

PAPER • OPEN ACCESS

Organization of structured interaction on the base of psychographic characteristics within the model of personality traits DISC

To cite this article: E A Chigova *et al* 2019 *IOP Conf. Ser.: Mater. Sci. Eng.* **483** 012097

View the [article online](#) for updates and enhancements.

You may also like

- [Systematic Literature Review of Profiling Analysis Personality from Social Media](#)
Idris, E Utami, A D Hartanto et al.
- [Computing Personality Trait Based on Multi-source](#)
Zheng Chuanqin
- [Resting-state network predicts the decision-making behaviors of the proposer during the ultimatum game](#)
Yuqin Li, Qian Yang, Yuxin Liu et al.



ECS
The
Electrochemical
Society
Advancing solid state &
electrochemical science & technology

DISCOVER
how sustainability
intersects with
electrochemistry & solid
state science research

Organization of structured interaction on the base of psychographic characteristics within the model of personality traits DISC

¹E A Chigova, ²I V Plyushch, ³I V Leskova

¹Reshetnev Siberian State University of Science and Technology, 31 “Krasnoyarskiy Rabochiy” pr., Krasnoyarsk, 660037, Russian Federation.

²Federal State Educational Institution of Higher Professional Education Siberian Federal University, 79 Svobodny pr., Krasnoyarsk, 660041, Russian Federation.

³Russian state social University 4 Wilhelm Pieck St., bld. 1, Moscow, 129226, Russian Federation

E-Mail: chigovaea@yandex.ru, reft@inbox.ru, leskova.i@yandex.ru

Abstract. The paper discusses impact factors assuring the change in the efficiency of structured interaction at enterprises and in organizations. Methodological tools included a pilot study based on the model of different personality traits (DISC). Participants of the study were 47 representatives of small work teams in companies of Siberian region. The paper interprets a correlation between the efficiency of structured interaction in work teams and social personality traits. The use of training forms aimed at adjusting a social model of work teams is said to be restricted. An interrelation between team building based on psychographic traits and application of latest organization principles of structured interaction was ascertained according to analysis data.

1. Introduction

In the present day society, improvement of manageability is recognized to be a burning issue in all activity fields. As more parties concerned are getting involved in the process, management tends to change.

Management techniques have been studied for a long time so far. As soon as mankind is aware of its needs, managing attempts are made, although an understanding of management is a quite new phenomenon. For two recent decades new approaches to management have been established in science. Human recourses management experiences the most dramatic changes. Management has been considered a process towards the goal. Subjectivity of management is becoming a more important factor in research of the time. A modern understanding of management implies projecting and maintaining of such an environment, where individuals co-working in groups achieve certain goals in an effective way [1]. Therefore, management is found in all spheres with intended transformation of properties or states in order to increase the efficiency of a system.

According to a common belief in the present day society a social factor is vital for production management. Individuals are involved in the most production phases, making processes uncertain. Several attempts have been made to improve this uncertainty through taking into consideration more parameters of human behavior, making behavior more controllable. But these attempts were complicated.

First, people management is impossible without an ethic factor. Therefore, social management relied on thoroughly developed formalized regulations, agreements, laws etc. However, a complex nature of human behavior impedes its regulation on the base of formalized rules. Moreover, work activities with a great number of rules and strict control is low efficient [2]. To date, individuals have a



more subject role in the society, becoming an active force instead of being just a tool or one of recourses. Specifics of people management enjoy recognition in management.

Social management is thought to be the process of going towards goals in a company; it has two moving forces – economic and administrative motivation of human behavior, and transformation of social maturity in staff, its active involvement into strategic planning of the company [3].

Second, it is hardly possible to balance or consider all uncertainty factors even if IT-technologies are used. As accepted, a complex system is to be self-balanced in an uncertain situation, which is not beyond approved system facilities. As a consequence, qualifications of human recourses have to meet much higher standards. Any work team or social group is a complex system and is to be capable for working more efficiently in ordinary situations.

2 Problem statement

Management implies implementation of preliminary realized needs of subjects. A new challenge facing management in the present day society is the use of realized needs both of managers and executives; that is based on employees' interest in work product and strategic development of the enterprise [4]. Manageability turns into a more required feature of organizations, groups, manufacturing in any activity field.

The involvement of staff into decision making process with the purpose to increase manageability has been gaining in importance in the society [5]. Participation in management and decision making, in its turn, necessitate certain social characteristics and states. For instance, it is a psychological climate in staff. The psychological climate in staff depends in most aspects on the social competence of employees. First of all, such characteristics as ability to be responsible for decisions made, a skill of making precise statements, being polite and reasonable in arguments, willing to discuss and accept ideas of other people [6]. Furthermore, in some activity fields social competences are strongly interrelated with professional skills and are close to them. For example, social competence is an important constituent of professional competence in the field «person-to-person» [7]. Introducing IT-technologies, people still participate in processes requiring a complex interaction between individuals. A majority of managers try to develop work teams. The most widespread practice in the Russian society is training to build local social groups (work teams).

Training as a form to influence a group dynamics is popular with managers due to certain characteristics. They include the development of a certain skill, willingness to practical application of this skill, time limit of preparation [8]. Trainings are used to change the dynamics of work groups.

However, training can't solve all problems of group dynamics for two reasons. First, managers underestimate the phase of problem statement; they are more focused on trainings with a certain subject area. For example, team building, negotiating skills, public speech, time management etc. The reason for conflicts or low efficiency in staff might not agree with the subject area of trainings. Second, training is far from being a universal tool to solve all problems existing in staff. Efficiency of training as a tool increasing social competence is quite low. Mainly, because skills of a social competence imply external reaction of an individual to the surroundings, to him/herself, it is a part of emotional intelligence, that can't be trained, only developed [9]. For example, communication training can promote personal development of an employee but not initiate it. The development of certain skills can't develop the personality of an employee; it provides him/her only with more sophisticated tools. A question is stated – what conditions are unfavorable for application of training as a universal tool for team development. Identification of these conditions makes it possible to determine potential application of trainings within the certain group dynamics. To answer this question a study was carried out on the base of psychographic characteristics.

3. A pilot study on a model of individual personality traits in DISC

A model of individual personality traits DISC is frequently used to analyze groups. Methodically, this model is based on a four-factor model of the same name and centers on test data in 4 different

behavior types (rational thinking, feelings, emotions, intuition) [10]. In Russia this methods is also applied now but mostly for selection of highly skilled personal.

Method description. In September 2018 a study was carried out in Krasnoyarsk with the purpose to pilot the method and assess its validity for Russian conditions. The study was conducted in Krasnoyarsk (Siberia, Russia). Employees of 4 companies, aged 20-50, participated in this study. Work teams have no functional connections and were tested according to DISC method without interrupting their work activity.

The study included double DISC-testing of respondents: in the evening of an active week day and during the day time at the weekend. Staff and managers of 4 structural (2 business and 2 governmental service) sub-divisions were tested.

Two business structures:

- pizza delivery service in the city (one company, 7 people),
- shop warehouse «Mebeldesign» (four subdivisions, 26 people)

Two structures of governmental services:

- PR-department of the territorial administration (one sub-division, 3 people),
- kids' clinic (one sub-division, 11 people).

Therefore, forty seven male and female respondents were questioned, including 7 managers and 40 ordinary employees.

As findings of tests were determined, respondents were also interviewed. The interview included three questions. They were: «Do you agree with DISC-test results?», «What is your position in the company?», «Do you like your job and your position?». The majority of respondents (except for 2) agreed with the study outcomes. Being emotional and using certain examples from their private life, they confirmed validity of results. As the second question «What is your position?» was asked, the data of testing and position of a respondent were compared.

4. Results

The results of DISC-test data obtained in the evening of a weekday and at the weekend are quite similar. They differ in one aspect only: tired respondents (after a working day) had more points in the scale «passivity». For instance, results of behavior style “compliance” exceeded slightly those of behavior style “dominance”, whereas “steadiness” was above “inducement”. And, vise-versa, results of the scale «activity» were higher at the weekend. However, the principal result, indicating the dominant DISC behavior style, was stable (89%). Therefore, a time factor is shown to be quite irrelevant for results of DISC-testing.

As for correlation between the position in a company and dominance, there is an unambiguous regularity. For instance, five of seven managers demonstrated a dominant behavior style. Two managers indicated a lower dominant style, according to assessments one of them was inducement (head of the PR-department), the other one demonstrated the style of compliance (head of accounting department). All respondents had minimum 6 months of working experience in the managerial position. All of them emphasized to feel comfortable in their managerial positions; and all their tasks were completely performed.

Analyzing the data provided by executive employees, entirely different conclusions were drawn. Among ordinary employees staff of kids' clinic (5 of 10 respondents) and shop warehouse «Mebeldesign» (4 of 22 people) demonstrated the dominant behavior style. Therefore, managerial positions are held more frequently by people with a high dominance factor, that is, active, purposeful, strong-willed, capable for problem solving, and authoritarian ones. In other cases these are positions with relative operational autonomy, where self-reliant decisions are supposed to be made (clinic). Modest, conservative, reserved, piece-loving, slow in decision making and easily-agreeing employees are executives. Here, the question «Do you like your job and your position?» was answered with “yes” by two thirds of executive respondents. In most cases they represented the style steadiness, who didn't feel comfortable with a dominant and conflicting manager.

5. Discussion

Efficient organization of any structured interaction implies a communication environment with certain rules of structural and personal communication, goals and content of manufacturing or business processes. Principally, efficient organization of structured interaction presupposes low proneness to interpersonal conflict on all levels of the manufacturing process, i.d., between managers, structural sub-divisions and executives. The role of emotions employees have in the process of work has been emphasized by experts of different research fields for almost fifty years [11]. Optimally, regular checking of negative emotions is recommended, the number of employees is not important in this regard. Using special techniques, the matter of difficulties should be disclosed in order to resolve conflicts arising in a work team. Otherwise, a conflict like any psychological problem caused by communication might deteriorate professional activity, lead to neglecting of functional tasks, and worsen attention focusing, as a consequence, employees make mistakes in their work activity.

Methods of staff diagnostics were not applied for recruitment in any organization under consideration. Employees were recruited according to formal characteristics (level of education, work experience). When recruiting social competence was not taken into account, as well as adaptability, orientation towards rules accepted in the organization. This is quite typical for the majority of organizations in Russia; as a result, they face such problems as labor fluctuations, low work efficiency and inefficiency of the organization. Poor-efficient methods of labor optimization are used to resolve these problems: introduction of an updated norm system, change of work schedule, training aimed at the development of certain skills. These methods can hardly change the efficiency of a work team as whole.

At the same time it is quite impossible at this stage to reveal reasons for certain psychographic characteristic that employees have. Several explanations are found. First, executives might have prevailing average values of certain characteristics due to random selection according to personality traits formed before. In this case people tend to choose unconsciously a professional role with more psychological comfort. Second, the tested might not demonstrate strongly-pronounced personality traits; those are seen as a consequence of some professional deformation. In this case the accepted passive role presupposes a leveling effect of psychographic characteristics with regard to the chosen role position. Third, it might be an all-Russian general tendency of low social competence. I.V. Plyushch emphasizes that misbalancing formation and development of certain personality traits cause later maturation, and a longer period of education is not the only reason for it. More infantilism manifestations, emotional immaturity, unformed social competences of adults are registered [12]. Present day infrastructural and social life conditions slow down the development of some social competences, sometimes making their formation even impossible.

In recent decades recruitment based on certain social and psychological characteristics has been gaining in importance. Different methods of recruitment or assembling work teams are used in this case; these methods can be divided into qualitative (relying on psychological and sociological theories) and quantitative (including formalization and modeling of logical deductions by decision making individuals, binary choice models and artificial neuron nets applied by HR agencies) [13]. As a result, all methods of recruitment and assessment of personal single out psychographic characteristics revealing a life style of an employee, his/her goals and values. The data on psychographic characteristics make it possible to choose a work team according to a set model, with necessary/sufficient level of personality development and orientation of this development. A work team formed this way operates maximally efficiently and is changeable by many up to date managerial methods, including training forms.

6. Conclusion

To date, management of a work team is an important part in management in any organization. Qualitative characteristics of personal are in focus of research. Two trends have been formed in personal management; their implementation relies on principles accepted in two different managerial schools.

One approach pays attention to the development of personal hired in a random way. This approach is dominant in countries with paternalistic managerial and cultural tradition, e.g. Russia. The advantage of this approach is higher security of employees. A low efficient employee is still employed. It is important in a society with a low level of social and professional mobility. Using short termed forms of training, a manager makes attempts to develop certain skills of employees. The efficiency, in this case, increases insignificantly and doesn't depend on made effort. Performing work activity for a long period of time, these employees develop certain tactic models of their profession and improve the efficiency of work under stable conditions or in certain professional fields. Therefore, work efficiency increases in a long run provided that a work team is constant. This approach is in line with management principles stated by A. Fayol.

The second approach to personal management relies on rigid diagnostics procedures of recruitment at the initial stage. The recruitment is carried out via determining psychographic personality traits of individuals. This approach makes it possible to assemble a work team with a high level of compatibility immediately at the beginning of professional activity. Short-termed training in this work group would result in a long-termed effect, increasing, in this way, the work efficiency, that is in line with management principles, described by the founder of personal manager, F.W. Taylor [14]. Nowadays, scholars also agree with F.W. Taylor's ideas and suggest four principles of personal management, which are efficient in a highly compatible work team [15]. In general, management is aimed at making the activity more rational and supporting the rational way of thinking. The rational activity is result-orientated; however, different groups of a work team might not always accept a certain work result as a main one. The efficiency of work activity is regulated both by management and social norms [16]; that's why we admit the development of any work team should be initiated in a managerial group. The most managers expect changes provided by employees, although the change of a managerial group is needed.

Therefore, organization of structured interaction on the base of psychographic characteristics makes it possible to reveal psychographic characteristics of potential employees at the stage of recruitment, and also use up to date principles in organization of structured interaction. For instance, a deep professional specialization of employees would be maximally efficient under conditions of appropriately formed work team, where managers and employees share work tasks and responsibilities, and both material and non-material remuneration for work done is important. Otherwise, no managerial methods, both formalized and communicative trainings, can guarantee high efficiency of organization.

7. Acknowledgements

We appreciate deeply collaboration of all participants of the study. They were willing to learn more about themselves with the purpose to become better. These are participants listed in groups: employees of pizza delivery service «Al Pacino», shop warehouse «Mebeldesign», PR-department of Regional Administration, kids' clinic №2.

References

- [1] Koontz H & Weihrich H 1990 *Essentials of management* **5** 13-22
- [2] Vogt J, Leonhardt J, Koper B and Pennig S 2010 *Ergonomics* **53**
- [3] Mazurkiewicz A. and Pizło W 2006. *Podstawy Marketingu* (Warsaw: PWSBiA) p 165
- [4] Chizhova E A and Oleshkevich Yu V 2017 *Theory of journalism* **2** 218–227
- [5] Maksimov B I 2014 *Sociological Studies* **3** 107-113
- [6] Urbach N. and Ahlemann F 2016 *HMD-Praxis der Wirtschaftsinformatik* **53(1)** 16-18
- [7] Ahlemann F and Eckl C 2013 *Strategisches Projektmanagement* (Springer-Verlag Berlin Heileiery) p 163
- [8] Plotnikov A V and Skuridina I V 2014 *Life Science Journal* **11** 548–553
- [9] Segundo Vito Aliaga Araujo and Scott N Taylor 2012 *Cross Cultural Management: An International Journal* **19** 19-29

- [10] Nikishina A 2016 *Modern research and innovation* **16** 7
- [11] Marston William Moulton 1928 *The Emotions of Normal People Emotions Of Normal People* (Osmania University: Publisher Kegan Paul Trench Trubner And Company) 443
- [12] Plyushch I V 2017 *Pedagogy* **3** 64-69
- [13] Zinchenko A A 2010 *Personnel management* **3(15)** 70-75
- [14] Taylor F W 1911 *The Principles of Scientific Management* (New York: Harper & Brothers) 156
- [15] Barabash M A and Chizhankova I V 2017 *Materials of Ivanovo readings* **3-2** p 6-12
- [16] Elster Jon 1989 *Journal of Economic Perspectives* **3(4)** 89–117