How Shared Leadership Can be Introduced in a Software Project Team? An Exploratory Study

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Abstract— Establishing a process of shared governance requires effective management, implementation of a suitable framework, multidisciplinary working, examination of its structure and culture. Shared governance is an ongoing process that requires constant assessment and reassessment so that administration may be responsive to a changing environment.

Index Terms— Shared Leadership, Distributed Leadership, Leadership, Implement Shared Leadership, Motivation to use Shared Leadership, Challenges before implementing shared Leadership, Democratic leadership, self vs. shared leadership.

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1 INTRODUCTION

Traditional models of leadership in organizations has often been regarded as hierarchical models, where a leader is a person to the next level of authority or rank, which is a central figure in the vision for effective performance, communicating organizational policies, and implement an institutional control [1][5]. In fact, each member is chosen because of the fact every person has unique knowledge and skills [2] [5]. Individuals in teams usually see the other group members as experts in their fields. In cross-functional teams, the real authority given to a formal leader, in reality authority may be limited due to the fact it depends on various factors such as expertise of team members to accomplish objectives etc. However, even in these cross-functional teams where each member is expert in various skills, members still see the team leader as the person who decides or take decisions [3]. An alternative management approach is one in which each team members receive responsibility for the information needed to manage a working group. Team will share the leadership responsibilities. This can lead members feel part of a facility/project where each person is jointly involved in helping and leading the team through different situations [4]. Shared leadership is a concept that evolved from the realization that leadership can effectively be shared or distributed among members of a group or team [4]. In Vertical leadership models, team leader is a coach who is responsible for team communication, integration and coordination [5]. Shared leadership model represent the team as a source of a common process in which leadership functions are shared. In this process the group members influence the other to take particular decisions that will be helpful to achieve team goals [5] [6]. The collaborative process of shared leadership often results in better team performance and team productivity, especially in complex situations[5][7][8][9][10].

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The two alternative models of leadership are shown at the end of the paper in Appendix A.

Differences between shared leadership and hierarchical leadership is explained in the following table (Taken from Article having reference number [25]).

Issue related to leadership style	Shared Leadership	More Conventional Leadership
Behavior Expressed	Aggregated behavior	Singular and Multiple behaviors.
Type of Structure	Lateral and decentralized.	Hierarchical and Centralized.
Action of Members	Autonomous and self-led.	Dependent and Instructed.
Actions of Teams	Collaborative and Consensus driven.	Responsive to the desire of appointed leader
Source/Type of vision	Shared Vision derived from the group.	Adopted Vision derived from the leader

2 RESEARCH QUESTION

- How Shared Leadership can be introduced in a Software Project Team?

3. INCLUSION / EXCLUSION CRITERIA

3.1 Inclusion Criteria

This review includes every article returned by the protocol that meets at least one of the following criteria for inclusion. (IC means Inclusion)
• IC1- Published between 2003 and Dec 2011.

3.2 Exclusion Stage

Publications that satisfy at least one of the following EC were excluded: (EC means exclusion)
- EC1—Documents not written in English.
- EC2—Documents whose full text is not available.
- EC3—Documents clearly dealing with topics irrelevant to

the purpose of this review.

- EC4—If the same study has been published more than once, the most relevant version (i.e., the one explaining the study in greater detail) will be used and the others will be excluded;
- EC5— Articles that do not match the inclusion criteria will be excluded.

4 STRATEGIES USED TO IDENTIFY SEARCH TERMS

As Major terms are formed from the research questions by**:-**

- Altering the spellings, identifying alternative terms and synonyms of major search terms.
- By checking the keywords in some papers we already have
- Boolean OR is used for incorporating search terms of alternative spellings and synonyms.
- Boolean AND is used to link the major terms with other terms and for combing different terms.

5 SHARED LEADERSHIP

Let me explain the shared leadership:-
- Personal Experience.
- With the help of Research papers.

5.1 Personal Experience

In my point of view it's all situational, where to apply and where not to apply shared leadership. Before applying shared leadership or normal leadership we have to take care of many factors, which start from cohesive team, Motivational factors, commitment of team, Culture etc. In my life I have faced two experiences regarding shared leadership; one was very bad and one was good, which make me think of the fact that one can't implement shared leadership every where it's all situational.

5.1.1 SHARED LEADERSHIP IN UNIVERSITY SOCIETY

I was announced as the president of XYZ Society in my University, Lahore, Pakistan. Executive members are from the graduating batch and after managing the event or the tasks performed that year, all of society's executive members have to make the new team for next year depending on various factors of the members (Honesty, motivation, leadership, other qualities, etc.). And this selection was made by voting for candidates from the executive members. Now always there are two members competing for the President, one of them always elected as president of society and other as vice president. The same happens with me. Now person who was elected as vice chairman of the society was not happy, which results in the fact that he was always involved in cons pirating against me.

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If I ever open discussion on any factor or issue I always encounter resistance for no reason. The entire team members, including board members are on one side, vice president and his few supporters on the other side give birth to grouping in the society. This one-year experience of shared leadership forces me to think normal leadership is better than shared one.

5.1.2 Industrial Experience/ Job experience:

I Worked as Software Quality Assurance Engineer in an international project for a company based in Lahore Pakistan. In the start of the project QA team was led by the team lead, but when all the team members had experience of few months and have clear understandings about criticality and features, team lead introduces the idea of shared leadership, for each build/version suggestions are taken from all the members and after having consensus then everything was put into action. It was a very pleasant experience in that situation where all resources are working for quality regardless of jealousy or some other factors. All resource's are required to work as a team and in shared leadership we as a team has achieved many impossible goals (related to time to market, Performance and security testing etc).

5.2 WITH HELP OF ARTICLES / JOURNALS/ RESEARCH PAPER:

A new form of leadership is needed if we want the staff to be engaged effectively and involved in decision making. Empowering employees is a major challenge requiring effective planning, preparation, Controlling, Coordinating and commitment. Establish a process of shared governance requires effective management, implementation of a suitable framework, multidisciplinary working, examination of its structure and culture. Shared governance is an ongoing process that requires constant assessment and reassessment so that administration may be responsive to a changing environment [21].

5.2.1 HOW TO IMPLEMENT SHARED LEADERSHIP

The implementation of shared leadership in teams requires the consent and encouragement of the designated leader of the unit/team and approval by the highest leader of the assigned group[6]. In many organizations, however, autonomous teamwork that is essential to shared leadership can be well outside the norms of behavior expected of senior executives in the organization [13].

5.3 Factors need to focus during Implementation of shared Leadership

While greater responsibility and autonomy given to the resources in work group can have positive effects on the perception of the employment of members for the team, it is also possible that additional responsibility i.e. shared leadership can increase job stress to the team members. In particular, managers or technical staffs who work in a team may feels that there is a conflict of shared leadership with previous ideas and may be a hurdle in achieving success [13].

5.3.1 JOB ROLE CONFLICT AND AMBIGUITY

In a shared leadership team members may face a situation where they think that the responsibility assign to him seems to conflict with work responsibilities to other members [14] [15]. A worker role ambiguity generally cause due to the fact that there is generally a lack of clarity about the roles and organizational goals [16]. This lack of clarity increases the feeling of stress and reduces the feeling of satisfaction of employees [17].

Some studies suggest that the ambiguity increases with the number of job roles to fulfill and the degree of flexibility in the roles of team members [18].

5.3.2 JOB STRESS

Stress at work is the psychological reaction of a worker to the demands of a job. In general, reduces the health and welfare of employees where job stress is high. Studies have shown that lack of control, increases job stress usually experienced by individuals [17].

5.3.3 JOB SATISFACTION

Job satisfaction describes how content an individual is with his/her job. Job satisfaction is not the same as motivation, although it is clearly linked. A story of great job satisfaction of team members seems to be their perceived level of autonomy to define their roles and tasks [17].

It is found that experienced employees feel satisfaction in their work when they felt a higher degree of social support from others, even if they were paid relatively less money and promoted less frequently[19][20].

5.3.4 SOME IMPORTANT CHALLENGES TO OVERCOME/SOLVE BEFORE IMPLEMENTING SHARED LEADERSHIP!

- Since decision making is shared, there is no explicit reporting path defined. All information that needs to be informed only to team lead, in shared management must be informed to all the team members. If someone is absent or on leave there is need to inform him as he is also involved in decision making. So that all the team members are on the same board [22].
- You can't take decision until and unless all the team members are present in the meeting. Delay may be expected in (some) cases if someone is missing [22].
- It is always difficult to agree on a thing or having consensus, because all people think differently, have different backgrounds, taking the situation differently and have different meanings for the same words. If this situation occurs, it becomes difficult to have some consensus and this process will be time consuming [22].

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Some more questions that need to be answer:-
- How to communicate Shared Leadership Philosophy to the team members? [26]
- What will be the initial expectations? Expected expectation after 6 months? [25]
- How to enrich communication efforts? [27]
- How to enrich team consensus? [27][26]
- How to build an environment where all resources are mutually accountable, share risks rewards and support each other? [29]
- One of the natural human instincts is to resist change even when it is designed to be beneficial. The way change is introduced has its own power to motivate or De-motivate, and can often be the key to success or failure [28]. Challenge will be how to motivate resources for shared leadership?
- How to ensure stability of team members. How many of the team members will leave in near future (employee turnover)? [30]

5.3.5 MOTIVATION TO USE SHARED LEADERSHIP

- When we share decision-making authority between group members, several suggestions are obtained in less time. The step or decision after discussion with all team members make the team motivated and cohesive which is a basic factor of performing team[22].
- The old model of a formal, personal leadership doesn't make full use of the talents / abilities of all resources. Improvements / performance achieved in the old model is not easily sustainable, as long as the team lead is there, cohesiveness / productivity / efficiency will be there, but when the team lead quits or leave the project; we will see that the drop in speed in all decisions and in some cases all the positive things just fade away making the team standing on the starting point [23].
- In the past there were only two executive posts in each organization, president and vice president, but over time many lessons have been learned by the organizations on the fact that: the team headed by a leader is always at high risk. The leader can move to any other organization or may become ill or die on the crucial time that in this case result in a failure of the project or even in some cases failure of the organization [22].
- There was no Apache CEO, President or a leader for making decisions. Instead they had to determine the group consensus, without the use of synchronous communication, and in a manner that would interfere as little as possible with the project. What they have developed a system of voting by e-mail based on the minimal quorum consensus. Any independent developer can vote on all matters before the project by sending an email to the mailing list with a "1" (yes) or "-1" (no) vote. For code changes, three positive votes and no negative vote (veto) were necessary before the amendment would be allowed in the final source. For other decisions, at least three "1" and an overall positive majority. Everyone on the mailing list to vote, and thus express their opinion on what the group should do [24].
- When we talk about leadership, there are certain people

or personalities which usually hit our mind, just like Mohandas Gandhi, Jr. Spring etc. But unfortunately we always neglect the fact that great leaders are formed when they are surrounded by great people. Take the example of independence of subcontinent, we always forgot to mention this reality that during the struggle for independence, Gandhi was surrounded and supported by a number of other great Indian leaders, including Nehru; Jinnah etc without their efforts and combined effort Gandhi certainly would have failed! This thing can't be only seen in history but if we move to the business community the same perception is there as well, the identity of U.S. companies are seen as reflections of the personalities sitting in the offices of CEO. Bill gates for Microsoft, Steve Jobs for Apple, and Mark Zuckerberg for Facebook etc. In all these cases we neglect the fact that successful organization can only be achieved when we have a cohesive and motivated team [22].

5.3.6 LINK BETWEEN LEARNING AND LEADERSHIP

In order to understand the relationship between learning and leadership, let us see our childhood, in our childhood teacher gave us an assignment to be done in "x" hours. All begin to try by sitting on his/her desk. After "y" hours some students have done the assignment according to their understandings and see that their friends still working and need help. The student who has done the assignment moves to the friends desk and guide them in understanding the problem, which will result in completing the task by many, as well as healthy discussion while explaining to his/her friends. Now in this, few things are important to notice. It is not necessary that Student "A" will always solve the assignment first or understand correctly may be student "B" who even don't succeed in submitting the first assignment understand correctly next assignment and also we must keep this thing in our mind that in this case: Everyone or Anyone can lead and Everyone can or will participate in discussion or decision making [24].

6 CONCLUSION / ANALYSIS

It's very difficult to say which leadership style is good and what the best way to implement is. As in my point of view, there is no "best" leadership style and way to implement. Effective leadership is job related, and most successful leaders are those who have their leadership style by observing person or group and how it will influence the result. The effective leadership varies not only with the person or group that is affected, but it is also on the task or function.

"To lead people, walk beside them… As for the best leaders, the people do not notice their existence... (Lao Tsu)"

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