students had to make or respond to at least one contact (by telephone, E-mail, or through an in-person appoint-

Table 1 Demographic characteristics of psychology majors at IUPUI, $N = 511$

Characteristic	Percentage of Students
Female	84
Caucasian	87
African American	8
First-generation college student	77
Currently caring for dependents	75
Adequate childcare that enables regular class attendance (average number of dependents = 2)	45
Self-financing at least 50% of college expenses	35
Receiving some financial aid	50
Parents financing at least 50% of college expenses	23

ment) with either a peer advisor or a faculty advisor following acceptance to the psychology department. This criterion resulted in a sample of 511 students, of which only 65 (13%) graduated during the period of data collection. Demographic characteristics of the 511 students are presented in Table 1.

Procedure

Advisor training. The psychology department employs 10 faculty advisors. Five of these faculty advisors agreed to participate in ongoing training in the intrusive developmental approach, while the remaining 5 agreed to continue with the prescriptive approach that they had typically utilized in the past. While it would have been methodologically more sound to randomly assign advisors to the two tracks or to request that each advisor treat one half of their students with each of the two advising approaches, the practical and logistical drawbacks associated with these alternatives were significant. Therefore, we permitted advisors to self-select their preferred mode of advising. The intrusive advisors were educated in theories of adult development, career development, and decision-making theory and trained in intrusive advising techniques based on Glennen (1975) and Garing (1992). The prescriptive advisors continued to advise using the typical (nonintrusive) practice of face-to-face appointments initiated by students. Advising remained consistently quick, efficient, and accurate for students who took the time to request these contacts. Each semester throughout the study, the two advising groups met and discussed their track procedures to insure that they were carefully adhering to the track techniques.

Intrusive advising was operationalized as faculty initialization of contact with students. Specific advising tasks included a) contacting (either by E-mail, telephone, or letter) assigned advisees during the first 2 weeks of their first academic semester as psychology majors, b) attempting a minimum of one additional contact with assigned advisees per semester (either an individualized meeting with the advisee or a group advising session with other advisees), c) documenting each contact with assigned advisees in a file maintained in the advisor's office, and d) reading papers and memoranda related to developmental advising and continually attempting to apply developmental practices during their interactions with students.

Conversely, prescriptive advisors did not initiate contact with their advisees. Rather, advisees sought out their advisors and scheduled all appointments. Prescriptive advisors did not maintain advisee files in their offices and only documented significant events (e.g., course waivers and late withdrawals) in student folders. Prescriptive advisors focused on providing students with efficient and accurate information concerning course requirements and career planning.

Peer advising office. To provide support for the logistics of the data collection procedures, we created a Peer Advising Office during the fall of 1999. The office was staffed by a graduate student coordinator who was responsible for overseeing the assessment of advising services utilization and data entry related to the project. Undergraduate peer advisors staffed the office during most daytime and some evening hours, and they assisted with data collection and data entry. Peer advisors were also trained to refer majors to other campus offices for specific issues and to assist with scheduling and confirming advising appointments. The office also served as a repository for resources related to developmental advising practices.

While the office was instituted primarily as a support mechanism for the present study, it rapidly evolved to serve numerous other important functions (e.g., lending library for career and graduate school

resources, course syllabi, and information about faculty research interests, and it became a support unit for new student orientations), and has subsequently become indispensable. Undergraduate peer advisors currently receive professional practice seminar credit for their participation in a class related to advising practices, and many have recently begun their own supervised research projects on multiple aspects of advising.

Administration of baseline survey. As students matriculated in the major they were initially sent the Psychology Student Profile Questionnaire (PSPQ) (Appendix A) by mail. The PSPQ is a short demographic questionnaire. Specifically, data regarding work status, family responsibilities, high school record (GPAs and SAT when available), financial responsibility for school, and parents' educational record were included in the instrument. Due to the low response rate of previously mailed questionnaires, the survey was distributed to students in the course, Orientation to a Major in Psychology, which is a requirement for psychology majors, and to students attending orientation sessions prior to the start of the semester. This procedural change greatly enhanced the response rate: In all, 154 questionnaires were returned (30% response rate).

Collection of in-process data. Although we initially had planned to assess students' perceptions of academic advising at graduation, only a small proportion of students captured in the cohort graduated during the 3-year study period. During the final year of the project, we decided to collect data from students "in process." In the spring 2001 semester, we introduced two new means of assessing the efficacy of the advising tracks: satisfaction with advising and academic success.

We received approval from the Institutional Review Board to visit all nonintroductory psychology courses between March 19 and March 23, 2001, to collect in-process satisfaction data through a 20-item survey (Appendix B). Twelve of the items referred to satisfaction with the student's advisor, and 3 questions referred to satisfaction with the Peer Advising Office. A total of 126 completed questionnaires matched those individuals who had either completed the baseline survey (PSPQ) or for whom institutional data related to academic success were available.

To verify the validity of the in-process satisfaction survey, a principal components analysis was conducted on responses to the 15 items for which students generated ratings on a 5-point Likert scale (1 = strongly agree; 5 = strongly disagree). The results of the analysis clearly identified two factors (see Table 2). The initial factor had an eigenvalue of 9.17 and accounted for 57.30% of the variance and the second factor had an eigenvalue of 2.74 and accounted for an additional 17.15% of the variance. Thus, the total solution accounted for 74.45% of variance. No item significantly (i.e., > 0.25) crossloaded onto the alternative factor, and the coefficient alphas for the two blocks of items were 0.97 and 0.91, respectively. Based on these analyses, items 5–17 were combined to create a satisfaction-with-advising scale score that was used in all further analyses. Derived scale scores were merged with departmental records (through a student identification number link) to assess the degree to which satisfaction with advising covaried with advising track and the amount of advising contact.

The student identification numbers associated with those 126 students for whom both baseline and satisfaction data were available were forwarded to the IUPUI Information Management and Institutional Research Office and linked to institutional data concerning students' progress through their major (e.g., number of credit hours completed, overall GPA, psychology credits completed). These data enabled us to examine in-process outcomes such as retention and academic success (GPA) in the absence of graduation data.

Web-based tracking of advising contacts. At each advising contact (via phone, E-mail, or in person) both faculty and peer advisors recorded information concerning the duration of the contact, the topics discussed, referrals made, and the initiator of the contact on an advising tracking form. Because of the volume of contacts made in a department with over 500 majors and 10 faculty advisors, an enormous quantity of paper was generated for subsequent entry into a computerized database. This procedure was effective but not terribly efficient. Intrusive-track advisors, in particular, completed a fair amount of paperwork after each advising appointment, as notes had to be made concerning advisees' short- and long-term goals, and tracking forms needed to be completed.

We decided midway through the current project to abandon efforts to maintain a paper-based tracking system and shifted all recording of advising service utilization to a secure Internet server maintained within the department. The Web-based tracking form was accessed through a tracking code assigned to each scheduled appointment and contained all of the information that had been on the paper forms. In addition, text boxes enabled advisors to retain notes related to individual advising appointments. These notes could later be

Table 2 Factor loadings for survey items regarding student satisfaction with advising

Survey Items	Factor Loadings for Satisfaction Items	
	Satisfaction with Faculty Advisor	Satisfaction with Peer Advising
5. I am satisfied with the academic advising I have been receiving in the Psychology Department.	.71	—
My psychology faculty advisor has (refer to the advisors you have seen most often):		
6. been available to me when I have needed to speak with him/her.	.68	—
7. made suggestions regarding my academic experience that have been helpful.	.84	—
8. provided me with information about opportunities in the department I was not previously aware of.	.86	—
9. contacted me over the last year to provide me with information.	.83	—
10. encouraged me to think carefully about my future.	.86	—
11. helped me make good choices about my future.	.87	—
12. provided me with accurate information.	.81	—
13. gone out of his/her way to help me.	.89	—
14. helped me get more involved in the department.	.91	—
15. helped me feel more connected to the department.	.89	—
16. helped me to identify classes that would fit my interests.	.83	—
17. helped me problem solve over issues related to my academic experience.	.88	—
18. The peer advising office has been a useful resource to me.	—	.90
19. I am satisfied with the information I have received from the peer advising office.	—	.95
20. The peer advisors seem knowledgeable about requirements for my major.	—	.87
Chronbach's Alpha	0.97	0.91

accessed through an advising history link to help ensure continuity in advising should the student elect to schedule an appointment with a different academic advisor. The amount of time in advising was derived by summing the quantity of time spent in advising for each student as it was noted in a computerized database. In subsequent analyses, advising time was the primary measure of exposure to academic advising.

Results

We provide a descriptive overview of the data collected. Then we show analyses specific to the predictions made at the outset of the project.

Comparisons Across Advising Tracks

Table 3 provides means and standard deviations of the variables of interest for the overall sample of 126 students for whom baseline, advising service utilization, and satisfaction data were available. The information is also broken down by track: 56 advisees received prescriptive advising and 70 advisees received intrusive advising. Independent-group t tests performed on each of the variables across the two tracks yielded significant differences for age[1]: $t(123) = 2.15$, $p < 0.05$. Significant differences between tracks were also noted with the satisfaction-with-advising variable, as measured from the survey: $t(124) = -3.69$, $p < 0.001$. A few more older students

[1] One of the 126 students did not respond to the question regarding age.

Table 3 Means of overall sample and *t*-test comparisons for advising track variables

Variable	Means (*SD*) Overall Sample (*N* = 126)	Intrusive Advising Track (*n* = 70)	Prescriptive Advising Track (*n* = 56)	Significance
Age	24 (6.18)	25 (7.28)	23 (4.20)	t (124) = 2.15, $p < 0.05$
Overall GPA (4.00 scale)	3.12 (1.03)	3.14 (1.03)	3.08 (1.05)	ns
Time spent in advising (minutes)	58 (45.87)	57 (40.40)	60 (52.14)	ns
Satisfaction with advising score (1 = most satisfied; 5 = least satisfied)	3.72 (0.76)	3.93 (0.74)	3.45 (0.72)	t (124) = –3.69, $p < 0.001$

were assigned to the intrusive advising track than to the prescriptive track. In accordance with our first hypothesis, students who received intrusive advising expressed higher levels of satisfaction than did those who received prescriptive advising. No significant differences were found between the two tracks in terms of overall GPA or in terms of time spent in advising (as determined from institutional records and the Web tracking forms).

We also compared students' responses to item 15 from the Satisfaction with Advising Survey ("my advisor has helped me feel more connected to the department") to evaluate our second hypothesis: Students in the intrusive advising track would feel more connected to the department than would students in the prescriptive track. The difference in satisfaction ratings between the intrusive advising group, in which students reported that they felt more connected to the department (M = 3.67), and those in the were prescriptive-advising group (M = 3.18) were significant: t (124) = 2.47, $p < 0.05$. Therefore, the hypothesis was supported.

The categorization of students in our final sample (N = 126) by Rajecki and Metzner's (1991) taxonomic scheme revealed slightly less diversity in students than originally anticipated. Only 2 students were direct entry; 9 were external transfers; 80 were internal transfers; 25 were short-term stop-outs; 6 were long-term stop-outs; 1 had majored in psychology prior to admission; and 3 had prior degrees. Because most IUPUI undergraduates are admitted directly to the University College prior to declaring a major within the Schools of Science or Liberal Arts, the number of internal transfers is high. Because so few participants were found in many of the categories, we compared the intrusive and prescriptive tracks only for internal transfers and short-term stop-outs. No significant differences were found for either group on either satisfaction with advising services or with overall GPA across the two tracks. Different classes of students responded similarly in terms of their relative levels of satisfaction with intrusive and prescriptive advising. In contrast to our prediction, we found no differences in overall GPA across the two advising tracks in the overall sample or within any of the more homogenous student groupings.

In a particularly interesting finding, a fairly large number of students assigned to nonintrusive advisors "jumped tracks" and requested appointments with one of the intrusive advising faculty: 63% of students assigned to prescriptive advisors and 91% of students assigned to intrusive advisors were advised by their assigned advisors. This result, that 37% of the students assigned to the nonintrusive track sought out alternate faculty advisors, suggests that intrusive advising promotes higher levels of advising satisfaction than prescriptive advising for some students.

Interrelations among the variables of interest are presented in Tables 4, 5, and 6. The data for everyone in the sample are presented in Table 4, and data from students included in each of the two advising tracks are presented in Tables 5 and 6. We found a significant positive correlation (r = 0.25, $p < 0.05$) between overall GPA and time spent in advising for students assigned to the intrusive advising track. This correlation was not significant for students assigned to the prescriptive advising track. Although we cannot deduce a causal relation from such correlation evidence, we can make a plausible argument that more academically successful students sought out intrusive advising (or responded to overtures from intrusive advisors). While intrusive advising was not associated with higher overall GPAs, the relationship between time spent in

Table 4 Interrelations among study variables for all students, $N = 126$

Variable	Advising Track	Age	Advising Satisfaction	Time Spent in Advising	Overall GPA
Advising track	—				
Age	.19*	—			
Satisfaction with advising	.32**	–.06	—		
Time spent in advising	–.04	–.07	.07	—	
Overall GPA	.03	–.05	.11	.14	—

Notes. *$p < 0.05$; **$p < 0.01$.

Table 5 Interrelations among variables for those in intrusive advising track ($n = 70$)

Variable	Age	Advising Satisfaction	Time Spent in Advising	Overall GPA
Age	—	–.02	–.02	–.07
Satisfaction with advising		—	.05	.14
Time spent in advising			—	.25*
Overall GPA				—

Note. *$p < 0.05$

Table 6 Interrelations among variables for those in prescriptive advising track ($n = 56$)

	Age	Advising Satisfaction	Time Spent in Advising	Overall GPA
Age	—			
Satisfaction with advising	.06	—		
Time spent in advising	–.20	.12	—	
Overall GPA	.01	.08	.03	—

advising and GPA is intriguing and suggests that an interaction pattern between academic success and advising track may have been observed if we had collected data for a longer period.

As depicted in the two research questions, we expected older students (>25 years) to be most satisfied with prescriptive advising, while we expected younger students to be most satisfied with intrusive advising, and we expected more academically successful students to report greater satisfaction with prescriptive advising than students who were less academically successful. An ANOVA with age (dichotomized as 25 years and younger and older than 25 years) and advising track as between-subject variables revealed that only track was significant with regard to satisfaction: $F(1, 131) = 13.54$, $p < 0.001$. Neither age nor the Age X Track interaction yielded significant interaction values with satisfaction. These results indicate that regardless of age, students preferred intrusive advising. (We found similar results through an ANOVA in which nondichotomized age means were analyzed.)

In the second research question, we predicted that students' academic success (estimated by overall GPA) would impact their responses to the two types of advising systems. We conducted a hierarchical regression analysis to examine whether track and academic preparedness interacted to predict satisfaction with advising. Advising track and GPA were entered into the regression equation at the first step and accounted for 11% of the variance: $F(2, 122) = 8.67$, $p < 0.01$. An examination of the beta weights suggested that the advising track was a significant predictor, $b = .51$, $p < 0.01$, while GPA was not significant, $b = .07$. At the second step, the interaction of track and GPA was entered and did not account for significant additional variance, $R^2 = 0.01$. Again, this pattern of results suggests that all students, regardless of academic profile, preferred intrusive advising practices.

Discussion

We designed our study to compare the relative efficacy associated with parallel intrusive and prescriptive advising tracks implemented within a psychology department at an urban comprehensive

university. A secondary question focused on assessing whether particular types of students, as characterized by their backgrounds or extracurricular commitments, expressed higher satisfaction with prescriptive advising. In keeping with prior research based on students at traditional, residential campuses, we found a widespread preference for the intrusive advising track at IUPUI. Students receiving intrusive advising reported higher levels of satisfaction with advising services and reported that they felt significantly more connected to the psychology department. However, students' satisfaction with advising was not at all related to the total time spent in advising, suggesting that preferences for intrusive advising were not driven simply by increased contact with faculty advisors. Rather, the quality of the time spent with advisors (in addition to the advisors' reciprocal role in maintaining contact with students) likely impacted satisfaction levels and perceptions of connectedness.

In contrast to Glennen (1975), we did not find a relation between intrusive advising and heightened academic success, and too few students graduated during the course of data collection to evaluate potential impact on graduation rates. Although we predicted that older students and students who were more academically successful would be equally satisfied with prescriptive and intrusive advising (based on the efficiency and as-needed basis of prescriptive advising practices), these predictions were not supported. Rather, all types of students demonstrated a clear preference for intrusive advising practices.

The results of this study have the potential to impact advising practices at many universities struggling to develop more salient and cost-effective advising services for student populations that vary substantially by age and by academic preparedness. Our findings that intrusive advising enhanced students' perception of connectedness are particularly significant because the vast majority of students at IUPUI commute to school and spend relatively little time on campus outside of their classes. Clearly, students' sense of connectedness to the institution is essential to the process of adjusting to college life. This connectedness is the foundation of intrusive advising (Garing, 1992; Glennen, 1975), and we speculate that it was largely responsible for students' increased satisfaction with advisors using intrusive practices.

We were rather surprised to discover that no relation existed between intrusive advising and heightened academic success. We had reasoned that students engaged in intrusive advising would ultimately select courses aligned with individual strengths and career goals. Furthermore, the developmental focus of intrusive advising was expected to help enhance students' motivation through the process of setting short- and long-term academic goals. At least three potential explanations for our failure to replicate Glennen's (1975) findings seem viable. First, the intrusive advising effects on academic performance may unfold gradually and only emerge as statistically significant over a relatively long period. Only a small proportion of IUPUI undergraduate students (26%) (Borden, 1997) graduate after 6 years, and many attend classes only part-time. Had the study continued for 6 years, an effect of track and academic success may have been found. Indeed, the significant positive correlation between overall GPA and the time that intrusive advisees spent in advising suggests that the overall quantity of time engaged in advising service utilization may affect the relationship between advising and academic performance previously reported in the literature.

Second, our hypotheses were tested on a subset of an IUPUI cohort who had completed both baseline surveys and student satisfaction questionnaires (administered to all nonintroductory psychology classes during one week of the spring 2001 semester). We suspect that the majority of students who were not caught in this cohort frequently missed classes or had withdrawn from school. Thus, the absence of a relation between advising track and academic performance may have resulted from a restricted range on GPA for the students that were included in the analyses.

Finally, the lack of impact of advising on students' GPAs may have been due to the fact that students ultimately are autonomous in selecting their classes each semester. Even though advisors may strive to help students choose courses that are aligned with their relative strengths, interests, and career goals, students may fail to heed this advice. Furthermore, students who are poorly prepared for college-level work may require more than increased motivation to succeed academically. Further research may help to tease apart these alternative explanations.

Intrusive advising is difficult to implement on urban campuses that lack a strong sense of community and student life, particularly when many students are burdened with work and family obligations in addition to school. Implementing intrusive advising practices within a department characterized by a prescriptive culture or within departments in which faculty advisors are like islands, with each manifesting her or his own individualized advising style (and most cherishing the freedom to continue

practicing in the manner of choice), may be even more daunting. Indeed, our own methodological decision to let advisors self-select their preferred track was made in response to these types of factors. Yet, our findings suggest that these hurdles are worth overcoming; all students appeared to benefit from intrusive advising practices. We offer a list of suggestions to other departments grappling with similar challenges of introducing intrusive practice on a prescriptive campus:

1. Remain empirically grounded. Within our own departmental culture, we knew that without a thorough data-based assessment of the alternatives, in which an experimental framework and randomized assignments of students to tracks were used, we would have the difficulty of convincing our colleagues of the importance of modifying existing advising practices. Only through solid research could we say with any degree of conviction that one manner of advising (particularly one that entailed substantially greater faculty effort) was worth converting to a standardized practice. The Web-based tracking system has proven so useful that we have continued to track utilization of advising services since the project's completion for our own departmental review purposes.
2. Provide support for intrusive practices. Creating a centralized advising office staffed by undergraduate peer advisors and supervised by a graduate student coordinator was essential for the implementation of intrusive advising at IUPUI. The office also served as a central hub for logistics related to assessment (e.g., categorization of students' entry audits, random assignments of students to advisors, assignments of tracking forms for individual appointments). Office staff also coordinated the mailings to students of intrusive-track advisors and sent reminders to students about their appointments, thus relieving some of the administrative burden from advisors.
3. Adopt a triage approach. Once the Peer Advising Office was established and peer advisors were trained to make referrals for students calling or walking into the office, students were less apt to call faculty advisors for routine administrative questions. Peer advisors referred students with transfer credit problems immediately to the Dean's Office; students with financial aid difficulties were directed to the Bursar's Office; and students with straightforward questions regarding curricular requirements were addressed immediately by Advising Office staff. Peer advisors also taught students how to utilize Web-based advising services at IUPUI using a computer station housed within the Advising Office. This triage approach resulted in faculty advisors having substantially more time to focus on developmental advising practices during their time with students.
4. Reward developmental advising practices as teaching. Institutional support for the importance of developmental practices is critical for ensuring faculty support. While some faculty advisors will engage in intrusive advising practices to best serve their students, many will be reluctant to spend even more time on a task characterized as service within most faculty reward systems. We suggest that developmental advising practices be compensated as teaching rather than as service. An alternative model might entail providing intrusive advisors with release time from teaching to protect their commitments to other endeavors (e.g., research, administration, graduate student training).

Advising has evolved over the last few decades into a service that has many different definitions and philosophical underpinnings. Titley and Titley (1982) suggested that some advisors have reduced academic advising to answering academic questions and informing students of the courses they should take, while others take a more expansive approach by grounding their advising in human development theory. Our findings suggest that all types of students majoring in psychology at an urban comprehensive university benefited from developmental advising that was intrusively forced upon students through regular contacts initiated by faculty. Developmental academic advising is not a simple or quick process; however, it can be a vehicle through which meaningful connections are made with students (Habley, 1994). Integrating the developmental approach with an intrusive approach further enhances the connections students make and benefits their personal and academic development. While standardizing such practices across a diverse group of faculty advisors may be challenging, we hope that our suggestions for implementing such practices will help others undertake similar initiatives.

Appendix A Psychology Student Profile Questionnaire (PSPQ)

Please answer each of the following questions as accurately as you can. This information is confidential and will not be seen by anyone but your academic advisor. We are asking this information to try and determine the factors that influence people's success in school. If you feel uncomfortable answering any of these questions, feel free to ignore that one question. We appreciate your help in completing this survey and returning it in the envelope provided.

1. Age (in years) _____

2. Is this your first college experience?
___ yes ___ no

If no, please check the statement that best describes your previous academic experience:
___ transferring from another school within IUPUI (e.g., UEC, Liberal Arts, SPEA)
___ returning to school to complete degree (out less than 2 years)
___ returning to school to complete degree (out more than 2 years)
___ returning to school for an additional (second) degree
___ transferring from another University
___ other (please describe _____
_____)

3. What part of your education is being financed by each of the following sources:
Self
0 _____ 1-25% _____ 26-50% _____
51%-75% _____ 76-100% _____
Financial Aid
0 _____ 1-25% _____ 26-50% _____
51%-75% _____ 76-100% _____
Parents
0 _____ 1-25% _____ 26-50% _____
51%-75% _____ 76-100% _____
Other
0 _____ 1-25% _____ 26-50% _____
51%-75% _____ 76-100% _____
(please describe _____)

4. Are you the first person in your family to attend college? ___ yes ___ no

If no, please check all that apply (note, you can check both options for any one or more individuals) :

Mother:	___ attended college
	___ earned a degree
Father:	___ attended college
	___ earned a degree
Siblings:	___attended college
	___ earned a degree
Spouse/Significant	___ attended college
Others:	___ earned a degree

5. Do you currently have dependents for whom you are the primary caregiver (e.g., children, elderly parents, etc.) ___ yes ___ no

If children, how many do you have? _____

Do you have adequate childcare arrangements so you can attend class regularly?
___ yes ___ no

6. To the best of your ability, could you please record your high school G.P.A., your high school rank, ACT and/or SAT scores.

_____ G.P.A. _____ High School Rank
_____ ACT _____ SAT

We thank you for taking the time to complete this survey. Our goal is to provide better advising services to you and other students by examining this information. If this information will be used in any report, no one will be able to tie your identity to your responses. If you have any questions about this survey, please feel free to contact your academic advisor.

Appendix B Satisfaction with Advising Survey

We are in the process of collecting feedback from students regarding their perceptions of the academic advising in the Department of Psychology. This is in conjunction with a research study we have been conducting over the last 3 years. We would appreciate a few minutes of your time to complete the short survey below. Using the attached Scantron form, please fill in the circles associated with your answers.

Enter Identification Number in the space indicated in the bottom left corner of the Scantron form. In order to adequately analyze the data, we will need to connect your responses to our database. Therefore, we need to ask that you place your student ID # in the space below. After we have entered your data into the database, the ID # will be removed and you will only be known as a random subject number. No one can identify you from the database.

1. I know who my ***assigned*** psychology faculty advisor is: ___ yes ___ no

2. Please estimate the **number of times you have met with your psychology faculty advisor over the last year.**

   0—never
   1—once (throughout the year)
   2—once each semester
   3—3–5 times
   4—more than 5 times

3. Please estimate the **number of times you have used the peer advising office (LD 123) over the last year.**

   0—never
   1—once (throughout the year)
   2—once each semester
   3—3–5 times
   4—more than 5 times

4. I regularly meet with an advisor that I am not formally assigned to. ___ yes ___ no

Please use the scale below to respond to the items.

1 Strongly Agree	**2 Agree**	**3 Neither Agree nor Disagree**	**4 Disagree**	**5 Strongly Disagree**	**9 NA (has never occurred)**

	SA	A	N	D	SD	NA
5. I am satisfied with the academic advising I have been receiving in the Psychology Department.	1	2	3	4	5	9
My psychology faculty advisor has: (refer to the advisor you have seen most often)						
6. been available to me when I have needed to speak with him/her.	1	2	3	4	5	9
7. made suggestions regarding my academic experience that have been helpful.	1	2	3	4	5	9
8. provided me with information about opportunities in the department I was not previously aware of.	1	2	3	4	5	9
9. contacted me over the last year to provide me with information.	1	2	3	4	5	9
10. encouraged me to think carefully about my future.	1	2	3	4	5	9
11. helped me make good choices about my future.	1	2	3	4	5	9
12. provided me with accurate information.	1	2	3	4	5	9
13. gone out of his/her way to help me.	1	2	3	4	5	9
14. helped me get more involved in the department.	1	2	3	4	5	9
15. helped me feel more connected to the department.	1	2	3	4	5	9
16. helped me to identify classes that would fit my interests.	1	2	3	4	5	9
17. helped me problem solve over issues related to my academic experience.	1	2	3	4	5	9
18. The peer advising office has been a useful resource to me.	1	2	3	4	5	9
19. I am satisfied with the information I have received from the peer advising office.	1	2	3	4	5	9
20. The peer advisors seem knowledgeable about requirements for my major.	1	2	3	4	5	9

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Authors' Note

This research was supported by NACADA grant # 54340 awarded to Mikki Poynter Jeschke. We are very grateful to Lori Losee, Chantal Koch, Larita Jarvis, D. W. Rajecki, and Scott Comer for their assistance. We also thank the Department of Psychology for providing matching resources, and the faculty and peer advisors who have made numerous contributions to academic advising.

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