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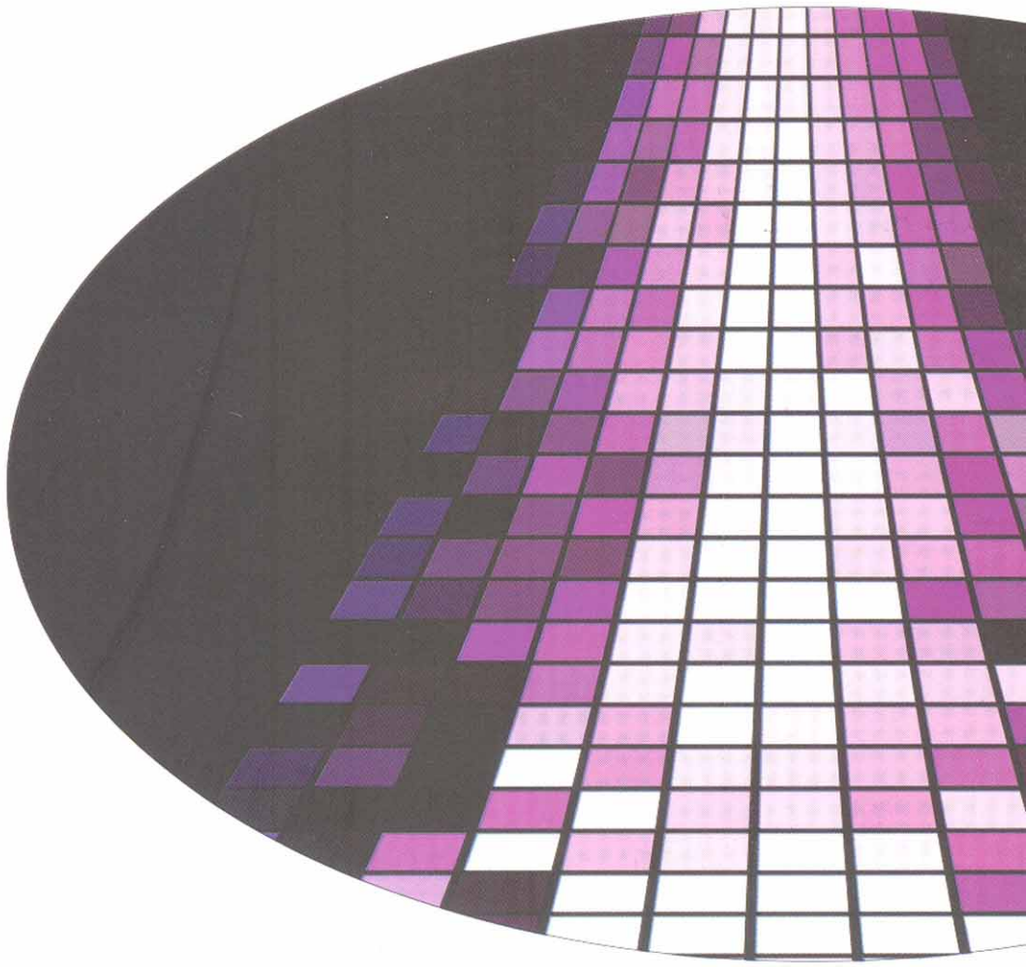

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Measurement of Integration between NPD and Marketing Employees: Case of a Software Product Development Company

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Abstract

The relationship between marketing and new product development (NPD) is of great significance. It has been widely accepted that it also affects the success of the project or product to a large extent. But yet, this integration is not an easy task and presents lots of challenges to an organization. One of the major barriers is considered to be differences in the perceptions of marketing and NPD employees about each others' tasks and the way they are supposed to cooperate. The study described in this paper is aimed at diagnosing these differences for a particular software products organization. The study has tried to capture these differences for integration behaviours between marketing and new product development (NPD) employees engaged in software product development. The study revealed that there was a significant difference between perception of marketing and new product development (NPD) employees over the current level of information flow from marketing to NPD as well the improvement required in the same. The priorities of marketing and NPD employees for improvement also seem to be quite different which is a serious concern as it can lead to lack of concerted effort in a particular direction. The paper describes these findings on the integration behaviours between marketing and NPD employees.

Keywords: *Marketing and NPD integration, measurement of integration in software product development.*

INTRODUCTION

For any product firm, new product development (NPD) is the most critical activity in the entire value chain. However, NPD is a complex process needing cooperation between different functions. The functions involved in NPD are R&D, design, manufacturing and marketing, where NPD per se occurs somewhere between design and manufacturing. Coordination and communication between these functions is a challenge due to individual differences in the educational background and training of employees. Challenges are accentuated at different stages of the NPD life cycle. Though theoretically, employees are aware of these challenges, they find it difficult to communicate and coordinate. Other than individual differences in the technical backgrounds, poor permeability in the

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organization's structure, and lack of resources lead to differences in attitudes towards R&D, NPD, manufacturing and marketing resulting in poor tolerance of the other's point of view. This problems gets confounded in the case of software products as they are quite different from conventional products in terms of tangibility, duration of development, and product delivery and distribution mechanism. Though the stage from applied R&D to NPD involves the manufacturing function, this function becomes less distinguishable in case of intangible products like software. In the case of software product development, R&D and NPD are sometimes interchangeably used. This leaves the challenge of coordination and communication between the R&D/NPD and marketing functions. There is a need to study the marketing-NPD interface. Literature describes the collaboration between marketing and R&D as 'integration'. The aim of this paper is to diagnose the status of integration behaviours between marketing and NPD within the software product development team of a large global software services organization.

LITERATURE REVIEW

Authors describe communication, coordination and collaboration between marketing and NPD as 'integration'. Integration has been defined in different ways. It has been described as a symbiotic inter-relation of two or more entities, resulting in the production of advantages, superior to the sum of the advantages of each separately (Souder and Chakrabarti, 1978). According to Gupta (1984), integration is the quality of state of collaboration existing among departments, which is required by environmental demands to achieve unity of efforts.

Integration between marketing and R&D/NPD has been studied in different ways. Griffin and Hauser (1996) have described six ways of easing integration between marketing and R&D. Impact studies use dependent variables such as new product performance. Leenders and Wierenga (2002) use multiple criteria like speed of the NPD decision-making process, quality of the NPD decision-making process and speed at which new products are developed. Li, Tiger. (1999) tried to measure new product performance in terms of product market share and pre tax profit margin. Their independent variables were grouped into resource variables like R&D investment, structural variables like centralization, competition intensity and customer related variables. Compare and contrast metholodogies are also seen. Researchers studied commercially successful innovation projects vs. commercially unsuccessful innovation projects (Moenaert et al, 1994). This paper used variables like formalization, centralization, interfunctional climate, marketing-R&D role flexibility as some of the determinants of interfunctional communication flow and its impact on project success. The

paper by Gupta et al (1986) suggested that factors related to organizational design and senior management support, along with sociocultural differences between marketing and R&D managers could influence the level of integration achieved by the organization. The integration between marketing and R&D/NPD may be different depending on the stage of project life cycle as well as level of innovativeness (Olson et al, 2001). The findings in this paper revealed that cooperation between marketing and R&D is highest during early stages of the process.

Drawing on the model suggested by Gupta, (1984), Lapierre and Henault (1996) conducted a study on a single organization to understand the R&D-marketing interface. The initial framework measured integration as a component of two primary elements: involvement and information. While Gupta's paper included involvement of the marketing team into R&D activities and vice versa and information flow from marketing to R&D, he did not include information flow from R&D to marketing. Lapierre and Henault (1996) made the addition and also modified areas under each category for telecommunications. They found that managers from both groups disagreed on the required integration level on most of the 25 activities they studied in their research project. In looking at the difference between the level of integration perceived as required and the level of integration perceived as actually achieved, managers of both functions were very dissatisfied with the level of integration achieved in the company but marketing managers were more dissatisfied.

From an individual behaviour perspective, Massey and Kyriazis (2007) tested a model examining interpersonal trust between marketing managers and R&D managers during new product development projects. It was found that their trust dimensions strongly influenced the effectiveness of marketing/R&D relationships during new product development.

Table 1 summarizes variables investigated. This table served as an input to the measurement design adopted in the methodology of our research study. As our research focus involved a single organization, the organization level variables like formalization, centralization or competition intensity were not really suitable. Gupta's approach to study integration as consisting of involvement and information flow and then studying the perception gap between marketing and R&D professionals did seem to be effective in diagnosing the current situation in the organization of focus. Figure 1 illustrates the conceptual model we derived. Lapierre and Henault (1996) with their paper had indeed used it for a single firm and even added one more variable (information flow from R&D to marketing) to make the integration construct even more complete. Hence we decided to follow the approach adopted by Lapierre and Henault modifying it as per the organization and industry of focus.

Table 1: Marketing and R&D Integration: Variables Considered

Authors	Variables considered
Gupta.A.K (1984)	Involvement of marketing in R&D activities, involvement of R&D in marketing activities, information flow from marketing to R&D
Lapierre J. and Henault B. (1996)	Involvement of marketing in R&D activities, involvement of R&D in marketing activities, information flow from marketing to R&D and information flow from R&D to marketing
Leenders M. and Wierenga B. (2002)	Relocation and physical facilities design, Personnel movement, Informal social systems, Organizational structure, Incentives and rewards, Career opportunities of marketing, Formal integrative management processes, Information and communication technology (ICT)
Massey G. and Kyriazis E. (2007)	Formalisation, centralisation, bi-directional communication, quality of communication, cognition-based trust, affect based trust, perceived relationship effectiveness
Moenaert R., Souder W., Meyer A. and Deschoolmeester D. (1994)	Project centralization, formalization, interfunctional climate, R&D role flexibility, marketing role flexibility, marketing info received by R&D, R&D info received by marketing, commercial success of innovation products
Olson E., Walker O., Ruekert R. and Bonner J. (2001)	Project innovativeness, cooperation-early, cooperation-late
Li, Tiger. (1999)	Centralization, Competition intensity, customer sophistication, marketing and R&D interface,R&D Investment

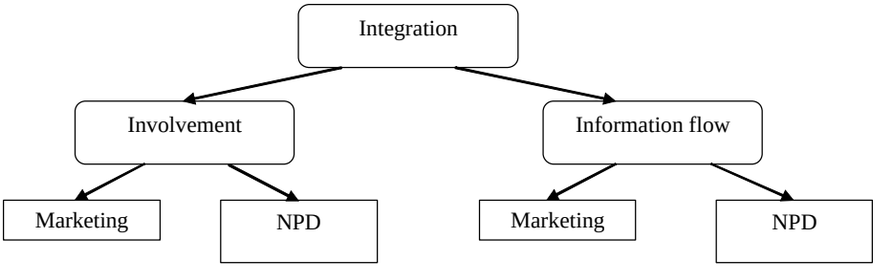

Figure 1: The Conceptual Model

METHODOLOGY

The discussions with the particular software product organization revealed the importance to understand integration behaviours between their NPD and marketing employees. The organization is a leading global software products organization in India with about 4000 employees in the their NPD function.

Variables measuring integration, were adopted from Lapierre and Henault's paper (Lapierre and Henault, 1996) in which they consider

integration to consist of two elements: involvement and information flow. Involvement here consists of participation, cooperation and interaction. Information flow comprises the actual information that is provided as well as the direction. Each function NPD and marketing have their core set of activities. However each function's additional role in the other functions' core activities is being captured, similar to the research design used by Gupta, (1984) and Lapierre and Henault (1996). This led to four variables:

- Involvement by marketing employees into NPD activities of NPD employees
- Information flow from marketing employees to NPD employees
- Involvement of NPD employees into marketing activities of marketing employees
- Information flow from NPD employees to marketing employees

Lapierre and Henault (1996), have defined a list of integration areas or items for each of their variables. But this list needed modification as it contained lot of items not applicable to the software products. This led us to a preliminary qualitative study to verify the areas of integration suitable for a study of our nature.

We requested experienced experts in marketing, sales and NPD, from the organization to assess whether integration areas we selected were valid for software product development activities. This effort resulted in three areas being removed and another new one being added. Table 2 below shows both, the initial list of areas of integration and also the added ones.

Table 2: Variables and items for measuring integration

	Variables for measuring integration
A	**Marketing/Sales are involved with product development team members in:**
1	Setting new product goals
2	Product Team's budget proposal *
3	Establishing product development schedules
4	Choosing sectors for modernization of equipment ^
5	Establishing deployment locations for equipment providing new services ^
6	Generating new product ideas
7	Screening new product ideas
8	Finding commercial applications for new product ideas

	Marketing/sales provides information to product development team members on
1	Customers' requirements for new product.
2	Regulatory and legal restrictions on product design *
3	Marketing tests results
4	Feedback from customers regarding product performance on regular basis
5	Competitors' moves
	Product teams are involved with marketing team members in:
1	Marketing's budget proposals
2	Screening new product ideas
3	Modifying products according to marketing's recommendations
4	Designing communication strategies for new products.
5	Designing product user manuals
6	Training new product users *
7	Marketing events, PR and media briefings #
	Product development teams provide information to marketing team members on:
1	New technologies
2	Future technologies
3	Technical constraints of the product

*^ Items removed before the expert survey, * Items removed after the expert survey, # Items added*

The main questionnaire was designed using the Likert type scale of 1 to 5. Respondents had to rate the items on two different states of mind, current level, as the activities actually happen in their organization and improvements needed. The questionnaire is available in the appendix of this paper, for reuse.

Two sets of hypotheses to be tested focusing on involvement areas and information flow areas of integration, were stated:

Hypotheses set 1: Marketing employee's role in NPD activity

H_{o1}: There is no difference in perception of marketing and NPD employees with respect to current level of involvement behaviors of marketing with NPD employees in NPD activities.

H_{o2}: There is no difference in perception of marketing and NPD employees with respect to improvement required in involvement behaviors of marketing with NPD employees in NPD activities.

H_{o3}: There is no difference in perception of marketing and NPD employees with respect to current level of information flow behaviors from marketing to NPD employees

H_{o4}: There is no difference in perception of marketing and NPD employees with respect to improvement required in the information flow behaviors from marketing to NPD employees.

Hypotheses set 2: NPD employee's role in marketing activities

H_{o5}: There is no difference in perception of marketing and NPD employees with respect to current level of involvement behaviors of NPD employees with marketing employees in marketing activities.

H_{o6}: There is no difference in perception of marketing and NPD employees with respect to improvement required in involvement behaviors of NPD employees with marketing employees in marketing activities.

H_{o7}: There is no difference in perception of marketing and NPD employees with respect to current level of information flow behaviors from NPD to marketing employees.

H_{o8}: There is no difference in perception of marketing and NPD employees with respect to improvement required in the information flow behaviors from NPD to marketing employees.

The sample consisted of both marketing and NPD employees. Marketing employees comprised of marketing, pre-sales as well as sales personnel. NPD employees engaged in development of new software products (and not services).

The questionnaire was administered manually but anonymously through the HR personnel in the organization. In all, 65 responses were garnered with 23 from marketing and 42 from NPD. Reponses from marketing people were limited since most of the marketing people especially the ones in sales were stationed all over the world. Email based data collection was discouraged.

The data was entered into a spreadsheet, cleaned and coded and then imported to R 2.5.1, the LINUX based free software for statistical analysis. SPSS was also used for certain specific analysis.

Cronbach alpha coefficients for each of the four main areas of integration are above 0.7 which is the recommended threshold for applied research. Table 3 shows the Cronbach alpha scores.

Table 3: Questionnaire reliability analysis using Cronbach Alpha (n=65)

Variables	No. of items	Current Level of integration	Improvement required in the level of integration
Involvement of marketing into NPD activities	5	0.872	0.79
Information flow from marketing to NPD	4	0.731	0.789
Involvement of NPD into marketing activities	6	0.8	0.784
Information flow from marketing to NPD	3	0.908	0.882
Overall questionnaire	18	0.931	0.925

Descriptive statistical analysis was computed for each area of integration. Tests for normality were performed for each of the variables of integration using Shapiro's test as well as the Lilliefors test. Table 4 given below shows the p values for the normality test for both samples: NPD and marketing.

Table 4: p Value for Normality Test

Variable	NPD (n=42)			Marketing (n=23)		
	Shapiro	Lillie	Normal Y/N	Shapiro	Lillie	Normal Y/N
Current level of involvement of marketing in NPD activities	0.001	0.0007	N	0.333	0.30	Y
Improvement required in the involvement of marketing in NPD activities	0.07	0.0004	N	0.29	0.36	Y
Current level of information flow from marketing to NPD	0.25	0.04	N	0.1	0.01	N
Improvement required in the information from marketing to NPD	0.002	5.373e-05	N	0.18	0.009	N
Current level of involvement of NPD into marketing	0.015	0.11	N	0.66	0.92	Y
Improvement required in the involvement of NPD into marketing	0.14	0.091	N	0.12	0.04	N
Current level of information flow from NPD to marketing	0.06	0.15	N	0.201	0.1707	Y
Improvement required in the information flow from NPD to marketing	0.068	0.01	N	0.02	0.001	N

Mann Whitney test was used for testing the hypotheses. At the item level, Fisher's exact test was performed to test for difference in proportion. The items within the variables were ranked by their means (Lapierre and Henault , 1996) to obtain the top areas where integration prevails currently as well as where improvement is required. Hence the highest mean over all the areas of integration, received the best rank, namely 1, for the appropriate column.

RESULTS

Results show that out of the eight hypotheses only two of them are significant. This meant that six of the hypotheses showed that there were very little differences between the two samples on many integration activities or areas. Tables 5A and 5B describe the p values obtained using the Mann Whitney tests for the two samples.

Table 5A: Degree to which marketing personnel (n=23) integrate with NPD personnel (n=42)

Hypothesis	NPD mean	Marketing mean	P value for Mann Whitney test
H_{o1}	2.40	2.52	0.524
H_{o2}	3.96	3.81	0.375
H_{o3}	2.55	3.08	0.007***
H_{o4}	4.08	3.68	0.082*

****p=0.01, **p=0.05, *p=0.10*

Table 5B: Degree to which NPD personnel (n=42) integrate with marketing personnel (n=23)

Hypothesis	NPD mean	Marketing mean	P value for Mann Whitney test
H_{o5}	2.32	2.62	0.186
H_{o6}	3.75	3.79	0.79
H_{o7}	2.44	2.75	0.23
H_{o8}	3.86	3.91	0.61

****p=0.01, **p=0.05, *p=0.10*

Null hypotheses 1 and 2 are retained. This indicates that marketing and NPD personnel perceive the involvement of marketing personnel in NPD activities, similarly. This is the case for both current and improvement

perception ratings, the level of collaboration and trust in this area is similar for both samples.

We reject hypothesis 3, as there is a difference between marketing and NPD employees with reference to information flow of marketing to NPD employees. Marketing people feel they provide more information flow to the NPD employees (higher average mean rating) than do the NPD employees. Interestingly, in hypothesis 4, the hypothesis also stands rejected as there is a difference between the marketing and NPD employees with regard to the improvement needed in information flow activities between each other. The NPD employees see a higher need for improvement (higher average mean rating) than do the marketing employees. This needs further investigation.

In the case of hypothesis 5 and 6, the null hypotheses are retained. There is no difference with regards to the involvement activities of the NPD employees with the marketing employees for both current and improvements.

A similar situation is noticed in the case of hypotheses 7 and 8, where the differences in the perception of information flow from the NPD to marketing employees are not statistically significant, thus the null hypotheses of 7 and 8 are retained.

We can affirm that, there is a significant difference in perception of marketing and NPD employees with respect to current level of information flow behaviors from marketing to NPD employees. Also there is a significant difference in perception of marketing and NPD employees with respect to improvement required in the information flow behaviors from marketing to NPD employees.

Statistical differences at the item level revealed the actual areas within these variables that need to be worked upon. As the data at the item level is discrete, the test for proportions was used. The test for each of the items reveals whether or not response proportions are similar for NPD and marketing samples. Results from fisher's test, showing only the p values, are tabulated in Tables 6 and 7. Additionally, the ranking for each item using the means is also reported.

Table 6: Degree of marketing personnel's (n=23) integration with NPD personnel (n=42) on the activities that bring integration

	Current P value (Fishers)	Improve P value (Fishers)	Ranking NPD (current status)	Ranking marketing (current status)	Ranking NPD (improve required)	Ranking marketing (improve required)
A. Degree to which marketing personnel are involved with NPD personnel in:						
Setting new product goals	0.86	0.71	6	10	2	3
Establishing product development schedules.	0.69	0.12	9	10	9	9
Generating new product ideas	0.22	0.85	7	7	2	4
Screening new product ideas	0.46	0.43	10	13	3	6
Finding commercial applications for new product ideas	0.40	0.81	11	11	6	3
B. Degree to which marketing personnel provides information to NPD personnel on:						
Customers' requirements for new product.	0.82	0.09*	2	2	5	8
Marketing tests results	0.21	0.03**	8	4	3	11
Feedback from customers regarding product performance on regular basis	0.40	0.13	3	1	6	9
Competitors' moves	0.37	0.11	15	3	1	2

****p=0.01, **p=0.05, *p=0.10*

Table 7: Degree of NPD personnel's (n=42) integration with marketing personnel (n=23) on the activities that bring integration

	Current P value (Fishers)	Improve P value (Fishers)	Ranking NPD (current status)	Ranking marketing (current status)	Ranking NPD (improve required)	Ranking marketing (improve required)
C. Degree to which NPD personnel are involved with marketing personnel in:						
Marketing's budget proposals	0.06*	0.96	17	10	12	7
Screening new product ideas	0.66	0.49	12	13	8	2
Modifying products according to marketing's recommendations	0.69	0.24	1	9	11	1
Designing communication strategies for new products.	0.201	0.66	16	12	8	6
Designing product user manuals	0.68	0.42	5	6	4	9
Marketing events, PR and media briefings	0.02**	0.05**	14	4	10	10
D. Degree to which NPD personnel provide information to marketing personnel on:						
New technologies	0.46	0.71	8	7	7	2
Future technologies	0.34	0.97	13	5	6	3
Technical constraints of the product	0.04**	0.69	4	8	9	5

****p=0.01, **p=0.05, *p=0.10*

Table 6 deals with the degree to which, marketing personnel integrate with the activities of NPD personnel, on involvement (A) and information flow (B), on their job. Both marketing and NPD personnel appear content with the degree of involvement between themselves. However in the area of information flow, there appear differences in two activities. These are the degree to which information about the "customers' requirements for new products" is communicated from marketing to NPD personnel (significant at the 0.10 level) and the degree to which "marketing test results" are communicated from marketing to NPD personnel (significant at the 0.05 level).

Table 7 deals with the degree to which NPD personnel's integration with marketing personnel on the activities related to their job, bring about integration. The level of involvements between the marketing and NPD personnel appears to have significant differences. The test of proportions reveals that there is a significant difference between marketing and NPD employees in the perception of current level of involvement of NPD personnel with marketing personnel in deciding "marketing budget's proposals" (significant at 0.10). Additionally, the involvement of NPD personnel with marketing personnel in "marketing events, PR and media briefings", reveals a significant difference. This is the case for both the current as well as improvement levels required.

There is difference in the level of information flow from NPD to marketing personnel for one of the activities. The difference in perception is significant for the current level of information flow from NPD to marketing personnel on "technical constraints of the product" (significant at the 0.05 level).

Comparing the hypotheses performed at the variable level and the item level analysis given above, we note that in hypotheses 3 and 4, only two items under improvement variable show significant difference under the Fisher's test. The additive differences of the items are statistically significant at the variable level.

We also observed how marketing and NPD employees ranked each of the 18 integration items (see Tables 6 and 7). Marketing and NPD personnel do not share the same priority in terms of, areas of integration. The top three ranks for NPD personnel appear to be across involvement and information flow activity areas. They feel the most important area as they see it currently is from the information flow area, namely to "modify products according to marketing's recommendations". The most important area they have to improve is also an information flow area, where they feel they need more information on the "competitors' moves". The top three ranks

for the marketing personnel are from the information flow activities for the current perceptions and from the involvement area for their improvement perceptions. Marketing personnel feel that "feedback from customers regarding product performance on a regular basis" is the most important area of integration. What they want to improve is the area of information regarding "modifying products according to marketing recommendations".

Perceptive disagreements between NPD and marketing personnel appear to be with reference to the degree of involvement in areas of "marketing events, PR and media briefings" and "modifying products according to marketing recommendations". This is the case with information flow in areas of "competitors' moves". In the case of improvements, disagreements appear to be regarding information flow in areas related to "modifying products according to marketing recommendations" and "screening of new product ideas", and degree of involvement in "marketing test results". This lack of consensus in the areas of improvement could have serious impact as there would be an absence of united effort in that direction.

As compared to this study, Lapierre and Henault. (1996) in their paper found significant differences over many more items. Out of the 25 items, 8 items were found to be statistically significant at p=0.01 for current level of integration. Both Lapierre and Henault's and ours found statistical differences for items falling under NPD's involvement in marketing activities.

In spite of the statistical differences at the item level, ranking analysis by Lapierre and Henault (1996) showed that marketing and NPD employees had similar priorities. The top five areas of improvement as suggested by NPD employees and marketing employees are common though the individual ranks do not match. On the hand, our study finds stark differences in the ranks of marketing and NPD personnel. Very few areas are common between the two samples in the top and bottom rankings for the areas of integration.

Subsequent to the results obtained we validated our results via a process of dialogue with experts at the organization. According to them and our insights, the current low prevalence of information flow from marketing to NPD personnel could be attributed to five different reasons. First, there are a lower number of marketing and sales employees in the organization especially as compared to the number of NPD personnel. Second, most of the marketing force was distributed across the globe. Hence it is not very easy for them to be in touch with the NPD personnel. Communication technologies do not fair well compared to face to face meetings for free flow of information. Third, is the limited understanding of the marketing

personnel with respect to technology behind the software products. For example, information flow regarding "technical constraints of the product" is an extremely important part of NPD and this can also affect product features and the product's popularity amongst the users. But one of the reasons for difference to exist is the perception of the technical personnel that it is their domain and marketing employees may not understand it to that extent. Fourth, may be the absence of an efficient knowledge management system. An efficient knowledge management system can provide solutions to various problems faced in case of lack of information flow so as to ensure that right information is available to the right person at the right time.

CONCLUSION

The results in our study provide insights into how measurement of integration between marketing and NPD personnel can be achieved. By testing the eight hypotheses in our study it was found that, there is similarity between the way the marketing and NPD perceived their integration. This speaks well for their organization design practices. Some perception differences are noted and marketing personnel perceive that their information flow is greater than that of the NPD personnel and on the other hand, the NPD personnel feel strongly that this area must be improved in comparison to the marketing personnel.

The study has implications for managerial Leadership. Leaders in the company must sense the quality of interaction between marketing and NPD. Lack of this interaction leads frustration, finger-pointing, de-motivation and drop in sales. Unfortunately these issues surface at the time when the product is ready to be delivered to market or even after the first lot delivered. At this stage there is very little one can do to salvage the loss of effort and cost to the company. Leadership also has to take good care while defining department objectives.

The research described in this paper can be further extended to multiple software product organizations and larger samples, to verify the measurement used and build theory about integration behaviours of NPD and marketing personnel. Whilst this study provides a measurement design for diagnosis of disagreements and agreements between NPD and marketing personnel, it however paves the way to studies with larger samples. Additionally, demographic factors that may affect the responses can also be explored.

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APPENDIX

Main Questionnaire

Dear respondent

This survey has been designed to find out how the integration between marketing and new product development (NPD) happens in your organization. The questionnaire given below lists different areas in which marketing and NPD employees normally engage. These areas initially gathered from various research papers were verified in the context of your organization with the help of experts at your organization. Kindly rate the degree to which these activities actually happen in your organization and further kindly rate the degree to which you would want them to improve.

Rate these areas on the scale of 1-5 on:

- The degree to which you find the activity prevalent in your organization:

1	2	3	4	5
Not prevalent	Slightly prevalent	Moderately prevalent	Very Prevalent	Extremely prevalent

- The degree to which you would want the activity to improve in your organization :

1	2	3	4	5
Not improve at all	Slightly improve	Moderately improve	Improve very much	Improve extremely

Before starting the survey, please fill in the following details.

Please fill in the following details:

Your team: Marketing ☐ Sales ☐ NPD ☐
Designation:

Qualification:

Experience in
your organization: 0-2 years ☐ 2-5 years ☐ 5-10 years ☐ >10 years ☐

Experience in
IT industry: 0-2 years ☐ 2-5 years ☐ 5-10 years ☐ >10 years ☐

Gender: Male ☐ Female ☐

S. No.	Question	The degree to which you find the activity prevalent in your organization	The degree to which you would want the activity to improve in your organization
A.	Marketing/Sales are involved with product development team members in:	1 2 3 4 5	1 2 3 4 5
1.	Setting new product goals	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
2.	Establishing product development schedules.	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
3.	Generating new product ideas	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
4.	Screening new product ideas	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
5.	Finding commercial applications for new product ideas	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
B.	Marketing/sales provides information to product development team members on		
1.	Customers' requirements for new product.	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
2.	Marketing tests results	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
3.	Feedback from customers regarding product performance on regular basis	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
4.	Competitors' moves	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
C.	Product teams are involved with marketing team members in:		
1.	Marketing's budget proposals	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
2.	Screening new product ideas	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
3.	Modifying products according to marketing's recommendations	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
4.	Designing communication strategies for new products.	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
5.	Designing product user manuals	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
6.	Marketing events, PR and media briefings	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
D.	Product development teams provide information to marketing team members on:		
1.	New technologies	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
2.	Future technologies	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
3.	Technical constraints of the product	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐

Thank you for your support.

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