

Satisfaction and Completion in Correspondence Study: The Influence of Instructional and Student-Support Services

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Abstract

Correspondence education can provide college-level instruction that is efficient, economical, and sensitive to the changing needs of traditional and adult learners. However, to ensure the development of the educational environment necessary for effective education to occur, providers need to be aware of factors that contribute to student satisfaction and persistence in correspondence education. This article examines the relationship between student satisfaction and course completion in relation to the provision and perceived quality of instructional and student-support services.

Introduction

Independent study by correspondence has a bright future as a means of delivering collegiate-level education to learners who choose not to study in a face-to-face setting. Correspondence study provides college- or university-based education that is efficient, economical, and sensitive to the needs of a changing learning community. The emergence of new technologies for the production and delivery of distance education will provide an environment in which the market for print-based materials is likely to expand (Simerly 1991).

As detailed in the final report of the National University Continuing Education (NUCEA) Research and Evaluation Committee (Kreiger et al. 1993), independent study enrollments in NUCEA member institutions were 367,193 in 1991-92. Approximately 59% (217,746) were college enrollments. The 1992-93 NUCEA Independent Study Profiles (Burgesson et al. 1994) reported a total college enrollment of 239,719, an increase of more than 9% over the previous year. In comparison, the 1984-85 profile reported approximately 250,000 total (college and other) enrollments annually in correspondence courses (Feasley, Kreiger, and Markowitz 1986). Clearly, an increasing number of learners view taking

college and university correspondence courses as a viable option for learning.

Purpose

The purpose of this study was to examine the relation of students' perception of the effectiveness of instructional and student-support services to their participation in correspondence education. Five research questions framed this study:

1. Does the pre-enrollment orientation session (audiotape, printed manual, and telephone dialogue), which is a mandatory component of the admissions process, contribute to student satisfaction or to the probability of program completion?
2. Does continued communication with the student-support staff at intervals throughout the program increase student satisfaction and probability of completion?
3. Does direct communication between the instructor and the student contribute to learner satisfaction or probability of completion?
4. Do both the personnel and processes responsible for providing accessible and relevant student-support services (e.g., admissions, academic advising, and registration) contribute to learner satisfaction or the probability of completion?
5. Do course materials that are easily understood, clearly written, and delivered in an educationally effective manner influence student satisfaction and the probability of completion?

Methods

The Student Satisfaction Questionnaire (SSQ) developed for this study was based on previous research instruments developed and administered by Leverenz (1979) and St. Pierre (1989). The SSQ was constructed as a Likert-type rating scale with five choices ranging from "strongly disagree" to "strongly agree"; several demographic questions were also included. The questionnaire was pilot tested and modified prior to administration in the final study. The SSQ consisted of forty-nine items that elicited demographic data and information relevant to the five research questions. The questionnaire items gathered data relating to the admissions process, the importance of instructor feedback, the influence of mailing course materials, student self-assessment of learning, the

impact of student-institutional interaction and faculty contact, the influence of support personnel, format preference, and student goal articulation. The Appendix provides a summary of the questionnaire items, numbers, and labels used in this study.

Two empirically generated factors—student satisfaction and probability of completion—served as the dependent variables for the study. The first dependent measure, student satisfaction, consisted of five items: beneficial learning experience, contribution to academic development, would take another correspondence course, would recommend correspondence courses to friends, and personally rewarding educational experience. The second dependent measure, probability of completion, consisted of a single item: likelihood of completing studies and receiving degree. Factor extraction used principal components analysis and was rotated using the equamax method in order to provide maximum simplification of the variables. The use of an orthogonal method allows the effects of the factors to be viewed as separate effects.

The Kaiser-Meyer-Olkin measure of sampling adequacy produced a measure of .82158. Kaiser (1974) describes this level as “meritorious.” Based on this measure, it was assumed that factor extraction was an appropriate method for the study.

Table 1 defines the emergent factors and provides their respective weights. Factor 2 was the independent variable for student satisfaction and Factor 11 the single item that represented probability of completion.

Procedure

The SSQ was mailed to a proportionately stratified sample of 505 students. These students had completed courses through the Department of Continuing Education at Southeastern College—a private, religiously affiliated institution—by means of correspondence study during the period between July 1, 1991 and June 30, 1992.

Because the SSQ was administered as a mail questionnaire, the problem of nonresponse needed to be addressed. Both Dillman (1978) and Fowler (1988) note the problem of selectivity as a threat to the study. A demographic analysis of the nonrespondents revealed that the characteristics of the nonresponse group did not differ significantly from those of the response group. This finding, and the assertion by Smith and Glass (1987) that a high response rate is itself not a guarantee of the absence of nonresponse bias (since in each case there is no substitute for the application of intelligent judgment), supported the assumption that nonresponse bias was not significant to the findings of the study.

Table 1. Summary of Factors with Loadings

Item Numbers	Factors			
	1 Admissions	2 Student Satisfaction	3 Instructor Feedback	4 Institutional Interaction
26	.82686			
27	.82360			
28	.66627			
29	.75155			
31	.58094			
11		.69651		
21		.66122		
22		.74156		
23		.79641		
24		.73939		
6			.76737	
7			.68775	
8			.75320	
9			.79868	
36				.66040
39				.52494
40				.72599
41				.58478
	5 Mailing	6 Faculty	7 Learning	8 Support
15	-.74280			
16	-.74532			
12		.84046		
13		.84171		
19			.82541	
20			.73331	
37				.76466
38				.84835
	9 Goal Articulation	10 Format	11 Completion	
1	-.63478			
3	.50528			
32	.60387			
25		.71269		
48			.67226	
46				

Sample

The sample population (311 respondents) comprised 128 females (41.2%) and 183 males (58.8%). Most of the students (75.9%) were twenty-five years of age or older; traditional-aged students (18–24) represented 24.1% of the sample.

This stratified sample was chosen to ensure proportional representation of all students by month of course completion; this method served to increase the precision of the sample estimates, thereby decreasing the size of the standard error. The sample size was determined using the formula presented by Krejcie and Morgan (1970) and assumed a response rate of 57% (an underestimate of the return rate for the pilot study). For a 95% confidence level and a population of 1200, the sample size was 291.

Data Analysis

Data analysis was performed in several phases. The first phase comprised a descriptive overview of the demographic data. The next phase included factor analysis to identify composite variables representing clusters of significantly interrelated independent variables. The final phase included the application of stepwise regression and analysis of variance. This process facilitated analysis using both groups of variables and individual items.

In relation to Cronbach's alpha, the five independent variables that were summed to represent the dependent variable, student satisfaction, were reliable at .85. The second dependent variable selected—probability of completion—was a single item, with an eigenvalue of .12539. This value indicates that the variable contributed little to the variance. The mean score for this variable was 1.1411. On the rating scale, a score of 1.00 indicated a report by the respondent that he or she was very likely to complete studies and receive a degree. A score of 4.00 indicated a report that he or she would definitely not complete the studies and receive the degree. All reporting students were enrolled in a degree program.

The purpose of the data analysis was to locate the best predictors of student satisfaction and probability of completion; therefore, a stringent level of significance was set at $p > .0001$. For the stepwise regression, the entry value was set at $p < .05$ and the drop value at $p > .10$. The analysis techniques used in this study were chosen both because of their

particular applicability to the design and intent of the study and to represent techniques used in two previous and related studies (Chacon-Duque 1985; St. Pierre 1989).

Findings

Over three fourths (75.9%) of the sample population of 311 students were twenty-five years of age or over; traditional students, aged 18–24, represented 24.1% of the sample. In order to facilitate comparison, the categories and definitions by age are consistent with those used by St. Pierre (1989). Both Leverenz (1979) and St. Pierre (1989) found that the majority of students enrolled in correspondence courses were single. In the current study, 67.1% of the students were married and 53.9% were married with children. No clear reasons for this finding were suggested by the data; however, sociological factors not identified in the study, but associated with the study population, could account for this difference.

Almost one third (32.8%) of the students was employed full-time. Another large group (30.9%) was employed 31–40 hours per week. Therefore, more than 63% of the students were employed at least 30 hours per week. This supports the finding of St. Pierre (1989) and also the observation that correspondence study is particularly convenient for students who must devote great amounts of their time to vocations and families. Correspondence study provides students with a flexible framework within which to pursue academic study.

Even with many demands on their time, more than two-thirds (68%) of the students were officially enrolled in an external degree program at Southeastern College; an additional 11.3% were degree-seeking students at another institution of higher education. Ninety per cent of the students in this study were pursuing an academic degree. The goal orientation of the students, and the primacy of this orientation in learning through correspondence, is substantiated by Copas and Ross (1986) and St. Pierre (1989).

The factor analysis yielded an eleven factor solution. These eleven factors accounted for 66.7% of the total variance attributable to the variables included in the analysis. From the eleven factors, two—student satisfaction and probability of completion—emerged as dependent variables and the remaining nine were entered in the analysis as independent variables. Regression analysis using the nine factors as independent variables generated a five factor solution in terms of student satisfaction (see Table 2).

Table 2. Summary of Stepwise Regression for Student Satisfaction Factors

Variable	<i>b</i>	Beta	<i>t</i>	Sig. <i>t</i>
Factor 1 (Admissions)	.26	.269	4.70	.0000
Factor 7 (Learning)	.53	.346	6.69	.0000
Factor 5 (Mailing Materials)	.33	.200	3.81	.0002
Factor 6 (Faculty Contact)	-.23	-.182	-3.37	.0009
Factor 3 (Instructor Feedback)	.13	.136	2.63	.0090

The five variables explained approximately 41% of the variance associated with satisfaction ($R^2 = .4054$). "Admissions support" was the single variable that explained the greatest amount of variance, 22%. "Learning," "mailing of materials," "faculty contact," and "instructor feedback" were the other factors entering into the equation. A regression using the single independent variables also was performed. The ten variables that entered into this equation (see Table 3) accounted for 56% of the variance associated with student satisfaction ($R^2 = .5579$). Assistance provided by Continuing Education personnel (ASSIST) was the single greatest influence on the outcome ($R^2 = .2410$). "Assistance" combined with two additional variables, "thoroughness of courses" (THOROUGH) and "ease of accomplishing course registration by mail" (MAILREG), accounted for approximately 46% of the variance.

When the factors, as independent variables, were regressed with "completion," no equation was formed. When all single independent variables were regressed with "completion," an equation consisting of three variables, the mandatory orientation seminar (ORSEM), the continuing education catalogue (CECAT), and the library (LIBRARY) emerged (see Table 4). The amount of variance accounted for by these three variables was extremely small ($R^2 = .0615$). The most influential variable in the equation was the mandatory orientation seminar. The findings are not surprising due to the students' reported extreme probability of program completion.

Table 3. Summary of Stepwise Regression for Student Satisfaction Independent Variables

Variable	<i>b</i>	Beta	<i>t</i>	Sig. <i>t</i>
ASSIST	.92	.220	4.31	.0000
THOROUGH	.48	.173	2.84	.0050
MAILREG	.78	.234	4.74	.0000
GUIDE	.63	.160	3.34	.0010
CORRECT	.41	.138	2.97	.0033
CEADVIS	.45	.117	2.35	.0198
FACE	-.64	-.280	-3.80	.0002
LEARNING	.43	.152	2.40	.0173
PERSON	.40	.161	2.22	.0271
OFFREG	-.27	-.093	-2.01	.0452

Note: Descriptions of variable labels are presented in the Appendix.

Table 4. Summary of Stepwise Regression for Completion

Variable	<i>b</i>	Beta	<i>t</i>	Sig. <i>t</i>
ORSEM	.090	.154	2.375	.0184
CECAT	-.106	-.150	-2.282	.0234
LIBRARY	.085	.128	2.000	.0471

The findings in respect to the five research questions were as follows:

Research Question 1. The admissions process was the single most influential factor associated with student satisfaction. This factor included the usability or "user-friendliness" of the admissions materials and the helpfulness of the admissions personnel. Also important was the orientation session conducted via telephone or face-to-face. In terms of completion, no factors entered the regression equation at the set level.

Research Question 2. Assistance provided by the Continuing Education personnel was the most important variable related to continued communication between the support staff and the student. This was followed, in order of importance, by contact with the advisors, feeling a

part of Southeastern, promptly returned telephone calls, and motivation provided by the advisors. Again, in terms of completion, no variables proved significant at the set level.

Research Question 3. The instructor's timely return of lessons and the prompt return of lessons at the beginning of the course were the most significant predictors of student satisfaction. Following in order of influence were the instructor's response to questions, feeling comfortable communicating with the instructor, and specific suggestions offered by the instructor. Consistent with the findings of the previous research questions, none of the predictor variables emerged as significant in relation to probability of completion.

Research Question 4. Of the ten independent variables examined in terms of the contribution of student-support services to student satisfaction, nine were significantly influential; only the ease of office registration was not. The two most influential variables were "helpfulness of admissions personnel" and "ease of mail registration." The seven remaining variables, in order of influence, were admissions forms which were easily completed, admissions information which was easily understood, ease of telephone registration, clarity of the orientation manual, efficiency of mailing materials, ease of understanding the continuing education catalogue, and length of time to receive corrected lessons. Probability of completion was not significantly influenced by any of the identified variables.

Research Question 5. Five variables relating to written course materials were tested. All five were significant in predicting student satisfaction. None of the variables tested was significant in predicting probability of completion. In regard to satisfaction, the most influential variable was thoroughness of the course, followed in order of influence by the contribution of the study guide to learning, effectiveness of the learning experience, clearly stated lesson objectives, and preference for course format.

Summary and Conclusions

Southeastern College is a private, independent, religiously affiliated college. The college offers a limited number of majors, and students are most often adherents of the sponsoring denomination. Understanding the context of the institution is critical to understanding and interpreting the data collected in the study. Supported by analyses of the data of the

Southeastern College (SEC) correspondent student study population, the following conclusions were drawn:

1. Students enrolled in SEC correspondence programs have well-articulated goals and have chosen correspondence as a preferred means of realizing those goals.
2. The typical correspondence student at SEC is likely to be male, 25 years of age or older, married with children, employed full-time, and seeking an undergraduate degree.
3. The majority of students enrolled in a correspondence course judge the learning to be at least as effective and thorough as the learning in a traditional classroom course.
4. There are only minor differences in satisfaction between traditional age (18–24) and adult students (25+).
5. Both instructional and institutional support services are linked with student satisfaction.
6. The quality of the study guide and the clarity of the lesson objectives and requirements contribute positively to student satisfaction.
7. A positive initial contact between the student and the program through the admissions procedure positively influences satisfaction.
8. Variables that contribute to the likelihood of completion are tied to the variables that contribute to satisfaction in such a way that they are not discretely identifiable.
9. There is an “educational environment” that contributes to student satisfaction and continuing participation.

Satisfaction with correspondence education is a complex matter. Isolating specific variables that will guarantee student satisfaction may not be possible; however, developing an educational environment that will contribute to student satisfaction is possible. High quality support services will encourage student satisfaction.

The complexity of the situation is aptly described by Miller (1990), who notes that distance education must take seriously its social role and the integration of delivery mechanisms with the content and learner. If his statement is true, then it is through the provision of high quality instructional and institutional support services, and through institutional understanding of the characteristics of the correspondence learner, that students will experience satisfaction with the educational environment and attain the goals toward which they are striving. Perhaps the key is an expansion of Holmberg's (1989) guided didactic conversation model to

include institutional support services in addition to instructional support services. The conversational character and dialogical structure of this model allow the student to be "present at a distance" (Munro 1991).

Analyses of the data did not reveal variables that were statistically significant in terms of facilitating the probability of completion. This finding is explained by the homogeneity of the population, the specialized course offerings provided by SEC, and the self-selection process in which the students engaged. Cookson (1990) notes that continuing participation is closely linked to the learner's response to the continuing education program. Therefore, it is possible to assume that the satisfaction revealed by the data analyses is in a contingent relationship with continuing participation. If the students are satisfied they will continue until their goals have been met and their course of study completed.

Tinto (1987) corroborates the concept of the contingent relationship between satisfaction and continuing participation. He acknowledges that persistence is inextricably linked to the relationship between the student and the college community. Cookson (1990) agrees that "although it may not be true in every case, if persistence rates are high it may be assumed that learners are reasonably satisfied with the program" (p. 203). The converse is also true. If students are reasonably satisfied, persistence rates will be high. The task of the correspondence program is not to directly increase persistence rates or completion rates but rather to provide services that encourage the student satisfaction that subsequently promotes probability of completion.

Recommendations for Future Research

Research studies applying the variables from the current study to institutions comparable to Southeastern College would enable further explication of the issues of self-selection and the importance of goal articulation for students pursuing correspondence education. This explication is especially important due to differences revealed in the data in this study and that of some other recent studies.

The increasing multicultural character of the general population would make an investigation of "cultural" satisfaction with correspondence learning materials and environments valuable. The results of such research could assist independent study programs in developing and sustaining cultural sensitivity as a means of providing quality education to a diverse population. Also valuable would be a study that considered the variables identified in this study in relation to students who have stopped out or dropped out.

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Appendix. Summary Report of Questionnaire Items (Independent Variables)

Questionnaire Item Number, Item Description, and Label

5. The instructor returned lessons to me in a reasonable length of time. (TIME)
6. The instructor responded to the questions I asked. (RESPOND)
7. I received specific suggestions from the instructor on how I might improve my work. (SUGGEST)
8. The instructor provided me with positive feedback during the course. (FEEDBACK)
9. I felt comfortable communicating with the instructor. (COMMUNIC)
10. I was satisfied with the assistance provided by the Continuing Education personnel. (ASSIST)
11. Taking this correspondence course was a beneficial learning experience. (BENEFIT)
12. I missed having face-to-face contact with Southeastern. (FACE)
13. I would have liked to have had more personal contact with the instructor. (PERSONAL)
14. The lesson requirements and objectives for this course were clearly stated. (LESSON)
15. I did not like sending and receiving course material by mail. (MAIL)
16. The length of time it took to receive my corrected lessons back was too long. (CORRECT)

17. At the beginning of the course it was especially beneficial to promptly receive returned lessons. (PROMPT)
18. The study guide contributed to my knowledge and understanding of the material. (GUIDE)
19. I believe the learning experience was at least as effective as in a course taken within the classroom setting. (LEARNING)
20. I found the correspondence course to be at least as thorough as an on campus course. (THOROUGH)
21. This course contributed to my academic development. (ACADEV)
22. I would take another course through the Continuing Education program. (ANOTHER)
23. I would recommend Southeastern correspondence courses to my friends, relatives, etc. (RECOMEND)
24. I found the educational experience personally rewarding. (REWARD)
25. I prefer correspondence study to classroom instruction. (PREFER)
26. The admissions information was easily understood. (ADINFO)
27. The admissions forms were designed for easy completion. (ADFORMS)
28. The admissions personnel were helpful. (ADPERSON)
29. The Continuing Education catalog presents information which is easily understood. (CECAT)
30. The Orientation Tape was clear in its explanation of the correspondence program. (ORTAPE)
31. The Orientation Manual was clear in its explanation of the program. (ORMAN)
32. The Orientation Seminar was beneficial. (ORSEM)
33. The advisors in the Continuing Education office were helpful. (CEADVIS)
34. Course registration by telephone was easily accomplished. (TEL-REG)
35. Course registration by mail was easily accomplished. (MAILREG)
36. Course registration at the Continuing Education office was easily accomplished. (OFFREG)
37. The advisors motivated me to complete the course. (ADVMOT)
38. Follow-up calls by the Student Services Secretary encouraged me to complete my studies. (FOLLOWUP)
39. Calls I placed to the Continuing Education Office were returned promptly. (CALLRET)

40. The assistance I received from the Southeastern library staff was beneficial. (LIBRARY)
41. My contacts with the Continuing Education personnel made me feel a part of Southeastern College. (PARTSEC)
48. How likely is it you will complete your studies and receive your degree? (COMPLET)

Note: Items 1-4, 42-47, and 49 did not relate directly to the research questions and are not included in this summary.