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Student Withdrawal: Test of an Integrated Model

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Abstract

This study examined a model of student withdrawal that integrated the major elements of Tinto's (1975) Student Integration Model and Bean's (1982, 1983) Industrial Model of Student Attrition. In a sample of 315 college freshman, the results of a path analysis indicated that both social and academic integration were related to satisfaction but only academic integration was related to commitment. Neither social nor academic integration had significant direct effects on intention to withdraw. Further, of the two attitudinal variables, satisfaction was related to intention to withdraw, however, commitment was not. These findings support the integrated model of student withdrawal.

Both administrators and researchers in higher education have shown an interest in understanding student attrition. This topic is an important one for administrators who must manage enrollment levels and the financial and other resources associated with them (McGrath & Braunstein, 1997). For researchers, student attrition has been a primary variable of interest for those seeking to understand the experiences and outcomes associated with obtaining higher education. For these reasons, a considerable amount of research on student attrition has been conducted and a number of theoretical models have been advanced. Perhaps the two most common theories of student attrition are Tinto's (1975) Student Integration Model and Bean's (1982, 1983) Industrial Model of Student Attrition.

The Student Integration Model (Tinto, 1975) posits that student characteristics interact with institutional characteristics in such a way that either facilitates or hinders student integration. Higher levels of integration are said to lead to higher levels of commitment which, in turn, influence student withdrawal. Although several types of integration are possible, the two most prominent are academic and social integration. Academic integration arises primarily out of the student's interaction with faculty and advisors and occurs when the student accepts the performance standards and identifies with the intellectual norms of the institution. Social integration arises primarily out of the student's interactions with peers and occurs when the student accepts the social standards and identifies with the social norms of the institution.

The Industrial Model of Student Attrition (Bean, 1982, 1983) posits that student characteristics interact with institutional variables in a manner that influences student satisfaction which then influences intention to withdraw. Intent to withdraw is seen as an immediate precursor to actual withdrawal. The model also suggests that environmental variables such as work opportunities and marriage can moderate the relationship between satisfaction, intention to quit, and withdrawal.

Conceptually and empirically, these two models have some important similarities

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and differences (Cabrera, Castaneda, Nora, & Hengstler, 1992). In terms of similarities, both models place great importance on the interaction between student and institutional characteristics. Both models also highlight that attitudinal responses to these interactions are precursors to withdrawal. The main difference between the two models is that commitment is the attitudinal response identified in the Student Integration Model, whereas satisfaction is the attitudinal response identified in the Industrial Model. Noting these similarities and differences, Cabrera et al. (1992) suggested that these two models should be viewed as complimentary to one another. They also suggested that future research incorporate the major propositions of each model to obtain a better understanding of the student attrition process.

Building on this past research and theory, the purpose of the present study was to test a model of student attrition that included the main elements from these two models of student attrition. More specifically, we retained the notion present in both models that student and institution characteristics are the primary determinants of attitudinal reactions. We adopted the academic and social integration framework suggested by the Student Attrition Model based on the results of Cabrera et al. (1992), which showed that these broader concepts encompassed some of the more narrowly defined variables in the Industrial Model, and the larger body of research which has supported their influence on withdrawal (i.e., Cleveland-Innes, 1994; Eaton & Bean, 1995; Pascarella & Terenzini, 1980). Further, the academic and social subsystems of the institution are most salient to students. We also retained the primary attitudinal response variables from each model (i.e., commitment from the Student Integration Model and satisfaction from the Industrial Model). We hypothesized that social and academic integration influence both commitment and satisfaction, which in turn, influence intention to withdraw.

Method

The participants in this study consisted of 315 freshman undergraduate students attending a Midwestern university. This university is primarily an undergraduate teaching institution that enrolls approximately 11,000 students. The sample represented 30% of the freshman class. Approximately 41% of the respondents were male, 58% were female and 1% did not respond. The age of these respondents fell in various ranges: 23% of the participants were 18 or under, 68% fell into 19 to 20 range, 5% were in the 21 to 22 range, less than 3% were in the 23 to 24 range, and slightly more than 1% fell in the 25 and older range.

Participants were solicited from large sections of introductory courses in business, psychology, and english during the latter part of March, 1999. After voluntarily agreeing to participate, each participant was asked to complete a freshman retention survey which included items related to social integration, academic integration, commitment, satisfaction and intention to withdraw (see Table 1 for sample items, complete item sets available upon request).

Results and Discussion

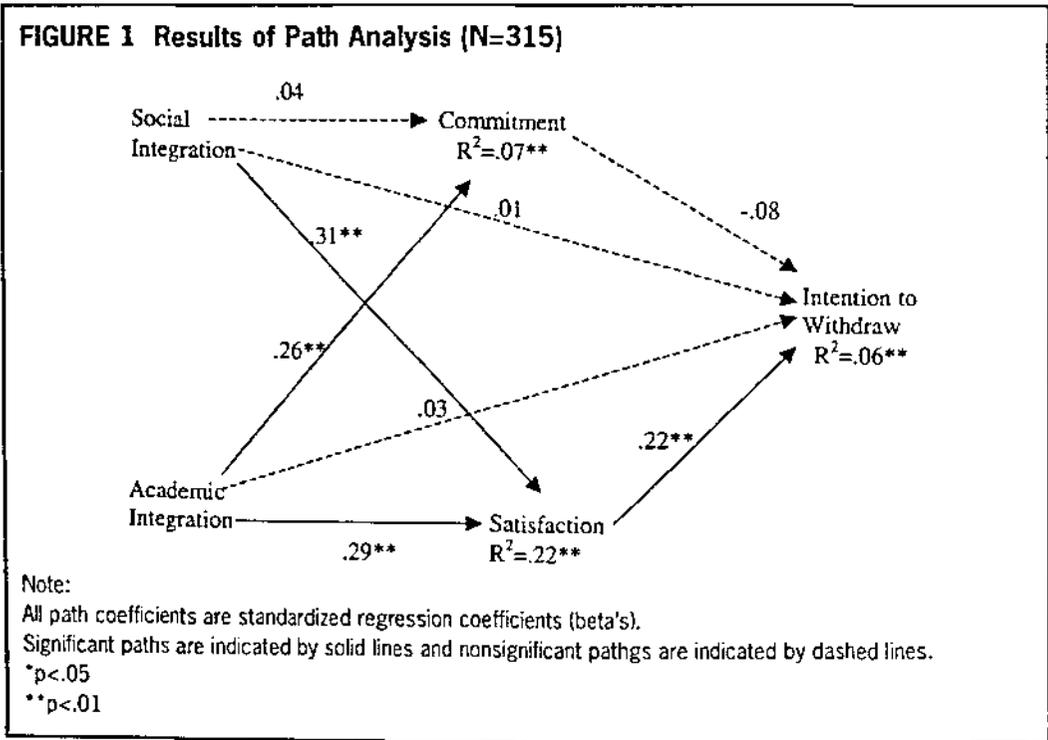
First, means, standard deviations, correlations and internal consistency reliability estimates were calculated. These are presented in Table 2. Following these, a path analysis was conducted via a series of regression equations to test the hypothesized model (Terenzini, 1982). Specifically, this analysis sought to determine if, as hypothesized, social and academic integration influence commitment and satisfaction, which in turn, influence intention to withdraw. These results are presented in Figure 1.

TABLE 1 Sample Items from Measures ¹	
Social Integration (mean of 8 items) I have made several close friends at [this university]. I attend university sporting events. I am involved in a Greek organization.	Commitment (mean of 4 items) I know which profession I intend to pursue. I am excited about my major. I am strongly committed to getting a degree.
Academic Integration (mean of 7 items) My professors know who I am. I find my classes interesting I enjoy education and learning.	Satisfaction (mean of 4 items) I enjoy classes at [this university]. I enjoy the social life at [this university]. I enjoy being a student at this university.
	Intention to Withdraw (sum of 2 items) Do you plan on transferring to another school? ² My likelihood of returning next fall is: ³
¹ All items were rated on a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree) unless otherwise noted. ² Response scale was coded 1=No, 2=Unsure, 3= Yes, to another university/tech school. ³ Response scale coded 1=0-20%, 2=21-40%, 3=41-60%, 4=61-80%, 5=81-100%	

TABLE 2 Means, Standard Deviations, Correlations, and Internal Consistency Reliability Estimates for Study Variables							
	M	SD	1	2	3	4	5
1. Social integration	2.74	.69	.70				
2. Academic integration	3.29	.54	.20**	.70			
3. Commitment	3.84	.90	.10	.27**	.84		
4. Satisfaction	3.69	.65	.37**	.35**	.14*	.70	
5. Intent to drop out	5.93	1.08	.08	.08	-.04	.22**	n/a
M refers to mean which is the arithmetic average SD refers to standard deviation which is a measure of dispersion elements in the main diagonal are internal consistency reliability estimates (alphas) computed when the measure contained more than two items. *p<.05 **p<.01							

As can be seen in Figure 1, both social and academic integration were related to satisfaction ($B=.31, p<.01$ and $B=.29, p<.01$, respectively) but only academic integration was related to commitment ($B=.26, p<.01$). In addition, neither social nor academic integration had significant direct effects on intention to withdraw ($B=.01, ns$ and $B=.03, ns$, respectively). Of the two attitudinal variables, satisfaction was related to intention to withdraw ($B=.22, p<.01$); however, commitment was not ($B=-.08, ns$).

The purpose of this study was to test an integrated model of student attrition that included the major elements of Tinto's (1975) Student Integration Model and Bean's (1982, 1983) Industrial Model of Student Attrition. Overall, the results support the efficacy of the integrated model in the prediction of intention to withdraw. The findings that academic and social integration influence intention to withdraw through their relationship with satisfaction highlights the importance of attitudinal responses to the social and academic subsystems of the university in the prediction of intention to withdraw. The finding that satisfaction was related to intent to withdraw, and that commitment was not, suggests that satisfaction is a key variable in the decision to leave the university.



As with any study, this study had several limitations. Perhaps the most noteworthy of these is the manner in which the criterion variable was measured. It may have been better if the criterion variable had been actual withdrawal behaviors rather than reported intentions. However, both theory and past research support the use of self-reported intentions and indicate that they are indeed proximal indicators of actual behaviors (Bean, 1983). On a related note, the criterion variable used in the present study made no distinction between different types of withdrawal such as drop out, stop out, and transfer (Rapaport, George, Adams & Clarkson, 1997). Although in many cases the type of withdrawal does not matter in a practical sense (i.e., the student has left the university and added to the decline in enrollment) it may be interesting from a theoretical standpoint to examine different types of withdrawal for which these results might differ. For instance, it seems reasonable to speculate that although commitment is not related to drop out it may be related to transfer (e.g., highly committed students maybe more likely to transfer than to drop out). This, and other potential differential relationships for other forms of withdrawal would appear to be fruitful ground for future research.

Another limitation of the present study is in regard to the sample of participants. Although data on race/ethnicity was not collected, based on the demographic composition of the university the majority of participants were most assuredly white. This leaves open the question of whether or not the results found here would be obtained in a more ethnically diverse sample. Indeed, because much research in this area has used such homogeneous samples, too little is known about the student attrition process among different ethnic groups. Given the multicultural context in which many universities find themselves, additional research on this topic is needed. For instance, researchers might begin by examining the relationship between ethnic group mem-

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bership and specific variables within the models (i.e., does ethnic group membership influence academic and/or social integration). Ultimately, however, research aimed at determining whether current models of student attrition accurately describe the attrition process for various ethnic groups will be needed.

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