

Assessment of Personality for Influencing Team Dynamics

Manish Ghimire

BBM Scholar, Madan Bhandari Memorial College,
Tribhuvan University, Kathmandu, Nepal.



Journal of UTEC Engineering Management (ISSN: 2990-7969)

Copyright © 2023 The Author(s): **Published by United Technical College**, distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0)

INFO

Corresponding Author:

Manish Ghimire

BBM Scholar, Madan Bhandari
Memorial College, Tribhuvan
University, Kathmandu, Nepal.

E-mail

maneesghimire4@gmail.com

Orchid

<https://orcid.org/0009-0005-5093-632X>

Date of Submission

January 7, 2023

Date of Acceptance

June 12, 2023

ABSTRACT

Personality and team dynamics are closely related and can have a significant impact on the effectiveness of a team. Having a diverse range of personalities on a team can bring new ideas and solutions, but it can also lead to conflicts if team members have difficulty communicating or working together effectively. Personality and team dynamics play an important role in determining the effectiveness of a team. A diverse range of personalities can bring new ideas and solutions, but it can also lead to conflicts if team members have difficulty communicating or working together effectively. This is a literature based research to find team dynamics under different personality. The development of innovative solutions to complex problems in the field of information systems (IS) has become increasingly challenging. In order to meet these challenges, many organizations have adopted the use of cross-functional teams in their IS development process. These teams consist of both users, such as accountants and salespeople, and IS professionals, such as systems analysts and programmers. The goal of these teams is to work together effectively in order to produce successful systems. The team-building literature suggests that teams should have high levels of satisfaction with their performance, but in reality, this is not always the case. This suggests that there may be challenges in effectively implementing teams in the IS development process.

Keywords: personality, team dynamics, information systems, effectiveness, team building

INTRODUCTION

Leader is the dealer of hope (Mishra, 2018). Satisfaction of human is prime concern for today's organizations (Dahal, et al, 2021). The study of the relationship between personality and team dynamics has gained attention in recent years. The idea is that by understanding the personalities of team members, managers and team leaders can better understand and manage the dynamics within a team.

One commonly used personality assessment is the Myers-Briggs Type Indicator (MBTI), which is based on Carl Jung's theory of personality and measures an individual's preferences in four areas: extroversion vs. introversion, sensing vs. intuition, thinking vs. feeling, and judging vs. perceiving.

Another popular assessment is the Big Five personality traits, which measures an individual's levels of extroversion, agreeableness, conscientiousness, neuroticism, and openness to experience. This assessment is based on the work of Costa and McCrae and has been widely used in research on personality and team dynamics.

A study by Den Hartog and Koopman found that the Big Five personality traits have a significant impact on team dynamics and that team members with high levels of extroversion, conscientiousness, and agreeableness tend to have a positive impact on team performance.

In summary, the study of the relationship between personality and team dynamics is important as it helps managers and team leaders to better understand and manage the dynamics within a team by identifying the personalities of team members and their potential impact on team performance. This can be made strength of organization through ethical cultivation and practice (Mishra and Aithal, 2023; Yadav et al, 2016).

Statement of the Problem

The primary problem addressed in this review paper is the limited understanding of how

individual differences impact team dynamics, and the underutilization of personality assessments to address this issue. Despite a well-established connection between personality and team performance, there is still a lack of knowledge on the specific methods in which personality assessments can be utilized to enhance team dynamics. This includes a lack of understanding on how to effectively use personality assessments for team member selection, training programs, and communication strategies. Additionally, there is a dearth of research on the potential challenges and limitations that may arise when utilizing personality assessments in team settings.

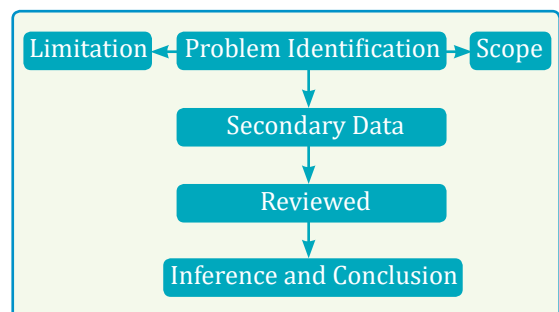
This review paper aims to address this problem by providing a comprehensive examination of the use of personality assessments in the context of team dynamics. The paper will explore different methods of assessing personality and examine how they can be used to improve team dynamics. It will also address the potential challenges and limitations of using personality assessments in team settings, providing a balanced view of the benefits and drawbacks of utilizing personality assessments in team dynamics.

OBJECTIVE

Overall, the objective of this review paper is to increase understanding of the impact of individual differences on team dynamics and the ways in which personality assessments can be used to enhance team performance.

METHODOLOGY

Flow of Research



Analysis Method

Various articles and journals with key words such as personality, Team, Interaction, Team work etc were reviewed in order to make this review paper more fruitful and meaningful. Furthermore, the review of such papers and journals are given in the paper below.

Literature based Analysis

Interactions are more important when performed by the agents that have a better position in a group. Various personality are constantly affecting team dynamics. According to the article of ELAI 2010, H.Coelho, various personality plays the vital role in the operation of a proper functioning team.

This article has proposed the Model for group behavior which states that, "The base model for the agents' behavior in the team is inspired by the SGD Model. The SGD Model was created to embed social intelligence in autonomous agents that interact in small teams. It implements behavior patterns inspired by results from social sciences that allow agents to generate "human-like" group behaviors. The model focuses on the interactions within small groups and not on highly structured societies and social networks. The model implements two principles in the dynamics of the team. First, not all agents interact with the same frequency, some interact more often than others. In addition, not all agents engage in the same type of interactions in a given situation. For example, when one agent in the team performs a bad action for the team's goal an agent may adopt a negative attitude while another may adopt a positive attitude. Second, the relevance (and valence) of an interaction depends on the agent that performs the action and on the agent that observes it (e.g. interactions are more important when performed by the agents that have a better position in the group). These differences may come from the personality of the agents but are influenced by the social context of the group as well (e.g. the distribution of social power)."

Furthermore this paper has mentioned the behavior generation to see or check if the person or subordinate is motivated to work. The way that the agents in this system behave is determined by regular cycles in which their motivations are evaluated. If one or more motivations are determined to be active, the most intense one will be chosen for the agent to pursue. The agent then uses a planning mechanism to select the appropriate actions to achieve the chosen goal. The intensity of the motivations can change over time and in response to specific events. The reactive components of the motivations will decrease over time, while the proactive components of instrumental motivations will increase over time. Socioemotional motivations do not change over time because the agent is primarily focused on completing tasks. However, if the agent is designed to prioritize social goals, this may need to be reconsidered. Additionally, certain events may cause the motivations to reset to neutral if the goal associated with the motivation is fulfilled. The agent is persistent in its goals and will continue to strive to achieve them, although certain events can change the motivation's value.

The dynamics or the motion of the team is influenced by personality traits such as Extraversion, Agreeableness, Conscientiousness, Neuroticism, openness to experience. Each of these have various impact on the team functioning. Each of those impact are described below:

- **Extraversion:** Extraversion are the type of personality who are more vocal and open to sharing his/her ideas in a team or group. Their impact on the team is basically positive because of their free flowing dialogue within the team. Opposite to Extraversion, there is another personality type which is Introverts are shy guys and cannot communicate with the members of the team on various matters which basically have negative impact on the team dynamics.
- **Agreeableness:** It is another type of personality who are the open guys who

certainly agrees on various matters of team decisions. They are the ones who can make the task easy of the team by easily agreeing on the various matters of the team. This type of personality basically have the positive impact on the team dynamics.

- **Conscientiousness:** Conscientiousness is a personality trait of being diligent and careful. This type of personality tend to be more organized and routine follower person. This personality trait obviously have the positive impact on the team dynamics. Because of their disciplined behavior, team members are positively influenced and they too tend to become conscientious persons.
- **Neuroticism:** It is the personality trait that gives more importance to the negative events than the positive ones. These type of personality can be found in every team who are working to achieve the common predetermined goals. This trait of personality can have both positive and negative impact on the team dynamics. The negative impact it can have on the team dynamics is that he/she always provides negative perception on every plans structure as well as working method of the team. The positive impact this personality can have on a team dynamics is that due to their negativity questioning some unnecessary decisions can be avoided.

Now, one AI based application came raising question on human personality and the Adoption of Mobile is going may be personality will be lost(Pokharel, et al, 2020; Mishra, 2020).

- **Openness to experience:** It is another personality trait which have both positive as well as negative impact on the team dynamics. It is a personality trait a person is open to experience various challenges. Now the positive impact of this trait is that if that challenge is utilized, it can be turned into opportunity and team can get benefitted but on the other hand, if the challenge is

not worked properly, it can lead to various interpersonal conflict within the team members which have adverse effect on the team dynamics.

According to this article, the case study was done and which will be cited below.

“The extended SGD Model, with the personality system presented here, was used in the mind of autonomous agents that act as characters in the game”Power Pentagram”. This game is an adapted version of the game “Perfect Circle: the Quest for the Rainbow Pearl” that was designed to evaluate the effects of the first version of the SGD Model. The game places four autonomous characters and one user controlled character in a virtual environment and defines a context of interaction and a task for the group. The group’s goal is to search the world for a magic item. To achieve this, the group must travel around the world through magic portals that are activated by the powers of gemstones. Their task is to gather and manipulate the gemstones in order to get the required ones that will open the portal. To achieve this, characters need to apply their individual abilities in order to change the gems’ forms, sizes and colours. For example, if the group has two small rubies but it needs one medium-sized ruby, one character can use its ability to merge the small stones into a bigger one. In addition, two or more characters can combine their efforts if they all have the same ability. As a result, the probability of success of the action becomes higher. The difference from the first version is that now the characters and have a secondary goal besides the common goal to open the portal and proceed with the quest. The secondary goal is to get some wealth while going on the quest. To achieve this, characters may use some of the gems in the group’s common stash for own profit. The catch is that they will only get that individual profit if the group’s task is successful within a given time. The actions concerning the resolution of the group’s task are discussed by the group before being executed. Therefore, once a character believes it has a

good action to perform it proposes the action and waits for the opinion of the other members. Then, if the proposal gathered sufficient support the agent starts the execution of the corresponding action. The notion of support depends on the perspective that the proposing agent has of the group. Opinions are identified as Agree or Disagree interactions and will have different strengths according to the position in the group of their performers. For example, if two members in the group express themselves against the action while just one agrees with it, this does not necessarily mean that the action is not going to be executed. If the member that agreed with the action has a better position in the group than the other two together in the perception of the proposing member, then it feels supported and will execute the action. Agents have the choice to join the execution of an action if they agree with a proposal and have the ability to execute the action, although they can only do that if are not already executing an action. By joining the action agents add efforts and increase the action's probability of success. The group interactions are not restricted to the execution of the task. Each member can at any time engage in social-emotional interactions, by expressing their opinion about other members or the group. Characters have different personalities and different abilities that are generated in the beginning of the game."

The SGD model was applied on the game which is cited above. It describes a system for implementing the SGD (Social Goal Dynamics) Model in a game. The system defines the ways in which agents in the game can interact with one another and how these interactions affect their decision making. The agents can use two types of interactions: instrumental interactions (such as facilitating or obstructing a problem) and socio-emotional interactions (such as agreeing or disagreeing with a proposal). These interactions influence how agents perceive and respond to one another's actions. Additionally, the system has direct correspondence between the game

actions and group interactions, which simplifies the process of perception and identification of group interactions.

In the decision-making process, agents consider their internal motivations, such as the desire to perform the group's task or to earn personal points. They also use a planning algorithm and a model of the task at hand to inform their decisions to agree or disagree with a proposal. It is noted that these decisions are not based solely on the task model but also follow socio-emotional rules.

In summary, personality and team dynamics are closely related and can have a significant impact on the effectiveness of a team. Personality refers to an individual's unique characteristics, such as their values, beliefs, attitudes, and behaviors, which can influence how they communicate and interact with others, as well as their approach to problem-solving and decision-making. Team dynamics refer to the way in which individuals within a team interact and relate to one another, including communication styles, leadership roles, and task management. A diverse range of personalities can bring new ideas and solutions to a team, but it can also lead to conflicts if team members have difficulty communicating or working together effectively. To effectively manage personality differences within a team, it is important to establish clear communication channels, set ground rules for respectful interactions, and find ways to support and recognize the strengths of each team member.

Team dynamics are closely related to the different personality types within a team. Personality profiling can help employees understand their own personality traits and those of others in the team, leading to a better understanding of how to work together more effectively. This can include a balance of personalities within a team and an understanding of individual preferences to help with task delegation and communication. Personality profiling can be a useful tool in building self-awareness, creating open

communication and fostering a cohesive team atmosphere. It is also important to remember that too much dissimilarity in personalities can lead to conflict, but with self-awareness and understanding, these differences can also be used to complement one another for the betterment of the team. [t-three.com]

Having a mix of personalities on a team can greatly impact the team's effectiveness. According to Harvard Business Review, good teams involve a mix of several personality types such as self-confident, energetic organizers, diplomatic relationship builders, detail-oriented rule followers, imaginative innovators and cautious, practical thinkers. Other assessments such as Inc, suggest that good team players share certain personality traits such as willingness to ask uncomfortable questions, ability to challenge others, and willingness to accept feedback. The big five personality traits, openness to experience, conscientiousness, extroversion, agreeableness and neuroticism, can also be used to judge the effect of personality on teams. As a team manager, it's essential to have an understanding of the different personality types within the team and how they interact with each other. To optimize the team's effectiveness, a balance of personality types is needed, including functional roles and psychological team roles. Additionally, open communication and understanding of individual differences can help team members bond and work effectively together. [Smallbusiness.chron.com]

Empirical Review Analysis

Assessment of personality for influencing team dynamics is an important topic in organizational psychology, as personality is considered a significant predictor of behavior in group settings. The purpose of this empirical review is to examine existing literature on the assessment of personality for influencing team dynamics, including how personality traits can impact team performance and how personality assessments can be used to optimize team dynamics.

Several studies have found that personality traits such as extraversion, agreeableness, and openness to experience can have a significant impact on team performance and cohesion. For example, a study conducted by Bell et al. (2015) found that teams composed of members high in extraversion tended to be more communicative and outgoing, leading to greater cohesion and performance. Similarly, a study by Saklofske et al. (2012) found that agreeableness was positively associated with teamwork and cooperation, while openness to experience was positively associated with creativity and innovation.

Personality assessments can also be useful tools for optimizing team dynamics. For example, a study by Yurtkoru and Aydin (2015) found that personality assessments can be used to identify potential areas of conflict within teams, as well as to identify team members' strengths and weaknesses. Personality assessments can also be used to guide team formation, ensuring that teams are composed of members with complementary personality traits. For instance, a study by Horvath and Ryan (2015) found that teams composed of members with complementary personality traits performed better than teams composed of members with similar personality traits.

However, the use of personality assessments in team building and development is not without its challenges. Some studies have raised concerns about the validity and reliability of personality assessments, particularly those that rely on self-report measures. For example, a study by Binning et al. (2015) found that self-report personality assessments may be biased by social desirability and other factors. There are also concerns about the potential for personality assessments to reinforce stereotypes and bias, as well as the potential for team members to manipulate their responses to the assessment in order to present a favorable image.

In conclusion, the assessment of personality for influencing team dynamics is an important topic in organizational psychology, with

significant implications for team performance and cohesion. Personality traits such as extraversion, agreeableness, and openness to experience have been found to impact team dynamics, while personality assessments can be useful tools for optimizing team performance and guiding team formation. However, there are challenges associated with the use of personality assessments in team building and development, including concerns about validity and reliability, bias, and potential manipulation of responses. Further research is needed to address these challenges and to develop best practices for the use of personality assessments in team building and development

CONCLUSION

Overall, the use of cross-functional teams in the IS development process is becoming increasingly popular. The goal of these teams is to work together effectively in order to produce successful systems. However, there are challenges in implementing this approach and accurately evaluating its effectiveness. More research is needed to identify appropriate measures for evaluating team effectiveness. Despite this, organizations are still using teams, such as steering committees, in the IS development process, but the level of satisfaction with their performance is not as high as expected.

Personality type theory is a field of study that is rooted in the work of Jung, which aims to understand how individuals approach different tasks and make decisions. One of the most popular instruments used to measure personality type is the Myers-Briggs Type Indicator (MBTI), which was developed by Katherine Briggs and Isabel Myers Briggs. The MBTI is a psychometric instrument that is intended to be an inventory of basic preferences rather than a measure of traits. It is a self-report instrument that is typically administered by qualified professionals and is intended for use with normal subjects. The instrument has been tested extensively for validity and reliability, and it has become the most widely used instrument

for non-psychiatric populations and has been used extensively in business.

The MBTI is based on the theory that individuals have preferences in four areas: how they are energized (extrovert or introvert), how they perceive information (sensing or intuition), how they make decisions (thinking or feeling), and the life-style they adopt (judging or perceiving). Extroverts are energized by interacting with other people, while introverts are renewed by being by themselves. Extroverts prefer the outside world of people and things, while introverts enjoy the inner world of concepts and ideas. Sensing individuals perceive information through their sense organs and prefer data that is factual, precise, concrete, and practical. Intuitive individuals mediate perceptions so that data are received as a whole, through a set of associations. Intuition is applied to explore the unknown and to sense possibilities and implications that are not readily apparent. Thinking individuals use a logical, analytical process to lead to rational judgements or decisions. Feeling individuals consider personal factors in their decision-making process.

An important aspect of Jung's theory, as proposed by Myers, is the grouping of the information intake (sensing versus intuition) and the decision-making functions (thinking versus feeling). Myers proposed two sets of dichotomous functions by which individuals prefer to perceive information and process that information in order to reach decisions – intuitive-thinkers (NT), intuitive-feelers (NF), sensing-thinkers (ST), and sensing-feelers (SF). The MBTI model suggests that each person has a preferred function by which information is perceived (sensing or intuition) as well as a preferred function by which decisions are made (thinking or feeling).

Sensing individuals prefer data that is factual, precise and concrete, and pay attention to currently known facts in a situation. They tend to break every situation down into isolated

pieces. An individual with a sensing orientation is typically a specialist who likes to develop a single idea in depth. Intuitive individuals, on the other hand, mediate perceptions so that data are received as a whole, through a set of associations. They apply intuition to explore the unknown and sense possibilities and implications that are not readily apparent. An individual with an intuitive orientation can be typified as a generalist who prefers to develop many alternative ideas rather than dealing in specific facts and solutions to problems.

Thinking individuals use a logical, analytical process to lead to rational judgments or decisions. They stress logic and formal methods of reasoning and personal factors are not considered in the thinking function. An individual with a thinking orientation seeks to define alternative courses of action, the consequences of each possible course of action, potential costs and benefits of each alternative, including the consequences of no action, and to select the best course of action. Feeling individuals consider personal factors in their decision-making process. They use feelings and values as the basis for making decisions. They seek to understand the feelings of others and try to reach decisions that are in harmony with the needs of the group.

The composition of a team's personality can have a significant impact on its dynamics and outcomes. Two main theoretical approaches exist in studying this topic: the social categorization perspective and the information/decision-making perspective. The social categorization perspective holds that individuals tend to group themselves and others into subgroups based on similarities in surface-level factors such as gender, age, and religion. This leads to homogenous groups that operate more effectively and provide a satisfying environment for its members.

The similarity and attraction paradigm is often used as the underlying theoretical approach in studies related to team personality composition. On the other hand, the information/decision-making perspective suggests that a diversity of

personalities within a team can have a positive impact on team outcomes. This approach is used as a basis for a variety of diversity-related research such as functional diversity, demographic diversity, and team personality diversity. Studies have found positive associations between team performance and diversity in personality traits such as extraversion and openness to experience. In summary, both approaches, the social categorization perspective and the information/decision-making perspective, have their own advantages and limitations and should be considered when assessing the effect of personality on team dynamics.

References

- [1] Bell, S. T., Villado, A. J., Lukasik, M. A., Belau, L., & Briggs, A. L. (2010). Getting specific about demographic diversity variable and team performance relationships: A meta-analysis. *Journal of Management*, 37(3), 709-743. <https://doi.org/10.1177/0149206310365001>
- [2] Bradley, J. H., & Hebert, F. J. (1997). The effect of personality type on team performance. *Journal of Management Development*, 16(5), 337-353. <https://doi.org/10.1108/02621719710174525>
- [3] Dahal, Amrit Kumar, Mishra, A.K, Chaudhary, Manoj Kumar, & Aithal, P. S.,(2021). Job Satisfaction in Federal Structure - A Case of Bhojpur, Nepal. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 5(2), 38-56. <https://doi.org/10.5281/zenodo.5496456>
- [4] Dietze, P., & Knowles, E. D. (2016). Social class and the motivational relevance of other human beings. *Psychological Science*, 27(11), 1517-1527. <https://doi.org/10.1177/0956797616667721>
- [5] Laxman Pokhrel, Diksha Adhikari, Mishra.A.K,(2020). Adoption of Mobile Banking Among users in Kathmandu Valley: Lens of Technological Acceptance Model. *NOLEGEIN Journal of Management Information Systems*. 3(2): 1-7p <https://ssrn.com/abstract=3858283>

- [6] Mishra A. K. (2020). Project management: theory and practice from different countries. Project management: theory and practice from different countries. Tamilnadu: DK International Research Foundation. 2020 . <http://doi.org/10.5281/zenodo.4817542>
- [7] Mishra AK. (2018). Assessment of Human Resource Capacity of Construction Companies in Nepal. J Adv Res JourMass Comm 5(4): 14-25.
- [8] Mishra, A. K., & Aithal, P. S., (2023). Building Ethical Capital through Human Resource. International Journal of Management, Technology, and Social Sciences (IJMTS), 8(1), 1-15. <https://doi.org/10.5281/zenodo.7519862>
- [9] Mutafa D.M,(n.d). The Role of Personality Composition on Team Creativity and Innovation.
- [10] Prada, R., Ma, S., & Nunes, M. A. (2009). Personality in social group dynamics. 2009 International Conference on Computational Science and Engineering. <http://doi.org/10.1109/cse.2009.24>
- [11] Saklofske, D. H., Austin, E. J., Mastoras, S. M., Beaton, L., & Osborne, S. E. (2012). Relationships of personality, affect, emotional intelligence and coping with student stress and academic success: Different patterns of association for stress and success. Learning and Individual Differences, 22(2), 251-257. doi: <http://doi.org/10.1016/j.lindif.2011.02.010>
- [12] Yadav, R. S., Sharestha, I. N, and Mishra, A. K., (2016). Assessment of ethical behaviour among professionals at procurement and after tendering process with its impacts and drivers in Nepalese construction industry. International Journal of Scientific and Technology Research, 5(11), 1-8.

