



Noora Teräs

DIFFERENT PERSONALITIES AND THEIR EFFECTS ON LEADING A PROJECT

School of Technology,
2023

TIIVISTELMÄ

Tekijä	Noora Teräs
Opinnäytetyön nimi	Different Personalities and Their Effects on Leading a Project
Vuosi	2023
Kieli	englanti
Sivumäärä	44 + 1 liitettä
Ohjaaja	Adebayo Agbejule

Tämän opinnäytetyön tavoitteena on perehtyä eri persoonallisuustyyppihin ja selvittää kyselyn perusteella, on henkilön persoonallisuustyypillä vaikutusta projektin johtamiseen.

Opinnäytetyö koostui kahdesta osasta. Kirjallisuusanalyysissä käsiteltiin persoonallisuustyyppjä sekä projektijohtamista ja sen tärkeimpiä osa-alueita. Lisäksi tarkasteltiin aiempia tutkimuksia, joita oli tehty liittyen persoonallisuuden vaikutuksesta projektijohtamiseen. Toinen osa oli kysely, joka toteutettiin lähettämällä kysymykset Google Forms lomakkeella ennalta määrätyille 45:lle henkilölle. Saadut vastaukset analysoitiin SPSS työkalun avulla.

Kyselyyn saatiin 24 vastausta. Vastauksista karsittiin pois epäluotettavimmat, ja lopputuloksen perusteella jaettiin projekti työ kahteen pääkategoriaan johtamiseen ja organisointiin. Näiden perusteella voitiin todeta vastausten edustavan hyvin eri persoonallisuuksista kerrottuja tietoja. Lisäksi voitiin todeta, että persoonallisuustyyppjä ei tulisi jättää kokonaan huomiotta, kun mietitään projektijohtamista, ja parasta mahdollista lopputulosta projektille.

VAASAN AMMATTIKORKEAKOULU
UNIVERSITY OF APPLIED SCIENCES
Project Management, Master

ABSTRACT

Author	Noora Teräs
Title	Different Personalities and Their Effects on Leading a Project
Year	2023
Language	English
Pages	44 + 1 Appendices
Name of Supervisor	Adebayo Agbejule

The goal of this thesis was to study different personality types and research based on a questionnaire if the personality type has any effect on project management.

This thesis was conducted in two parts, in the literature review personality types and project management were researched through literature. Also, a review was made on previous research made on project management and personality types. The second part was a questionnaire that was sent by Google Forms to a selected group of 45 people. The received answers were analysed with SPSS tool.

There were 24 replies received to this questionnaire. Unreliable answers were discarded out and finally two main categories were formed, leading and organising projects. Based on the analysis made by the answers it can be said that the given answers represent well information gathered from literature. Also, it can be said that personality types should not be fully disregarded while considering project management and best possible outcome for a project.

Keywords

Personality, project, leading, and analysis

CONTENTS

1	INTRODUCTION	7
1.1	Research Problem and Objectives	7
1.2	Research Questions	8
1.3	Structure of the Study.....	8
2	LITERATURE REVIEW.....	9
2.1	Project Management	9
2.2	Leading in Project Management.....	14
2.3	Personality Types	16
2.3.1	Big Five Model	18
2.3.2	Neuroticism-Extraversion-Openness Personality Inventory Revised (NEO-PIR)	18
2.3.3	Myer-Briggs Study.....	19
2.3.4.2	Yellow personality	20
2.3.4.3	Green Personality	21
2.3.4.4	Blue personality	22
2.4	Leading Project Management and Personality types	23
3	RESEARCH METHODS	31
4	DATA ANALYSIS AND RESULTS	36
5	DISCUSSION AND CONCLUSIONS	40
	BIBLIOGRAPHY.....	42
	ATTACHMENT 1	

LIST OF FIGURES AND TABLES

Figure 1. Project lifecycle

Figure 2. Integration of Success Management Process Groups. Adapted from (Varrão, 2018a) and (PMI, 2017)

Figure 3. Which personalities come along the best.

Figure 4. Different personalities in the questionnaire

Table 1. Red people

Table 2. Yellow people

Table 3. Green people

Table 4. Blue persons

Table 5. Descriptive statistics of leading people

Table 6. Descriptive statistics of organizing people

Table 7. Personality types and in which stage of a project they are working.

1 INTRODUCTION

This thesis work is a study of personality types and how one's personality affects their way of leading a project. This aim of the study is to find out what tasks in project management certain personality type may find difficult or easy. The study takes into account that long experience in project management might affect the answers given to questions made to find out these traits of behaviour, and make individuals answer according to their experience and not their background.

Personalities have been studied for many years and now they are more and more considered in working life as well. Still, it is regarded as an interesting and kind of fun fact to know more than an actual tool in forming for example project group and selecting suitable project manager for the task.

There are many ways to describe and test personalities but for this research the four personality types according to the disc-analysis were selected. The research was executed in two parts first literature review studying the personality types and previous research and second a questionnaire that was sent to people working in projects.

After receiving replies, the data was analysed with the SPSS tool omitting questions that had been answered incoherently. After that a comparison was made to literature and conclusions based on given answers.

1.1 Research Problem and Objectives

According to the disc-analysis there are four different personality types. These personality types are indicated by colour's; red, yellow, green and blue. Every person has one main colour in their personality. In this study we are looking through these personality types and trying to find out how they affect leading in project management. The purpose is to determine what challenges certain personality might face and what aspects of a project they find easy.

Project team members are the engine of the work, technical skills are needed in a specific discipline to accomplish the deliverables for the project. The role is to successfully perform the tasks allocated, usually in their own expertise area, and keep the project manager aware of progress or any issues which might arise. One essential matter to be considered when forming project teams is to select appropriate members and consider whether the technically talented alternative is genuinely better than a member with interpersonal and organizing skills. /4/

1.2 Research Questions

In this study there are two main research questions:

- What is the role of personality types leading and organizing in project management?
- What difficulties one may face in leading a project because of the personality type?

1.3 Structure of the Study

Chapter 2 provides a literature review on personality types and how is related to project management. The literature review discusses the personality types such as the study of Myer-Briggs study and Disc analysis and project management on the different stages of project life cycle.

The research method is presented in Chapter 3. This chapter describes how the data was collected.

The method and the results of analysis of the data are presented in Chapter 4.

The discussion and conclusion of the study is presented in Chapter 5.

2 LITERATURE REVIEW

2.1 Project Management

Project management is the process of leading the work of a team to achieve all project goals within the given constraints. This information is usually described in project documentation, created at the beginning of the development process. The primary constraints are scope, time, and budget. The secondary challenge is to optimize the allocation of necessary inputs and apply them to meet pre-defined objectives. /2/

Project management uses specific knowledge, skills, tools, and techniques to deliver something of value to people. All projects are a temporary effort to create value through a unique product, service, or result. All projects have a beginning and an end. They have a team, a budget, a schedule, and a set of expectations the team needs to meet. Each project is unique and differs from routine operations. /1/

Throughout human history, project management has always been practiced informally, but it began to emerge as distinct profession in the mid-20th century. Today we live in the project economy, where projects are driving force behind how work is done, changes are realized, and value is delivered. /1/. It is now widely acknowledged that basic knowledge in project management can provide value to people with a variety of roles in vast range of endeavours. /1/

The success of any project is measured by its completion time, within the budget cost and meet the planned performance based on the initial plan. /5/

Several factors influence the creative and innovative behaviours required within a project team, including individual capabilities, leadership styles, team processes, and the organizational environment in which the project team operates. To be effective, project managers must recognize the tensions created by the duality of creativity and innovation, and they must evaluate the environment in which the

project team is operating. With this understanding of the project environment, project leaders can adapt their leadership style to support the project team in successfully meeting these conflicting demands of creativity and innovation. /6/

Given the unique nature of the intended project outcome, project execution is an innovative process that requires both creativity and focused implementation. Successful innovation through project execution is critical for businesses to grow and flourish. /6/. The success of project management is the ability of the project to deliver in scope, time, cost, and quality. /17/

Project management is divided into five process group (see Figure 1, PMI 2017) as listed below:

1. Initiating phase.
2. Planning phase.
3. Executing phase.
4. Monitoring and Controlling phase.
5. Closing phase.

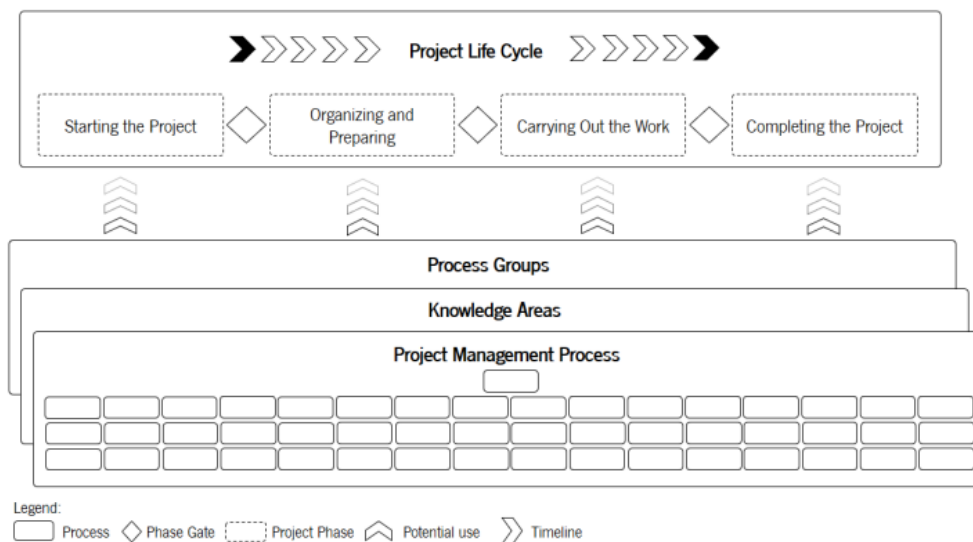


Figure 1. Project lifecycle /16/

The processes identified in PMBOK (PMI, 2017) are organized in process groups and knowledge areas. The process groups are Initiating, Planning, Executing, Monitoring and Controlling, and Closing. The knowledge areas and processes of each area are as follows:

- **Integration:** It is responsible for the integration of all other knowledge areas, being the only one that has processes related to every process groups. The processes in this area are: Develop Project Charter, Develop Project Management Plan, Direct and Manage Project Work, Manage Project Knowledge, Monitor and Control Project Work, Perform Integrated Change Control, Close Project or Phase;
- **Scope:** Responsible for defining and managing all the work necessary for the project to be successfully completed. The processes in this area are: Plan Scope Management, Collect Requirements, Define Scope, Create WBS, Validate Scope, Control Scope;
- **Schedule:** Responsible for managing the timely completion of the project. The processes in this area are: Plan Schedule Management, Define Activities, Sequence Activities, Estimate Activity Durations, Develop Schedule, Control Schedule;
- **Cost:** It involves all necessary actions (for example, planning, estimating, financing, controlling) to manage the project with the approved budget. The processes in this area are: Plan Cost Management, Estimate Costs, Determine Budget, Control Costs;
- **Quality:** It involves efforts to meet the quality expected by project stakeholders. The processes in this area are: Plan Quality Management, Manage Quality, Control Quality;
- **Resource:** Responsible for providing the project manager and project team with the required resources, at the right time and place, for the successful completion

of the project. The processes in this area are: Plan Resource Management, Estimate Activity Resource, Acquire Resource, Develop Team, Manage Team, Control Resources;

- Communications: Responsible for planning and executing an effective communication strategy with project stakeholders. The processes in this area are: Plan Communications Management, Manage Communications, Monitor Communications;

- Risk: To optimize the chances of project success, this area is responsible for decreasing the probability/impact of negative risks and maximizing the probability/impact of positive risks. The processes in this area are: Plan Risk Management, Identify Risks, Perform Qualitative Risks Analysis, Perform Quantitative Risks Analysis, Plan Risk Responses, Implement Risk Responses, Monitor Risks;

- Procurement: Responsible for planning and executing all required acquisition and management (for example, contracts, purchase orders, internal service level agreements (SLAs)) of products, services or results for the success of the project. The processes in this area are: Plan Procurement Management, Conduct Procurements, Control Procurements;

- Stakeholder: It involves strategies to achieve effective engagement of people, groups, or organizations that could impact or be impacted by the project. The processes in this area are: Identify Stakeholders, Plan Stakeholder Engagement, Manage Stakeholder Engagement, Monitor Stakeholder Engagement. /20/

The integration of the project life cycle is integrated with the process flow and summarised in Figure 2 below.

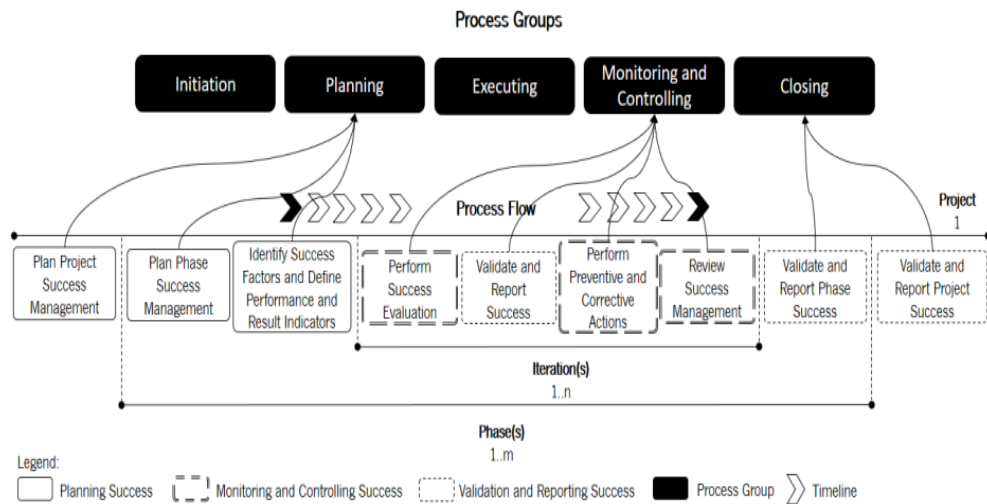


Figure 2. Integration of Success Management Process Groups. Adapted from (Varajão, 2018a) and (PMI, 2017). /18/

Project innovation begins with the creative process of idea generation and culminates with the disciplined realization of that idea. The innovation process, however, is far from linear. The innovation process often involves chaotic cycles of shifting back and forth between idea generation and idea implementation as the project team learns from unforeseen issues and successful progress. Switching between creativity and innovation presents a challenge for project teams because the ideal characteristics of creative team members are very different from those of team members who excel at implementation. Creativity is best served by individuals with open minds, comfort with ambiguity, and a willingness to take risks, while efficient implementation requires conscientiousness, focus, and conformance to a planned course of action. /6/

This shows that projects need different type of personalities, the main problem is how to get these personalities working together in best possible way.

2.2 Leading in Project Management

Leadership is one of the most important and essential factors in project and construction management. Leadership can be seen as the art of influencing others to achieve desired results. Leadership is defined as a manner in which the project managers and construction managers conduct themselves in their role, in order to obtain the best performance from the people they are managing. Leaders guide behaviours by setting the vision, direction, and the key processes; in other words, leadership has a large influence on the whole project process, including the actions of others. /7/

The success of a project depends on several factors, one of which is the competencies of the project leaders, their personalities, characteristics, skills, and leadership styles, amongst others also the impact on project outcomes. /7/

It is obvious that a person can be a leader without being a manager and a person can be a manager without being a leader. Some of the leadership styles categorized are 1) autocratic leadership 2) democratic leadership 3) transformational leadership and 4) transactional leadership. /7/

Autocratic leaders tell others what to do and expect them to comply obediently. Although it may work in certain circumstances and in the short run, but this is not effective in the long run. This could easily be considered red personality's leading type. Democratic leaders are those who make their decisions final only after consulting with the people they are leading based on the consensus. This seems to be more greens' style of leading. Transformational leaders on the other hand empower their team members to develop their own decisions based on the information provided to them and exert little control over the decision-making process. This could be considered to be leading type closest to yellow personality. Transactional leaders are result based leaders who ask their team members to focus solely on the goals at hand, these leaders also believe on rewarding subordinates. /7/ This is more blues' task-oriented approach to leading.

To this end, it is sometimes assumed that the leader's personal trait can determine their leadership qualities or style and this in turn will determine success. With this approach, the belief is that the leaders are born with the qualities that they possess. Traditional and behavioural approaches links and compares behaviour of the ineffective leader to those of the effective leader. The proponent of this theory believes that successful leadership depends more on appropriate behaviour, skills, and actions, and less on personal traits. The distinction between this approach and the previous one is significant, because more than often traits are constant while skills can be learned and changed. For the managers to be effective they must be able to identify and apply the necessary leadership style suitable the given situation rather than predefined sets of successful traits. Moreover, they should be able to adapt to change and sometimes contradictory circumstances in which they need to show versatility and flexibility. /7/

A 2017 study suggested that the success of any project depends on how well four key aspects are aligned with the contextual dynamics affecting the project, these are referred to as the four P's:

Aim & Expectations: What are the aims & expectations of the project.

Plan: The planning and forecasting activities.

Process: The overall approach to all activities and project governance.

People: Including dynamics of how they collaborate and communicate.

Power: Lines of authority, decision-makers, organograms, policies for implementation and the like. /2/

There are a number of approaches to organize and complete project activities, including phased, lean, iterative, and incremental. There are also several extensions to project planning, for example, based on outcomes (product-based) or activities (process-based). /2/

Regardless of the methodology employed, careful consideration must be given to the overall project objectives, timeline, and cost, as well as the roles and responsibilities of all participants and stakeholders. /2/

The role of a project leader, or project manager, is primarily to oversee the day-to-day details of the project. Some of the project lead's roles and responsibilities include making sure the project proceeds within a given timeframe, under the stated budget, and achieves the goals and objectives set. The project manager's responsibilities also include the people component. This person needs to oversee the project team to keep everyone on task, mitigate problems and make sure that everyone understands their individual role within the greater project.

Project managers must support the project team in successfully executing their assigned projects. Given the challenges of the innovation process, project managers could benefit from a clear understanding of the interplay of these various influences on creativity and innovation by adapting their leadership style appropriately based on other contextual factors to help the project team effectively manage the innovation process. /6/

Selecting the right project manager is a challenge for any project-based organization. A competency/competence development framework can be used to evaluate past performance and predict future performance of project managers. /7/

2.3 Personality Types

The concept of personality has for a long time attracted the interests of psychologists. As a result, there are numerous theoretical approaches to the measurement of personality. /8/

“Personality refers to an individual's characteristic patterns of thought, emotion, and behaviour, together with the psychological mechanisms, hidden or not, behind those patterns”. /8/

Personality traits cannot be directly observed but are expressed in, and thus can be inferred from, people's recurring (re-)action patterns. They are consequential for people's personal, occupational, and social daily lives and predict many important life outcomes (for example, mental and physical health, longevity, income, romantic attraction, divorce). The power of personality is far-reaching and pervades every aspect of our lives. /11/

Compared to introverted project managers, it is believed that extroverted project managers are more likely to improve project performance and achieve project success. The personality traits of project managers affect their leadership qualities. On the other hand, the emotional intelligence and personality of project managers impact on their competency/competence. Among construction studies on the personality of project managers, it was proposed that project managers with different personality traits may differ in terms of psychological adjustment to working stress. It was concluded that project managers with different personality traits may perceive risks and deal with risks in different ways. Emotional intelligence and personality of project managers have a significant effect on team communication, conflict management and team leadership. /7/

More importantly construction project managers have a collection of roles to play, such as decision maker, safety coordinator, organizer, team worker, motivator, planner, process controller, inspector, diplomat, quality coordinator, communication facilitator and implementer, and what role a construction project manager will actually play depends on personal maturity and project nature. /7/

This research focuses on colour-based personalities, but there are also several other ways to investigate and determine personalities.

2.3.1 Big Five Model

According to trait theories, traits define the nature of personality as well as determine the actual operation of personality. According to Westen, Burton, and Kowalski (2006) traits “are emotional, cognitive and behavioural tendencies that constitute underlying personality dimensions on which individuals vary” (p. 421). Even though thousands of traits have been identified, Costa and McCrae suggested that five traits are central to personality: extraversion, neuroticism, openness to experience, agreeableness, and conscientiousness. This led to the development of the Big Five model. The selection of these five traits was based on studies that demonstrated that the five traits were the most useful and recurrent when rating personality. /8/

One strength of the Big Five is that the model has shown cross-cultural consistency in studies in which measures based on the model, such as the NEO-PI-R, have been developed within one culture and validated in other cultures. One major criticism of the model, however, is that it does not provide any theoretical explanations for personality development; rather it is more of a description of personality traits possessed by individuals. /8/

2.3.2 Neuroticism-Extraversion-Openness Personality Inventory Revised (NEO-PIR)

Although numerous instruments have been developed to assess the Big Five traits, the NEO-PI-R is the most commonly used. The NEO-PI-R is a revised version of the Neuroticism-Extraversion-Openness Personality Inventory (NEO-PI), which was developed to measure three out of the five personality traits. The NEO-PI-R comprises 240 items and was primarily developed through factor analytical methods. Subscales for each of the Big Five traits have been designed to measure six subtraits, which the measure developers named facets. The NEO-PI-R contains both a self-report questionnaire (S form) as well as an observer rating form (R form) for peers to complete, allowing for the collection of dyadic data. /8/

2.3.3 Myer-Briggs Study

In contrast to the Big Five, which focuses on personality traits, the Myers-Briggs Type Theory focuses on types, which are “a difference in kind”. Rather than focusing on traits directly, this approach focuses on the patterns of traits that characterize whole persons. By doing so MBTI acknowledges both qualitative and quantitative individual differences rather than focusing only on quantitative differences. /8/

The main focus of the MBTI is to measure individuals on four dimensions consisting of opposite pairs; Extraversion-Introversion (E-I), Sensation-Intuition (S-N), Thinking-Feeling (T-F), and Judgment-Perception (J-P), resulting in 16 possible psychological types. /8/

A study has been made based on Myer-Briggs and it shows that extroverted managers (as opposed to introverted managers) carry out projects that show lower delay and lower waste time. Introverted managers often make “Over-processing” and “Defect” types of waste. Moreover, lower delay and over-budget have been shown by perceiving managers. /9/

2.3.4 Personality Based on DiSC analysis

There are four main categories of behaviour types, each of which is associated with colour. About 80 percent of all people have a combination of two colours that dominate their behaviour. Approximately 5 percent have only one colour that dominates their behaviour. The others are dominated by three colours. /3, p13/

2.3.4.1 Red personality

Red is the behaviour type that Hippocrates in his theory of human temperament called choleric. Nowadays a red person could be called bold, ambitious, driven, but also potential hot-tempered, rash, or dominant. /3, p16/

People who have lots of red in their behaviour are task-oriented extroverts and they enjoy challenges. They make quick decisions and are often comfortable taking the lead and taking risks. A common perception is that reds are natural leaders. These are people who willingly take command and go to the fore. They are so driven that they will go through despite any obstacle in their way. It is not unusual for a CEO or president to have a lot of red in their personality. /3, p16-17/

Reds will usually speak their mind, do not want to be late and like to compete. Red people often describe themselves with adjectives shown in Table 1:

Table 1. Red people. /3 p18/

Driven	Resolute	Ambitious
Desicive	Competitive	Independent
Prompt	Determined	Time-concious
Persuasive	Strong-willed	Results-oriented

2.3.4.2 Yellow personality

In the Hippocratic world yellow personality is referred as sanguine. Yellow persons are often described as optimistic and cheerful with a bright outlook on life. These are people who live to live, always finding opportunities for enjoyment. Life is a banquet, and yellows will see to it that they savour every bite. They are driven by merriment and laughter. /3, p28/

Yellows make sure that the atmosphere is at its zenith so that every event becomes a marvellous party. When something is no longer fun, they move on to another place where the atmosphere is better. /3, p28-29/

Recognizing yellow is easy. He is the one who is talking all the time the one giving answer rather than asking questions – often answering questions that no one even asked. /3, p29/

Yellows are also quite touchy-feely people, and like reds quick to make decisions, but more based on their feelings. Yellow persons often describe themselves with adjectives shown in Table 2:

Table 2. Yellow people /3, p31/

Enthusiastic	Charming	Outgoing
Inspiring	Optimistic	Flexible
Open	Creative	Spontaneous
Convincing	Easygoing	Communicative

2.3.4.3 Green Personality

The green person is the most common. Green can be described as an average of all the other colours, and not in a bad way. When reds are stressed performance seekers, yellows are creative bon vivant guys, and blues are perfectionists, greens are the most balanced ones. Hippocrates called them phlegmatic people. The Aztecs called them earth people. Calm, leisurely, and easy going could also be words to describe them. Greens do not stick out the same way as reds and yellows and they often bring serenity to the situations. Where blues get caught up in details, greens often feel their way to what is right. /3, p37-38/

Greens are more passive than others. They are not as driven as reds, not as resourceful as yellows and not as orderly as blues. For this reason, they are easy to deal with. They do not demand much, and they never kick up a fuss unnecessarily. /3, p38/

Green people are kindness personified. It's often said that greens are the best listeners, and it's true. They are always more interested in others than in themselves. They are also good team players. /3, p29/ Green people often describe themselves with adjectives shown in Table 3.

Table 3. Green people /3, p40/

Friendly	Calm	Reliable
Considerate	Pleasant	Patient
Predictable	Stable	Team player
Discreet	Thoughtful	Good listener

2.3.4.4 Blue personality

Blues do not make a fuss of themselves, but they do keep tabs on what is happening around them. In the background they analyse, classify, evaluate, and assess. They are also very organized.

They are also pessimist; or actually a realist. They see errors, and they see risks. They are the melancholics who closes the circle of behaviour. Reserved, analytical and detail-oriented are some words associated with blues. /3, p48-49/ Blue people often describe themselves with adjectives shown in Table 4:

Table 4. Blue persons /3, p50/

Accurate	Cautious	Correct
Detail-oriented	Logical	Methodical
Orderly	Quality-oriented	Reflective

Systematic	Thorough	Unassuming
------------	----------	------------

2.4 Leading Project Management and Personality types

A project manager needs to have a broad range of skills. Moreover, he or she should be a person with deep knowledge in various fields. Substantive preparation will be necessary for accomplishing numerous tasks which belong to the project manager's duties. It is worth noting that the key attributes of a manager, regardless of the industry, are administrative skills, planning and leadership. These are the features that will ensure that the implementation of any project will not be a problem for a manager. /12/

The basis of good project management is having the knowledge and skills necessary to perform the job. A project manager is generally defined as the person responsible for working with the project sponsor, the project team, and the other people involved in a project to meet project goals. /13/

A project manager must have skills in addition to the basics of project management to succeed. "It requires all these soft skills that have to do with getting things that you want (and) adjudicating issues between people, managers, egos and agendas. It's how to get a job done without annoying people" /13/. These soft skills can include basic leadership and team building abilities that are needed for the team to complete the designated project. Basic business skills are also needed for a project manager to be successful. /13/

Another important aspect of project management is the ability to communicate effectively. It is essential for project managers to have the capacity to listen and understand the people on their project team as well as the customers of their project. Dennis Johnson, an Assistant vice President at USAA states "A project manager needs the ability to question without alienating –to listen and watch people's body language and really see what's happening. /13/

There are many skills a project manager may have that are argued to be ingrained in the human spirit, the largest of these being the ability to influence others. Linda Pittinger, CEO of People3, states “It’s hard to find people who can influence others and create win-win situations”. There are also many skills a project manager may have that can be either learned or innate, like the ability to make decisions. It has been said that the best decision makers are the most experienced decision makers. “As a manager and leader, every step you take required decision-making skills. What makes it more challenging is the pressure to make the right decision is often very high”. /13/

Numerous researchers, in the past, have investigated the relationship between personality types and professions. Some papers have been written analysing project management personality. The classical definition of a project manager is an Extraverted, Sensing, Thinking, Judging (ESTJ) individual (MBTI) . /9/ In colour-based personality types this would be combination of red and blue and maybe yellow personalities.

Many researchers’ findings have shown that soft skills contribute more than technical skills to the project’s success, but studies still lack emphasis on these skills, particularly the project manager’s personality. This is also supported by Thal and Bedingfield, stressing the value of a comprehensive examination of how personality traits play a key role in project success. /15/

Project outcomes greatly depend upon the personality of the project manager. If the project manager is adroit, marvel, and skilful, the project will lead towards success. In this respect, the selection of the right people for the right job is extremely important for achieving success in the project. /14/

Personality is a set of relatively permanent characteristics, dispositions or attributes of an individual that warrant a relative consistency of his/her behaviour. It is also defined as a relatively constant manner of both responding to the social and natural environment and interacting with it, typical of each individual. It is worth

noting that personality is not the sole determinant of action – what and how we do it also depends on our current physical and mental state, the emotions we feel and our readiness to act. /10/

When leading a project there usually is many types of personalities in the project teams. To understand different personalities and how to communicate with them comes then important. Who gets along and why is important to understand.

Based on DiSC-analysis a group should consist of all colours to create best possible dynamic. In a perfect world we would have an equal number of each colour. The yellow comes up with a new idea, the red makes the decision, the green must do all the work and the blue evaluates and makes sure the results are excellent. But this is not the case. Not infrequently, we find yellow in positions better suited for reds. Or in the worst cases, they have been able to talk their way into a job that requires blue behaviour. Indeed, there are many examples of people who are sitting in the wrong chairs, and part of the explanation lies in the fact that they lack the natural perquisite to do their jobs. /3, p190/

To lead a good project, it is good to recognise different personalities, and maybe try to build a project team so that there is as much as possible good combination of colours.

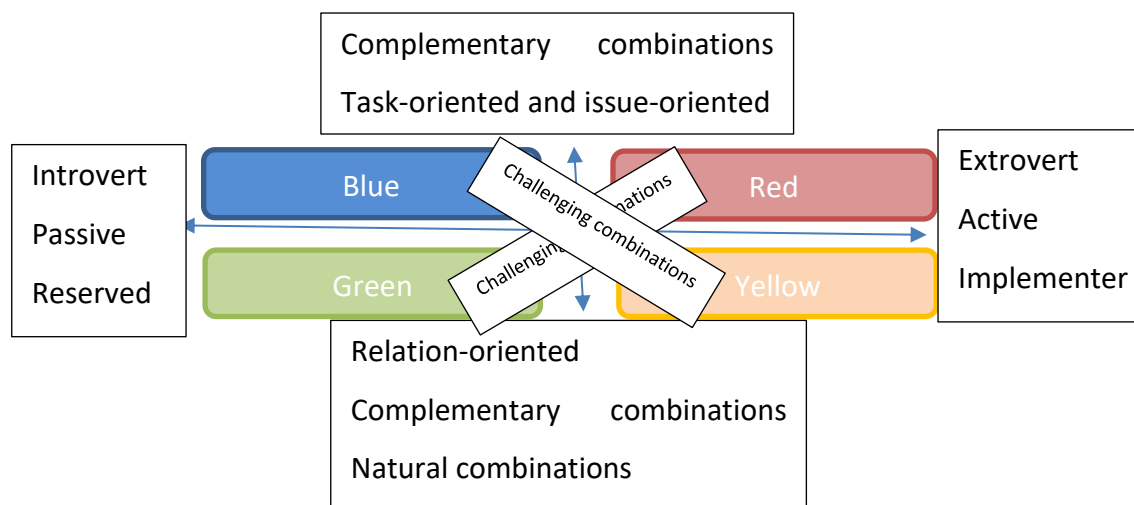


Figure 3. Which personalities come along the best.

If we look at diagram above, we can see that blue and green could be suitable combination, without much of effort from either of them. The work phase would be quite slow and making decisions might take a while. But work would be done thoroughly. /3, p192/

Similarly red and yellow could work well together. The work phase would be fast, but there would be no problems in communications. They both set high goals and think quickly. /3, p192/

It also works to look at the other axis and make pairings based on each colours focus. Both blues and red are task oriented. Reds maybe more interested in the results than the process and blues on the other hand are more focused on the process – but at the end they are speaking the same language. /3, p192/

In the same way there is some logic butting yellows and greens in the same team. The tempo on which they are working is different, but both will be curious of each other. Both believe that people are interesting and important. They will easily find

similar focus. Also, greens have good calming influence on slightly hysterical yellows. /3, p193/

In addition to these very well working combinations, there are two very complicated ones. This does not mean they cannot work together but there sure will be some challenges.

It would be quite a challenge to put red and green to solve an issue together. In the beginning green will be quite passive as the red one gets going even before he has heard the instructions. The red will be very critical on greens constant moaning of too much work, and on the other hand green will think red as an aggressive and non-listener. /3, p194/

Based on Marston's theories, the greatest challenge is to put yellow and blue work together. If neither of them is aware of how their personalities work, there will be friction from the outset. The yellow dives into the task without the slightest idea on what to do and how. He will speak a great length on how exciting project they have been given, when blue starts carefully researching the given material and does not say a word. The yellow will think blue as the most boring people he has ever met. On the other hand, the blue will get irritated on the constant babble of yellow. /3, p195/

Self-awareness is the key to solving these issues, but not always in the moment and in the hectic phases of a project, this is remembered. Leading projects means you need to have good understanding of the people you work with and, try to find the best ways to make them thrive.

Also, it is not easy to read and interpret everyone. If person only has one colour it will be easier to understand them. But as mentioned earlier about 5 percent has only one colour. 80 percent has two and the rest has three. No one has four, at least not with this method. /3, p196/

It is relatively easy to recognise people with two colours, but with three it starts to get harder.

When it comes to project management and personality types it can be said, based on previous that red personality leads a project efficiently, focused on project to be successful and finish in time. As a leader of a project, they probably are strict and want things done in their own way not always listening other people's opinions. This persuasive and ambitious way of leading a project might then also come a problem if there are people with opposite personalities in the team but on the other hand can bring great success for the project execution.

Yellow personality as a project manager can be driven and motivating to the project team. They are team builders and focus on the positive. On the other hand, their thoughts and plan might not always be realistic, and they tend to focus on too much talking and not as much doing.

Green person is easy to get along with but as project leaders they might not be the best ones. They are often not organised, do not want to hurt anyone's feelings and sometimes decision making might be difficult for them. On the other hand, they will not cause trouble and want everything to go smoothly so they will make effort to reach that goal. They are also patient and therefore can handle stressful situations without exploding.

Blues are oriented, organised and focused on the goal. They do everything to make a success out of a project. Their organising skills are good when it comes to leading projects. On the other hand, they sometimes tend to focus too much on the details and use too much time on them, when in projects there usually is not too much time for that. They are also introverted and like to work alone. As a team leader they are strict and fair, but maybe not the best team builders and listeners.

This way we could also try to analyse in which stages of a project different personalities could be placed. Red personalities would be the best to work in the execution phase due to their efficiency. Blue personalities could then be good at organizing and preparing. Yellows might shine in the initiation phase and greens could close the project after all big decisions has been made.

If we can teach project management skills, why cannot we take someone who has the skills and train them in the methods of leading people? We do some of this in terms of raising awareness of the issues associated with some aspects of leading a project team. However, this comes down to being much more than a training issue. "It is not knowledge that we are trying to add to, but personalities that we are trying to change" /13/. Personalities can change, but over time. Individuals can take behaviour modification training to refine their behaviour to match that of a project manager. It has been shown that this training tends of have a very short half-life because people don't make the effort, once they get back into the comfortable environment, to enforce what they learned and practiced during training. It should be somewhat obvious that given the choice to add to one's knowledge and skills, or to change one's behaviour, the former would be a better choice. The latter is more likely to fail. /13/

By looking at given factors in project management and personalities there still are many differing opinions as to whether you can teach someone to be a project manager or whether that person must have the "gift" of project management. There are good points to both sides of the debate. However, from all the information provided, we would have to conclude that a great project manager is born with the skills necessary to succeed. Learning the behaviours and soft skills might give someone the ability to survive as a project manager in the project management world. However, we do not think that this person would be as successful as one with the behavioural skills they were born with. It can be shown by Apollo 13 that when in critical situations, people revert to what they know, what is in their gut. If a person does not have the gut instincts and ability to operate as a project

manager under stress, they will not survive in the field. Understanding this concept, we believe that attempting to teach this in the classroom would result in failure. If we were asked to choose my ideal project manager, we would want someone who not only had the technical skills of project management, but we would also prefer someone who had the ability to lead people and teams. We would also desire someone with the ability to communicate effectively with different types of people and inspire them to work to their utmost potential. In addition, we would attempt to determine whether the person has the ability to make decisions, as well as influence others to work to their optimum potential. The ability to influence and motivate others is ideal for a project's completion within its constraints. /13/

3 RESEARCH METHODS

The goal of this research is to find out which areas of project management is easier or harder to different personality types or is there any pattern that can be seen there. Personality types used in this research are based on the DiSC analysis dividing personalities into four colours: red, yellow, green and blue.

3.1 Different Research Methods

Analysts and researchers use quantitative and qualitative research methods such as focus groups, interviews, and surveys for data interpretation to cultivate a better understanding of information. Selecting the best research method to use can help a research professional achieve useful results in their investigations. /15/

Research methods are processes used to collect data. This data can be used to analyse current methods or procedures and to find additional information on a topic. Professionals use research methods while studying medicine, human behaviour, and other scholarly topics. There are two main categories of research methods: qualitative research methods and quantitative research methods. /15/

Quantitative research methods involve using numbers to measure data. Researchers can use statistical analysis to find connections and meaning in the data. Qualitative research methods involve exploring information and non-numerical data. These research methods also examine how people might connect meaning to their experiences and emotions. /15/

There are many types of research methods to that can be used to investigate the chosen item; observation, questionnaires and surveys, interviews, focus groups and case studies, experiments, secondary data analysis and mixed methods.

3.2 Data Collection

This research was carried out with questionnaire to people working in projects.

Questionnaires and surveys ask the same questions to a large group of individuals. These questions are typically used to measure quantitative data. Researchers translate the survey answers into numerical data so they can look for patterns. /15/

To ensure enough responses for this research the questionnaire was sent to 45 people of which 24 answered. The platform used for the questionnaire was Google forms. Questionnaire was done in two parts where first the focus group made the personality test based on DiSC analysis, and then they answered the questionnaire asking questions from different areas of project management.

3.3 Measurement of variables

3.3.1 Leading people: The questions on leading projects were adapted from an existing literature /4/. The questions are evaluated on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). The following items were used:

- (i) Do you think making decisions is easy for you?
- (ii) Are you willing to take the lead in difficult situations?
- (iii) Do you feel comfortable giving people directions at work?
- (iv) You feel that you have capability to foresee problems in project and take needed actions to fix them?

3.3.2 Organizing people: The questions on leading projects were taken from an existing literature /4/. The questions are evaluated on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). The following items were used:

- (i) Do you find organising works and tasks easy?
- (ii) Do you find it easy to leave what you are doing in way of something more urgent?

(iii) You like to seek new technologies and innovations to make project management easier

(iv) You like to work under pressure and feel comfortable to to make fast decisions?

(v) Project base working is the best way of working for you?

3.4 Descriptive Statistics

The descriptive statistics and the reliability measurements of the variables are presented in Tables 5 and Tables 6 The reliability measurements for leading and organizing people are 0.77 and 0.64 respectively, which is acceptable. /19/

Table 5. Descriptive statistics of leading people

Leading people	Mean	Standard deviation	N	Cronbach alpha
Do you think making decisions is easy for you?	3.54	1.02	24	0.77
Are you willing to take the lead in difficult situations?	3.29	1.08	24	
Do you feel comfortable giving people directions at work?	3.54	0.88	24	
You feel that you have capability to foresee problems in project and take needed actions to fix them?	3.83	0.91	24	

Table 6. Descriptive statistics of organizing people

Organizing people	Mean	Standard deviation	N	Cronbach alpha
Do you find organizing works and tasks easy?	4.04	0.55	24	0.64
Do you find it easy to leave what you are doing in way of some-thing more urgent?	3.92	0.83	24	
Do you feel comfortable giving people directions at work?	3.33	1.16	24	
You like to work under pressure and feel comfortable to to make fast decisions?	3.83	1.26	24	
Project base working is the best way of working for you?	3.54	0.65	24	

4 DATA ANALYSIS AND RESULTS

4.1 Background Information of Respondents

The questionnaire was answered by 24 people. 45,8 % were blue personalities, 25 % were green, 20,8 % red and 8,3 % were yellow. 83 % of people answering were male and 16 % % were female.

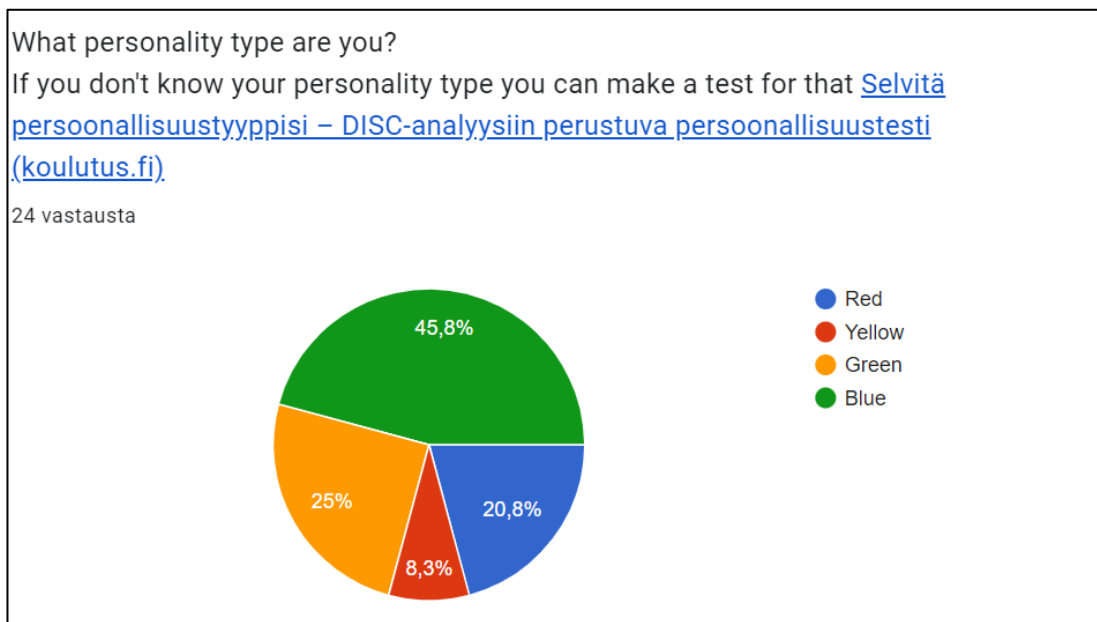


Figure 4. Different personalities in the questionnaire

Most of the people answering the questions have been working in projects 0-5 years. The rest of them had 5-10 years of experience in projects or then 10-15 years.

Most people from this focus group were working in the renewable sector as project managers, site managers and site engineers. Few of the people answering were from some other construction field, IT, sales, and some other specialist. Nevertheless their work is project based.

87,5 % are working in the execution phase of projects, 8,3 % in initiation, and 4,2 % in closing. 9 out of 11 blue personalities were working in the execution phase of

project. 1 blue was working at the initiation phase and one at closing. 5 out of 5 red personalities were working in the execution phase of projects. Yellows had most deviation since one was working at the initiation phase and one execution (see Table 7).

Table 7. Personality types and in which stage of a project they are working.

Personality type	Initiation	Execution	Closing	Total
Blue	1	9	1	11
Red	0	5	0	5
Green	0	6	0	6
Yellow	1	1	0	2

4.2 Data Analysis

The data analysis was done using the SPSS analysing program. Using SPSS, the questions were checked for reliability. It could be seen that some of the replies were incoherent and not fully thought through

The questions were sorted into two reliable categories project leading and organising projects and omitting the questions that were not reliable. By categorising the questions this way it was also easier to do a comparison with the literature review and given replies.

Table 8. Personality types and leading projects

Personality Type	Number	Mean	Standard deviation
Blue	11	3.56	0.84
Red	5	3.95	0.27
Green	6	3.04	0.76
Yellow	2	4.00	0.01

From the analysis (see Table 8 above and 9 below) it can be seen that the highest value for leading projects comes from yellow personalities and the lowest from green. Also red ones consider their capability of leading a project quite high. These results correlate well with how these personality types usually see themselves and what they might consider to be easy for them.

As yellows usually are outgoing, enthusiastic, optimistic, and inspiring, and they naturally want to be in the spotlight, taking the lead is easy for them. Red personalities are said to be born leaders with their determination and quick decision making.

Green personalities on the other hand are said to be calm, friendly reliable, and they like to avoid any conflict. They often have difficulties to make decisions and these traits combined easily make them think leading a project is not what they like to do.

Blue personalities also in this case fall somewhere in the middle. To them leading seems necessity and they can do it if they must.

Table 9. Personality types and organizing projects

Personality Type	Number	Mean	Standard deviation
Blue	11	3.69	0.51
Red	5	3.68	0.72
Green	6	3.16	0.55
Yellow	2	4.10	0.42

The second category of project management was organising. In this category yellow ranked again themselves in the top. This probably again comes from the almost unbearable optimism and self-confidence. At organising blue personalities were then second. That is not surprising since they are described to be well organised and task oriented. Red personalities come the third and greens again are moderate and don't think they are too good at organising a project.

5 DISCUSSION AND CONCLUSIONS

Looking into the literature review it is clear that one cannot straight away say who should be a project manager and who not, but there are certain indicators who might be better at it. As mentioned earlier people are born with some traits and some they learn. How much of the good qualities can be taught is not yet fully covered. Based on the results of this analysis the second research question could be answered so that reds and yellows find project management and decision making easy for them. On the other hand greens see that aspect of projects uncomfortable.

Organising projects are easy for yellows and blues, red personalities also find it to be quite an easy aspect of project management to them. Greens are also in this aspect moderate and rank themselves lower.

All this shows that what has been studied and said about these four personalities types correlates well also in the project based work environment. As written by Thomas Erikson in his book *Surrounded by idiots*, to lead a good project it is good to recognise different personality types and understand how they work. This way it might be possible to reach a better result in all important areas of project management. To answer the first research question personalities cannot be overlooked when considering leading a project management.

Based on the analysis the first research question can be answered so that, personality types guide our decisions and affect how we face different situations. Yellows think they can conquer the world, and nothing is impossible, reds are determined to push through any obstacle in their way, blues will focus on any given task and greens will try to find a way to make everyone feel that they are part of the team.

As a conclusion based on this research personalities find most of the project management phases as difficult or easy as literature has indicated.

The limitation of this study was the fact that there were not enough replies to the questionnaire. The questionnaire was sent to 45 people from which only 24 replied. To have a more comprehensive study at least all 45 people should have answered, or the questionnaire could have been sent to more people. If there were more replies, there would be less deviation in the answers and the results would be more reliable.

BIBLIOGRAPHY

/1/ PMI, Project Management Institute web site. Accessed 12.7.2022 [What is Project Management | PMI](#) .

/2/ Wikipedia. Referred 4.9.2022 [Project management - Wikipedia](#)

/3/ Erikson Thomas, *Surrounded by idiots*, Penguin Random House

/4/ Niemi, M. (2018). Work package leader-A link between Line Organisation and Product Development Projects in an R&D Environment.

/5/ Berhan, E., & Beshah, B. (2017). Key project planning processes affecting project success. *International Journal for Quality Research*, 11(1), 159-172.

/6/ Crilly, B. C. (2020). *Ambidextrous project management: The influences of leadership styles, project management practices, and team characteristics on creativity and innovation* (Doctoral dissertation, Hood College).

/7/ Meng, X., & Boyd, P. (2017). The role of the project manager in relationship management. *International Journal of Project Management*, 35(5), 717-728. <https://doi.org/10.1016/j.ijproman.2017.03.001>

/8/ Johnsson, F. (2009). Personality measures under focus: The NEO-PI-R and the MBTI. *Griffith University Undergraduate Psychology Journal*, 1.

/9/ Bevilacqua, M., Ciarapica, F. E., Germani, M., Mazzuto, G., & Paciarotti, C. (2014). Relation of project managers' personality and project performance: An approach based on value stream mapping. *Journal of Industrial Engineering and Management*, 7(4), 857-890.

/10/ Baczyńska, A., & Korzynski, P. (2017). Leadership competencies among managers. *Central European Management Journal*, 25(2), 6-22.

/11/ Phan, L. V., & Rauthmann, J. F. (2021). Personality computing: New frontiers in personality assessment. *Social and personality psychology compass*, 15(7), e12624.

/12/ Agnieszka Goździewska-Nowicka, Arkadiusz Rajs, *Leadership Qualities in Project Management*

/13/ Lorenz, L., & Dittman, K. (2004). Project Managers: Born Or Made?. *Journal of College Teaching & Learning (TLC)*, 1(10).

/14/ Hussain, A., Jamil, M., Farooq, M. U., Asim, M., Rafique, M. Z., & Pruncu, C. I. (2021). Project managers' personality and project success: moderating role of external environmental factors. *Sustainability*, 13(16), 9477.

/15/ Types of Research Methods (With Best Practices and Examples) | Indeed.com, Accessed 23.3.2023

/16/ Takagi, N., & Varajão, J. (2020). Success management and the project management body of knowledge (PMBOK): An integrated perspective.

/17/ Caccamese, A., & Bragantini, D. (2012, May). Beyond the iron triangle: year zero. Newtown Square, PA: Project Management Institute

/18/ Varajão, J. (2018a). A new process for success management bringing order to a typically ad-hoc area. *Journal of Modern Project Management*, 5, 3, 92-99.

/19/ Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.

/20/ Westerveld, E. (2003). The Project Excellence Model®: Linking success criteria and critical success factors. *International Journal of Project Management*, 21(6), 411-418

Thesis survey

How personality types affect on project management

1. What personality type are you?

If you don't know your personality type you can make a test for that [Selvitä persoonallisuustyyppisi – DISC-analyysiin perustuva persoonallisuustesti \(koulutus.fi\)](https://selvita.persoonallisuustyyppisi-disc-analyysiin-perustuva-persoonallisuustesti.koulutus.fi).

Merkitse vain yksi soikio.

Red

Yellow

Green

Blue

2. How long have you worked in projects?

Merkitse vain yksi soikio.

0-5 years

5-10 years

10-15 years

15-20 years

more than 20 years

3. What type of projects do you work with?

4. Are you?

Merkitse vain yksi soikio.

Male

Female

5. Your position in a project?

6. What stages of a project you usually work?

Merkitse vain yksi soikio.

Initiation

Planning

Execution

Closing

7. Do you find organising works and tasks easy?

Merkitse vain yksi soikio.

I strongly disagree

I disagree

I don't know

I agree

I strongly agree

8. Do you find it easy to leave what you are doing in way of something more urgent?

Merkitse vain yksi soikio.

I strongly disagree

I disagree

I don't know

I agree

I strongly agree

9. Do you like working independently?

Merkitse vain yksi soikio.

I strongly disagree

I disagree

I don't know

I agree

I strongly agree

10. Do you think making decisions is easy for you?

Merkitse vain yksi soikio.

I strongly disagree

I disagree

I don't know

I agree

I strongly agree

11. You like to seek new technologies and innovations to make project management easier?

Merkitse vain yksi soikio.

- I strongly disagree
- I disagree
- I don't know
- I agree
- I strongly agree

12. You like to work under pressure and feel comfortable to to make fast decisions?

Merkitse vain yksi soikio.

- I strongly disagree
- I disagree
- I don't know
- I agree
- I strongly agree

13. Are you willing to take the lead in difficult situations?

Merkitse vain yksi soikio.

- I strongly disagree
- I disagree
- I don't know
- I agree
- I strongly agree

14. Do you feel comfortable giving people directions at work?

Merkitse vain yksi soikio.

I strongly disagree

I disagree

I don't know

I agree

I strongly agree

15. You like to think things through before making decisions?

Merkitse vain yksi soikio.

I strongly disagree

I disagree

I don't know

I agree

I strongly agree

16. You feel that you have capability to foresee problems in project and take needed actions to fix them?

Merkitse vain yksi soikio.

I strongly disagree

I disagree

I don't know

I agree

I strongly agree

17. You think it is important to keep all team members informed about project status?

Merkitse vain yksi soikio.

- I strongly disagree
- I disagree
- I don't know
- I agree
- I strongly agree

18. Project base working is the best way of working for you?

Merkitse vain yksi soikio.

- I strongly disagree
- I disagree
- I don't know
- I agree
- I strongly agree

19. You like to work by your self without any interruptions?

Merkitse vain yksi soikio.

- I strongly disagree
- I disagree
- I don't know
- I agree
- I strongly agree

20. You like more being a member of a project team than leading it?

Merkitse vain yksi soikio.

I strongly disagree

I disagree

I don't know

I agree

I strongly agree

Google ei ole luonut tai hyväksynyt tätä sisältöä.

Google Forms