

## **An Evaluation on Belbin's Team Roles Theory (The Case of Sakarya Anatolian Profession High School, Profession High School and Vocational High School for Industry)**

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**Abstract:** This study took place in Sakarya Anatolian High School, Profession High School and Vocational High School for Industry (SAPHPHVHfi) where a flexible and nonroutine organising style was tried to be realized. The management style was initiated on a study group at first, but then it helped the group to come out as natural team spontaneously. The main purpose of the study is to make an evaluation on five teams within the school where team (based) management has been experienced in accordance with Belbin (1981)'s team roles theory [9]. The study group of the research consists of 28 people. The data was obtained from observations, interviews and the answers given to the questions in Belbin Team Roles Self Perception Inventory (BTRSPI). Some of the findings of the study are; (1) There was no paralellism between the team and functional roles of the members of the mentioned five team, (2) The team roles were distributed equally balanced but it was also found that most of the roles were played by the members who were less inclined to play it, (3) The there were very few members who played plant role within the teams and there were nearly no one who were inclined to play leader role.

**Key words:** Organizational behaviour • Teams • Groups • Team (based) managemen • Team roles • Belbin's team role theory

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### **INTRODUCTION**

Yesterday's structure of management wanted everything be under total control. It extolled planning, control, problem solving, decision making and orientating. It also inclined to create a culture where the workers broght the problems to management whereas the management solved them and gave directives on what the workers should do. However, today we witness the imperative paradigm shift from mastership to empowered individuals or team leadership [1]. Team (based) management approaches are gradually becoming widespread. Team (based) management can be named as second industrial revolution for its unbelievable effects on today's business organizations [2]. Fortune magazine named them as "the great discovery in productivity for 90's".

Team (based) management systems are considered to be the milestones for increasing organizational effectiveness and productivity [3]. Almost all the organizations embraced the concepts of continuous development and quality to ensure competition advantages during 1980's and 1990's. In order to realize those principles, many organizations have experienced

important transformation from traditional individualistic form towards the team working strategies in their structure and hierarchy [4]. A tendency towards more flexible organizations have prevailed so far. Wright and Snell (1998) defined flexibility as "ability to rearrange the organizational activities and resources so quickly as to meet the enviromental demands" [5]. The implementers and the academicians have begun to see the flexibility as a strategic requirement [6]. Team (based) management is being considered as one of the most important approaches among the flexible organizing models. A transformation from traditional hierarchial (piramidal) structure towards more delicate laminar and more flattered structure is being realized [7].

It is expected that the team work should bring certain benefits to the organization in accordance with the general expectations. The very first benefit would be the problem solving and realization of making decisions through the participation of all the team members simultaneously. Secondly, the team members would feel the strong commitment and never let it be spoiled [7]. Last but not the least, it is considered that the team (based) management enables the organization to improve morale, cut down on the expenses, improve quality, increase

productivity and develop organizational performance to the highest level possible [8].

In order to establish the optimum performance within the organization, the existence of good team consisting complementary members is of vital importance [9-13]. One of the most known models on this issue is Belbin (1981)'s team roles model which is also the subject of this study [9].

**The Team Concept:** According to the most commonly accepted definition in the field of organizational behaviour, *the team* is a small group of people who make contributions to the common goal, who perform in accordance with the goals, who depend on each other with the mutual feeling of responsibility and who have complementary skills [14]. However, the concepts of team and group are often confused and mostly used instead of one another. One opinion in the literature suggests that the team is not different from the group and that the studies on them goes well long common past [15]. But, they do not have the same qualities [14,16,17]. As mostly accepted definition, group is "two or more number amount of people who perceive themselves as a group and share the common goals, who have stable relation in between and are within interaction" [16].

Up to date books on organizational behaviour exhibit the distinctive attributes that defines the team on group. Those are; shared goals and objectives, mutual confidence and loyalty, expressing the feelings explicitly, making decisions with compromise [18], cooperation, coordination and compliance [19], having a common synergic effect [20].

Assessing above given definitions it can be inferred that they have a lot in common. However, Katzenbach and Smith (1999) describes three fundamental characteristics of a team which are devotion, accountability (responsibility) and the skills [14].

Teams within organizations can be classified in many different ways. According to the formation style, formal and informal teams [21,22]; according to the functions they claim responsibility for, advisory and implementary teams [23]; and according to the relations within the organization vertical and horizontal teams [21]. Apart from these they can also be classified as problem solving, self-managing and cross functional teams [12,22, 24].

**The Role Concept:** *Role* is a sociology-origin concept. It was first used to apprehend the behaviours of individuals in a social environment [25]. However, today the role theory is being used effectively by researchers in many fields like psychology, social psychology, sociology, organizational behaviour and human resources

management. Many researchers in above mentioned fields emphasized that the role is an important component of social structure [26] and that it plays important part in understanding human behaviours in organizations [27]. There have been two main types of role form described and used for last fifty years which are behavioural perspective and expectancy perspective [28,29].

According to the behavioural perspective, which is also named as antropologic-sociologic perspective [30], *the role* is a typically exhibited behaviour of an individual who occupies a definite position in a community [31] or, to be more spesific, in a determined context [32].

Psychological perspective or expectancy perspective [30], defines role as expected behaviours of an individual who occupies a definite position in a community. In other words, the role is the set expectations, standards and norms for a statue or behaviours of the individual [25]. The expected behaviour and cognition related to an occupied position is very important for the success of the role [27].

Thus, it can be claimed that role behaviours of an individual is the outcome of the interaction between the individual and the organization [26].

Belbin (1981)'s role definitions that are composing the fundamentals of his studies and play important role from the aspects of this study [9]. He defines two role styles which are namely functional and team roles. Functional role, is required functions for the survival and living of a social system [33]. Team role, is set of roles that are defined within a definite context. In other words, it is sum of the roles that are required to play for the pursuit to be done.

**Team Roles:** When the organizational literature related to team roles is reviewed, Benne and Sheats (1948)'s study which classified 27 team members roles has been recognized as the pioneer in this field [34]. The research was based on the assumption that the membership roles are required for group development and production. These 27 team roles were cathegorized under three main groups which were team role, mission and individual roles.

One of the important studies that has made contributions to the field belongs to Bales and his colleagues [35,36]. At the beginning of their research, they tried to cathegorize different behaviours exhibited by individuals in small groups. Behaviours were also classified in regard to their being positive or negative and their being active and passive.

Another study about team roles belongs to Ancona and his colleagues [37,38]. This study differs from the others on the assumption that within a team, team members claim only the interrelated roles. They

developed the team role perspective considering environmental affairs (boundaries) of the roles discussed.

One of the widely known studies about team roles belongs to Parker (1994; 1996) [13,39]. He described four team players styles which represented the choices the individuals made for the interaction within the team context. Parker classified the styles as; contributor, collaborator, communicator and challenger.

One of the most useful recent classification is Barry (1991)'s delegated leadership behaviour approach within the team [40]. Barry (1991) emphasized the self managing team paradox by asking the question of "who manages the leaderless teams?" [40]. He described four types of leadership required for self managing teams through qualitative researches he applied in 15 teams operating in industrial field. Those leadership styles are; envisioning leadership (innovative and vision fostering), organising leadership (giving orders on missions), spanning leadership (facilitating the activities that connects team to the organization) and social leadership (developing and maintaining the psychology and sociability of the team).

The last classification to be mentioned in the literature is Belbin (1981; 1993)'s team roles theory which also constitutes the theoretical fundamentals of this study [9,10]. Belbin determined eight team roles at first, but then he came up with the ninth. This theory is discussed in detail below.

**Belbin's Team Roles Theory:** Belbin made some experiences that consisted the fundamentals of her theory. The results of her experiments, which constituted a model of management teams, based on the roles required for the success of the team. Belbin described team roles as a servant member's, who facilitated the progress of the team as a whole with his performance, structure of behavioural attributes considering the interaction with others. She believes that team members have two types of roles. The first one, as described in role theory, typical functional role. The second type is the team role(s). Team role describes how suitable the member is for the team, not the functions [41].

In this model the role is described with six factors, namely, personality, mental abilities, motivation, values, field restrictions and experience and role learning. However, Belbin didn't demonstrate how most of the changes could be explained by each factor [42]. Instead, she defended the opinion that high performance teams required a balanced distribution of all the roles within the team. Belbin, also thought that team role concept should be distinguished from the concept of functional role that points out job related operational and technique knowledge. As a result, some members may have the same

functional role but still have different and done team role(s).

Belbin began her study with the simple idea of "different people interact differently". As a beginning, she analyzed the teams comprising almost similar members. Afterwards, she observed the teams in the work environment and analyzed different types extensively. For instance, she labelled one type as plant because he was, just like a real home plant, sitting still in his corner without any interaction. But, when he interacted he could produce an original idea and came up with brand new plans [42]. As a result, she defined eight roles she felt necessary for the success of the team based on his observations during the experiments [41].

Belbin's psychometric tests were used to associate psychological attributes that had been measured formerly observed behaviour. Afterwards, they were used to form a balanced team and to predicate the possible future success of the team once the determination of team roles was learned through test results. The four basic distinctive factors put forward by the tests are:

1. Intelligence
2. Dominance
3. Introversion/Extroversion
4. Determination/Anxiety

Belbin, attracts the attention to the connection between the needs for different team roles prevailing at different stages of the development process of the team. The mentioned *six* stages are as follows; 1. determining the needs 2. coming up with ideas, 3. formulating the plans, 4. realization of the ideas, 5. forming the team and 6. finalization of the job. At the first stages the Shaper and co-ordinator will be needed mostly whereas the Completer-Finishers and Implementers will make the greatest contributions in the later stages [30].

He labelled the team roles as; Chairman, Shaper, Plant, Resource Investigator, Monitor Evaluator, Team Worker, Company Worker and Completer Finisher at the beginning. Then, he renamed the Chairman as "Coordinator" and the Company Worker as "Implementer" and he added a ninth role as "Specialist". Team roles were divided into three groups; action roles (Shaper, Implementer and Completer Finisher), social roles (Co-ordinator, Team worker and Resource Investigator) and thinking roles (Plant, Monitor Evaluator and Specialist) [42]. The true definition of those roles is important in understanding work team and any management. In this study the model with eight roles is used. The roles within the model and their characteristics are stated in Table 1.

Table 1: Belbin's team-role descriptions

Type	Symbol	Typical features	Positive qualities	Allowable weaknesses
Company Worker	CW	Conservative, dutiful, predictable.	Organizing ability, practical common sense, hard-working, self-discipline.	Lack of flexibility, unresponsiveness to unproven ideas.
Chairman	CH	Calm, self-confident controlled.	A capacity for treating and welcoming all potential contributors on their merits and without prejudice. A strong sense of objectives.	No more than ordinary in terms of intellect or creative ability.
Shaper	SH	Highly strung, outgoing, dynamic.	Drive and a readiness to challenge inertia, ineffectiveness, complacency or self-deception.	Proneness to provocation, irritation and impatience.
Plant	PL	Individualistic, serious-minded, unorthodox.	Genius, imagination, intellect, knowledge.	Up in the clouds, inclined to disregard practical details or protocol.
Resource Investigator	RI	Extroverted, enthusiastic, curious, communicative.	A capacity for contacting people and exploring anything new. An ability to respond to challenge.	Liable to lose interest once the initial fascination has passed.
Monitor-Evaluator	ME	Sober, unemotional, prudent.	Judgement, discretion, hard-headedness.	Lacks inspiration or the ability to motivate others.
Team Worker	TW	Socially orientated, rather mild, sensitive.	An ability to respond to people and to situations and to promote team spirit.	Indecisiveness at moments of crisis.
Completer-Finisher	CF	Painstaking, orderly, conscientious, anxious.	A capacity for follow-through. Perfectionism.	A tendency to worry about small things. A reluctance to 'let go'.

Source: Belbin R.M. (2007), Management Teams: Why They Succeed or Fail, Elsevier Butterworth Heinemann

**Company Worker (CW):** He is mostly responsible for implementing accepted plans effectively and systematically. He is not only the “arranger” but also a worker on behalf of the organization rather than his behalf. He is positively selfish, tough-minded, practical, disciplined, traditional, faithful and tolerant.

**Chairman (CH):** He is the team director, organiser and team manager. He is responsible for supporting promising ideas and distributing resources in any sense such as balancing the strong and the weak sides of team members. He guides other members and control them. He is a realistic manager, mostly calm, self-disciplined, dominant, determined and extroversion to an extend.

**Shaper (SH):** His basic function is to shape team endeavours and applications. He always prepare discussion platform and spur the group into action with hasty decisions. He tries to combine ideas, aims and practical thoughts related to a realizable project. He is also sociable, sensitive, reckless, impatient and sometimes aggressive and susceptible.

**Plant (PL):** He is a thinker and the source of the original ideas of the team. He can be defined as one of the creative members of the team. His ideas are distinguished on their

radical and original approaches to the problems and obstacles. A typical plant has high mental skills, is dominant and introverted. He is not only the smartest member of the team but also has he the widest imagination power.

**Resource Investigator (RI):** Resource Investigator is determined, dominant and extroverted. He is the second member to be innovative. They mostly resemble plant except for their personal affairs and original ideas. Despite the resemblance with the plant on developing unique ideas, the main difference is RI's being extroverted (preference to interact with the environment). He is rarely in his room and if he is it is mostly because of a call should be made.

**Team Worker (TW):** The team worker supports other members with his strength, help them to overcome their insufficiencies, feeds the team soul and develop communication. He also perceives emotional problems of the group and their anxieties and needs. Almost all managers are included in this category although they become disappointed with its plain meaning attributed to when they are described in this way. A typical team worker is decisive, extroverted and less dominant.

**Monitor Evaluator (ME):** He is an expert on analysing problems, assessing ideas and offering suggestions for taking decent decisions. He has high mental talents as plant and shaper do. He seems as unprejudiced and unbiased with his serious personality and judgements. His possibility of producing creative ideas is relatively low but he protects the team from fatal mistakes. A typical monitor evaluator is stable, introverted and has high level mental abilities.

**Completer – Finisher (CF):** The completer-finisher is the assurance of the team for not making mistakes and he is like a security guard against small but important mistakes. Unfortunately there are very few members who prefer this role. He has auto-control, strong character and very intolerant with irresponsible and indifferent members of the team. He is willing to try complicated things and finishes what he begins. He manages time well and always does his best to catch up all activities scheduled. He is a typical finisher, introverted and anxious.

**The Purpose of the Study:** The main purpose of the study is to make an evaluation on five teams within the school where team (based) management has been experienced in accordance with Belbin (1981)'s team roles theory [9]. Thus, Belbin (1981)'s team roles theory would be studied for its applicability in educational organizations [9]. Therefore the following sub purposes are defined for Belbin's team role model in SAPHPHVHFI;

- a. The distribution balance of the member's team roles,
- b. The distribution of the team roles of on functional roles,
- c. The compliance of the members' natural role tendencies with the roles they actually play within the team.

**Assumptions:** The basic assumption of this study is that some roles within a team may interfere with each other. In this situation playing only one type of role will be better for the team. Many factors should be taken into consideration in order to apprehend each member's potential role. Those factors are [43]:

1. An individual can play more than one role in the team taking points of significant level.
2. A member may want to play other roles because of his inclination for them despite the high point he gets for the defined role.

3. Despite a member's high score for a peculiar team role, which may give an idea that he is strong for that role, other members may prevent him to take the role. And because the scores are relative a score sometimes can be significant and insignificant some other time.

## METHOD

This is a case study. The established project teams in SAPHPHVHFI in which the team (based) management approach was applied. This study took place in SAPHPHVHFI where a flexible and non routine organising style was tried to be realized. The management style was initiated on a study group on readiness basis at first, but then it helped the group to come out as natural team spontaneously. The process of developing team (based) management approach was experienced in the school. The teams were described as natural since, except for the first study group, the school administration had no direct effect on their being structured. Therefore it was considered that the descriptive research structuring of this study would make significant contributions from the aspects of science and application fields. As for the study, at the first step the theoretical framework of the study was determined through literature review and it was decided that Belbin (1981)'s team roles model was the most applicable theory in studying team fact in SAPHPHVHFI based on the review. Then the data was obtained from observations, interviews and the answers given to the questions in Belbin Team Roles Self Perception Inventory (BTRSPI). The researcher is a natural member of the "Eight Colours in Vocational Education" team as being the contact person for Sakarya University. The observations were done on the other project teams by making use of this advantage.

**Population and Sampling:** It is not a coincidence that the SAPHPHVHFI was chosen for his study. Out of 1618 vocational high schools affiliated to the Office of the general manager of male technical instruction, SAPHPHVHFI was kept separately from the equals and attracted the attention because of the success showed. There is no evidence obtained from scientific data to explain the distinction criterion. However, it is possible to prove the school's being successful scientifically. But, this requires a different study effort that goes beyond the scope of this study. Apart from what has been mentioned before, the success of one school is determined in

accordance with some criteria in Turkish educational system. Some of those criteria are; the success of the students in a high school achieving in university exam in terms of percentage informally whereas the evaluation results of bureaucratic inspection based on grades formally. In Turkish educational system no expectation of achieving in university exam is breed for vocational and technical high school students. SAPHPHVHFI is accepted as successful regarding evaluation of bureaucratic inspection results.

It was considered that it would attract the attention to study a high school namely, SAPHPHVHFI where a non routine and team (based) management organising style which is not common in other high schools adhered to Ministry of National Education was tried to be realized.

**Sakarya Anatolian High School, Profession High School and Vocational High School for Industry (SAPHPHVHFI):** Sakarya Anatolian Profession High School, Profession High School and Vocational High School for Industry was established in 1946 with its branches of lathe workbench and joinery works. Today there are 2485 students and 150 teachers in SAPHPHVHFI. School administration consist of 20 people; one school principle, 7 deputy managers, 6 division chiefs, 6 workshop and laboratory chiefs.

There are five teams at the present in SAPHPHVHFI, namely; “European Union Project Team” that execute “eight colours in vocational education”, “Quality in Sub industrial Production of Automative Sactor”, “Vocational education for joblesses”, “World Bank Project Team”, “Robot Club Team”.

**The Study Group:** SAPHPHVHFI is a vocational high school consists of 2485 students and 150 teachers. The total of 28 people were working in the five teams that are the subjects of the study. All of the teams have the characteristic of crosswise functional team. The teams consist of teachers with different speciality were working in different divisions. For instance, there are 9 members in “European Union Project Team” that execute “eight colours in vocational education”, 6 members in “Quality in Sub industrial Production of Automative Sactor”, 6 members in “Vocational education for joblesses”, 8 members in “World Bank Project Team” and 6 members in “Robot Club Team”.

There are 24 men and 4 women in the teams. The distribution of the team according to the branches were as follows; 2 english teachers, 2 psychological consultancy and guidance teachers, 11 electrical and electronic

teachers, 4 computer teachers, 2 metal technologies teachers, 2 wood technologies teachers and 5 mechanics teachers. The service period of the team members were as follows; 2 teachers for 27 years, 2 teachers for 20 years, 13 teachers for 8-10 years and 11 teachers for 2-5 years of senioroty. However those characteristics of the team were not used in the study. Because they are not the issue in the purpose and scope of the study.

**Collection of Data:** The data was obtained from the answers given to the questions in Belbin Team Roles Self Perception Inventory (BTRSPI) that was developed by Belbin (1981; 1993) [9,10]. This instrument is a well known inventory by the practitioners and the scientists worldwide. BTRSPI was adapted to Turkish by Tunalı (2003) and used in his masters thesis [44]. The inventory was readapted by the researcher making benefits of Tunalı (2003)’s studies [44]. There are the ipsative and the normative versions of the inventory. The ipsative version of the inventory was used in this study. Ipsative scale concept is defined as the explanation of one power of coefficient category in comparison to the other coefficient category powers. According to another definition, it is measuring of an individual’s personality regarding others’ personalities [45].

The first version of the BTRSPI was used in this study. This version of BTRSPI consists of 7 categories which comprises 8 suggestion statements. Furthermore, the members of study group were asked extra questions pertaining their functional and team roles in the team.

Taking all the empirical studies together into consideration, team roles definitions and the independent instruments that are used to measure them are accepted as reliable. Balderson & Broderick, (1996) defined BTRSPI as reliable with a similar approach. Balderson & Broderick, (1996) and Tunalı (2003)’s suggestions were taken into consideration in this study [44,46].

**Data Analysis:** BTRSPI was applied to team members within the school by the researcher himself. Members assessed the suggestion statements for each category out of 10 points from the aspects their applicability to them. Based on this evaluation, Belbin (2007) calculated the team roles of the individuals in accordance with the total point equivalent answers within the matrix. The evaluation of data was done with SPSS 15 statistical programme [41].

Team members were encoded with numbers and the total points they got were put on the tables. Points demonstrate the Belbin roles the members are inclined to play. The minus sign (-) in the table demonstrates the

insignificant points that can be taken into consideration in forming the team. It is remarkable that if a member give the same answers for each coefficient in the inventory it will make a mean of 8.75 for each matrix cell. Thus, the members who took 9 points or lower were not seen as significant and shown as (-) in the cell. The letter and number symbols were used together to show the inclination of each member for a determined role. The letters stands for the team role given at the upper part and numbers demonstrate the points taken from the test. The scores between 10-19 are symbolized with lower case letters, for example the c3 shows that chairman's score is 13 and the p2 shows that the plant's score is 12. The mentioned symbols were used to simplify the table and to make it more comprehensive by eliminating secondary type data. The functional roles were classified in three groups namely; specialis, Research&Development (R&D) and support service since there were so many roles to be mentioned. If one member's functional role is related to his educated field then his role is defined as specialist in the module. If producing idea and making researches about the role he plays are excepted from one member, then he is defined as R&D. If one member's role includes report writing and budgeting or facilitating, then his role is defined as support service.

**Findings and Interpretations:** Member's natural role tendencies in accordance with the role they actually play within the team based on researcher's observations and members' perceptions are evaluated. The evaluation was done for each team first of which is shown in Table 2 for the "European Union Projects Team":

Analyzing European Union Project Team carefully from the aspect of Belbin (1981)'s team role balance, it can be said that the roles within the team are distributed equally (balanced) [9]. On the contrary, it can be inferred from the table above that the roles of CH, SH, PL, ME ve CF are played by the members who are less inclined. It can also be inferred that since the roles of PL and ME are claimed at a very low level, the team may suffer the consequences of being "brainless". The CW role within the team turns out to be the very role that each member except the 7th are potentially inclined role.

According to Table 2, when the functional and the team roles of the members are compared, there is no certain differentiation on functional roles. For example, while the 3rd member who has the highest score for CW role plays the specialist role as functional; the 6th member has the second highest score for CW role and plays the support service role as functional.

The results obtained from the second team, namely the World Bank Team, are shown in Table 3.

It can be inferred from the table above that the members who play the roles of CH, SH and TW are potentially at the low inclination level. According to distribution table, the weakest side of the team is in CH role. Likewise, the TW role is played by the 5th member of the team who is forced to play the CH role since there is a shortage in CH role. Taking the successes of the teams into consideration, the CH role is supported by the school principal who is the natural member of all the teams. Paying attention to these supplementary characteristics, it can be said that the roles are distributed equally within the team. However, as is seen on the table above, there is no parallelism between the team and functional roles of the members.

The results obtained from the third team, namely the Employment-Establishment Team, are shown in Table 4.

As is seen in the Table 4, There is no member who is inclined to play the PL role within the team. Except for the PL role, it can be said that the roles are distributed equally within the team. According to Belbin (1981), the RI role is the complementary of the PL role within a team [9]. From this point of view it can be inferred that all of the members', except for the 5th, being inclined to play the RI role can be considered as an advantage for the team to fulfill the need. According to natural inclination of the members, the strongest side of the team is five members' being inclined to play TW and RI roles. The roles of RI, CH and TW are intended to human relations [30]. In the light of the above given information, it can be inferred that the strongest side of the team is human relations and the weakest side is the roles related to "brain". As is valid for above mentioned teams, again, there is no parallelism between the team and functional roles of the members.

The results obtained from the fourth team, namely the Quality Team of Sub industry Production in Automotive Sector, are shown in Table 5.

As is seen in the Table 5, there is no member who is inclined to play the PL role in the team. According to Belbin (1981), the RI role is the complementary of the PL role within a team [9]. Therefore the PL role will be played by the 4th and 1st members of the team who have high level tendency towards playing that role. Thus it can be said that the roles are distributed equally within the team. The members of this team are less inclined to play almost all the roles except CW, RI and TW. From the Belbin (1981)'s point of view it can be said that the team's overall performance will not be at high level [9]. The strongest side of the team is the roles of CW and TW. It can also be

Table 2: European union projects team members role distribution

	Members	Functional Role	CW	CH	SH	PL	RI	ME	TW	CF
European Union Projects Team	1	R&D	c4	-	-	-	r1	m0	t0	f5
	2	R&D	c1	h5	s5	-	-	-	-	f3
	3	Specialist	C30	-	-	-	-	-	T5	-
	4	Support serv.	c5	-	-	-	R5	-	t6	-
	5	Specialist	C4	-	s7	-	-	-	t0	-
	6	Support serv.	C4	-	s7	-	r3	-	-	-
	7	Specialist	-	-	-	p1	r3	m1	t7	-
	8	R&D	c2	-	-	-	r6	m4	t0	f5
	9	R&D	c5	-	-	-	-	-	-	f3

Table 3: World bank team members distribution of functional and team roles

	Members	Functional Role	CW	CH	SH	PL	RI	ME	TW	CF
A. Ceylan	1	World Bank Support service	c3	-	-	-	-	m3	t4	F5
Coşkun Odabaş	2	World Bank R&D	c1	-	s5	-	-	-	-	f3
Gamze Kara	3	World Bank Support service	c5	-	-	-	r5	-	t6	-
Hıfzı Kaya	4	World Bank R&D	-	-	s5	p2	-	C1	-	-
Ilhan Coşkun	5	World Bank R&D	-	h3	-	-	r3	-	T5	-
M. Aydın	6	World Bank Support service	c0	-	S0	P2	-	m1	-	f1
N. Kocabaş	7	World Bank Support service	c3	-	-	-	R7	m0	-	f5
Onur Kalaycı	8	World Bank Support service	C30	-	-	-	-	-	T5	-

Table 4: Employment-establishment team members distribution of functional and team roles

	Members	Functional Role	CW	CH	SH	PL	RI	ME	TW	CF
Employment-Establishment Team	1	Supp.serv.	C1	H0	s0	-	r1	-	-	-
	2	R&D	c4	-	-	-	r1	m0	t0	f5
	3	R&D	-	-	-	-	r3	-	T5	-
	4	specialist	c1	-	s0	-	r2	-	T0	-
	5	specialist	C30	-	-	-	-	-	T0	-
	6	Supp.serv.	c5	-	-	-	R5	-	t6	-

Table 5: Quality team of sub-industry production in automotive sector members distribution of functional and team roles

	Members	Functional Role	CW	CH	SH	PL	RI	ME	TW	CF
Quality team of sub-industry production in Automotive sector	1	Specialist	-	-	-	-	r3	-	T5	-
	2	Specialist	C4	-	s7	-	-	-	t0	-
	3	Specialist	c4	-	-	-	r6	m0	t0	f5
	4	Specialist	c3	-	-	-	R7	m0	-	f0
	5	Supp.serv.	c0	h4	s5	-	-	-	-	f3
	6	R&D	c8	h5	-	-	-	-	t0	-

Table 6: Robot club team members distribution of functional and team roles

	Members	Functional Role	CW	CH	SH	PL	RI	ME	TW	CF
Robot Club Team	1	specialist	c0	-	-	-	-	M0	T0	-
	2	Support service	C4	h7	s7	P3	-	-	t0	-
	3	R&D	-	-	S0	-	R5	-	t6	-
	4	R&D	c7	H2	-	p3	-	-	t0	-
	5	specialist	C35	-	-	p0	r0	-	-	-
	6	specialist	c5	-	-	-	-	-	-	F0

inferred from the table that the possible success of the team in human relations and planned Project fields seem to be high. As is mentioned previous teams, there is no paralallism between the team and functional roles of the members.

The results obtained from the fifth team, namely the World Bank Team, are shown in Table 6.

As is seen in Table 6 it can be inferred that the roles are distributed equally within the team. As is mentioned

previous teams, again, there is no paralallism between the team and functional roles of the members.

## DISCUSSION AND CONCLUSION

The contributions that are made by the members of the teams, the roles they play and the distribution's being balanced or not in SAPHPHVHFI is within the scope of the study. The findings have revealed that the roles are

distributed equally within the teams. However, it is also shown that the tendency level of each member in the teams differs from one team to another.

Evaluating the teams from the aspect of roles in almost all of the teams the roles of CW, RI and TW are mostly inclined to be played by the members. On the other hand, there are very few members who are inclined to play CH, SH and PL roles. More generally, it can be inferred from the results of the study that there are almost no one who is inclined to play the CH and SH roles and the ones who are inclined do not show the certain characteristics of the mentioned roles. This finding supports Tunali (2003)'s [44]. It can be thought that the tendencies differentiation occurs because of studying different groups.

It is also revealed with the study that the actual roles played by the members match up with the team roles anticipated by BTRSPI. Given the right to choose, most members prefer to play the roles that are most convenient. As a result of this, it can be said that Belbin's team roles theory might be applied to educational organizations as well. In the educational organization which adopt team (based) management type, the BTRSPI can be made use of in the process of forming the teams. It is thought that this will have positive effect on the performance of the organization.

Another result obtained from the study is, contrary to what was expected, having no paralallism between the team and functional roles of the members. The functional roles played by members are related to tutorhood field. From this point of view, it is expected that there would be a certain relationship between professional tendencies, thinking styles [47] and personalities [48]. Yet, Belbin (1981) has developed team roles theory based on these two attributes [9].

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