

# **Impact Of Behavioral Styles On The Effectiveness Of Product Development Teams**

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## **Abstract**

This paper is based on the review and development of two major contributions to the understanding of human behavior in organizations. First, the psychological types of Carl Jung. Second, the decision making process of Herbert Simon. The text presents a model of teamwork skills based on two ideas of Jung and Simon. One refers to the phases of the decision making process. The other relates to the information basis in the decision making process. The authors' intention is to make some propositions that stress the importance of behavioral critical success factors, that influence the effectiveness of product development teams.

Keywords: teams, project management, critical success factors, behavioral styles, psychological profiles.

## **Introduction**

The ability to develop new products and services is a competitive advantage that depends on teams made up of people from different functional areas. The technical professionals on such teams must possess the skill of working in a collaborative manner through the whole life cycle of a product development project. Understanding the behavioral factors that influence this skill as well as the dynamics of multidisciplinary teams is a tool for optimizing individual competencies for the effective management of projects. In this paper, the authors propose a model for the study of individual differences related to project management skills and of their interaction in teams. We also offer some propositions on the basis of the model.

According to Pinto and Kharbanda, there are three categories of critical success factors: technical, organizational and behavioral. This paper focuses on the behavioral dimension, attempting to analyze its impact on the performance of multidisciplinary teams involved in the development of new products. The ultimate objective here is to advance some ideas for discussion and future research.

## **Teamwork: Some Practical Uses**

Teamwork is a form of combining technical skills in engineering, production, marketing, finance, and other organizational functions, with behavioral skills such as leadership, group decision making, creativity and conflict resolution. All these skills are integrated to allow for certain potential advantages of groups, such as time compression, rework reduction and effective transfer of new products to the production line.

Substitution of an interdisciplinary product development team for a sequence of isolated project groups is a management practice first observed in the American automotive and telecommunications industries. Motorola and Chrysler are reported to have pioneered this technique. An indicator of the growing trend towards the teamwork approach is the widespread availability of computer “groupware”.

Among many others, the Apache helicopter is a well-known example of the combined effectiveness of teams. Boeing managed to develop this new product with significant technical superiority, higher quality and lower manufacturing costs using a combination of teamwork and computational tools.

## **1. Group or Team? Exploring The Critical Success Factors**

One should never expect to form a team by simply assembling a group of technically competent people. Besides technical competence, a group must have certain organizational and behavioral qualities in order to achieve some degree of success. For instance, distinctive characteristics of true teams are:

- Sharing of and commitment to a collective goal.
- Sense of mission.
- Cohesion and effective participation.

Such characteristics reflect the importance of non-technical variables for the success of a project team. The studies reported by Pinto and Kharbanda suggest that behavioral factors have a potentially higher impact on project success than that of the technical factors.

### **Behavioral Styles**

One aspect of the behavioral dimension with a potentially high influence on team performance is the behavioral profile of team members. By understanding the behavioral profiles of team members, as well as his or her own profile, the project manager is able to leverage his or her personal effectiveness. The concept of profiles is a resource that helps to understand and manage the interaction of personal characteristics, team roles and phases of the project life cycle.

One of the major tools to understand and manage individual differences was developed by Carl Gustav Jung in the beginning of the 20<sup>th</sup> Century. In one of his most known ideas, Jung proposed the existence of psychological types based on four bipolar dimensions. Each pole in each dimension is a basic behavior. The combination of basic behaviors make a number of psychological types or styles.

Several management writers have found Jung’s dimensions and types useful to explain how people learn, make decisions, relate to each other and work in groups in organizations. Many ideas about individual behavior may be traced to Jung’s dimensions. For instance:

- The four individual approaches to making decisions that Rowe, Boulgarides and McGrath have identified: directive, analytic, conceptual, and behavioral.

- The four team player styles proposed by Parker: contributor, collaborator, communicator, and challenger.
- The four personal styles of learning and problem solving proposed by Slocum: sensation-thinkers, intuitive-thinkers, intuitive-feelers, and sensation-feelers proposed.

Two of Jung's dimensions are of particular importance in the management field and are recurrent in most of those 4-types models. Those are the sensation-intuition and judgement-perception dimensions.

## **2. The Problem Solving Process**

Another tool to understand one particular characteristic of individual and group behavior was proposed by Herbert Simon, who studied the decision making process. Simon's proposition for the decision making process may be grouped in two major steps: one is comprised of analysis and creativity; the other involves evaluation and choice of alternatives.

### **2.1. Analysis And Creativity**

In the world of analysis and creativity, there are two basic behaviors: conceptual and analytic. Models and abstract ideas are keywords for conceptual people, who are able and like to work with possibilities rather than concrete ideas. Design departments are probably preferred habitats for this kind of people. They are imaginative people who provide ideas for new products and work on their blueprints. On the other hand, keywords for analytic people are observation, experimentation, critical thinking, and fact finding. An inquisitive mind is also a characteristic of analytic persons, who usually are skillful at asking questions and looking for hard evidence. People with an analytic orientation are probably comfortable when they work on tasks with a high content of information seeking and processing, as it is the case of research and planning.

### **2.2. Judgement And Decision**

Judgement and decision are in another world. This is the world of making things happen, as opposed to the world of thought and creativity. Decision making, resource allocation and consensus seeking are some of the keywords here. There are also two styles here. Pragmatic people like to work with resources and to make things to happen. Seeing products being developed is also important to them. Political people, on the other hand, are those who work well with other people and make other people work well with each other. Helping everybody to function as team members is a major source of satisfaction for this kind of people.

## **3. The Information Dimension**

The problem solving or decision making process is based on two different types of information. One is the concrete information provided by observation of the real world. The other is abstract information produced by imagination and theoretical thinking. Some disciplines and activities are prone to stress the Cartesian rational reasoning based on concrete information. This is the case of research and

experimentation, application of technology and all kinds of quantitative analysis. For other disciplines and activities, Platonic reasoning based on abstract modeling appears to be more important. Such is the case of theory development, productive creation and conceptual thinking.

According to Simon, concrete information is the basis of rational decision making, whereas abstract information is the basis of intuitive decision making. According to Jung, sensitive types have a preference for concrete information, whereas intuitive types have a preference for abstract information.

#### **4. Behavioral Styles And Teamwork**

Jung and Simon ideas are remarkably similar in that they deal with the same principles of human behavior with different words. Figure 1 is a model based on the convergence of both ideas. The model identifies four types of behaviors or skills useful to incumbent and potential project managers. These are: conceptual, pragmatic, political, and analytic. According to Jung, when some people feel more comfortable with one type of behavior, or are more skillful at it, that is their style (or attitude). So, the four behaviors may be understood as either skills, styles, or attitudes.

For the manager of a product development team, it is of fundamental importance the knowledge of the frames of mind of the individual team members, himself or herself included. It is also important to know how the individual styles interact with each other and the impact on the team effectiveness. Such an analysis, on a theoretical and exploratory level, was performed by Frame, using the Myers-Briggs Type Indicator as a reference. Frame suggested that if each member understands the differences in reasoning and orientation to the world, this may help to ease the difficulties that would otherwise develop. It is implied that people are usually unaware of individual differences and tend to view differences in other people as nuisances and sources of conflict. For instance, extraverts may have the notion that introverts are selfish. On the other hand, introverts may view the extraverts as superficial and futile.

The knowledge of behavioral styles and the use of this knowledge to understand other people may help to increase the effectiveness of teams. In the following section of this paper, we advance some similar exploratory propositions about the four styles depicted in Figure 1.

#### **5. Propositions**

##### Proposition I

The importance of behavioral skills vary according to the phase of the product development project, as described in Figure 2. Analytic and conceptual skills appear to be important in the preparation phase of a product development project, since needs assessment, alternatives investigation, and scope definition are all planning activities that require the two types of skills. On the other hand, pragmatic and political people are needed in the implementation and execution phases, since this is when team organization, resources acquisition and deployment, and effective execution of plans take place.

The implementation and execution phase of a product development project demands people from the world of action, with an orientation to making judgements and choices and implementing their decisions.

### Proposition II

The major advantage of teamwork is the possibility of bringing together people with different skills and attitudes, instead of having them working in isolation in their functional homes, which is likely to reinforce their particular styles. Production, procurement and finance people will probably develop a pragmatic approach to decision making, whereas design and technical people may take a more conceptual and analytic view, and marketing and human resources people may have a more political orientation to the world. If these people work only with their peers, they may lose the perspective of other styles.

Teamwork is capable of improving the product development process because the analytic and conceptual approaches that focus mainly on the design of the product are combined with the pragmatism and human relations attitudes oriented to facilitate the execution of the project as a whole.

The formation of a multidisciplinary team at the beginning of the project will improve significantly the process of planning the project scope and the identification of the critical success factors of cost, time, and communications. If only one specialty is brought into the planning process, one of the perspectives will be impaired, either the product scope or the success factors.

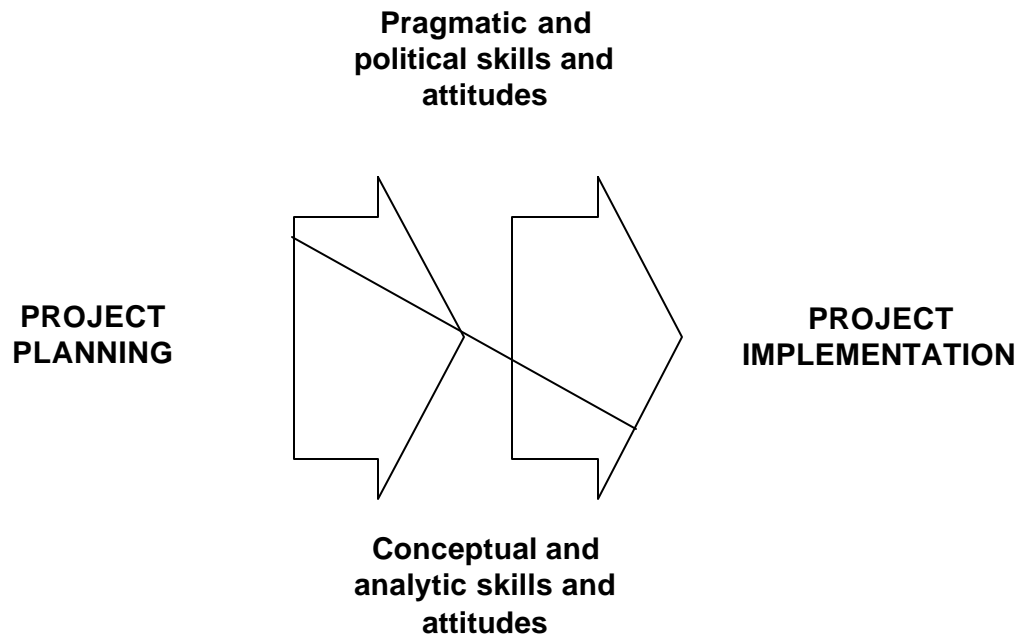
### Proposition III

To be effective, a team depends on people who have the four skills. However, it is unlikely that an effective team will be formed by simply putting together people from different functional departments. Differences in styles determined by professional preferences or personal choice may be the cause of conflict and alienation rather than synergy and cooperation. Conflict is likely to occur when people lack behavioral training or are unaware of what happens when individual differences interact in teams. It is one of the project manager's major responsibilities to ensure that all team members are aware of individual differences and of their importance to project success. Behavioral training for team members is likely to increase project effectiveness.

## **6. Conclusions**

Project performance is influenced by a number of variables grouped into three major categories: technical, organizational and behavioral. Project success and failure may be explained by the interaction of the three types of variables in particular cases. In this paper, the authors offer a model of individual behavioral to explain why teamwork may be more effective than the functional approach to product development. However, it has been noticed that project success and failure occur both in the teamwork and in the functional mode of product development management. It is implied that the three types of





**Figure 2**

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