

Virtual Project Management Soft Skills (VPMSS)

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Abstract— *Project management is an important subject in any field, and required skills for project management have been under research since the Industrial Revolution. Thus, in this paper, the focus will be on soft skills that are required, especially in virtual project management. In particular, this research is investigating the required soft skills for a virtual project manager. The paper puts a lot of emphasis on virtual because, unlike other project managers, this one handles different teams in different geographical positions, which means there is a possibility of them being in different time zones but are still required to deliver in their specific tasks. This research is a review that highlights the soft skills that can be used in project management generally by the project managers by listing them down and giving a description of what they entail and when they can be effective. It further goes down and looks at the most important soft skill for specifically virtual project managers. Afterward, results and charts give a pictorial view of what has come out of the project. The paper ends with five vital soft skills that cannot be achieved without technological literacy, which is the core of virtual work success.*

Keywords— *Project management: project manager: virtual project manager: key soft skills.*

I. INTRODUCTION

Project management is one of the works that a person can engage in this world. It is a complex field due to the numerous activities, but once you have the right skills, it eases that tension [1]. Under this field, we have the profession of a project manager. A project manager is someone who is given the responsibility for project management. Every project always has some objectivities that need to be attained by the time it comes to completion. It is the project manager who is supposed to ensure that those objectives are met without failure.

A client comes with what he or she needs, then assigns it to the project manager, who has to find a way to become a reality depending on the knowledge offered. Some specialty level that leads to expertise is always required for the project manager to be effective and efficient. Project management ensures that the project objectives are well defined. A project might have several things that they desire to achieve at the end, and project management is supposed to ensure that all of them are harmonized so that there is no confusion at any time the project is in place.

Other than that, project management is tasked with ensuring that those clear objectives that have been set are meaningful. There is no point in struggling to achieve something that will add no value [2]. Thus, after having clear objectives, they arranged them from most important to the least, removing the pointless ones. Thereafter, project management is supposed to ensure that the objectives are

attainable. Once the objectives are arranged in order of their usefulness, the next thing is to ensure that achievability puts all factors constant, such as the time frame given. In case they notice that any objects might become impossible to achieve after all the analysis, then it is dropped.

Project management is also tasked with looking for the things needed to facilitate the project. One of the key requirements of a project is the labor force. These are the individuals who are supposed to work tirelessly to ensure that the project does not fail. They form the core of project actualization. Furthermore, information is another requirement. Knowledge is almost everything when it comes to the project. A slight mismatch in knowledge can lead to a lot of catastrophes. Project management ensures that it acquires all the relevant information required in the entire process of implementing the project. Various things must take place for a project to go through [1]. They are the agreements that ensure swift delivery of the process, and in case of anything, then there is something that can be done about it. Materials, together with technology, are also other requirements that project management is tasked to find. It is supposed to ensure that all materials and technology that can assist in efficiency are availed. The third thing that project management is expected to do is manage the constraints. There are things such as time and quality, which will always be prioritized in any project. Project management is supposed to ensure such factors are not infringed in any way [3].

Since technology started rising, it became easy to work remotely, and it is slowly turning into a necessity. That being the case, project management has also transformed, and we have virtual project management. Virtual project management is where projects are managed through virtual teams or remote [4]. The ones who are in charge of the process are virtual project managers. A virtual team is a group of people operating together in a certain project, usually from different localities, to attain a shared goal and objective [5]. People are in different places with different time zones does not mean that a project cannot continue. The virtual project managers arrange those individuals and assign them tasks appropriately as they monitor what they do to ensure nothing fails. The virtual project managers are always tasked with various activities, including the development of the project plans. Without planning, it is automatic that the project will not produce the expected results. They are the ones who take their time and ensure that there are appropriate project control and execution. The plan ensures action, deliverables, all responsibilities are assigned properly and considers when considered is supposed to come to an end. Every project has

people who have an interest in it. The virtual project manager is the one who is supposed to ensure that the stakeholders are well managed, for they are the people who may affect or be affected by the project [4]. Communication is one of the vital responsibilities of the virtual project manager. Being that he or she is handling people from diverse places, is supposed to ensure proper communication without any dilution. They are supposed to establish a communication network that is effective for them and ensure that everyone gets the right information at the right time.

The virtual teams are supposed to be controlled, or some may end up doing their things. The virtual project manager is the one who should make sure that the teams are in check and active in their duties. Every project comes with its own risks, and the person who is expected to ensure that they are highly minimized is the project manager. A good project is cost-effective. Because virtual project managers are handling people from different places, the probability of resource waste is very high; thus, they are tasked to ensure that everything is accounted for, and there is value for money. Conflicts might arise in working on the project, and that is part of human nature. The manager's presence is highly required to ensure when they arise; amicable solutions are developed.

Humans have technical and non-technical types of skills. Technical skills are the practical abilities and knowledge that someone has to perform certain work. They are more inclined to issues such as science and mathematical tasks. Non-technical skills are those skills that help us to relate with other people comfortably. Soft skills are one of the non-technical skills that affect the way we work by controlling our interactions with our fellow workmates, solving issues that may arise, and managing our duties. It entails people skills, emotional intelligence, social skills, characters, attitude, social intelligence, communication skills, and career attributes. The soft skills make us desirable for a particular employment, which may not necessarily need acquired knowledge as it is a more common sense amongst people [6]. Soft skills are open-sourced; thus, they do not limit someone into any field, unlike hard skills. Hard skills require you to have some level of expertise to do a task, thus limiting one of the options. The soft skills are highly demanded in the workplace because it makes people very flexible. Many changes take place every moment, and we are expected to change with the changes.

The aim of this project is to ensure that we have identified what are the soft skills in project management. We need to understand why they are there and what makes them qualify to be soft skills. Other than that, we aim to know why the soft skills are generally required in the field of project management as we seek to know if a project manager must have them. Moreover, the objective of this project is to ensure that by the end we have sort out the most important soft skills. Amongst the numerous soft skills that are there which one of them is going to be more beneficial to the project manager? The paper put an emphasis on specifically virtual project managers. The issue of virtual teams has led to the establishment of the virtual project managers. They play a critical role in ensuring the virtual teams deliver. Thus, they need to have both hard and soft skills in order to manage their teams effectively.

Therefore, the research identifies what soft skills a project manager should have.

II. LITERATURE REVIEW: SOFT SKILLS IN PROJECT MANAGEMENT

There are so many soft skills that people can have in this life and we are going to look at the soft skills that are found under the field of project management. It is an area that one cannot participate in properly if he or she lacks soft skills. As much as it might require expertise in a certain hard skill, soft skills will also be of great benefit. The goal of this literature review is to find out the soft skills that exist in project management and project managers.

According to Tian (2020), leadership skills are one of the key soft skills that are there in project management [7]. He says leadership is never about the level at which people like you or how best you can talk to people, but the number of results you can produce. Good leadership is the one that allows people to reach their full potential by giving the best results, and the good thing with this skill is that anyone can develop it regardless of who they are. He emphasized leadership skills and found that being a project manager means that the person is trusted enough to be a leader. Studies attribute that no measurement can measure good or bad leadership in project management, but certain factors can influence one to judge as either of the two [8]. The article attributes the advantages of having this skill in project management. It says that leadership skills are important because they allow project managers to achieve the required goal. They are the ones who motivate the employees to do better when they feel they want to give. The skill also allows the project managers to understand each employee's potentials and therefore push them to be their best selves. Without purpose, there is no point in having a project.

Leadership skills make a project manager develop a purpose for the team and rally them behind the purpose. Other than that, the skill allows them to drive change when need be. The article also examined team building as an essential soft skill that is there in project management. According to the study, a project might have so many factors, and thus a large number of individuals may come on board to ensure that the project becomes a reality. Usually, a project entails customer, sponsors, vendors, consultants, quality assurance people, managers, among many other people [4].

Studies show that is the reason as to why team building skill is highly required. When people work together, they always expect great things to happen, but a slight division can affect many things. The thing about projects is that everything is always connected, and therefore when a single mistake is made, almost the entire thing is affected. The article concludes by saying that the team members must always feel secure and trust one another. That bonding between employees is essential as it helps them create a good working environment. The project manager should also be able to allow people to voice their opinion. They need to feel as if they are part of the project, not just being used to accomplish a task, then they are left.

Being that project management entails several people, communication is very crucial. From Jena and Satpathy's article, it was found that the skill allows effectiveness to take place when handling a task [6]. There is nothing like a project without communication because even to rally people into the project requires one to communicate. Jena and Satpathy said that communication in project management goes beyond speaking with our mouths, for we have nonverbal communication [6]. They studied three project managers running their projects and tried to understand what it entails. Their results showed that it is expected that people should be able to understand non-verbal cues. Sometimes it is not a must that some talk to relay a message, as they can also use various signs, and the receiver should understand it. It is nonverbal communication that can truly show the feelings of the communicator. An unfriendly tone is never encouraged in this field, and the communicators are supposed to be confident while saying what they want [6]. The confidence indicates that you are sure of what you are saying. The article emphasizes this skill; it allows feedback to take place. For it is difficult to run a project when there is no feedback coming through. Jena and Satpathy studying the three project managers realized that all of them were required to make various decisions from time to time; therefore, they believed that another soft skill in project management is decision-making skills [6]. The project managers are the ones who are required to be at the apex when matters of decision-making skills come on board [6]. They should be able to make decisions that will better the project. These skills allowed the project managers to make decisions after thinking objectively and connecting them to the desired goals. During their studies, they noticed that the project managers would be authoritative from time to time, where they would be forced to make decisions that did not please everyone.

Again, there are times when the project manager would consult before making decisions. They were supposed to be conscious when such a time came to decide that they would not have affected people if they were consulted. There are things that the team members would want, and there are those that the stakeholders would demand. At such a time, the project manager would always decide to balance all the parties. They allowed democracy at some point when making a decision. They would allow their team members to decide where the majority have their way while the minority have their say. Though there are decisions made randomly, they did not prefer them and hence would do it scarcely. One of the reasons as to why it could take place was to create unpredictability. There are times when parties were used to the existing systems and thus lazy around instead of ensuring the projects became successful, and they could change that with a bit of randomness.

According to Heerkens (2014), negotiation skills are a great soft skill that project managers must have after observing a project manager managing a mall [1]. The article says negotiation is the process where people settle the differences. The project manager ensures that an agreement is always reached by avoiding any dispute or arguments. From their study of project management, they noticed that disagreements

always arose from the desire of someone to get the best outcome without considering the other person, and the project managers are the ones who were supposed to ensure that fairness and mutual benefits were considered to allow for a successful outcome without relationships being affected. In case of any issues, the research indicates the project, and the manager would repeatedly use a certain criterion to arrive at a solution. The project manager would allow preparations to take place where factors such as when and where are put in place before any other thing is done. The people who were supposed to be there would declare at such a time, which allowed the project manager to clarify his position in the matter. Anytime this was not done, the conflict would continue when the negation process started. The parties in conflict were to read the set guidelines that were established before they started the project. The next thing that they would do was to discuss. People have different views; that is why a 6 maybe a 9 to someone who stands in the opposite direction [4]. Therefore, people were allowed to table their issues according to the way they viewed it.

The project manager would give everyone an equal opportunity while not engaging in anything. Thereafter, the project manager would clarify the goals, allowing the conflicting parties to have a common ground. The project manager would then drive an outcome that would create a win-win situation. Open-mindedness was of the essence to ensure that the solution was acceptable. Heerkens (2014) noticed that the reason we do whatever we do is because of the motivation we have [1]. Motivation directly affects who we are, which is why it is constantly a soft skill in project management [8]. Good project managers have always been motivating other people. Being that they manage people who are supposed to ensure that their project is not a mess, they need to keep them alive and kicking. They must have these skills, or else people will not feel like doing their job. The study showed that project managers would assess their teams and understand each of them. Different people will always have different personalities, and that means they will always operate differently. The article found out that is the reason as to why the project managers are required to initially do this so that they be aware of what motivates who.

Kimble (2011) indicates that trust-building is a vital skill in project management [8]. A good leader must earn the trust of its team members to interact and communicate with them easily. It is a skill that takes time and investment to become a reality. Kimble concluded that the skill is good for it allows leaders to be confident. One cannot be confident when the people who surround him or her do not have enough faith in him [8]. He noticed that teammates highly affect the whole would behave. When they did not trust one another, nothing significant would occur; a general analysis of project management and realized that this skill was essential because it made the project managers dependable.

The team members would always look at the top to get assistance, and when their leader was untrustworthy, it becomes difficult for them to inquire about the things they wanted. The project managers were likely to be trusted with their team members when they were open and friendly. It is

natural for us to believe more in those who are friendly even when they have wrong motives [1]. The team members would establish trust amongst themselves when they were able to operate together. The togetherness allowed them to drop down their guards and believed that they could work to achieve the goal. Results can be achieved, but the issue is how those results are achieved [8]. Trust building skills allowed the team members to achieve their results with the best feeling. They knew that they were doing the right thing with the right people. Therefore, there was no interference of their emotions. Kimble noticed that trust-building skills came on board when one walked the talk [8]. The project managers who would say something and achieve it were more trusted than those who only talked without doing anything.

III. METHODOLOGY

This research is a review of eleven scientific resources of journal articles analyzed to discover the required soft skills that are most important for the project managers to manage the project virtually. The publications used entailed details about the hard skills and soft skills that are. The studies examined the soft skills in project management. They also included project managers who have been managing various projects. The publications were both academic and peer-reviewed studies. Only publications that were written in English were used.

Three common journal articles were utilized in this research and influence the results of finding the important soft skills. Being that we were focusing on virtual project managers, we needed to understand what virtual entails. Ebrahim and Taha (2009) talked about who is a virtual project manager [9]. It also stipulated that they manage virtual teams. It described who is surmount to be referred to as virtual teams and what they mainly do. It further went on to talk about how they relate to virtual team managers. It described the skills that the project manager should have to ensure that the team delivers on the required task

Hallman's article was also utilized to find out the soft skills for virtual managers [10]. The article looked at successful project managers who have managed their teams virtually. It also looked at the project managers who failed to manage their teams virtual. Of the 3 who were successful, it talked about their shared characteristics. The things that they all did to ensure that they emerge successful with their projects despite managing people who are from different locations. Then it looked at the characteristics of the three project managers who failed to attain their desired results.

Johnston and Rosin analyzed virtual teams globally [11]. They had people who were working to develop software from seven different countries. All those individuals had their own tasks expected to achieve and then submit it to their project manager. The virtual team members all came from a different time zone. The paper [11] emphasized the project manager. It was keen to observe how the project manager was handling the other six people from different countries. By applying various skills, the project manager was able to attain the desired results.

IV. RESULTS AND DISCUSSION

Here we look at what the data have indicated. We keenly analyze the data to find the appropriate result for our study. We ended up having the following as the most important soft skills for the project manager.

Leadership skills can be presumed to be the most important of all the skills. From the studies, it is evident that a virtual project manager must lead the entire team from wherever they are to achieve the project's objectives. He must ensure that everyone who comes on board complies with the set guidelines, understands what the mission is, and fit to go after the goals. The sense of common purpose solemnly lies with the virtual project manager, and that purpose is the most important thing if there is a desire to attain the goals [7]. Moreover, having people focused on the purpose will ease their time as the manager because the team will remain committed to the course. It is a skill that allows results to be driven out as the manager can understand the full potential of everyone, and when they see you are not reaching it, they push you to it. The skill will also make the virtual project managers lead by example. It is always easy to say but difficult to do it. Therefore, when the subjects see you doing it, it motivates them to do it even better. That is why the managers should ensure they are at the forefront of ensuring the project's goals are attained. Without this skill, the dream of making a project successful should be dismissed [9].

After analysis, it emerges that decision-making skills are another important skill for virtual project managers because it cuts across all the articles. As a virtual project manager, you are the leader of different teams working on a similar thing. One of the main responsibilities of any leader is decision making. Daily, people will be waiting on the decision of the manager to take action. That means that the way the teams are going to be organized will depend on these skills. If the virtual project manager is good, they will make decisions to ensure proper channels to address anything, thus ensuring the organization [4]. Most conflicts always start because people were dissatisfied with the decisions that were made. The virtual project manager is supposed to make decisions that ensure everyone feels comfortable even if they did not like it. He or she is supposed to be aware of when to use commands [11]. There are situations where being authoritative will be essential. Must also know when is the time to reach a consensus where people are allowed to be democratic and choose what they want.

Communication skills are everything, as nothing will take place once there is no communication. Hallman shows us that even if you make the right decisions and offer the best leadership, but there is a communication breakdown, nothing substantial will take place [10]. It is a skill for the virtual project managers, and they must be almost perfect with it. They should be able to rely on any information they want with ease such that nobody misquotes them. The communication should always be two ways. There is a top-down and down-up form of communication [10]. While the manager directs on what needs to occur, he or she also receives feedback on what is taking place on the side. Being that communication goes beyond only speaking, it means that if the manager is

equipped with the skill will become emotionally intelligent. Dealing with people in different places at different times requires one to be highly emotional intelligent to read the team members' feelings as most of the time, they will not be with you physically.

A virtual project manager should be equipped with skills that can allow them to resolve any conflict that might arise. From the studies, it is notable that this manager is dealing with virtual teams, there is a high likelihood of conflict to occur, and that is very normal. People who see and think differently will always lead to diverse opinions that lead to issues when not taken seriously [10]. That skill allows the manager to create harmony amongst the teams, and thus, everyone moves forward together. There are various steps that the manager can follow to create the solution but what is of importance is that win-win is felt by everyone [4].

Virtual project managers should have trust-building capacities. You cannot work with different people in various

geographical locations when there is no trust. Everyone needs to believe in the project together with the manager. We are people who love to believe things that we constantly see and touch, but virtually it might become difficult for that to happen. That is the reason why the managers are required to have the ability to make everyone comfortable by constantly reassuring them of their trust.

Overall, based on the above review, Project management soft skills include leadership, team building, communication, trust-building, motivation, negotiation, decision making. All those skills are beneficial to a project manager, but they are specifically important for virtual project managers. They include leadership, decision making, communication, negotiation, trust-building. However, the most common ones are five skills that appeared to be vital: Leadership, Decision Making, Communication, Negotiation, and building trust, as shown in Fig. 1.



Fig. 1. Virtual Project Management Soft Skills model

V. CONCLUSION

After all, both hard and soft skills are necessary for project managers. No doubt that digital and technology literacy is the core for working virtually; however, for this research's focus, we concluded that five skills are vital for virtual project management, which are leadership, decision making, communication, negotiation, and trust-building. This is because we assume that motivation and team building are initiated and there by default. Again, all the feelings that need social intelligence have to be connived by investing in important tools such as cloud computing and video conference applications and tracking and tracking employees performance. Managers could perform well virtually if they employed proper communication solutions. Moreover, creating policies and procedures is vital to be followed. Procedures can clarify things, and policies can assist in ensuring that the guidelines are in place. However, working remotely has some problems if the balance between work and life is unconsidered. So, it is better to save commuting time and manage other life responsibilities with more production

and accuracy. Lastly, soft skills cannot work well without the emphasis on the importance of technological literacy.

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