

Employees' Communication Patterns in Unorganized Idea-sharing Activities

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Abstract

Idea management is frequently observed as the front end of innovation process. Before idea management is implemented in an organization, it may be significant to research what are intuitive and spontaneous patterns of behavior expressed by the potential idea sharers. This research focuses on spontaneous idea sharing behaviors of employees in Serbian industrial companies, focusing on those behaviors that were not systematically and proactively organized by their companies.

The goal of this research was to explore the frequency of idea sharing behaviors of employees and the idea-sharing and communication patterns that they express, the type of verbal stimulus relevant to their idea communication activities, and feedback stimuli that ideators experience. Findings suggest that there is significant creative potential that is not used, explaining the suboptimal usage of employees creative input with bad practices by the management.

Key words: *Idea management, Communication patterns, Idea sharing*

1. INTRODUCTION

Throughout the world, organisations are under constantly increasing competitive pressure to maintain market share, improve efficiency, enhance product range and reduce costs. The most important process by which organisations attain all of these improvements is innovation, and the first step in the innovation process is the acquirement of ideas [1]. Ideas can be copied from previous experiences of other subjects or represent their customized versions, but an organization must behave creatively in order to be truly innovative. Generating one's own ideas surely is not easy, and a company determined to maintain sustainable innovation must use every possible source of ideation available in order to keep up with the market. For example, Gordon [2] considers idea generation as a critical means for achieving competitive advantage, advocating for organization's sales force to actively transform customer information into usable ideas.

Searching for new ideas, organizations can look inside and outside of its boundaries. It is clear that in search for new ideas organizations must make the best use of both internal and external sources of innovation [3][4] (organizations must look inside and outside of its boundaries). Many organizations interact with outside

subjects to obtain input for production improvement or new product development. For example, some hire consulting engineering firms specialized in idea generation and other phases of business processes improvement [5]. Others ask their customers or business partners for their opinion, unanswered needs and ideas. Innovation research show that there is considerable cross-industry and cross-country variation in these sources [6][7]. However, these external sources of ideas can be expensive and sometimes prove to be unreliable. Coming from the desired characteristics of the solutions and intellectual property rights requirements, there is a number of issues rising about how the collaboration with the idea generators (ideators) should be organized and managed.

Inside every organization there are workers who have relevant experience needed for generating new useful ideas: Acland [8] notes that in many companies staff is an untapped creative potential. These employees are already paid for their working activities and have a mindset closest to what their organization needs, so they may seem to be optimal ideators. For example, in a 2006 study of 765 executives, IBM company [9] found that partners and customers are very important sources of ideas (more than 35 percent each), but employees

have been identified as the most important source (41 percent). The problem with this kind of improvement, based on employees' ideas, is that workers are usually not motivated to create and share their ideas to a great extent, so there can be suboptimal usage of these creative resources.

Aiming to describe the basic atmosphere found inside organizations that do not actively manage their idea sources, the presented research tries to establish a baseline for future implementation of idea management systems. This paper, using an appropriate survey technique, examines the frequency of idea-sharing activities and idea-sharing patterns of behaviours that employees in Serbian industrial companies express, with the objective to assess the unused potentials and to determine key factors responsible for good practices.

2. IDEA MANAGEMENT AND INDUSTRY

2.1 *Creating ideas within organizations*

Idea quality and idea generation activities have shown to be important determinants of innovative capacities, especially of large-scale firms [10]. These innovative ideas can originate from a broad spectrum of contexts. Ideas that organizations could use can occur either as a reaction to a certain situation, or as a proactive action determined to exploit a new opportunity [11]. In first case, the idea is improving working activities or it is a reaction to a change in regulations; in second case, the idea is designing a new product or propagating usage of some new technology. In both cases, the ideas can be created by recombination of known ideas, by altering the current methods or by unique approaches [12].

The process of generating ideas, needed for later stages of development and innovation activities, requires creative thinking, which is dependent on workers' expertise, their creative-thinking skills, their level of motivation and existing creative environment for idea generation [13]. From its point of view, the organization should encourage creativity within every department and employee; it should also give thinking autonomy to its workforce, supply the needed resources that may foster ideation and eliminate job pressure and organizational obstacles [14]. If an organization fails to create favorable conditions that stimulate ideation and idea sharing, it can't expect the workers to make contributions using their creative potential, or at least it can't expect the workers to maximize their creative activities. Also, a worker's creativity can be based on a vision that has been defined by the organization management [15], but that vision has to be correctly transferred and explained to the workers if it is planned to be a guiding factor.

The importance of shop-floor activation in organizational improving has been broadly discussed in the last decades, suggesting pooling ideas for more creative problem solving [16], identifying problems and improving customer service [17], and even using employee ideas to revitalize a company in big debts [18], but the question on how to incorporate workers (cultural element) in innovation activities (structural element) remained open. This relationship between

cultural and structural elements of an organization is considered to be mutual and multilateral [19].

For example, Van Dijk and Van den Ende [20] propose the Creativity Transformation model, suggesting that cultural and structural aspects of organization overlap and take part in three steps: idea extraction, idea landing and idea follow up.

In a similar way, Hellström and Hellström introduced a model of creativity process management, where the process was named "organizational ideation", and divided into four factors: idea inducement, the pathways, the rules of the road and 'gate control' [21].

Bakker, Boersma and Oreel [22] in their action model named Crea-Political Process Model even suggest that the person who created the idea should use active strategies to promote his idea for adoption, instead of just sharing them with the organization - combining cultural and structural aspects of employees and their organization.

2.2 *Communication and ideation*

With the proliferation of modern computer technologies supporting the capture, organization, representation, and communication of multiple media forms, a wealth of new communication channels are available for management of ideas in organizations. However, in most cases, solving the problem of efficient idea sharing within organization did not increase the number of ideas shared in the long term. Communication patterns and workers' motivation seem to depend on more factors than just mere ability to share ideas.

Communication is evidently playing a dual role in idea management processes, serving as a motivator for idea creation and idea sharing activities, as well as a tool for sharing those ideas. While the instrumental role of communication as an idea sharing tool is greatly explored, there is lack of knowledge regarding role of communication as a motivator for idea generation and idea sharing.

Taking a step back, ideation itself, as a creative idea generation process [23] is explored to a great extent as a process, but its factors remain only partially known, making ideation tool designers base their decisions on anecdotal evidence, personal experience and preference, instead on objective data [24].

Observing communication within ideation and idea sharing, it is already well known that individuals generate more ideas than group-organized ideators (detailed list of research can be found at [25]), and it is also known that the bigger the ideation group is, the less ideas will be generated [26]. Many ideation studies demonstrate that, under certain circumstances, techniques and technologies can be used to increase the total number of ideas a group produces [27], but this is limited to using software as an intermediating tool. Many ideation techniques have been developed with the goal of increasing the quantity of ideas produced during ideation [28], but most ideation studies make no reference to idea quantity-quality conjecture nor do they analyze the initial communication process that stimulated ideation.

However, there is newer evidence that individuals who have higher level of connectivity with co-workers when generating ideas produce higher percentage of high-quality ideas [29], suggesting that individuals should be stimulated to communicate with other potential ideators to discuss the relevant problems, but not to generate ideas together, probably using social networks. The same should stand for communication between workers and their managers - managers should motivate workers to think about opportunities for improvements, presenting ongoing issues and acute problems, without suggesting possible ideas.

2.3 Organized idea management

There is more than one definition on what idea management is. The phrase "idea management" was first used by Austrian engineer Siegfried Spahl in 1974, while working as an improvements and suggestions manager in Semperit AG company in Vienna [30]. Abend [31] observes idea management as "a deliberate and conscious process of identifying the problem and choosing the strategy to be used based on specific product goals and desired specifications". Saatchioglu [32] conceptualizes idea management as "an organizational process that structures members' acting and thinking toward stability and change". Logan [33] defines idea management as "the process of developing, identifying and using valuable insights or alternatives that otherwise would not have emerged through normal processes". Vandebosch [34] proposes the concept of idea management as "the process of recognizing the need for ideas, and generating and evaluating them". What is common for this definitions is that they all observe idea management as an organizational process, which implies that organization must proactively coordinate activities in order to manage its creative potential.

When discussing why should any organization make an effort in organizing its innovation activities, it can be heard that organizing ideas may be counterproductive, since creative process such as ideation can suffer from hard-written rules. It is found that formalized and centralized structures may inhibit the diffusion of ideas among project team members [35], so there is a reasonable doubt when thinking about ordering creative behavior from the employees.

While it is true that ideation needs autonomy to be fully expressed, it also needs stimulation and coordination to be properly used. The first two steps of a successful idea campaign, according to Van Gundy [36], are 1) to define idea challenge and 2) to motivate ideation and collect ideas; it is obvious that these steps are in fact communication processes that need a predefined form in order to be truly effective.

Idea management is found to be particularly effective if it is integrated during the building-up stage of the company [37]. In this stage, internal and external communication network structures are still highly manageable, and should be moulded to fit the constant-innovation needs. If idea management is not integrated during the building-up stage of the company (which is the case in majority of transition countries), phenomena

of organisational inertia and inherited culture may hit hard on ideation processes.

Integrated idea management is a sophisticated and holistic approach that requires well balanced partial autonomy of creative processes on one side, and orderly designed managerial processes on the other side. There is a multitude of different commercial software available that helps managing ideas and turning them into useful innovations; sometimes companies prosper and profit from these solutions, and sometimes they miss the key facets, principles and methods relevant for these systems [38].

3. RESEARCH METHODOLOGY AND SAMPLE

Observing the relationship between general communication activities in an organization and idea sharing activities that may also be present, it may be intuitive to think that quality of one should indicate quality of the other one. However, this hypothesis that there is a positive correlation between the two is hard to test, as both the quality of manifold communication processes and the quality of idea sharing processes are complex and therefore not easy to measure. In order to get a better understanding of this relationship, the authors chose to conduct an explorative research, which aimed to describe rather than to test present assumptions. The main research question that drove this research was: What are the dominant communication patterns that are used in Serbian companies during employees' idea sharing activities?

Not being able to find any organized idea management processes in the country observed, this research focused on exploring spontaneous idea sharing behaviours of employees in Serbian industrial companies and idea sharing behaviours not organized or controlled by their companies.

The goal of this research was to explore workers' idea sharing patterns, the type of verbal stimulus relevant to their idea communication activities, and feedback stimuli that ideators experience.

The data were gathered from six companies, with intention to cover different ownership and management structures: a government owned railroad company, a municipal company for road maintenance, a bank, an electric cable factory, a cotton wool company and an industrial electric motor factory. The sample was constructed with explorative approach in mind, knowing that there was no similar research conducted in the country and trying to achieve diverse sample regarding bigger organizations. It must be pointed out that transitional economy context in Serbia seems to have made many organizations reluctant to take part in an academic research. Additional seven contacted organizations rejected to take part in this study, and another two organizations allowed their employees to be surveyed, but the employees were not motivated to complete the questionnaire, mostly stating that their salary and work conditions were "not enough to cover this extra effort".

The initial sample consisted of 186 employees, with 45 years of age in average and average of 17 years

working for the current organization (this is one of the characteristics of government owned or recently privatized organizations in transitional economies). This sample consisted of 68 employees identified as mid-level managers and 118 employees identified as workers. These groups were observed in relation to generation of ideas and sharing ideas for organizational improvement, and also in relation to their structure of motivation for these activities. In this sample, 72 workers were female and 114 male. Eight workers have finished only primary school, 92 workers had high school diploma and 86 workers had university degree.

Data used to investigate patterns of communication related to ideas for improvement were gathered using a survey instrument, created by the manuscript authors. The written questionnaire consisted of 9 general questions and 27 multiple-choice questions about patterns of idea creation and communication patterns for sharing ideas.

From the initial sample, only those employees who answered that they had shared at least one idea within their current organization (104) were observed in the analysis.

4. RESULTS: EMPLOYEE’S INTENTIONS, IDEA SHARING PATTERNS AND FEEDBACK

4.1 Idea sharing patterns

Within the observed sample, 42% of employees stated that they never gave any improvement ideas since they had been employed at their current company, while 58% stated that they shared at least one idea.

Out of those who shared at least one idea, 42% gave between 1 and 4 ideas while 58% gave 5 or more ideas. In other words, in the observed sample 33% employees shared 5 or more ideas with median of 18 years of work experience in this organization. Since there were no idea management systems in observed companies and hence no written records of employees suggestions, employees recollections regarding exact number of ideas that they have shared was not perceived as reliable if higher than 5 (table 1).

Table 1. Idea sharing patterns of employees

Number of ideas shared	Percent of employees
none	42%
1	5%
2	8%
3	6%
4	6%
5 or more	33%

The employees’ age shows to be a significant factor in participating in idea sharing. Employees were categorized in 4 age groups (below 30, 30-40, 41-50, and older than 50). Younger employees tend to share their ideas more often than the older employees ($\chi^2=12.17$, $p=.016$) (table 2). Value of Cramer’s V=.256 implies moderate strong relationship between age and idea sharing behavior.

Table 2. Idea sharing in relation to employees’ age

Age group	Idea sharing behaviour	
	No shared ideas	Shared ideas
below 30 years	7	11
31-40 years	10	23
41-50 years	29	28
51 years and older	45	32

There is a significant difference ($\chi^2=12.55$, $p=.000$) between mid-level managers and regular workers regarding the number of employees who shared their ideas (table 3). More mid-level managers tend to share their ideas (68%) than the regular workers (41%). Value of Cramer’s V=.26 implies moderate strong relationship between work place and idea sharing behavior.

Table 3. Idea sharing in relation to employees’ function in organization

Work place	Idea sharing behavior	
	No shared ideas	Shared ideas
mid-level managers	22	46
regular workers	70	48

Only the employees who answered that they had shared at least one idea within their current organization (n=104) were observed in the next three analyses, with these results:

- Majority of the employees had shared ideas about resolving ongoing issues in the organization (84%), where the rest of ideas were about chances and ideas for new courses of work (16%).
- Majority of the employees had shared ideas suggesting incremental changes (78%), and a smaller number suggested radical changes on a big scale, regarding the whole organization (23%).
- Majority of the ideators had shared ideas only from their field of work (64%), while a smaller percent shared ideas that related to some other parts of the organization (36%).

4.2 Communicating for stimulating ideation

Respondents from different hierarchy levels are also found to differ about the influence their superior’s incentives to share ideas have over the actual idea sharing behavior (identified with answers to question: “My superiors encourage me to talk to them if I have any ideas for improvement.”). Most of mid-level managers tend to share ideas regardless of being encouraged to do so or not (table 4). The regular workers show a different pattern of behavior, being more likely to share ideas if encouraged, and not sharing them if they are not encouraged enough ($\chi^2=7.698$, $p=.006$). Value of Cramer’s V=.255 implies moderate strong relationship between work place, superior’s incentives and idea sharing behavior.

Furthermore, employees’ attitudes regarding feedback proved to have influence on their idea sharing behavior.

Table 4. Idea sharing in relation to employees’ function in organization and verbal encouragements from management.

Work place	Receives encouragement	No shared ideas	Shared ideas
mid-level managers	yes	5	28
	no or very rarely	17	18
regular workers	yes	14	21
	no or very rarely	56	27

There are significant differences between employees who shared their ideas and those who do not in relation to their affinity for receiving feedback (table 5). When asked "Would you share more ideas for improvement if you got quality feedback information?", those who did not share any ideas did not tend to be generally interested with receiving feedback, while those who shared their ideas were generally interested in receiving feedback ($\chi^2=4.689$, $p=.03$). Value of Cramer's $V=.161$ implies weak relationship between affinity for feedback and idea sharing behavior.

Table 5. Idea sharing and affinity for feedback

Affinity for feedback	Idea sharing behavior	
	No shared ideas	Shared ideas
yes, that would make me suggest more ideas	68	83
no, I don't care about their feedback	20	10

There are also significant differences in mode of instigation to think about organizational improvements and the idea sharing behavior ($\chi^2=30.372$, $p=.000$). Employees who identified themselves as being asked only to think about problems are equal regarding whether or not they shared any ideas (table 6). Those who consider themselves being asked to think about problems, to suggest solutions and propose new business perspectives tend to share their ideas, while majority of those who are not encouraged in any way did not share any ideas.

Value of Cramer's $V=.404$ in this analysis implies very strong relationship between modes of instigation and idea sharing behavior.

Table 6. Modes of instigation to think about organizational improvements and the idea sharing behavior.

Modes of instigation	Idea sharing behavior	
	No shared ideas	Shared ideas
I am encouraged only to identify problems	21	18
I am encouraged to think about problems, suggest solutions and propose new business perspectives	14	49
I am not encouraged in any way	57	27

4.3 Feedback patterns

Ideators were also asked how the idea receivers behaved, with the following patterns identified. Only the employees who answered that they had shared at least one idea within their current organization ($n=104$) were observed in the following three analysis.

When an idea was submitted, 18% of the employees stated that mostly they received no feedback at all; 33% received short answer while 49% were faced with additional questions for clarification.

Employees were asked how they believe their ideas were considered with the following results: 9% said none of their shared ideas had ever been considered; 49% said only a few of their shared ideas were considered; 30% believed majority of their ideas were considered and 12% stated that all of their ideas were considered by the management.

When asked what part of the ideas they shared was implemented, the employees stated the following: 12% stated none of their ideas were ever implemented; 54% stated only a few ideas were implemented; 28% stated majority of their ideas were implemented and 5% said all of their ideas got implemented.

The following table shows correlations between an amount of ideas considered by management, type of feedback received and number of ideas that were implemented. It can be seen that there is a moderate relationship between the type of feedback received on one side, and idea consideration and implementation on the other side (table 7).

Table 7. Correlations between idea actions

Idea actions	1. Type of feedback received	2. Amount of ideas considered by management
2. Amount of ideas considered by management	.376 ^a	
3. Number of ideas implemented	.416 ^a	.836 ^a

^aAll shown Spearman's rho correlation coefficients are significant at .01 level

5. DISCUSION AND CONCLUSION

The presented exploratory survey tried to describe dominant communication patterns used in Serbian companies during employees' idea sharing activities. The conclusions related to these innovation activities showed some strength of this pool of ideas, but also some weaknesses that the lack of structured, formal rules of behaviour has brought.

This research showed that in companies without organized idea management employees do share their ideas to some extent, but they have some specific features. Although employees have substantial number of years of work in their companies, it is apparent that the number of ideas shared is relatively small. If employees are young, freshmen full of enthusiasm, or if they work on position of mid-level manager, they are more likely to share their ideas with their managers.

Mid-level managers tend to share ideas regardless of being encouraged, and the reason for this seems to be that mid-level managers consider themselves relevant to think about problems and suggest solutions, while regular workers have to be additionally encouraged to share ideas.

One of the possible explanations is maybe that absence of formalized idea management prevents older employees that have the large insider knowledge of a firm's strengths and weaknesses to exploit their knowledge, and bring new ideas. The reason may also lie in the fact that most of the submitted ideas have never been considered for implementation, which more experienced workers have learned over time.

According to the findings, the typical result of spontaneous idea sharing in a company will be incremental changes in different fields of work related to ongoing issues, that is in line with [39] hypothesis that most individuals will naturally provide ideas that can be categorized as improvements rather than true innovations, unless continuously guided and triggered. It is difficult for individuals to get beyond the obvious and readily available ideas. In organisations without formalized idea management the full creative potential of employees who don't participate in guided ideation sessions can't be realised.

Furthermore, only 30% of surveyed workers who shared their ideas believed majority of their ideas had ever been considered. Amabile [40] stated that creativity potential of employees in an organisation would be released only if these individuals were motivated by the knowledge that their ideas would be processed, and the environment in the organisation would be receptive. Besides the obvious lack of motivation for employees for spontaneous idea sharing, the big problem for some companies is that a large quantity of ideas is neglected. In companies without idea management systems quantity of collected ideas is low and absence of system to evaluate and progress ideas makes majority of that low number of ideas unconsidered.

While indirectly trying to assess the nature of ideas shared, it is found that 33% of workers who had shared ideas stated that majority or all of their shared ideas were implemented. This percent suggests that the quality of ideas is not poor, and can also lead to conclusion that in companies without any organized idea management a significant number of employees propose and promote their ideas only if they are convinced that ideas are significant for the company and have good chance of being implemented. It is easy to hypothesise that an organized idea management system would convince employees to share their ideas without judging their chance of implementation, rather encouraging them to create and share ideas creatively.

Observing the feedback patterns, it can be concluded that the feedback given is weak and sporadic. The fact that almost a half of the respondents believed that only a few of their shared ideas were considered is probably the highest part of an explanation of the fact that there are so little ideas that are shared. On the other hand, it

can be seen that employees that get more of their ideas into consideration also have more chance to have their ideas implemented, which advocates for previously mentioned Bakker, Boersma and Oreel's Crea-Political Process Model that states ideators have to "sell" their ideas rather than just submit them.

Based on the results of employees working in organizations that lack formal idea management processes, conclusions should aim to help these organizations in their efforts to formalize this innovation source. The presented results have clear implications on the possible introduction of formal idea management process within these organizations.

Firstly, the formal idea management process should try to activate the big percent of the employees that have significant work experience, but hesitate to share their ideas for improvement, especially within the shop-floor level employees. This implication is also aimed at older workers, who rarely share their ideas; companies should find a suitable method for inclusion of these employees in innovation efforts.

Secondly, the communication used by the organization should strongly motivate and clearly ask the employees about the idea that it wants; the messages sent should be as precise as possible when asking solutions to problems, rather than asking for employees' cooperation. Although it is important to motivate workers to share their ideas, this is not enough; the communication should also steer their cognitive processes that lead to idea sharing. This can be done by stimulating ideation with real problems the company deals with, probably through aimed idea campaigns.

Thirdly, the feedback that the company sends to the ideators should be constant and specific, taking care to implement the ideas which should be taken care of. The employees need to know if their ideas were timely considered and implemented in order to share more ideas. It is not enough just to thank them for their efforts or to reward them with bonuses for their good ideas; all ideas should deserve a proper response.

5.1 Limitations

The presented research tried to describe the current state in the selected population of Serbian companies. The observed companies were chosen by the criterion to cover a wide range of different organizational styles and ownership types.

However, the number of the observed companies is small and thus the conclusions drawn have to be generalized carefully. Since only a few companies from a big array of possible ones were contacted, the results shown here should serve more as a suggestion for further research, rather than as specific information for implementation. Furthermore, only the companies with no organized idea management were taken into consideration; the observed aspects within companies that do have an organized stream of ideas could vary significantly. Also, this research covered only big companies, with more than 500 employees each, which almost certainly have a different setup, organizational culture and communication styles than the small ones.

Further studies should take these limitations as a starting point when broadening the research sample. A bigger sample of both the companies and the employees should be observed, as well as small and medium enterprises. The questionnaire used should be standardized and factorized for better usability and ability to evaluate companies in the relevant dimensions.

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Obrasci komunikacije među zaposlenima u neorganizovanim aktivnostima razmene ideja

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Rezime

Menadžment ideja se često posmatra kao početna faza procesa inovacije. Pre nego što se menadžment ideja implementira u organizaciju, može da bude značajno istraživanje koje intuitivne i spontane obrasce ponašanja izražavaju potencijalni učesnici u razmeni ideja. Ovo istraživanje je usmereno na spontano ponašanje razmene ideja kod zaposlenih u srpskim industrijskim kompanijama, fokusirajući se na ono ponašanje koje nije sistematski i proaktivno organizovano u ovim kompanijama.

Cilj istraživanja je da istraži frekvenciju ponašanja razmene ideja među zaposlenima i obrasce razmene ideja i komunikacije koje oni izražavaju, tip verbalnog stimulusa relevantnog za njihove aktivnosti komunikacije ideja, kao i stimulse povratne sprege sa kojima idejni tvorci imaju iskustva. Rezultati sugerišu da postoji značajan kreativni potencijal koji nije iskorišćen, objašnjavajući niži nivo upotrebe kreativnog inputa lošim praksama menadžmenta.

Ključne reči: *Menadžment ideja, Obrasci komunikacije, Razmena ideja*