

# Marketing's Integration with Other Departments

Kenneth B. Kahn  
GEORGIA INSTITUTE OF TECHNOLOGY

John T. Mentzer  
UNIVERSITY OF TENNESSEE

*Interdepartmental integration is very much a part of a marketing department's activities, but what is meant by "integration" is not well defined. Some literature has ascribed to an interaction perspective, where meetings and documented information exchange predicate marketing's relationships among departments. Other literature has ascribed to a collaboration perspective, where teams and collective goals are prescribed. And a third group of literature has suggested that integration is a composite of interaction and collaboration. An empirical study of 514 marketing, manufacturing, and R&D managers was undertaken to investigate which one of these perspectives may be more valid for achieving performance success. Findings indicate that collaboration distinguishes successful performance and promotes marketing's satisfaction in working with other departments. Managerial and future research implications are discussed. J BUSN RES 1998, 42:53-62. © 1998 Elsevier Science Inc.*

Although the marketing concept highlights integration as a key component for marketing and overall company success (Webster, 1988), much of the traditional marketing literature views integration from an intradepartmental perspective, where the focus is marketing's integration of product, place, promotion, and price strategies. Such literature tends to overlook integration from an interdepartmental perspective, where the focus is the integration of marketing's strategies with other departments' strategies (Wind, 1981; Ruekert and Walker, 1987; Olson et al., 1995). This is unfortunate because evidence suggests that "good" integration between marketing and other departments contributes to successful marketing programs and successful company-wide initiatives, especially in the case of new product development (Souder, 1987; Urban and Hauser, 1993; Olson et al., 1995).

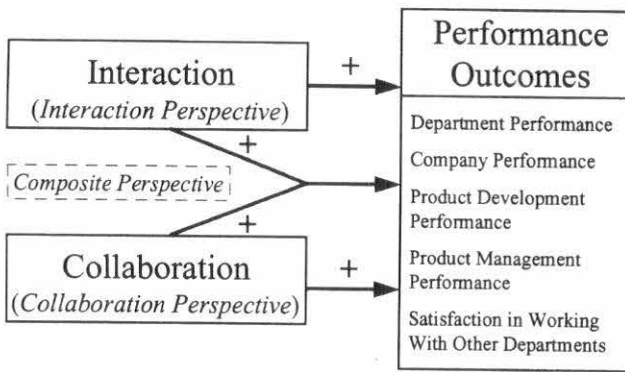
But what is meant by "good" interdepartmental integration? As yet, consensus over how the marketing department can be properly integrated with other departments is lacking. This

is evidenced by the existence of multiple characterizations for the term "integration," which confounds what approach for integration a marketing manager should adopt. For example, certain literature characterizes integration as an interactive process, where communication activities like "meetings" and "documented information exchange" predicate the relationships between departments (e.g., Ruekert and Walker, 1987; Griffin and Hauser, 1992; Lim and Reid, 1992; Moenaert et al., 1994). The marketing manager ascribing to this interactive view of integration would favor more meetings, greater written documentation, and increased information flows to promote interdepartmental unity—the focus being communication between marketing and other departments. In this way, the marketing manager would rely on activities to structure the relationships between marketing and other departments through the diffusion of market information. The question is whether "interaction" between departments alone can achieve performance success? Or can more meetings and greater information flows between departments by themselves become overburdening for marketing personnel, thereby diminishing success?

A second stream of literature describes integration as a collaborative process, where "teams" and "resource sharing" typify interdepartmental relationships (e.g., Lawrence and Lorsch, 1986; Schrage, 1990; Clark and Fujimoto, 1991). The marketing manager who ascribes to a collaborative view of integration would promote efforts that instill collective goals, mutual respect, and teamwork between departments. This marketing manager therefore would rely on those activities that are more affective and relational-based, thereby building *esprit de corp* within the organization as well as encouraging relationships between departments. Through such relationships, an appreciation and affinity for marketing contributions and a market orientation might be realized. The question is whether "collaboration" between marketing and other departments stimulates performance? Or does collaboration just improve relationships, and not help to achieve department or company performance goals?

A third segment of literature associates "information-shar-

Address correspondence to Kenneth B. Kahn, Georgia Institute of Technology, School of Management, 755 Ferst Drive, Atlanta, GA 30332-0520 (e-mail: kenneth.kahn@mgt.gatech.edu).



**Figure 1.** Hypothesized framework of marketing's integration with other departments illustrating the interaction, collaboration, and composite perspectives.

ing" and "involvement" with interdepartmental integration to suggest a composite view of integration, where integration subsumes interactive and collaborative processes (Souder, 1977; Gupta, Raj, and Wilemon, 1986; Song and Parry, 1993). The marketing manager ascribing to a composite philosophy of integration would attempt to balance interaction and collaboration activities. Although conceivably a merging of both views, the balancing of two different sets of activities may become too laborious for the respective marketing manager. Thus, the question is whether interaction and collaboration have equal influence on performance success. Or would attention to one of the processes be more advantageous for achieving such success?

The above questions point to the research need of studying interdepartmental integration. A further impetus is the difficulties that marketing managers typically have in working with other departments due to these departments' unwillingness to work with marketing, and correspondingly, these departments' resistance to the marketing concept and a market orientation. A study was therefore undertaken with the objective to better define interdepartmental integration by determining whether marketing should interact, collaborate, or do both simultaneously in order to achieve success?

## Framework of Interdepartmental Integration

Building on Ruekert and Walker (1987), a framework of interdepartmental integration is proposed in Figure 1. A distinction of this framework is its inclusion of collaboration along with interaction activities; the latter being Ruekert and Walker's focus. As shown, interdepartmental integration is illustrated in accordance with the interaction, collaboration, and composite perspectives for integration. These three perspectives for integration and their proposed relationships are discussed to detail the given framework of interdepartmental integration.

### Interaction View of Integration

An interaction view emphasizes the use of communication in the form of meetings and information flows between departments (e.g., Griffin and Hauser, 1992; Ruekert and Walker, 1987; Woodward, 1965). In fact, much of marketing literature highlights that "effective" integration is predicated on interaction, and thus, prescribes marketing's increased contact with other departments through information flows (e.g., Carlsson, 1991; Griffin and Hauser, 1992; Moenaert et al., 1994; Urban and Hauser, 1993).

Interaction activities are information exchange activities that include committee meetings, teleconferencing, conference calls, memoranda, and the exchange of standard documentation (Galbraith, 1977; Van de Ven and Ferry, 1980). By their nature, these activities do not necessarily require emotions in order to be carried out, and may occur by the devise of a schedule or the mandate of upper management. Interdepartmental interaction (hereafter referred to as interaction) is defined as the information exchange process between departments.

At the extreme, a strict interaction perspective may encourage departments to act independently with fixed contact points (e.g., monthly meetings). Correspondingly, such independence may encourage departments to be competitive, and thus, more interested in optimizing in favor of their respective department. This is not to say that interaction should be avoided because marketing and other departments require some degree of information dissemination (cf., Narver and Slater, 1990; Jaworski and Kohli, 1993; Maltz and Kohli, 1996). However, too much interaction may overburden marketing personnel with having to attend too many meetings and experience information overload. Interestingly, Maltz and Kohli (1996) found that too little interaction had no effect on departments' perceptions of market information quality—a surrogate measure for performance, while too much interaction diminished perceptions of market information quality. It would appear that there is a certain level of interaction necessary for effective relationships between marketing and other departments.

Overall, literature supports a direct, positive relationship between interaction and performance success (Carlsson, 1991; Griffin and Hauser, 1992; Urban and Hauser, 1993; Maltz and Kohli, 1996). Of the empirical research undertaken in new product development, Dougherty (1987) found that greater levels of communication across departments promoted project success in a film cover project, while low levels of communication across departments was a reason for failure in a battery product development project. Carlsson (1991) also found that communication by way of task forces is an important integration mechanism during the start-up and final stages of product development.

As Figure 1 shows, interaction has a positive influence on performance in terms of department success, overall company success, product development success, product management

success, and departments' satisfaction with interrelationships. It is reasoned that meetings and information exchange will provide the necessary information to reduce the uncertainty in undertaking an activity and thereby facilitate the different types of performance (Galbraith, 1977; Daft and Lengel, 1984). More communication and the reduction in uncertainty during interdepartmental decision making also will increase departments' satisfaction in working with the other respective department(s).

*H1:* A department's interaction with another department will positively influence: its own department performance; overall company performance; product development performance; product management performance; and satisfaction with its interrelationship with that other department.

### ***Collaboration View of Integration***

Collaboration is commonly characterized as an affective, volitional, mutual/shared process (cf., Appley and Winder, 1977; Gray, 1985; Schrage, 1990; Sriram, Krapfel, and Spekman, 1992). Further, the collaboration view has defined integration as "a state of high degrees of shared values, mutual goal commitments, and collaborative behaviors" (Souder, 1987, p. i) and as "the quality or state of collaboration that exists among departments that are required to achieve unity of effort by the demands of the environment" (Lawrence and Lorsch, 1986, p. 11).

Collaboration is distinguished from interaction in that collaboration focuses on working together, having mutual understanding, having a common vision, sharing resources, and achieving collective goals. Interdepartmental collaboration (hereafter referred to as collaboration) is therefore defined as an affective and volitional process where departments work together with mutual understanding, common vision, and shared resources to achieve collective goals.

In the strictest sense, departments in a collaboration environment would view themselves as highly interdependent, working closely together to achieve mutual/shared goals. Such goals would stem from shared vision for the company to which all departments agree. Penalties for "dealing" with other departments would be nonexistent due to shared goals, thereby promoting a cooperative internal environment.

While appealing, committing to a collaboration philosophy would require a dramatic change in organizational climate and culture (Schwartz and Davis, 1981). Collaboration would decentralize authority to empower lower levels of management to work with other departments, which might be problematic if centralized decision making is preferred. Collaboration also encourages informal interdepartmental efforts, which are unstructured in nature. This may confuse employees over their roles in the collaboration process and contribute to employee confusion over their roles in the collaboration process and contribute to employee frustration. A third issue is that collab-

oration is an involved process, which may not provide immediate results because of time and resources spent to participate in interdepartmental training and other interdepartmental activities. Such training and activities without immediate results might be undesirable from upper management's perspective.

Literature supports a direct, positive relationship between collaboration and performance success. Lawrence and Lorsch (1967, 1986) found that collaboration between departments had a strong effect on performance. Souder (1977, 1987) found that cases of severe disharmony between departments (low levels of collaboration) resulted in dramatic failures, whereas harmony between departments (higher levels of collaboration) resulted in significantly more successful projects. And Tjosvold (1988) reported that collaboration between departments promoted the winning of contracts, greater satisfaction, improved productivity, improved morale, and department confidence.

As shown in Figure 1, collaboration should positively influence performance in terms of department success, overall company success, product development success, product management success, and departments' satisfaction with interrelationships. This is because mutual understanding, collective goals, and the sharing of information and resources will be more cost-effective by minimizing duplicated efforts and reducing time to complete activities related to the respective department, the overall company, product development, and product management. Mutual understanding, collective goals, and the sharing of information and resources also will promote goodwill across departments making personnel more satisfied in working with other departments (Souder, 1987; Schrage, 1990).

*H2:* A department's collaboration with another department will positively influence: its own department performance; overall company performance; product development performance; product management performance; and satisfaction with its interrelationship with that other department.

### ***Composite View of Integration***

The composite view of integration implies a multidimensional perspective of integration (Clark and Fujimoto, 1991; Gupta, Raj, and Wilemon, 1985a, 1985b, 1986; Song and Parry, 1993). For example, Song and Parry (1993) and Gupta, Raj, and Wilemon (1985a, 1985b, 1986) characterized and operationally defined interdepartmental integration as information sharing and involvement. Clark and Fujimoto (1991) characterized interdepartmental integration as communication and teamwork.

While "information-sharing and involvement" or "communication and teamwork" closely parallel the given definitions of interaction and collaboration, an empirical distinction of the two constructs is lacking. Literature has portrayed integration as low to high integration, where low integration corre-

sponds to low levels of "information-sharing and involvement" or "communication and teamwork," and high integration corresponds to high levels of "information-sharing and involvement" or "communication and teamwork." This may not be necessarily true since marketing and another department might meet together often, but not gain ground toward successful implementation of a marketing strategy. Likewise, departments may collaborate, but not meet for extended periods of time. Simply portraying integration on a continuum from low to high integration may overlook specific elements of interdepartmental integration. Another concern is that information sharing and involvement might be interpreted as just interaction, which would equate to more joint meetings and forwarding of information between departments.

Consequently, a composite definition for integration should reflect, both definitionally and empirically, the distinct natures of interaction and collaboration. As Figure 1 suggests, the composite view defines interdepartmental integration (hereafter, referred to as integration) as a multidimensional process where interaction and collaboration have unique, significant contributions. Based on this definition, interaction and collaboration are considered unique processes that should positively influence performance at the same time.

H3: Interaction and collaboration concurrently will have positive influences on performance.

## Methodology

A mail survey was employed to study the issue of marketing's integration with other departments. Questionnaire recipients were department managers, which relied heavily upon the assumption that managers represent the sentiments of their departments (Phillips, 1981). It was presumed that department managers would be most involved with interaction and collaboration activities and most able to reflect appropriate characterizations of the interdepartmental situation because they oversee the functioning of their respective departments, assign personnel to multifunctional assignments, and deal directly with other departmental managers.

To limit the scope of departments analyzed, only the departments of marketing, manufacturing, and research and development (R&D) were canvassed. These three departments were chosen due to their clear, direct impact on product development and product management success as well as their distinction as the "key task functions" within manufacturing organizations (Woodward, 1965; Lorsch, 1965; Lawrence and Lorsch, 1967, 1986).

### Survey Sample and Response Rate

The survey sample was comprised of department managers of manufacturers in the Electronic Industries Association (EIA). The decision to concentrate on the electronics industry was based on three factors: (1) focusing on one industry

controlled for industry effects; (2) electronic firms typically have separate marketing, manufacturing, and R&D departments; and (3) the nature of the electronics industry requires careful management of the interrelationships between marketing, manufacturing, and R&D departments.

A sample of 860 companies having the three departments of marketing, manufacturing, and R&D were identified from the EIA membership directory. The individual survey response rate after two mailing waves was 514 managers or 20%. Of these 514 managers, 177 were marketing managers, 157 manufacturing managers, and 180 R&D managers (note that the survey asked respondents for their title to confirm that they were managers of the departments under study). Overall, the response rate is comparable to other studies addressing interdepartmental relationships. Also, the magnitudes of each department's sample size are larger than various referenced studies (e.g., Ruekert and Walker, 1987; Tjosvold, 1988), lending further support for acceptance of the response rate.

The mean responding company was a manufacturer of industrial products with annual sales of \$223,801,501 and employment of 1,371. The mean marketing department had 23 employees, the mean manufacturing department had 363 employees, and the mean R&D department had 57 employees. Comparison of sales, company employment, and department employment demographics between each wave's respondents revealed no statistically significant differences at  $\alpha < .05$ . Thus, the characteristics of responding departments did not appear biased by differences at  $\alpha < .05$ . Thus, the characteristics of responding departments did not appear biased by response time, supporting the representativeness of this response sample for electronic manufacturers with marketing, manufacturing, and R&D departments.

### Operationalization and Reliability of Constructs

Measures to tap the given constructs of interaction and performance were adapted from previous studies concerning interdepartmental relationships. Reliability procedures comprised the use of factor analysis and the calculation of Cronbach alpha, in accordance with recommendations of Nunnally (1977) and Churchill (1979). Unidimensional scales with item loadings of greater than .5—as recommended by Hair et al. (1992)—and a Cronbach alpha value of greater than .7—as recommended by Nunnally (1977) for exploratory research—were deemed acceptable. The Appendix presents the study's measures along with their respective reliability statistics. All measures were pretested with five manufacturers to ensure clarity, ease of filling, and favorable attitudes toward completing the survey.

Interaction was adapted from Van de Ven and Ferry's (1980) measure of information flow. Respondents were asked to evaluate the degree to which their department interacted with other departments in terms of meetings, committees, teleconferencing, phone conversations, phone mail, electronic mail, and the exchange of various standard documentation.

The 5-point scale of "never" to "quite frequently" was employed.

Reliability analysis on the interaction construct determined two dimensions: meetings and documented information exchange. While the interaction construct was initially believed to be unidimensional, the discovery of these two dimensions is not surprising because meetings and documented information exchange naturally characterize interaction as either verbal (immediate) communication or written communication. As both dimensions conceivably would be important to maintaining interdepartmental relations, the two constructs were separated.

The meetings construct contained the items of meetings, committees, phone conversations, phone mail, and electronic mail. Electronic mail is considered meeting-related since electronic messages are instantaneous and may represent a real-time dialogue. The meetings construct was unidimensional across the three departments with the lowest value of lambda equaling 2.46 and 49% of the variance explained. The lowest Cronbach alpha value equaled .73. The written information exchange construct included the items of exchange of forms, exchange of reports, exchange of memoranda, and exchange of materials by fax. The construct was unidimensional across the three departments with the lowest value of lambda equal to 2.35 and 59% of the variance explained. The lowest Cronbach alpha value equaled .74.

Collaboration was a newly constructed scale that asked respondents about the degree to which their department and other departments achieved collective goals, had mutual understanding, informally worked together, shared the same vision for the company, and shared ideas, information, and/or resources. The 5-point scale of "never" to "quite frequently" was used. The collaboration scale was found to be a very good measure: the 6-item scale was unidimensional across the three departments with the lowest lambda value equal to 4.16 and 69% of the variance explained; the lowest value of Cronbach alpha for the collaboration scale was .91.

Measures of performance were adapted from Lorsch (1965) and Lawrence and Lorsch (1967, 1986). Respondents were asked to grade their department's performance, the company's overall performance, the company's product development performance (pre-launch activities), and the company's product management performance (launch and post-launch activities). Respondents graded each of these four types of performance on a scale of 0 to 100%, with 100% representing perfect performance. A second scale asked respondents about their satisfaction with relationships between their department and other departments to assess interdepartmental relationship performance. The 5-point scale of "very dissatisfied" to "very satisfied" was used. Although reliability analysis could not be applied because the measures were single items, these performance measures are akin to those used by Lawrence and Lorsch (1967, 1986) and other studies, and thus, there is a research precedence for their use.

## Analyses

Regression analyses investigated marketing's interaction and collaboration with the departments of manufacturing and R&D, and vice versa. While regression cannot determine cause and effect, it can suggest correlational relationships as they apply to each of the hypotheses. Furthermore, regression is a valid tool for examining the relationship between several independent variables and a dependent variable via how well the independent variables predict the dependent variable (Hair et al., 1992, pp. 24-25). Relying on the "cause and effect" discussion that predicates each hypothesis as a substantiation for which variable is a dependent and independent variable, the examination of how well interaction and collaboration predict (explain) performance is considered a surrogate measure for "influence."

Specifically, the independent variables of each regression model included interaction as represented by meetings and documented information exchange, and collaboration. The dependent variable was each specific type of performance: department performance, company performance, product development performance, product management performance, and satisfaction in working with the other respective department. Variance inflation factor (VIF) statistics indicated no multicollinearity effects in any of the regression models (all VIF statistics were below 2), supporting the use of regression.

## Findings

A dramatic finding was the strong, significant relationship between collaboration and performance (significance judged at  $\alpha < .05$ ). As presented in Table 1, collaboration had significant positive relationships with most performance outcome variables across each of the interdepartmental relationships. These findings generally support H2. Surprisingly, interaction was shown to have no significant positive relationships with performance, and in two cases, reflected significant negative relationships with performance. Thus, there lacks general support for H1. Collaboration's significance with performance coupled with interaction's insignificance also fails to support H3, which hypothesized that collaboration and interaction would uniquely and concurrently influence performance.

Specific findings associated with each dyad analyzed are now discussed. Table 1 presents the empirical findings for each of the dyads analyzed.

### *Marketing Managers with Manufacturing and Manufacturing Managers with Marketing*

Marketing managers indicated that collaboration with manufacturing improves marketing department performance, company performance, product development performance, product management performance, and satisfaction in working with manufacturing. Conversely, manufacturing managers indicated that collaboration with marketing only improves prod-

**Table 1.** Relationships between Interaction, Collaboration, and Performance Factors (Standardized Beta Coefficients)

	Department Performance	Company Performance	Product Development Performance	Product Management Performance	Satisfaction in Working with Other Departments
Marketing Managers' Integration with Manufacturing					
Collaboration	0.26 <sup>d</sup>	0.17 <sup>b</sup>	0.18 <sup>b</sup>	0.34 <sup>d</sup>	0.61 <sup>d</sup>
Meetings	-0.02	-0.14	0.01	-0.03	0.02
Documented Info Exchange	0.08	0.06	-0.10	0.02	-0.15 <sup>f</sup>
R <sup>2</sup>	0.09	0.03	0.03	0.11	0.33
Manufacturing Managers' Integration with Marketing					
Collaboration	0.04	-0.08	0.01	0.21 <sup>b</sup>	0.43 <sup>d</sup>
Meetings	0.07	0.11	-0.07	-0.14	-0.01
Documented Info Exchange	-0.00	0.01	0.10	0.07	-0.17
R <sup>2</sup>	0.01	0.02	0.01	0.05	0.16
Marketing Managers' Integration with R&D					
Collaboration	0.21 <sup>b</sup>	0.22 <sup>d</sup>	0.43 <sup>d</sup>	0.37 <sup>d</sup>	0.60 <sup>d</sup>
Meetings	-0.14	-0.20 <sup>b</sup>	-0.06	-0.08	-0.10
Documented Info Exchange	0.12	0.15	-0.15	-0.02	-0.08
R <sup>2</sup>	0.05	0.07	0.14	0.11	0.29
R&D Managers' Integration with Marketing					
Collaboration	0.31 <sup>d</sup>	0.24 <sup>d</sup>	0.35 <sup>d</sup>	0.42 <sup>d</sup>	0.49 <sup>d</sup>
Meetings	-0.12	-0.06	-0.01	-0.14	-0.20 <sup>b</sup>
Documented Info Exchange	-0.05	-0.10	-0.04	0.02	-0.01
R <sup>2</sup>	0.07	0.04	0.11	0.14	0.19

<sup>d</sup>  $p \leq 0.010$ .<sup>b</sup>  $p \leq 0.050$ .

uct management performance and satisfaction in working with marketing. Because the strongest of these findings was collaboration to satisfaction, collaboration appears to be an important factor in sustaining satisfaction across the marketing/manufacturing relationship. The collective findings of these two departments also suggest that the marketing/manufacturing relationship is predicated on product management activities. In other words, collaboration between marketing and manufacturing appears to be directed at post-development (launch and post-launch) activities.

Conceivably, the difference over how collaboration affects department performance may be a source of problems. The marketing department perceiving direct department gains from collaborating with manufacturing might be more anxious to initiate collaborative activities with manufacturing. On the other hand, manufacturing managers who do not perceive such direct department gains might hesitate, causing friction. One explanation for this difference may be that marketing needs manufactured product that can be offered to the customer in order to achieve dollar sales goals. Marketing therefore would be anxious to collaborate with manufacturing to ensure that the proper volume is produced to meet dollar sales expectations. Manufacturing being typically measured on cost goals (which do not necessarily correspond to dollar sales goals) would be mostly indifferent to dollar sales expectations.

As for interaction, only one significant ( $\alpha < .05$ ) finding was revealed: marketing's documented information exchange

with manufacturing had a negative relationship with marketing's satisfaction in working with manufacturing. The same relationship was significant at  $\alpha < .06$  in the case of manufacturing managers (i.e., manufacturing's documented information exchange with marketing has a negative relationship with manufacturing's satisfaction in working with marketing). Thus, it would appear that more documented information exchange diminishes marketing's and manufacturing's satisfaction in working with each other. Such information exchange may be seen as unnecessary, or the time to document such information may be viewed as unproductive.

### **Marketing Managers with R&D and R&D Managers with Marketing**

Unlike the marketing/manufacturing relationship, marketing and R&D managers perceive collaboration as improving all performance factors. As shown in Table 1, marketing and R&D managers reflected significant positive relationships between collaboration and each performance variable. It therefore appears that marketing/R&D collaboration is critical to the success of both marketing and R&D departments. Moreover, this finding suggests that the marketing and R&D departments in electronic companies should collaborate to achieve success. As in the case of the marketing/manufacturing relationship, collaboration's effect on satisfaction reflected the greatest level of significance across the two departments. This illustrates that collaboration is an important factor in sustaining satisfaction across departments.

Two significant findings were found regarding the interaction variables. Interestingly, this finding concerned meetings in both marketing and R&D manager cases. Marketing managers reflected a negative relationship between meetings and company performance, while R&D managers reflected a negative relationship between meetings and satisfaction in working with marketing. It would appear that structuring formal meetings between marketing and R&D may be viewed as counter-productive to some degree. Instead, both marketing and R&D managers may prefer informality between the two departments via collaboration.

## Future Research

Based on the findings of the present study, research should continue to investigate interdepartmental integration with particular emphasis on collaboration. The framework of Ruekert and Walker (1987) therefore should be updated to include collaboration as a key element of marketing's interdepartmental relationships.

Of course, there is a need to confirm or refute collaboration's strong, positive impact on performance. If research continues to highlight collaboration's significance, then future research can turn toward determining the key antecedents to collaboration. There also is a need to clarify interaction's role in the integration process. As discussed, interaction's insignificance may be due to a lack of variability, which would suggest that a certain level of interaction is necessary between marketing and other departments (as Maltz and Kohli, 1996, suggest) even though interaction might not promote performance success directly. The issue is whether a certain level of interaction is necessary and if so, what that level of interaction should be.

Studies involving other industries, other departments aside from the three investigated in this study, and other country cultures would broaden the scope of the present findings. Studies using other methodologies like case studies and experiments would provide multi-method validation and offer a fuller understanding of marketing's interdepartmental activities. Longitudinal studies would be valuable for studying the influence of time on marketing's interaction and collaboration efforts.

## Conclusions and Implications

The objective of the present study was to better define interdepartmental integration by determining whether marketing should interact, collaborate, or do both simultaneously in order to achieve success. Based on the empirical findings, it is recommended that interdepartmental integration emphasize a collaboration component to achieve better performance, which favors marketing's (and other departments') adoption of a collaborative perspective toward interdepartmental integration.

The empirical findings provide insight into answers to the

questions posed at the beginning of this article. In regard to interaction, the following two questions were posed: (1) Can "interaction" between departments alone achieve performance success when working across departments?, and (2) Can more meetings and greater information flows by themselves become overburdening for marketing personnel, thereby diminishing success in working interdepartmentally? The findings of this study suggest that interaction alone does not appear to have a direct affect on performance success. In fact, the lack of a positive relationship between interaction and performance would imply that marketing managers should not simply increase the number of meetings and/or documented information exchange between departments for the sake of improving performance. Rather, it may be appropriate to use interaction to establish contact and then let collaboration drive the interaction process. As for the second question, it would appear that interaction has limited direct influence on performance as illustrated by the level of insignificance associated with each of the interaction variables. There also appears to be the suggestions that too much documented information exchange between marketing and manufacturing and too many meetings between marketing and R&D will impede performance between the two respective departments. Thus, too much interaction may be detrimental.

An alternative explanation may be that a certain level of interaction is necessary between departments. In other words, interaction may be a necessary, but not sufficient, factor for top performance. If this is the case, regression would be unable to detect interaction's effects due to a lack of significant variation in the level of interaction. Further study is needed.

The two questions asked in regard to collaboration were: (1) Can "collaboration" between marketing and other departments stimulate performance? and (2) Does collaboration just improve relationships, and not help to achieve department or company performance goals? The striking findings of this study illustrate collaboration's strong positive relationship to performance. Thus, if marketing managers (and other department managers) are to truly integrate their departments with other departments, collaboration appears to be a key factor—not forced interaction through frequent meetings or greater levels of documented information exchange. Study findings also address the second question by showing that both interdepartmental relationships and performance improve with collaboration. As found, collaboration reflected a strong positive influence on marketing's satisfaction in working with the other department as well as having a strong positive influence on marketing department performance, company performance, product development performance, and product management performance.

With the composite philosophy, the following questions were posed: (1) Do interaction and collaboration have equal influence on performance success? and (2) Would attention to one of the processes be more advantageous for achieving such success? The findings of this study indicate that collabo-

ration has the stronger impact on performance success. Findings further suggest that collaboration alone has a significant positive influence on performance success. Consequently, the findings point to collaboration as a more advantageous interdepartmental process for achieving performance success.

Hence, it would appear that the collaborative perspective to marketing's integration with other departments is preferable. The implication for marketing managers is that interdepartmental programs need to focus on collaboration, not interaction. Based on the given definition for collaboration, efforts that achieve goals collectively, have mutual understanding, work informally together, ascribe to the same vision, and share ideas/resources should be pursued. Because many of these activities are strategic in nature, any program that is developed should include modifications of the strategic planning process and the strategic planning implementation process. A recommended first course of action would be for marketing managers to characterize their current interdepartmental activities and determine whether they are collaborative or interactive in nature. Then the focus should be to stimulate collaboration in critical interdepartmental marketing activities to ensure their successful implementation, as well as promote the marketing concept and affirm a market orientation.

## References

- Appley, Dee G., and Winder, Alvin E.: An Evolving Definition of Collaboration and Some Implications for the World of Work. *The Journal of Applied Behavioral Science* 13 (1977): 279-291.
- Carlsson, Mats: Aspects of the Integration of Technical Functions for Efficient Product Development. *R&D Management* 21 (January 1991): 55-66.
- Churchill, Gilbert A., Jr.: A Paradigm for Developing Better Measures of Marketing Constructs. *Journal of Marketing Research* 16 (February 1979): 64-73.
- Clark, Kim B., and Fujimoto, Takahiro: *Product Development Performance: Strategy, Organization, and Management in the World Auto Industry*. Harvard Business School Press, Boston, MA, 1991.
- Daft, Richard L., and Lengel, Robert H.: Information Richness: A New Approach to Managerial Behavior and Organization Design. *Research in Organizational Behavior* 6 (1984): 191-233.
- Dougherty, Deborah J.: New Products in Old Organizations: The Myth of the Better Mousetrap in Search of the Beaten Path. Unpublished masters thesis. Sloan School of Management, Massachusetts Institute of Technology, Boston, MA, 1987.
- Galbraith, J.: *Organizational Design*. Addison-Wesley, Reading, MA, 1977.
- Gray, Barbara: Conditions Facilitating Interorganizational Collaboration. *Human Relations* 38 (1985): 911-936.
- Griffin, Abbie, and Hauser, John R.: Patterns of Communication Among Marketing, Engineering, and Manufacturing—A Comparison Between Two Product Teams. *Management Science* 38 (March 1992): 360-373.
- Gupta, Ashok K., Raj, S. P., and Wilemon, David: The R&D Marketing Interface in High-Technology Firms. *Journal of Product Innovation Management* 2 (April 1985a): 12-24.
- Gupta, Ashok K., Raj, S. P., and Wilemon, David: R&D Marketing Dialogue in High-Tech Firms. *Industrial Marketing Management* 14 (November 1985b): 289-300.
- Gupta, Ashok K., Raj, S. P., and Wilemon, David: A Model for Studying R&D-Marketing Interface in the Product Innovation Process. *Journal of Marketing* 50 (April 1986): 7-17.
- Hair, Joseph F., Jr., Anderson, Rolph E., Tatham, Ronald L., and Black, William C.: *Multivariate Data Analysis*, 3rd ed., MacMillan Publishing Company, New York, NY, 1992.
- Jaworski, Bernard J., and Kohli, Ajay K.: Market Orientation: Antecedents and Consequences. *Journal of Marketing* 57 (July 1993): 53-60.
- Lawrence, Paul R., and Lorsch, Jay W.: Differentiation and Integration in Complex Organizations. *Administrative Science Quarterly* 12 (Winter 1967): 1-47.
- Lawrence, Paul R., and Lorsch, Jay W.: *Organization and Environment: Managing Differentiation and Integration*. Harvard Business School Press, Boston, MA, 1986.
- Lim, Jeon-Su, and Reid, David A.: Vital Cross-Functional Linkages with Marketing. *Industrial Marketing Management* 21 (1992): 159-165.
- Lorsch, Jay W.: *Product Innovation and Organization*. The MacMillan Co., New York, NY, 1965.
- Maltz, Elliot, and Kohli, Ajay K.: Market Intelligence Dissemination Across Functional Boundaries. *Journal of Marketing Research* 15 (February 1996): 47-61.
- Moenaert, Rudy K., Souder, William E., DeMeyer, Arnoud, and Deschoolmeester, Dirk: R&D-Marketing Integration Mechanisms, Communication Flows, and Innovation Success. *Journal of Product Innovation Management* 11 (January 1994): 31-45.
- Narver, John C., and Slater, Stanley F.: The Effect of a Market Orientation on Business. *Journal of Marketing* 54 (October 1990): 20-35.
- Nunnally, Jum C.: *Psychometric Theory*. McGraw-Hill Publishing Company, New York, NY, 1977.
- Olson, Eric M., Walker, Orville C., Jr., and Ruckert, Robert W.: Organizing for Effective Product Development: The Moderating Role of Product Innovativeness. *Journal of Marketing* 59 (January 1995): 48-62.
- Phillips, Lynn W.: Assessing Measurement Error in Key Informant Reports: A Methodological Note on Organizational Analysis in Marketing. *Journal of Marketing Research* (November 1981): 395-415.
- Ruckert, Robert W., and Walker, Orville C., Jr.: Marketing's Interaction with Other Functional Units: A Conceptual Framework and Empirical Evidence. *Journal of Marketing* 51 (January 1987): 1-19.
- Schrage, Michael: *Shared Minds: The New Technologies of Collaboration*. Random House, New York, NY, 1990.
- Schwartz, H., and Davis, S.: Matching Corporate Culture and Business Strategy. *Organizational Dynamics* 10 (Summer 1981): 30-48.
- Song, X. Michael, and Parry, Mark E.: R&D-Marketing Integration in Japanese High-Technology Firms: Hypotheses and Empirical Evidence. *Journal of the Academy of Marketing Science* 21 (Spring 1993): 125-133.
- Souder, William E., Chakrabarti, A. K., Bonoma, T. V., Avery, R. W., and Cichineeli, R. D.: An Exploratory Study of the Coordinating Mechanisms Between R&D and Marketing as an Influence on the Innovation Process. Final report to the National Science Foundation. NTIS Number PB-279-366. 1977.
- Souder, William E.: *Managing New Product Innovations*. Lexington Books, Lexington, MA, 1987.



- Sriram, Ven, Krapfel, Robert, and Spekman, Robert: Antecedents to Buyer-Seller Collaboration: An Analysis From the Buyer's Perspective. *Journal of Business Research* 25 (1992): 303-320.
- Tjosvold, Dean: Cooperative and Competitive Interdependence: Collaboration Between Departments to Serve Customers. *Group and Organization Studies* 13 (1988): 274-289.
- Urban, Glen L., and Hauser, John R.: *Design and Marketing of New Products*, 2nd ed., Prentice Hall, Englewood Cliffs, NJ. 1993.
- Van de Ven, Andrew H., and Ferry, Diane L.: *Measuring and Assessing Organizations*. John Wiley & Sons, New York, NY. 1980.
- Webster, Frederick E.: The Rediscovery of the Marketing Concept. *Business Horizons* (May-June 1988): 29-39.
- Wind, Yoram: Marketing and the Other Business Functions. *Research in Marketing* 5 (1981): 237-264.
- Woodward, Joan: *Industrial Organization: Theory and Practice*. Oxford University Press, London, England. 1965.

### Appendix. Measurement Scales and Respective Reliability Analysis

#### Interaction Scales

Construct	No. of Items		Cronbach Alpha	Eigenvalue (Factor #)	% Variance Explained
Meetings	5	Marketing	.76	2.62	52
		Manufacturing	.73	2.46	49
		R&D	.74	2.50	50
Documented Information Exchange	4	Marketing	.81	2.59	65
		Manufacturing	.80	2.57	64
		R&D	.74	2.35	59

During the past three months, to what degree did your department interact with the other two departments in regards to the below activities. (N = never, S = seldom, OCC = occasionally, O = often, QF = quite frequently)

	Mean Factor Loadings <sup>1</sup>		
	MKTG	MFG	R&D
Meetings			
Meetings	.73	.72	.69
Committees/Task Forces	.73	.72	.79
Phone Conversations	.75	.71	.73
Phone Mail	.78	.74	.73
Electronic Mail	.62	.60	.58
Documented Information Exchange			
Exchange of forms	.76	.74	.71
Exchange of reports	.88	.87	.85
Exchange of memorandums	.84	.84	.86
Exchange of FAX materials	.72	.75	.62

<sup>1</sup> Note: Each questionnaire asked two questions about the respective department's collaboration with the other two departments. Factor loadings are the mean of factor loadings across these two questions/measures; both were the same question except for the departments involved.

(continued)

**Appendix.** (continued)*Collaboration Scale*

Construct	No. of Items		Cronbach Alpha	Eigenvalue (Factor #)	% Variance Explained
Collaboration	6	Marketing	.93	4.46	74
		Manufacturing	.91	4.16	69
		R&D	.92	4.24	71

During the past three months, to what degree did your department pursue the following activities with the other two departments. (N = never, S = seldom, OCC = occasionally, O = often, QF = quite frequently)

	Mean Factor Loadings <sup>b</sup>		
	MKTG	MFG	R&D
Achieve goals collectively	.86	.78	.84
Have a mutual understanding	.87	.88	.86
Informally work together	.84	.85	.84
Share ideas, information, and/or resources	.88	.82	.85
Share the same vision for the company	.81	.74	.77
Work together as a team	.92	.91	.88

<sup>b</sup> Note: Each questionnaire asked two questions about the respective department's collaboration with the other two departments. Factor loadings are the mean of factor loadings across these two questions/measures; both were the same question except for the departments involved.

*Performance Scales*

Considering your company's (division's) overall business activity in the past year, please grade the following on a scale of 0% to 100%, with 100% meaning perfect performance.

- Your department's overall performance
- Your company's/division's overall performance
- Your company's/division's performance in product development
- Your company's/division's performance in product management

Circle the appropriate response that identifies the degree of your satisfaction with your department's relationship with the other two departments.

- Department A    Very dissatisfied, Dissatisfied, Neither dissatisfied nor satisfied, Satisfied, Very satisfied
- Department B    Very dissatisfied, Dissatisfied, Neither dissatisfied nor satisfied, Satisfied, Very satisfied