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BRAINSTORMING FOR LESSONS LEARNED

by

I.W. Taylor
and
Maj D. Hoyle

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ABSTRACT

The Directorate of Logistics Analysis (D Log A) has been developing a methodology for structured brainstorming that is more efficient and can be more effective than normal free-format brainstorming meetings. D Log A has also been represented on the Change Support Team (CST) for the re-engineering of J4 Mat. On completion of the re-engineering study report by the CST, it was suggested that D Log A's structured brainstorming approach be used to collect the lessons learned from the CST exercise. This report discusses how to use the D Log A Structured Brainstorming Approach to collect lessons learned after an exercise, project or operation with the J4 Mat CST study as an example.

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BRAINSTORMING FOR LESSONS LEARNED

BACKGROUND

1. The Directorate of Logistics Analysis (D Log A) is developing a methodology which uses a structured brainstorming approach to collect lessons learned from Operations. We would also like to apply this process to lessons learned from analysis projects. Our first attempt was with the J4 Mat Change Support Team (CST) after they had completed their final report on re-engineering the division.

THE DATA COLLECTION PROCESS

2. The lessons learned data collection process took place on 5 and 12 March 96 in two one hour sessions of the CST. The first session dealt with lesson identification and the second session involved recommendation identification.

Lesson Identification

3. During the lesson identification stage, we utilized the Nominal Group Technique discussed in Reference 1 in which:

a. a question statement is developed;

b. there is time for silent idea generation;

c. ideas are listed on a flip-chart in a round-robin fashion;

d. ideas are discussed sequentially and grouped into categories; and

e. the importance of the idea categories is determined using an anonymous vote.

4. This process produced 34 lessons learned grouped into seven categories. However, it was noted that these lessons were mostly "problems" that arose during the re-engineering process. It was suggested that a further brainstorming session be conducted to propose "solutions" to these "problems".

Recommendation Identification

5. The follow-on brainstorming process involved the Idea Writing Technique (see Ref. 1). During this stage, a description of each lesson learned category was attached to two pads of paper with the words "Preventive Actions" or "Contingent Actions" written on the top. The CST members were encouraged to write on the pads a description of the actions that could be taken to prevent or resolve these potential problems in future re-engineering exercises.

PROBLEMS AREAS AND POSITIVE RESULTS

6. There were six potential problem areas identified during the brainstorming:

a. Leadership;

b. Process/Methodology;

c. Guidance;

d. Team Quality;

e. Training/Preparation; and

f. External Environment.

These have been listed in the order of their importance to the CST. There was a great deal of consensus in the anonymous vote that was taken at the end of the Nominal Group Technique to determine this ranking.

7. There was also mention of the Positive Results that were obtained by the CST. This topic was discussed in the same depth as the problem areas and it was felt that Positive Results should be included among the lessons learned.

8. What follows is a detailed list of the recommendations on preventive and contingent actions that could be taken to prevent or resolve these problems. It should be noted that there is a certain amount of overlap in these categories. Therefore, one lesson learned could appear in more than one category.

Leadership Issues

9. The team stated that, despite receiving good support from J4 Mat/DG Log, they should have encouraged him to play a more active role in the re-engineering exercise as a "process champion". It was agreed that the active participation of a process champion in the re-engineering would have eliminated many of the difficulties encountered by the team.

Problem Prevention

10. Actions that could prevent problems with leadership in a re-engineering exercise include:

a. the leader of an organization attempting to carry out the re-engineering exercise must provide clear and unquestionable support for the exercise initially and throughout the process;

b. the chain of command within the organization must support the re-engineering process. Management "buy in" must be obtained by the process champion;

c. a clear mandate and terms of reference from the leader are required before the process commences and this should be disseminated throughout the organization;

d. team members should be seconded by the organization's leader to the CST to avoid conflicts of interest or the perception of such;

e. team members should be selected for the CST based on their extensive knowledge of their organization;

f. the lines of communication should be clearly established prior to the study. For example, stakeholder intervention should be avoided during the process by requiring official communication to go through the organizational leader. Briefings should be given by the process champion and subordinate directors to everyone in the organization prior to commencing the exercise and at significant points throughout the re-engineering process;

g. there should be a project plan written by the CST prior to the commencement of work. This should be approved by the process champion and should clearly state the role of the leader and the actions that will need to be taken by the leader throughout the re-engineering process; and

h. the organization's leader should be prepared to react to negative comments from the stakeholders, both public and private, and ensure these negative comments do not adversely affect CST's morale or credibility.

Contingent Actions

11. There were only two contingent actions identified under leadership. It was suggested that if leadership became an issue:

a. the CST could develop a communications strategy which involved the organization's leader and the directors that attempted to obtain their support and influence; and

b. the organizational leader might be encouraged or persuaded to support the CST through briefings or official correspondence at certain critical times during the re-engineering process.

Process/Methodology Issues

12. The team developed its re-engineering methodology as the study progressed. As a result, they encountered many problems which were caused by inadequate or misunderstood processes.

Problem Prevention

13. There were a number of actions that could have been taken before the re-engineering exercise began that would have resolved some of the process and methodology problems. It was suggested that:

a. a project management methodology be used which clearly stated each CST member's responsibilities and helped to ensure that the goals were attained;

b. time be spent early in the project either brainstorming or studying and selecting a methodology that would be followed throughout the process;

c. the process should be constantly examined through weekly "sum-up" meetings to discuss where we have been and where we are going;

d. frequent brainstorming at critical times throughout the process should be scheduled but this brainstorming should not alter the assumptions/objectives/criteria in the process;

e. clear and accurate organization charts and background information be acquired before the re-engineering process begins;

f. the project plan include briefings by the stakeholders on their organizations and processes. However, steps should be taken to avoid "briefing burn out";

g. the report writing process should be built into the steps of the plan;

h. the software used by the team should be standardized early in the process; and

i. the organization structure should be "frozen" until the team has completed its study.

Contingent Actions

14. If problems with the process or methodology occur during the re-engineering study, it was suggested that:

a. the team members not be afraid to stop the process and attempt to "step back" to gain the proper perspective;

b. when process or methodology shortfalls are identified they should be fixed right away without allowing them to affect the study; and

c. occasional access to an external facilitator to step in and resolve problems or conflicts when necessary.

Guidance Issues

15. The team was given general guidance at the beginning of the project but no formal terms of reference were issued. A lot of time was spent considering if the work being done by the team was helping to achieve the aim or whether there were other factors that should be considered. It was felt that this deficiency detracted from the teams productivity.

Problem Prevention

16. Preventive actions that could have resolved the guidance problems were that:

a. the re-engineering process not begin until a clear mandate is established by the organization's leader for the CST;

b. the terms of reference for the CST should be written at the initial stages of the process and approved by the organization's leader;

c. these terms of reference should be disseminated to the directors and other stakeholders;

d. clear definitions for key issues should be researched by and discussed among the CST at the start of the process (e.g. core/non-core activities);

e. research should be conducted into other organizations attempting to carry out re-engineering exercises to establish benchmarks for the terms of reference of the CST; and

f. an experienced facilitator should be used to establish the terms of reference and ensure the necessary guidance is obtained.

Contingent Actions

17. If the guidance, terms of reference or definitions were found during the process to be inadequate, the only suggestions by the CST were to:

a. stop the process and rewrite these documents as required; and

b. examine other CSTs in other organizations and see if their guidance documents could be adapted to the our purposes.

Team Quality Issues

18. Team quality became a critical factor to the success of the re-engineering exercise. The CST performed extremely well as a team; however, it was felt that this occurred rather accidentally. More time and effort should have been spent on ensuring team quality both when the team was being formed and during the re-engineering process. Team "burn out" became a serious problem near the end of the study.

Problem Prevention

19. It was felt that the following actions should be taken in future projects to ensure team quality:

a. a clear mandate and support from the Directors be acquired during the formation of the CST;

b. team members should be selected because they are open-minded and honest, and have complete familiarity with their organization;

c. greater support and representation on the team from larger directorates in the organization should be provided (eg. two representatives on the CST);

d. commitment to the CST process by the team members should be ensured by secondment of all team members to the CST for the project duration;

e. a team building course be completed by all team members before the exercise commences; and

f. the strengths of each member of the team should be determined and utilized to their fullest. Tasks and responsibilities should be assigned based on what each person wants to do and is good at.

Contingent Actions

20. It was felt that the following contingent actions could be taken to improve or maintain team quality:

a. if the team is not working out because of conflict and confrontation, it would be worthwhile to intervene with a facilitator;

b. if the team is starting to get "burned out", the team leader should intervene with some coaching or assign the task of "cheer leading" to the more enthusiastic members;

c. social interventions either during lunch hour or after hours should also be utilized to improve morale and team spirit; and

d. only work as a team for half of each day and work separately the other half of the day to reduced the effect of team burn out.

Training/Preparation Issues

21. The team felt that they were not well prepared individually or as a group for the re-engineering exercise. They believed that they lacked specific training and skills that would have enhanced their contribution to the project. In addition, they stated that the team would have benefited from more preparation time.

Problem Prevention

22. The training deficiencies could have been resolved prior to the exercise if:

a. team members received training on business process re-engineering;

b. a team building course had been conducted early in the process;

c. project management training had been provided; and

d. change management training had been included in the exercise;

23. This training would have provided some useful preparation for the re-engineering exercise. However, the team should also have done some specific preparation tasks as a group prior to conducting the re-engineering exercise such as:

a. time should have been spent scoping out the effort and developing a plan using various project management techniques learned during the training. This would have led to a better time appreciation;

b. the team members' background, previous training and skills should have been assessed prior to commencing the exercise to help with the efficient assignment of tasks; and

c. the establishment of a "contract" between the CST and the leader of the organization could have been developed prior to the exercise to ensure the goals and objectives were agreed upon.

Contingent Actions

24. Once the exercise has started, there is very little that can be done about prior preparation and training. However, training days could have been built into the plan or a professional facilitator could have been hired to provide process knowledge and on-the-job training.

External Environment Issues

25. The External Environment was a problem during this re-engineering exercise because there were too many changes occurring at the same time. These changes affected the re-engineering process directly and limited the availability of CST members for team meetings which was disruptive.

Problem Prevention

26. It was felt that there was very little that the CST could have done about external environmental problems, except:

a. attempt to restrict the changes going on by getting the organization's leader to freeze the organization structures; and

b. second CST members full-time so that their normal directorate duties would be suspended;

Contingent Actions

26. If the external environment was changing too quickly, the CST could have:

a. tried to get the organizational leader or directors to step in and freeze the changes;

b. made the necessary assumptions, recorded them and then carried on with the analysis; or

c. otherwise ignored the changes that were going on around them and focus on the "end-state" they were proposing.

Positive Results

27. The team members experienced many positive results from participation in the CST during the re-engineering exercise. They included the individual learning experience of the team members, the team spirit and team work shown by the CST, and the self-confidence developed in the group towards their recommendations. In addition, the team members noted a great increase in their circle of contacts. These Positive Results were enabled by certain actions taken by the CST and there were others actions that could have been taken to enhance the Positive Results.

Actions Taken That Helped

28. The following actions enhanced the positive results of the project:

a. maintaining a balance in the work life by including social functions throughout the process and being able to "lighten up" when necessary (e.g. held the Meet and Greet luncheon);

b. ensuring independent effort and emphasis was placed on team building early in the process;

c. working only mornings in group and then using time in the afternoon to do individual project work to avoid "burn-out";

d. performing self-study and sharing first-hand experience pertinent to the re-engineering exercise; and

e. being aware of the emotional aspects of a downsizing exercise on the organization's staff and the need to handle the situation delicately.

Actions That Could Have Been Taken

29. Other things the CST could have done to enhance the Positive Results of the re-engineering exercise were:

a. include other members of the organization to enhance their professional development by learning what other directorates do;

b. provide more briefings early on in the process on the role of the organization;

c. avoided "alienation" of the team by the directors and the division by reassuring them that the process could achieve the results required and help them to develop a more positive view of the process;

d. it should have been made clear that changes would happen and that the directors should co-operate to aid the process; and

e. public recognition of the results of the study should have been coming from the process champion to end the process on a positive note.

CONCLUDING REMARKS

30. The collection of this list of lessons learned took about two hours of the CST's time and four hours of the facilitator's time to write them up. It was considered a worthwhile and efficient activity. This data collection process was new to the CST and may have been a little uncomfortable because the interaction was done mostly in writing and the group was used to working together verbally. However, the completeness of the results and the amount of participation provided by even the quieter group members, we believe were worth the minor discomfort to the group. Possibly if they had worked with this methodology before and seen its successful results, they would have been more enthusiastic.

31. The concept of preventive and contingent actions was taken from risk analysis processes in project management (Ref. 2). These were difficult concepts for the group to appreciate and therefore should be explained more fully in the future. Possibly only one pad of paper per lesson learned category is needed and the participants could be encouraged to write both preventive and contingent actions on that pad.

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1. Taylor, Ivan; The Nominal Group and Idea Writing Techniques for Structured Brainstorming; D Log A Research Note 95/3; May 1995.

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