

Modeling and Managing Student Loyalty

An Approach Based on the Concept of Relationship Quality

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The loyalty of customers is widely accepted as a critical factor in the long-term success of a service firm. In this article, the authors develop a model of student loyalty by combining the growing body of knowledge on relationship marketing in the context of services with insights from more traditional educational research. Their relationship quality-based student loyalty (RQSL) model proposes that student loyalty is mainly determined by the dimensions of relationship quality. The model also includes students' integration into the university system and external commitment as second-order factors. The authors test the RQSL model using the structural equation modeling approach and empirical data from a survey of several German universities. Among other things, the results indicate that the quality of teaching and the students' emotional commitment to their institution are crucial for student loyalty. However, there are clear differences between the results obtained from different courses of study.

ing, developing, and maintaining successful relational exchanges (Morgan and Hunt 1994)—is at “the forefront of marketing practice and academic marketing research” (Berry 1995, p. 243). This is especially true in the field of services marketing. Stable, long-term relationships with customers allow service organizations to reduce the negative consequences of those inherently unsatisfying service encounters that are inevitable given the intangible and individual character of these services (Rust, Zahorik, and Keiningham 1996, p. 9). Furthermore, the regularity and predictability of loyal customers' buying behavior allows service providers to utilize their resources more efficiently. This is of special importance for high-contact services.

Services that have already been analyzed from a relationship marketing perspective include life insurance (Crosby, Evans, and Cowles 1990; Morgan and Chadha 1993), banking (Reichheld and Kenny 1990; Stauss and Neuhaus 1997), utilities (Payne and Frow 1997), restaurants (Hennig-Thurau, Klee, and Langer 1999), and airlines (Bejou and Palmer 1998; Rapp 2000). However, although many authors support the now widespread idea that higher education institutions can be considered service organizations (see, e.g., Dolinsky 1994; Joseph and

The concept of relationship marketing—the management of all marketing activities directed toward establish-

The empirical part of this article was made possible through the generous support of the Center for Higher Education Development (CHE), a Gütersloh-based joint venture between the Bertelsmann Stiftung and the German Hochschulrektorenkonferenz. Special thanks are due to Professor Detlef Müller-Böling and Dr. Frank Ziegele (both from the CHE) for their enduring commitment to this project. We are also grateful for the constructive comments made by three *Journal of Service Research* anonymous reviewers and Roland Rust, the editor.



Joseph 1997; Kotler and Fox 1995; Licata and Frankwick 1996; Zammuto, Keaveney, and O'Connor 1996), a relational approach has only recently been applied to this specific field of services marketing. The few existing studies on the relations between higher education institutions and their students have focused on adapting Morgan and Hunt's commitment-trust theory to an educational context (Holdford and White 1997), on the student satisfaction construct and the marketing tools necessary for increasing student satisfaction (Keaveney and Young 1997; McCollough and Gremler 1999), and on the optimization of the design of a university's Internet presence from a relationship marketing perspective (Kittle and Ciba 1998).

In this article, we want to extend these previous efforts by drawing in the student loyalty construct. Student loyalty is a key objective for many higher education institutions, for several reasons.

- For most privately owned universities, tuition fees are the main source of income. Retaining students means developing a solid and predictable financial basis for future university activities. In addition, as we know from relationship marketing theory (e.g., Reichheld 1996; Reichheld and Sasser 1990), long-term relationships with students may provide some sort of strategic competitive advantage; gaining new students is generally more cost intensive than maintaining existing relationships, and cost-reduction effects are generated over the relationship life cycle.
- Services marketing theory on customer participation (e.g., Rodie and Kleine 2000; Rust, Zahorik, and Keiningham 1996, p. 8) indicates that a student loyal to his or her educational institution may (as the external factor in the service production process) positively influence the quality of teaching through active participation and committed behavior. For example, the lecturer's own involvement in the course increases if students are highly motivated, jointly contributing to a classroom atmosphere that stimulates learning. Furthermore, motivated students may also contribute to research activities by tackling innovative subjects while writing a thesis or by actively helping to collect data for a research project.
- After graduating, a loyal student may continue to support his or her academic institution (a) financially (e.g., through donations or financial support of research projects); (b) through word-of-mouth promotion to other prospective, current, or former students; and (c) through some form of cooperation (e.g., by offering placements for students or by giving visiting lectures). Clearly, the advantages (to the university) of student loyalty are not limited to the time that the student spends in the university; indeed, these advantages are at their greatest after the

student graduates. Student loyalty should therefore be interpreted as a multiphase concept that stretches from enrollment through to retirement and beyond.

Although educational services fall into the field of services marketing, there are several conceptual differences between this type of service and other professional services. These differences include, among others, the central position of the services provided in the life of the students and—closely related—the enormous amount of intellectual skill and motivation required of students if they are to achieve the desired goal.¹ In educational studies, a long research tradition exists that deals with the subject of student loyalty (usually described as student retention). However, the degree of interaction between educational studies and services marketing research is rather low, with the result that progress in this aspect of relationship marketing has been minimal in terms of both theory and reported experience. To overcome this gap, we develop a conceptual model for student loyalty that combines insights from the educational literature on student loyalty with the relationship approach of services marketing theory. This ensures that the model takes proper account of the specific characteristics of educational services within its broadened perspective of relationship marketing.

Our model concentrates on Tinto's (1975) model of student drop-out behavior and the concept of relationship quality. Several authors view relationship quality as a central determinant of relationship success in traditional business marketing settings (see, e.g., Crosby, Evans, and Cowles 1990; Hennig-Thurau 2000; Kumar, Scheer, and Steenkamp 1995; Smith 1998).

In the subsequent parts of this article, we use a three-step procedure to gain deeper insights into the potential of relationship quality in the university context. First, the existing information available from previous research efforts in the fields of student loyalty and relationship marketing are used to develop a relationship quality-based model of student loyalty. Second, the model is tested empirically using structural equation modeling. This empirical part is based on a German survey of 1,162 former university students. Finally, the theoretical and empirical results are discussed with regard to the possible managerial implications for providers of educational services.

1. Other structural differences relevant for the issues raised here are the multitude of customers and stakeholders involved (Taylor 1996, p. 208) and the loose internal structure of the educational institution (Weick 1976). See Licata and Frankwick (1996, pp. 3-12) for further differences between universities (as professional service organizations) and other service organizations.

DEVELOPING A CONCEPTUAL MODEL OF STUDENT LOYALTY FROM A RELATIONSHIP MARKETING PERSPECTIVE

Theoretical Background

Despite the growing interest in student loyalty, a review of the relevant educational literature reveals that there is no generally accepted—let alone empirically confirmed—conceptual model of the student loyalty process. However, such a model can be seen as crucial to the development of theory-based, consistent strategies aimed at increasing the loyalty of a university's students and, as a consequence, its economic success. The relationship quality-based student loyalty (RQSL) model put forth in this article aims to fill the gap. The model integrates knowledge gained from research into student loyalty with relationship quality aspects of relationship marketing theory.

The Conceptualization of Student Loyalty

Paralleling the related concept of customer loyalty, student loyalty contains an attitudinal component and a behavioral component, both of which are closely related to each other (Jacoby and Chestnut 1978). A student loyal to his or her educational institution must not only use this institution's offerings on a regular basis but must also have a positive cognitive-emotive attitude toward the institution, one that provides the underlying motivation for his or her behavior. The latter component of loyalty can be seen as crucial when it comes to differentiating between loyalty, retention, and repurchase behavior (Dick and Basu 1994).

A second issue relates to the term *student* and its interpretation in the context of loyalty. As described earlier in this article, the advantages to an educational institution of having loyal customers are not restricted to the period when these customers are formally registered as students; the loyalty of former students can also be important for the institution's success. In this study, the term *student loyalty* therefore refers to the loyalty of a student during and after his or her time at the university. Such an extended interpretation of the term makes intrinsic sense, because a former student's loyalty can be expected to be predominantly based on his or her experiences while at the university.

Educational Research on Student Loyalty

The educational literature on student loyalty is dominated by Tinto's (1975) model of student drop-out behavior.²

Drawing on earlier research by Spady (1970), Tinto's theoretical model tries to explain the processes of interaction between students and universities. Notwithstanding the importance of the student's individual predispositions (family background, skills and abilities, precollege schooling, etc.), it is the commitment and integration constructs that are at the core of Tinto's model (Tinto 1993).

In his model, Tinto (1975, 1993) assumes that the commitment and integration constructs are closely interrelated within a dynamic process. However, he sees the student's commitment as the construct that directly influences loyalty, whereas the relationship between integration and loyalty is moderated by this commitment. In addition, the degree to which the student is integrated into the academic and social system of the university also plays a key role in the development of this commitment itself. Tinto divides the commitment construct into three parts: the student's commitment to his or her own goals (goal commitment), the student's commitment to the university (institutional commitment), and an external commitment that reflects the student's non-university-related activities and interests. Tinto suggests that this external commitment has a negative influence on student loyalty.

Tinto's model is often used as the theoretical foundation for further research and forms the basis of loyalty strategies used at several American universities. However, some authors have identified serious limitations to Tinto's model (see, e.g., Bean and Metzner 1985; Grubb 1989; Tierney 1992). In his analysis of completion rates at American colleges, Seidman (1996) reached the conclusion that loyalty programs and services developed on the basis of Tinto's model have not led to any increase in student loyalty. The main limitation that we see of the Tinto model is its focus on the student's commitment at the expense of other factors (which are considered only peripherally). In particular, Tinto includes the quality of teaching as a determinant of the degree of integration but not as an original antecedent of student loyalty itself. This reflects the fact that the Tinto model predominantly focuses on students' behavioral changes as determinants of loyalty, whereas the impact of changes within the university and its services are neglected (see also Brower 1992).

Relationship Quality Research

The concept of customer loyalty is central to relationship marketing. As a consequence, much effort is ex-

2. The discussion in this area mostly uses the term *student retention* instead of *student loyalty*. However, the term *retention* tends to be used without giving due consideration to its real meaning, and several publications actually deal with loyalty. Given the distinction we draw between the two constructs, we decided to relabel the construct as loyalty in order to avoid terminological problems.

pended in trying to identify the antecedents of this loyalty. Although early studies focused predominantly on constructs such as customer satisfaction and service quality, the relationship quality construct, "is [now] emerging as a central construct in the relationship marketing literature" (Smith 1998, p. 4).

However, there is no real consensus regarding the conceptualization of relationship quality, although there is agreement that relationship quality is "a higher-order construct consisting of several distinct, although related dimensions" (Dorsch, Swanson, and Kelley 1998, p. 130). Crosby et al. (1990) proposed customer satisfaction and trust as the dimensions of relationship quality. Dwyer and Oh (1987) cited satisfaction, trust, and minimal opportunism, whereas Kumar, Scheer, and Steenkamp (1995) saw relationship quality as "encompassing conflict, trust, commitment, . . . willingness to invest in the relationship and expectation of continuity" (p. 55).

Building on these perspectives, Hennig-Thurau and Klee (1997) took a more integrative approach and combined these concepts with the key mediating variables theory of Morgan and Hunt (1994). Hennig-Thurau and Klee's conceptual model of the relationship quality construct contains three components: the customer's perception of service or product-related quality (a stable, attitude-like construct mainly resulting from the customer's previous ephemeral feelings of satisfaction), the customer's trust in the relationship partner, and the customer's commitment to that partner. In their model, service quality is seen to have a positive effect on both trust and commitment. They also propose that trust itself has a positive influence on customer commitment. All three dimensions of relationship quality are treated as antecedents of customer loyalty (or retention, respectively).

This model has recently been tested empirically in a study of restaurant chains, and most of its structure was found to be valid (Hennig-Thurau, Klee, and Langer 1999). However, the results obtained did differ slightly from the hypothesized structure with regard to one particular aspect. Instead of all three dimensions having a significant independent impact on customer retention, structural equation modeling indicated that only the path from commitment to customer retention was significant; trust and service quality only had an indirect impact on retention through the strength of their influence on commitment.

An Integrative Approach: The RQSL Model

We now propose an integrative model of student loyalty that combines the main elements of the Tinto (1975, 1993) model with the relationship quality model developed by Hennig-Thurau and Klee (1997). This integrative ap-

proach overcomes the limitations of the individual models when it comes to explaining students' loyalty to their academic institution. The RQSL model proposed here goes beyond Tinto's traditional interpretation of student loyalty by assigning academic institutions a more active role in generating high levels of loyalty. Paralleling the relationship marketing perspective, the university itself is treated as a key factor that drives students' loyalty to the institution. In addition, the RQSL model extends relationship marketing theory to include various aspects of educational research, thereby accounting for the special characteristics of educational institutions and their relationships with students as customers.

In the RQSL model, student loyalty is determined directly by three complex constructs: students' perception of the quality of the teaching activities (or service quality), students' trust in the institution's personnel, and students' commitment to the institution. The model also considers some other variables in order to gain a better understanding of this loyalty and the underlying processes involved. The components of the model and their proposed interactions are described in detail below, and hypotheses are formulated for each of the relationships.

A student's assessment of the university's service quality involves the evaluation of teaching-related structures and teaching-related processes and the actual results or outcomes of these teaching processes (Donabedian 1980). As we know from exploratory research, the structure dimension of service quality refers to the university's infrastructure (e.g., library, computers, teaching facilities) and the quantity, competence, and diversity of its academic staff. The process dimension is made up of several elements, including courses, administrative services, exams and tests, and the degree to which the faculty members care for their students (e.g., office hours, mentorships). Finally, the results or outcome dimension of service quality within a university context largely reflects the student's evaluation of the usefulness of his or her studies for meeting future challenges. At a basic level, a study by Boulding et al. (1993) supports our assumption that service quality is relevant for customer loyalty in an educational context. However, the Boulding study focuses on a different issue; although the authors report that an overall perceived quality has a positive and significant impact on students' behavioral intentions, they do not provide deeper insights into the structure or strength of this relationship.³

3. Although Boulding et al. (1993) measured different facets of service quality using the SERVQUAL scale, they do not report any relationships between these individual facets and students' behavioral intentions. In addition, empirical work by Hansen, Hennig-Thurau, and Wochnowski (1997) has raised questions about the suitability of using the SERVQUAL scale for studying higher education services.

Hypothesis 1: The educational institution's service quality, as perceived by the students, has a significant positive impact on student loyalty.

The students' trust in the institution's personnel is understood as the students' confidence in the university's integrity and reliability (Morgan and Hunt 1994). It is based on the personal experiences each student has had with faculty members. Were lectures held at the time they were supposed to be? Were exams fair (which does not mean easy), given what was actually taught in the lectures? Have announcements of future lectures and/or services turned out to be reliable? Trust is also understood as a direct antecedent of student loyalty.

Hypothesis 2: The students' trust in the educational institution has a significant positive impact on student loyalty.

The students' commitment to the educational institution is another construct included as a determinant of student loyalty in the RQSL model. As we know from organizational research on the commitment construct, we have to distinguish between the emotional aspect and the cognitive (or calculative) aspect of a person's commitment to an institution (Geyskens et al. 1996). The two aspects of commitment are treated as distinct constructs in the model because work reported in the literature suggests that there are no significant correlations between the two (Hennig-Thurau 2000).

Hypothesis 3: The students' emotional commitment to the educational institution has a significant positive impact on student loyalty.

Hypothesis 4: The students' cognitive commitment to the educational institution has a significant positive impact on student loyalty.

To give due consideration to the specific characteristics of educational services, this understanding of relationship quality is extended to include another dimension: students' commitment to the achievement of their own goals. Given the long-term character of the service and the need for extensive customer learning and active coproduction, students usually face several external challenges over the course of their time at the university. These external influences can result in the reformulation of the students' goals and a reevaluation of their relationship with the university. As with the other dimensions of relationship quality, the hypothesis is that this goal commitment has a positive direct impact on student loyalty.

Hypothesis 5: The students' goal commitment has a significant positive impact on student loyalty.

Students' emotional commitment to the university plays a central role in traditional educational research on student loyalty. Hence, the RQSL model also addresses second-order factors that determine the student's degree of emotional commitment to the university. According to Tinto (1975, 1993), a student's commitment is largely determined by his or her degree of integration into the university system. This integration can take place in two ways: first, through active participation in university societies and committees (i.e., academic integration), and second, through friendships and acquaintances with fellow students (i.e., social integration). Tinto argues that a higher degree of student integration into the university system leads to an increased congruence between the student and the academic institution, particularly the institution's academic and social systems. This congruence refers to the fit between the student's abilities, skills, and value system and the university's expectations, demands, and values. For example, when students' intellectual abilities match with the intellectual requirements of courses and lectures, congruence is likely to exist. As a result of increased congruence, the student feels a higher degree of commitment toward the institution.

However, the degree of students' emotional commitment toward the academic institution is restrained by their other obligations and activities. Consequently, consideration also has to be given to the negative influence of students' external commitment on emotional commitment (Tinto 1993). Following Tinto's (1993) conceptualization of the construct, external commitment can be seen as a metaconcept with three central aspects: job commitment, family commitment, and students' commitment to nonuniversity activities. These three external commitments are competing with the university itself for the student's time and activities, forcing the student to decide between the often long-existing external communities and the university's community. Although the student's allocation of his or her resources between the university, his or her job, family, and nonuniversity activities depends on the individual's amount of existing resources, a negative impact of external commitment on the student's emotional commitment can be expected. Therefore, we formulate the following hypotheses:

Hypothesis 6: The students' integration into the academic system has a significant positive impact on emotional commitment.

Hypothesis 7: The students' integration into the social system has a significant positive impact on emotional commitment.

Hypothesis 8: The students' job commitment has a significant negative impact on emotional commitment.

Hypothesis 9: The students' family commitment has a significant negative impact on emotional commitment.

Hypothesis 10: The students' commitment to nonuniversity activities has a significant negative impact on emotional commitment.

Additional relationships between service quality, trust, and emotional commitment, the traditional dimensions of relationship quality, are postulated on the basis of previous research and, in particular, the model produced by Hennig-Thurau and Klee (1997).⁴

Hypothesis 11: The students' perception of service quality has a significant positive impact on trust.

Hypothesis 12: The students' perception of service quality has a significant positive impact on emotional commitment.

Hypothesis 13: The students' trust in the educational institution has a significant positive impact on emotional commitment.

The full causal path structure of the RQSL model is illustrated in Figure 1. If accurate, the model should allow higher education institutions to better coordinate their activities to increase student loyalty rates. We therefore need to empirically validate this proposed model structure, and this validation process is described in the next part of the article.

TESTING THE CONCEPTUAL MODEL: RESULTS FROM A GERMAN STUDY

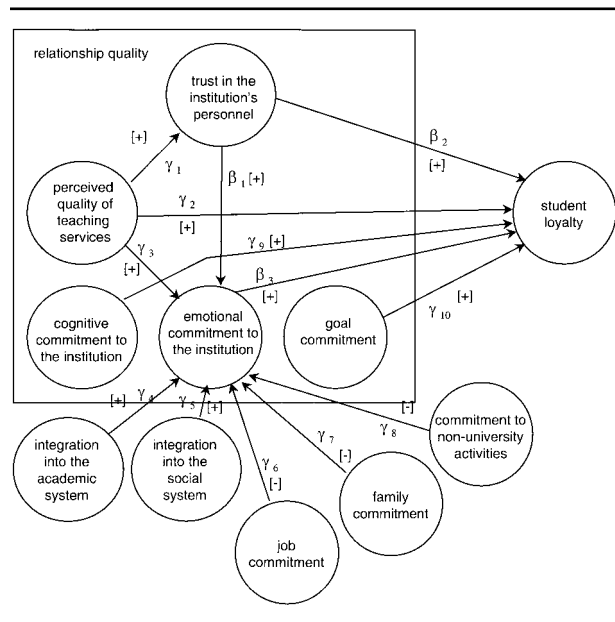
Background

To obtain data for validating the RQSL model, a questionnaire was mailed to 5,994 students who had left university in the second half of 1998. The sample contained both graduates and so-called dropouts—people who for whatever reason have failed to finish their studies. A total of 1,162 returned questionnaires were suitable for analysis, a return rate of 19.4%. We tested the sample for the existence of a nonresponse bias but found no significant differences between the answers of early respondents and those of late respondents.

The questionnaire survey covered former students from six German universities (Hanover, Osnabrück, Wilhelmshaven, Oldenburg, Ostfriesland, and Lübeck). As well as covering different universities, the sample also covered students from different courses. This allowed a

4. Although there are causal relations between the three constructs, each construct has its own distinct conceptual character. Trust, for example, might result from the ongoing perception of a service provider's performance as being high quality. However, a customer may have considerable confidence in a service provider, but his or her perception of service quality may still be low due to the provider's genuine inability to match the customer's expectations or preferences.

FIGURE 1
The Relationship
Quality-Based Student Loyalty Model



more subtle analysis of the data. Consequently, the RQSL model has been analyzed for each of the following distinct sample subsets as well as for the total sample: students of business and law, students of engineering and applied sciences, and students of educational studies.

Method and Operationalization of Constructs

Due to the complex nature of the model, the linear structural equation modeling approach was used to test the model's validity (Bagozzi 1980; Hoyle 1995).⁵ This procedure allowed us to test the proposed structure of the model as a whole. Each construct was covered by a set of multiple items in the questionnaire; only job commitment was represented by a single item.⁶

In operationalizing the constructs, we adapted a subset of items from Hansen, Hennig-Thurau, and Wochnowski (1997) for the measurement of service quality. The indicators of trust and emotional commitment were modified versions of items used by Morgan and Hunt (1994). The items for cognitive commitment were derived from

5. The calculations were performed using LISREL, version 8.

6. The questionnaire contained eight quality items, six student loyalty items, four trust items, seven items for emotional commitment, two items for cognitive commitment, three social integration items, four academic integration items, two items for family commitment, three external commitment items, and one item for job commitment.

Geyskens et al. (1996). Goal commitment, social and academic integration, job commitment, family commitment, and nonuniversity activity commitment were drawn from Tinto's work. The measurement of student loyalty was designed to cover the different facets of the construct; questions regarding the student's (hypothetical) "repurchasing" intention were included, together with items measuring referral and alumni-related behavioral intentions.

To ensure a high degree of reliability and result validity, the final operationalization of the variables was based on the three-step procedure recommended by leading researchers (e.g., Churchill 1979; Fornell and Larcker 1981). In the first step, an exploratory principal component analysis was performed for each construct in order to assess its dimensionality. In the second step, where a construct was found to be two dimensional instead of one dimensional, the discrimination of the two dimensions was tested using the chi-square procedure and the Fornell-Larcker discrimination coefficient (Fornell and Larcker 1981). The exploratory analysis suggested that the service quality construct should have a two-factor structure, but the high interfactor correlation demonstrated using the Fornell-Larcker coefficient meant that the proposed one-factor approach could be considered adequate. In the third step, we performed confirmatory factor analysis on each construct and deleted single indicators where necessary in order to increase the homogeneity of the respective construct (see Appendix A for a list of the items remaining in the analysis). Table 1 gives the means, standard deviations, number of remaining indicators, and Cronbach's alphas for each construct as well as the correlations between these constructs. These results are based on the final operationalization used in the study and refer to both the total sample and the different subsamples.

Results

The goodness-of-fit statistics given in Table 2 indicate an acceptable overall level of fit for the total sample and each subsample (for an explanation of the methodology, see Homburg and Baumgartner 1995; Hu and Bentler 1995). With regard to the local fit of the model, some individual items had a coefficient of determination below .4 for at least one set of sample data, but these were not removed for content-related reasons and in order to allow comparisons between results obtained using different data sets. All in all, the local fit of each model and data set combination was found to be satisfactory (see Appendix B for the coefficients of determination of each item and the explained variance of each latent variable).

The results broadly confirm the proposed structure of the RQSL model. Depending on the sample, between 74% and 78% of student loyalty is explained through the sug-

gested constructs. For the total data set and for the course-based subsets, the level of service quality perceived by the students has the strongest direct impact on loyalty, followed by the students' emotional commitment to the institution (see Table 3). This ranking also holds true when both the direct and indirect impacts of each latent variable on loyalty are considered (see Table 4). Hypothesis 1 and Hypothesis 3 are therefore supported for the total sample and also for the different subsamples.

Some differences can be observed when comparing the results obtained using data representing students from just one course of study. The key difference concerns the path between trust and student loyalty. There is a strong and significant relationship between both constructs (i.e., supporting Hypothesis 2) in the case of students of educational studies, but trust has no significant impact on loyalty in either the total sample or the other two subsamples. Consequently, Hypothesis 2 must be rejected in these cases. The latter findings are consistent with the results obtained in an empirical study by Hennig-Thurau, Klee, and Langer (1999), who found that trust had only an indirect (and still rather small) impact on retention in the area of restaurant services. In addition, in the case of students of educational studies, the influence of trust on the students' emotional commitment is well above average.

Although the impact of the students' goal commitment on loyalty is weaker than that of service quality and emotional commitment, it is still significant and positive, as speculated in Hypothesis 5. However, the cognitive part of the commitment construct has a small but consistently negative impact on student loyalty, which leads us to reject Hypothesis 4. A possible explanation for the latter finding might be that if a student is locked in a relationship with the university against his or her will, then his or her loyalty to the relationship partner declines after that student is "set free."

Regarding the second-order factors, both academic and social integration have a positive impact on emotional commitment, and this result is consistent across all samples. This impact is significant and strong for academic integration, providing solid support for Hypothesis 6, but is of a rather weak nature for social integration, thus providing only partial support for Hypothesis 7. The results also indicate that a small, but positive, relationship exists between two of the external commitments, namely, job and family commitment and the students' emotional commitment to the institution, leading to the rejection of Hypothesis 8 and Hypothesis 9. We would suggest that this means that the positive impacts on loyalty of a student's commitment to his or her job and family (e.g., emotional stability, financial security) more than compensate for the negative impacts of these kinds of commitment (i.e., the reduction of time available for studying). For the third type of exter-

TABLE 1
Means, Standard Deviations, Number of Remaining Indicators, Cronbach's Alphas, and Correlations

	Mean	Standard Deviation	Number of Items	Service Quality	Trust	Emotional Commitment	Cognitive Commitment	Goal Commitment	Academic Integration	Social Integration	Job Commitment	Family Commitment	Nonuniversity Commitment	Student Loyalty	
Service quality	3.118	0.677	7	.819											
	3.212	0.698		.817											
	3.000	0.648		.824											
	3.281	0.653		.779											
Trust	3.474	1.023	4	.611	.846										
	3.634	1.006		.593	.861										
	3.299	0.972		.607	.813										
	3.635	1.048		.586	.861										
Emotional commitment	3.841	1.227	4	.457	.402	.864									
	3.860	1.198		.541	.463	.866									
	3.587	1.216		.472	.353	.863									
	4.233	1.222		.350	.416	.861									
Cognitive commitment	4.945	1.490	1	-.045	.017	.002	1.000								
	5.049	1.349		.077	.131	.104									
	5.012	1.456		-.072	-.016	-.038									
	4.762	1.619		-.044	-.060	-.095									
Goal commitment	2.099	0.851	1	.024	.017	.047	-.025	1.000							
	2.066	0.852		.008	.027	.060	-.055								
	2.065	0.787		.107	.067	.117	-.018								
	2.123	0.893		-.031	.026	.030	.025								
Academic integration	4.576	1.107	3	.126	.071	.269	-.022	.054	.614						
	4.427	1.135		.240	.094	.323	.057	.025	.641						
	4.571	1.125		.128	.131	.241	-.025	.170	.623						
	4.774	1.043		.078	.120	.312	-.054	.036	.586						
Social integration	2.786	1.214	3	.171	.029	.243	-.156	.099	.416	.767					
	2.683	1.156		.241	.074	.274	-.047	.135	.431	.740					
	2.686	1.176		.178	.004	.218	-.253	.157	.391	.770					
	2.912	1.305		.101	.057	.249	-.211	.033	.489	.793					
Job commitment	4.036	1.725	1	-.158	-.094	-.059	.058	.028	-.007	-.066	1.000				
	3.947	1.756		-.079	-.085	-.011	-.032	.061	-.054	-.073					
	4.316	1.682		-.169	-.099	-.075	.090	-.026	-.045	-.018					
	3.929	1.659		-.145	.055	.045	-.014	.023	.071	-.066					
Family commitment	2.037	1.209	1	.086	.074	.060	-.014	.014	-.088	.004	-.090	1.000			
	1.816	1.071		.074	.094	.042	.076	.005	-.097	.079	-.011				
	2.114	1.229		.200	.157	.137	-.005	.017	-.111	-.061	-.084				
	2.020	1.174		-.024	.021	-.038	-.055	.129	-.028	.051	-.189				
Nonuniversity commitment	2.819	1.415	1	.131	.086	-.008	-.026	.058	.028	.147	-.141	.153	1.000		
	2.642	1.375		.105	.112	-.014	-.050	.018	.102	.181	-.060	.155			
	2.831	1.435		.137	.148	.002	.016	.150	.036	.039	-.103	.129			
	2.798	1.306		.169	-.042	.009	-.009	.019	.015	.237	-.207	.102			
Student loyalty	3.297	1.072	6	.603	.477	.562	-.080	.119	.200	.213	-.132	.077	.118	.782	
	3.210	1.063		.554	.445	.615	.038	.185	.264	.219	-.052	.041	.059	.766	
	3.087	1.019		.629	.448	.594	-.101	.180	.210	.222	-.137	.160	.144	.781	
	3.666	0.996		.567	.552	.471	-.112	.068	.143	.101	.053	.035	.064	.752	

NOTE: Values on the main diagonal are Cronbach's alphas. First number in each cell = total sample, second number = business and law subsample, third number = engineering subsample, and fourth number = educational studies subsample.

TABLE 2
Overall Goodness-of-Fit Statistics

	<i>Total Sample</i> (N = 1,162)	<i>Business and Law</i> (n = 273)	<i>Engineering</i> (n = 421)	<i>Educational Studies</i> (n = 205)
Goodness-of-fit index	.97	.95	.96	.94
Adjusted goodness-of-fit index	.96	.93	.95	.93
Root mean square residual	.06	.08	.07	.08
Root mean square error of approximation	.06	.06	.05	.04
Comparative fit index	.96	.96	.97	.98

TABLE 3
Path Coefficients and Explained Variance

	<i>Total Sample</i> (N = 1,162)	<i>Business and Law</i> (n = 273)	<i>Engineering</i> (n = 421)	<i>Educational Studies</i> (n = 205)
Student loyalty (R^2)	.75	.75	.78	.74
Trust (β_2)	-.00	-.03	-.03	.19
Quality (γ_2)	.56	.49	.58	.48
Goal commitment (γ_{10})	.11	.17	.10	.11
Emotional commitment (β_3)	.39	.46	.41	.33
Cognitive commitment (γ_9)	-.08	-.06	-.07	-.03
Emotional commitment (R^2)	.45	.56	.44	.46
Trust (β_1)	.16	.15	.06	0.31
Quality (γ_3)	.38	.46	.47	.19
Academic integration (γ_4)	.29	.28	.27	.34
Social integration (γ_5)	.08	.09	.05	.10
Job commitment (γ_6)	.01	.05	.00	.09
Family commitment (γ_7)	.08	.01	.12	.04
Commitment to nonuniversity activities (γ_8)	-.11	-.15	-.11	-.07
Trust (R^2)	.51	.45	.53	.54
Quality (γ_1)	.72	.67	.73	.73

NOTE: Nonsignificant values are printed in italics.

TABLE 4
Total Effects of Latent Variables on Student Loyalty

	<i>Total Sample</i>	<i>Business and Law</i>	<i>Engineering</i>	<i>Educational Studies</i>
Trust	.06	.04	-.01	.29
Quality	.76	.73	.76	.75
Goal commitment	.11	.17	.09	.11
Emotional commitment	.39	.46	.41	.33
Cognitive commitment	-.08	-.06	-.07	-.03
Social integration	.03	.04	.02	.03
Academic integration	.12	.13	.11	.11
Job commitment	.00	.02	.00	.03
Family commitment	.03	.01	.05	.01
Commitment to nonuniversity activities	-.04	-.07	-.05	-.02

NOTE: Nonsignificant values are printed in italics.

TABLE 5
Aspects of Service Quality and Their Influence on Student Loyalty

	<i>Total Sample</i>	<i>Business and Law</i>	<i>Engineering</i>	<i>Educational Studies</i>
Goodness-of-fit index	.98	.97	.98	.97
Adjusted goodness-of-fit index	.96	.94	.96	.94
Root mean square residual	.07	.08	.07	.08
Root mean square error of approximation	.09	.09	.08	.08
Comparative fit index	.97	.97	.98	.97
Student care	.11	.13	.06	.26
Teaching on offer	.18	.16	.09	.29
Academic staff	.14	.20	.11	.11
Examinations/tests	.03	.00	.14	.00
Administrative services	.09	-.07	.14	.09
Outcome	.36	.50	.37	.22
Infrastructure	.07	-.01	.12	-.03

NOTE: Nonsignificant values are printed in italics.

nal commitment (i.e., commitment to nonuniversity activities), the impact on emotional commitment is both negative and significant in three of the four cases, thus largely supporting Hypothesis 10.

Finally, the relationships between the core dimensions of relationship quality—service quality, trust, and emotional commitment—are, as expected, consistently positive, strong, and significant (with the one exception of the path from trust to emotional commitment in the education students sample, which is positive but nonsignificant). These results support Hypotheses 11, 12, and 13.

DISCUSSION: IMPLICATIONS FOR THE MANAGEMENT OF STUDENT LOYALTY

The results of the structural equation modeling procedure clearly demonstrate that a close relationship exists between the quality of education (as perceived by students) and the students' loyalty to their educational institution. This is true for students on all the courses included in the study, namely, for business and law students, engineering students, and education students, and confirms the results given by Boulding et al. (1993). A second strong determinant of student loyalty is the students' emotional commitment to the university. Trust—the third core dimension of relationship quality—only had a strong impact on the loyalty of students who had taken education courses.

These results offer valuable insights for the management of higher education institutions. Basically, we can draw out three alternative strategic approaches to increasing the level of student loyalty: quality-based, commitment-based, and trust-based management. According to

this research, a quality-based approach is likely to be the most promising. However, an institution that wants to develop such a quality-based strategy to increase its student loyalty rate also needs to know which aspects of this service quality are most important. We therefore performed additional structural equation modeling, where we directly linked different aspects of a university's service quality (exogenous latent variables in the model) to the level of student loyalty (endogenous latent variable in the model). The results of these analyses are given in Table 5; a satisfactory degree of fit was again obtained in all cases (see Table 5 for global goodness-of-fit indices and Appendix B for local goodness-of-fit indices and a full list of relevant indicators). The results show that even if the perceived net outcome plays an important role for students on all three courses of study, there are still major differences between these student groups in terms of the key components of this service quality. For educational studies, student care and "teaching on offer" (i.e., the quality of teaching at the university as perceived by students—the motivation and competence of professors and the variety, structure, and relevance of lectures, etc.) proved to be the most relevant quality dimensions when it comes to improving student loyalty (these components were even more important than the outcome). In contrast, examinations and administrative services were of special importance to engineering students. In the business and law students subsample, the competence of the academic staff was found to be crucial to student loyalty.

In interpreting these results, however, we must remember that the RQSL model is based on an integrative approach. As a consequence, quality should not be seen in isolation; instead, all three core dimensions of relationship quality, their interrelationships, and the students' commitment to their own goals have to be considered. With regard

to the students' emotional commitment as a significant determinant of loyalty, the results demonstrate that commitment largely depends on the depth of the students' academic integration. Supporting this kind of integration might help to increase emotional commitment. The results also make clear that the students' interest in nonuniversity activities works against high emotional commitment.

The allocation of spending among these constructs should reflect the relative importance of each construct for student loyalty. A relationship marketing strategy that differs according to the course of study involved would therefore seem to be most appropriate.

If we are to be able to apply these conclusions to educational establishments outside Germany, then the potential influence of other factors characterizing higher education institutions first needs to be examined. These characteristics may affect both the strength of the relationships between the dimensions of relationship quality and their impact on student loyalty. Such characteristics include the following:

- Ownership of the institution: All the universities included in this study are public institutions, so the results may differ for private universities.
- The role students' tuition fees play in financing the institution: The fact that no tuition fees are paid at the institutions included in this study may have had an influence on the level of student commitment and students' quality expectations. This in turn may have affected the pathways in the RQSL model.
- The institution's organizational structure and culture: The organization's flexibility and the commitment of the institution's staff to its employer may also have influenced path coefficients within the model. The requirements of the German educational system are such that the universities are of a rather bureaucratic nature.

CONCLUSION

In this article, we have introduced a relationship quality-based model of student loyalty derived from a comprehensive review of educational and relationship marketing literature. Most of the model's structure was confirmed in structural equation modeling using empirical data from a survey of 1,162 former students from different German universities. The article shows that two variables in particular are key determinants of student loyalty: the quality of teaching services (as perceived by students) and students' emotional commitment to their educational institution. The results indicate that the impact of service quality on loyalty is around twice that of commitment. The development of loyalty-oriented management concepts for higher

education institutions should take into account the special importance of these two variables.

The data obtained allowed us to differentiate between several aspects of teaching quality and to identify their individual impact on student loyalty. The results of an appropriate structural equation model demonstrated that the importance of the various aspects of quality differ significantly, depending on the course of study. This makes a good case for the development of course-specific loyalty programs. As the sample includes only German universities and students, there needs to be more research of this kind in other regions in order to test the validity of the reported results for other countries, for example, the United States.

APPENDIX A
List of Indicators for Model 1

	<i>Total Sample</i>	<i>Business and Law</i>	<i>Engineering</i>	<i>Educational Studies</i>
Quality (average variance explained)	.45	.47	.45	.40
Academic staff	.46	.43	.43	.44
Infrastructure	.22	.29	.24	.12
Teaching on offer	.70	.73	.63	.63
Student care	.52	.60	.47	.52
Examinations/tests	.34	.34	.46	.18
Administrative services	.31	.25	.32	.29
Outcome	.62	.66	.59	.59
Student loyalty (average variance explained)	.43	.41	.43	.40
I'd recommend my course to someone else.	.39	.35	.36	.30
I'd recommend my university to someone else.	.66	.61	.67	.61
I'm very interested in keeping in touch with "my faculty."	.47	.53	.42	.48
If I was faced with the same choice again, I'd still choose the same course.	.28	.23	.29	.16
If I was faced with the same choice again, I'd still choose the same university.	.49	.49	.52	.46
I'd become a member of any alumni organizations at my old university or faculty.	.31	.24	.33	.39
Trust (average variance explained)	.63	.67	.57	.66
Integrity is a word I'd use when describing the university staff.	.63	.73	.50	.77
I was sure that the university staff were always acting in my best interests.	.72	.71	.69	.69
I trusted the university staff completely.	.75	.69	.74	.76
University staff always kept their promises to me.	.42	.55	.35	.43
Emotional commitment (average variance explained)	.60	.65	.65	.67
I felt very attached to my university.	.65	.82	.83	.89
I felt very attached to my faculty.	.79	.76	.81	.75
I was proud to be able to study at my university.	.48	.51	.51	.48
I was proud to be able to take the course I did.	.49	.49	.46	.55
Cognitive commitment				
I chose this university for practical reasons. ^a	1.00	1.00	1.00	1.00
Goal commitment				
When I set targets for myself, I always reach them. ^a	1.00	1.00	1.00	1.00
Social integration (average variance explained)	.63	.60	.64	.68
I regularly took part in university-related leisure activities, such as sport or fairs.	.34	.33	.33	.28
I always had intensive contact with my fellow students.	.80	.74	.88	.88
I regularly did things with fellow students outside of university.	.75	.73	.70	.87
Academic integration (average variance explained)	.42	.42	.44	.38
I regularly took part in extra academic courses or events.	.59	.76	.58	.50
I was a regular member of student academic groups set up on their own initiative.	.23	.21	.29	.20
I regularly got involved with university committee work.	.45	.30	.46	.43
Commitment to nonuniversity activities				
I made sure I still had plenty of time for my hobbies while I was a student. ^a	1.00	1.00	1.00	1.00
Family commitment				
I still had very close contact with my family and relatives (e.g., parents) while I was a student. ^a	1.00	1.00	1.00	1.00
Job commitment				
While I was at university, some of my time was taken up with paid work. ^a	1.00	1.00	1.00	1.00

NOTE: Values are coefficients of determination.

a. Fixed parameter.

APPENDIX B

List of Indicators for Model 2

	Total Sample	Business and Law	Engineering	Educational Studies
Quality				
Academic staff ^a	1.00	1.00	1.00	1.00
Infrastructure ^a	1.00	1.00	1.00	1.00
Teaching on offer ^a	1.00	1.00	1.00	1.00
Student care ^a	1.00	1.00	1.00	1.00
Examinations/tests ^a	1.00	1.00	1.00	1.00
Administrative services ^a	1.00	1.00	1.00	1.00
Outcome ^a	1.00	1.00	1.00	1.00
Student loyalty (average variance explained)	.44	.41	.44	.41
I'd recommend my course to someone else.	.46	.43	.43	.37
I'd recommend my university to someone else.	.68	.63	.73	.62
I'm very interested in keeping in touch with "my faculty."	.40	.44	.31	.43
If I was faced with the same choice again, I'd still choose the same course.	.32	.26	.35	.19
If I was faced with the same choice again, I'd still choose the same university.	.51	.51	.54	.51
I'd become a member of any alumni organizations at my old university or faculty.	.25	.18	.25	.31

NOTE: Values are coefficients of determination.

a. Fixed parameter.

REFERENCES

- Bagozzi, Richard P. (1980), *Causal Models in Marketing*. New York: Wiley.
- (1995), "Reflection on Relationship Marketing in Consumer Markets," *Journal of the Academy of Marketing Science*, 23 (4), 272-77.
- Bean, John P. and Barbara S. Metzner (1985), "A Conceptual Model of Nontraditional Undergraduate Student Attrition," *Review of Educational Research*, 55 (Winter), 485-540.
- Bejou, David and Adrian Palmer (1998), "Service Failure and Loyalty: An Exploratory Empirical Study of Airline Customers," *Journal of Services Marketing*, 12 (1), 7-24.
- Berry, Leonard L. (1995), "Relationship Marketing of Services: Growing Interest, Emerging Perspectives," *Journal of the Academy of Marketing Science*, 23 (4), 236-45.
- Boulding, William, Ajay Kalra, Richard Staelin, and Valarie A. Zeithaml (1993), "A Dynamic Process Model of Service Quality: From Expectations to Behavioral Intentions," *Journal of Marketing Research*, 30 (February), 7-27.
- Brower, Aaron M. (1992), "The 'Second-Half' of Student Integration: The Effects of Life Task Predominance on Student Persistence," *Journal of Higher Education*, 63 (4), 441-62.
- Churchill, Gilbert A., Jr. (1979), "A Paradigm for Developing Better Measures of Marketing Constructs," *Journal of Marketing Research*, 16 (February), 64-73.
- Crosby, Lawrence A., Kenneth R. Evans, and Deborah Cowles (1990), "Relationship Quality in Services Selling: An Interpersonal Influence Perspective," *Journal of Marketing*, 54 (July), 68-81.
- Dick, Alan S. and Kunal Basu (1994), "Customer Loyalty: Toward an Integrated Conceptual Framework," *Journal of the Academy of Marketing Science*, 22 (2), 99-113.
- Dolinsky, Arthur L. (1994), "A Consumer Complaint Framework with Resulting Strategies: An Application to Higher Education," *Journal of Services Marketing*, 8 (3), 27-39.
- Donabedian, Avedis (1980), *The Definition of Quality and Approaches to Its Assessment and Monitoring*. Ann Arbor, MI: Health Administration Press.
- Dorsch, Michael J., Scott R. Swanson, and Scott W. Kelley (1998), "The Role of Relationship Quality in the Stratification of Vendors as Perceived by Customers," *Journal of the Academy of Marketing Science*, 26 (2), 128-42.
- Dwyer, F. Robert and Sejo Oh (1987), "Output Sector Munificence Effects on the Internal Political Economy of Marketing Channels," *Journal of Marketing Research*, 24 (November), 347-58.
- Fornell, Claes and David F. Larcker (1981), "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research*, 18 (February), 39-50.
- Geyskens, Inge, Jan-Benedict E. M. Steenkamp, Lisa K. Scheer, and Nirmalya Kumar (1996), "The Effects of Trust and Interdependence on Relationship Commitment: A Trans-Atlantic Study," *International Journal of Research in Marketing*, 13 (4), 303-17.
- Grubb, W. Norton (1989), "Dropouts, Spells of Time and Credits in Postsecondary Education: Evidence from Longitudinal Surveys," *Economics of Education Review*, 8 (1), 49-67.
- Hansen, Ursula, Thorsten Hennig-Thurau, and Holger Wochnowski (1997), "TEACH-Q: Ein valides und handhabbares Instrument zur Bewertung von Vorlesungsleistungen" [TEACH-Q: A Valid and Easy-to-Use Instrument for Evaluating Teaching Services], *Die Betriebswirtschaft*, 57 (3), 376-96.
- Hennig-Thurau, Thorsten (2000), "Relationship Quality and Customer Retention through Strategic Communication of Customer Skills," *Journal of Marketing Management*, 16 (1-3), 55-79.
- and Alexander Klee (1997), "The Impact of Customer Satisfaction and Relationship Quality on Customer Retention: A Critical Reassessment and Model Development," *Psychology & Marketing*, 14 (8), 737-65.
- , ———, and Markus F. Langer (1999), "Das Relationship Quality-Modell zur Erklärung von Kundenbindung: Einordnung und empirische Überprüfung" [Explaining Customer Retention Using

- the Relationship Quality Model: An Empirical Investigation], *Zeitschrift für Betriebswirtschaft*, 69 (2), 111-32.
- Holdford, David and Sandra White (1997), "Testing Commitment-Trust Theory in Relationships Between Pharmacy Schools and Students," *American Journal of Pharmaceutical Education*, 61 (Fall), 249-56.
- Homburg, Christian and Hans Baumgartner (1995), "Beurteilung von Kausalmodellen. Bestandaufnahme und Anwendungsempfehlungen" [The Evaluation of Causal Models], *Marketing ZFP*, 17 (3), 162-76.
- Hoyle, Rick H. (1995), *Structural Equation Modeling: Concepts, Issues, and Applications*. Thousand Oaks, CA: Sage.
- Hu, Li-tze and Peter M. Bentler (1995), "Evaluating Model Fit," in *Structural Equation Modeling: Concepts, Issues, and Applications*, Rick H. Hoyle, ed. Thousand Oaks, CA: Sage, 76-99.
- Jacoby, Jacob and Robert W. Chestnut (1978), *Brand Loyalty: Measurement and Management*. New York: Wiley.
- Joseph, Mathew and Beatriz Joseph (1997), "Employers' Perceptions of Service Quality in Higher Education," *Journal of Marketing for Higher Education*, 8 (2), 1-13.
- Keaveney, Susan M. and Clifford E. Young (1997), "The Student Satisfaction and Retention Model (SSRM)," working paper, Graduate School of Business Administration, University of Colorado, Denver.
- Kittle, Bart and Diane Ciba (1998), "Relationship Marketing in Higher Education via the World Wide Web: A Follow-Up Study of Home Pages Examining Student Recruitment Strategies," paper presented at the 9th Symposium for the Marketing of Higher Education, San Antonio, Texas.
- Kotler, Philip and Karen F. A. Fox (1995), *Strategic Marketing for Educational Institutions*, 2d ed. Englewood Cliffs, NJ: Prentice Hall.
- Kumar, Nirmalya, Lisa K. Scheer, and Jan-Benedict E. M. Steenkamp (1995), "The Effects of Supplier Fairness on Vulnerable Resellers," *Journal of Marketing Research*, 32 (February), 54-65.
- Licata, Jane and Gary L. Frankwick (1996), "University Marketing: A Professional Service Organization Perspective," *Journal of Marketing for Higher Education*, 7 (2), 1-16.
- McCullough, Michael A. and Dwayne D. Gremler (1999), "Guaranteeing Student Satisfaction: An Exercise in Treating Students as Customers," *Journal of Marketing Education*, 21 (2), 118-32.
- Morgan, Robert F. and Sanjay Chadha (1993), "Relationship Marketing at the Service Encounter: The Case of Life Insurances," *Service Industries Journal*, 13 (January), 112-25.
- and Shelby D. Hunt (1994), "The Commitment-Trust Theory of Relationship Marketing," *Journal of Marketing*, 58 (July), 20-38.
- Payne, Adrian and Penny Frow (1997), "Relationship Marketing: Key Issues for the Utilities Sector," *Journal of Marketing Management*, 13 (5), 463-77.
- Rapp, Reinhold (2000), "Customer Relationship Marketing in the Airline Industry," in *Relationship Marketing: Gaining Competitive Advantage through Customer Satisfaction and Customer Retention*, Thorsten Hennig-Thurau and Ursula Hansen, eds. Berlin: Springer, 317-31.
- Reichheld, Frederick F. (1996), *The Loyalty Effect*. Boston: Harvard Business School Press.
- and David W. Kenny (1990), "The Hidden Advantages of Customer Retention," *Journal of Retail Banking*, 12 (Winter), 19-22.
- and W. Earl Sasser (1990), "Zero Defections: Quality Comes to Services," *Harvard Business Review*, 68 (September-October), 105-11.
- Rodie, Amy Risch and Susan Schultz Kleine (2000), "Customer Participation in Services Production and Delivery," in *Handbook of Service Marketing and Management*, Teresa A. Swartz and Dawn Iacobucci, eds. Thousand Oaks, CA: Sage, 111-25.
- Rust, Roland T., Anthony J. Zahorik, and Timothy L. Keiningham (1996), *Service Marketing*. New York: HarperCollins.
- Seidman, Alan (1996), "Retention Revisited: R=E,Id+E&In,Iv," *College and University*, 71 (4), 18-20.
- Smith, J. Brock (1998), "Buyer-Seller Relationships: Similarity, Relationship Management, and Quality," *Psychology & Marketing*, 15 (1), 3-21.
- Spady, William G. (1970), "Dropouts from Higher Education: An Interdisciplinary Review and Synthesis," *Interchange*, 1 (1), 64-85.
- Stauss, Bernd and Patricia Neuhaus (1997), "The Qualitative Satisfaction Model," *International Journal of Service Industry Management*, 8 (3/4), 236-49.
- Taylor, Steven A. (1996), "Consumer Satisfaction with Marketing Education: Extending Services Theory to Academic Practice," *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 9, 207-20.
- Tierney, William G. (1992), "An Anthropological Analysis of Student Participation in College," *Journal of Higher Education*, 63 (6), 603-18.
- Tinto, Vincent (1975), "Dropout from Higher Education: A Theoretical Synthesis of Recent Research," *Review of Educational Research*, 45 (Winter), 89-125.
- (1993), *Leaving College: Rethinking the Causes and Cures of Student Attrition*, 2d ed. Chicago: University of Chicago Press.
- Weick, Karl (1976), "Educational Organizations as Loosely Coupled Systems," *Administrative Science Quarterly*, 21 (March), 1-19.
- Zammuto, Raymond F., Susan M. Keaveney, and Edward J. O'Connor (1996), "Rethinking Student Services: Assessing and Improving Service Quality," *Journal of Marketing for Higher Education*, 7 (1), 45-70.

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