Application of Communication Management in Project Innovation

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Abstract: The report focuses on the communication management of the project, based on the aggregation structure, analyzes the impact of some specific projects - entrepreneurship and innovation projects, so as to summarize lessons learned, put forward reasonable and feasible suggestions for project implementers, and promote the success of the project. The report is divided into four parts. The first part is to review the research literature on the topic and analyze the relationship between them, as well as their contributions and limitations. Secondly, the research methods applied in this report are described. Thirdly, the results of the study are discussed and analyzed in detail. Finally, the limitations of the report be explained. References are attached to the end of it.

Keywords: project innovation; communication management; Theory and practice

1. Introduction

In modern society, with the rapid development of the commodity economy, more and more people are affected and begin to choose to work in the field of innovation and entrepreneurship, develop new products or provide new services (Avtandil Silagadze et al., 2016) [1]. At the same time, these efforts can all be seen as a process of doing a project (Petrucă, I. 2019)[2], that is to say, they are all aimed at achieving the desired project results. Therefore, based on this situation, many countries and regions in the world have promulgated relevant laws and regulations to encourage their citizens to carry out entrepreneurial and innovative activities. For example, the government provides cheap or even free office space to businesses; Simplify the registration process for related businesses; Tax deductions, etc. (Samáková Jana et al., 2017) [3]. There are many reasons why projects fail ((Berntal, J. 2018) [4]. However, many of them are related to failure in project management. Because as a systems discipline, it plays an important role in the success of various types of projects. Communication management as one of core component in project management, the role of it is becoming increasingly prominent (Hunt, J.A. 2018) [5].

2. Literature review

Since the topic is the communication management of projects, the definition of communication should be recognized priority. Communication can be divided into broad and narrow concepts. In a broad sense, communication refers to the self-inheritance of information or the transmission and reception of it between individuals to influence the behaviors and results. To be specific, firstly, communication is not only between individuals, but also includes the self-inheritance of information which is important to know yourself (Li, Z. et al. 2019)[6]. It comes from our experience, which depends on our feelings about all the objects in the world and our thoughts about opinions and matters. It is important for project innovators and entrepreneurs. The second point is that individuals are not only between mankind, but also between people and things and even between things only. For example, a newborn calf is able to survive among its nature and environment without any help. It is seen as communication in a broad sense as well (Li, Z. et al. 2019). In the narrow sense, communication refers to the situation that expression of opinion and idea between people. This is a mutual process, in which one party sends out information and the other one understands it and gives appropriate feedback after receiving it. The ability of communication is not we are born with, it is useful lifelong competence we need to learn and train (Shapton, L. 2016).

Accordingly, the concept of project communication management is clear as well, It spans both

narrow and broad sense of communication, because it occurs between almost all the parties related to projects. It is the process of ensuring that project information is properly and timely generated, collected, published, stored, and ultimately processed (Richards, A. & Fitzpatrick, K. R. 2018)[7]. This report is based on academic articles that explores the topic in project innovation further.

2.1. The relationship between articles

After analyzing these articles, it can be found that the research on innovation of project communication management can be basically divided into two categories: one is the role and influence of communication management in the whole process of a project or a certain one; the other is the role and influence of communication management for a certain type of project participants or stakeholders.

Specifically, both articles of Kyriazis, E. et al. (2017)[8] and Wu, G. et al. (2017)[9] are researches on the communication management in the project process; Both Andreassen, H. K. et al. (2015)[10] and Kyriazis, E. et al. (2017) have studied the communication management of medical project innovation. Some minor communication innovation can also bring ideal harvest. Both Sergeeva, N. & Zanello, C. (2018)[11] and Kyriazis, E. et al. (2017) adopt the research method of interview to some extent. Both Richards, A. & Fitzpatrick, K. R. (2018) and Saunsbury, E. & Howarth, G. (2016)[12] take super-large projects as research objects. Ekrot, B. et al. (2016)[13] classifies the conflicts caused by communication in detail and proposes solutions. Saunsbury, E. & Howarth, G. (2016) focuses on how the proposers of innovative ideas communicate effectively and promote innovation in the project. It is worth noting that Ekrot, B. et al. (2016) and Pemartin, M. et al. (2018)[14] are involved in the innovation of communication methods. Ekrot, B. et al. (2016) proposes relationship expectations and their impact on communication.

2.2. Contribution and limitation

The contributions of these articles to the topic are mainly reflected in the following aspects: firstly, the research angle is more detailed and not as general as before. For example, how innovators communicate in the research of Saunsbury, E. & Howarth, G. (2016); Kyriazis, E. et al. (2017) research is detailed to the communication of blood test items, etc. Secondly, research methods are more specific and systematic. For example, the research of Samáková Jana et al. (2017) is consistent with the project operation process; the whole paper of Sergeeva, N. & Zanello, C. (2018) analyzes the conflicts caused by communication, etc. Finally, some new concepts on this topic are also proposed, such as relationship expectations, conflict types, and communication frequency.

At the same time, the limitations of these articles need to be noted as well. First, the study sample may not be sufficiently representative. One is that they tend to focus on one area, health care, big projects, etc. On the other hand, the sample size is small. Secondly, the research methods can be enriched. For example, applying forms of interviews and questionnaires to collect data in order to obtain more objective and accurate information. The contributions and limitations of the authors above are summarized in the *Table 1* below.

Table 1: Thematic Analysis Table

article	Contributions and important findings	Limitations
Samáková Jana et al. (2017)	Research method contribution: divide the communication stage according to the cycle of innovation project.	There are no case studies of specific projects and lack of practical proof.
Sergeeva, N. & Zanello, C. (2018)	It fills the research gap of innovative project communication management: innovator's communication management.	There are only 5 case studies, which are insufficient and may not be representative.
Saunsbury, E. & Howarth, G. (2016)	The first study of a blood test found that small innovations in communication can bring big rewards.	The project is special and the research conclusion may only be applied to this project.
Kyriazis, E. et al. (2017)	It raises the impact of relational expectations on communication.	There's a lot of rationality, no specific case study.

***This topic analysis table shows the contributions and important findings of each study, as well as their respective limitations.

3. Methodology

Since the theme of the report is the role and influence of communication management on project innovation, there are two requirements for the selection of these papers: one is that the research content is communication management; the other is that the project should be as innovative project as possible, or that the improvement of communication management finally achieves the result of project innovation.

Based on this goal, this report analyzes several authoritative journals in recent years based on the research of project communication management, especially its role in promoting project innovation. This work has obtained the latest research results on this topic in recent years through the search method of the university of Sydney library. These articles are from academic journals such as 'Project management journal', 'international journal of project management' and other project management academic journals. All of them have been printed out for the convenience of taking notes and comparative analysis. Limitations may be unavoidable, such as analyzing recent research results. Although it is possible to obtain the latest academic outcomes of this issue, it may be difficult to understand the historical appearance of this topic. In addition, the research fields of these articles are large and not concentrated in one field, which may weaken the applicability of the research conclusions. The number of articles in this report is in line with the requirements and some evidences are added as an auxiliary, the actual number is greater than the requirements.

4. Results and Discussions

According to the life cycle of the innovation project, Samáková Jana et al. (2017) divides it into ten stages, including the entrepreneurial opportunity discovery stage, the thinking stage, the team building , the financial planning, the bankruptcy stage and so on. To study the communication management at different stages of such projects. There is no strict sequence of these ten stages and are not necessary for all projects either, they can be tailored.

Andreassen, H. K. et al. (2015) focuses on project innovation in the medical and health field, such as telemedicine. Because the breakthrough in this field needs to overcome many difficulties in a complex network of relationships, the relevant national management departments need constant attention and support, and the project researchers also need to be enthusiastic in the long-term activity and integrate the innovative results into life, so as to obtain support of the public.These processes need effective communication with each other.

Petrucă, I. (2019) conducts research on innovation in the field of culture and education in the form of interview. It shows that there are two factors hindering innovation in educational programs. One is the lack of effective communication, which makes it impossible to identify and hire teachers with special skills in emerging fields. In addition, the communication between the upper and lower levels of education departments is not smooth, which makes the education development sometimes lacks focus, the understanding of everyone is inconsistent, the goal is not clear enough.

Richards, A. & Fitzpatrick, K. R. (2018) has a unique research perspective. This paper studies the relationship between the communication medium of the project team and project separability. It is suggested that different project communication media should be selected according to the type of project, high or low separability. Innovative projects are obviously of low separability. Neither the cognitive level of project members nor the existing rules can meet the potential requirements of such projects. Therefore, face-to-face or more advanced electronic communication methods are needed to enhance connections and facilitate communication.

Wu, G. et al. (2017) studied the effect of communication management on complex and large construction projects. Three types of conflicts caused by the lack of communication management are proposed: task, process and relationship conflicts and the impact on the success of projects. At the same time, the role of formal and informal communication in resolving the above conflicts is studied. It is concluded that formal communication in the context of task conflict is most effective in promoting project success.

Sergeeva, N. & Zanello, C. (2018) studied five representative mega-projects in the UK and analyzed how to promote innovation in these large projects. Among them, communication plays an important role, especially those participants who develop innovative ideas, if they were supported by leaders and investors, the concept of innovation can be promoted to the large extent, build a scientific

project team, deal with risks and carry out projects.

Saunsbury, E. & Howarth, G. (2016) studied how blood tests services in the medical field were improved in terms of service efficiency and quality through innovative communication management. This innovation resulted in satisfactory results for patients, doctors and caregivers, which resulted in the success of the project.

Kyriazis, E. et al. (2017) studied the importance of communication to projects from a political perspective, which was reflected in alliance. Ideal communication could increase their political loyalty and improve their working relationships. Communication between Allies is often two-way and there are few barriers because they have positive relationship expectations and are more willing to communicate which is considered the basis of cooperation.

Ekrot, B. et al. (2016) focuses on the core concept of 'VB' (Voice Behavior), especially its role for project managers. VB concentrates on project improvement and through innovates to improve productivity ultimately and make projects successful in complex environments.

Pemartin, M. et al. (2018) studied one of the ways of communication -- collaborative communication. Moreover, more in-depth research has been done on the impact of the frequency of communication on projects. It is concluded that different communication methods should be applied in projects according to the characteristics of the project.

Table 2 summarizes the findings of these authors.

Table 2: Results and Discussions

Article	Samáková Jana et al. (2017)	Andreassen, H. K. et al. (2015)	Petrucă, I. (2019)	Richards, A. & Fitzpatrick, K. R. (2018)	Wu, G. et al. (2017)
Key finding	*Different methods of communication should be applied at different stages of projects.*	*Different methods of communication should be used for different stakeholders of projects.*	*Communication can be divided into internal and external types.*	Different projects should be applicable to different ways of communication.	*The contradictions caused by communication need to be resolved through communication.*
Article	Sergeeva, N. & Zanello, C. (2018)	Saunsbury, E. & Howarth, G. (2016)	Kyriazis, E. et al. (2017)	Ekrot, B. et al. (2016)	Pemartin, M. et al. (2018)
Key finding	*Project innovation is closely related to the timely communication between managers and innovators.*	*Small innovations bring big results as well.*	*Relationship expectations can affect communication.*	*The voice behaviour of the project manager influences the success of the project.*	*Frequency of communication is important.*

This report deeply integrates the theory and practice of communication management. In terms of the selection of research literature, there are not only articles that closely related to the communication theory, such as the study on the communication stages, the research of the communication modes and the conflict resolutions caused by communication, etc., but also has concentrated on practical case studies covering multiple fields, such as medical service institutions, the field of culture and education and super-large projects. Therefore, these contents are helpful for future research and practice. In terms of research, they provide innovate research angles and methods, which provide new ideas and perspectives for future research. On the practical side, they are ideal references for health care, education, culture, and large projects that operate on a project basis at least.

It is not difficult to find that the current research on this topic is still limited. First of all, the theoretical research results have not been applied in practice, let alone its effect. Secondly, the articles mainly focused on case studies are either single in number and unrepresentative, or they are too detailed and ignore the application of relevant theories. Based on this situation, future research may need to further combine the theory and practice of project communication management. To be specific, first of all, the research on project communication theory should be put into projects for specific analysis and record through long time observation, so as to test the role and influence of these theory on projects and improve. In addition, the case study should pay more attention to this topic, focusing on

the analysis of the performance and requirements of related projects in communication management and avoiding irrelevant content.

5. Conclusion

Based on ten latest academic papers, this report analyzes the role and influence of project communication management in project innovation. Its importance is reflected in these articles to varying degrees, more specific and detailed answers are given. In general, communication management is of great significance to the operation of projects, even directly related to the success or failure of projects. Although the success or failure of a project depends on many factors, from the perspective of communication management, these should be included: 1. Project team members have a clear understanding of the project objectives through communication. 2. Create a decent communication environment for the project and keep project members' thinking active. 3. Use various communication media and means to enrich communication forms. 4. Knowledge sharing, establishing communication channels for information sharing. 5. Embrace innovations that are small but enhance project management.

In addition to the relevant theoretical research is helpful, it is also enlightening to the actual project management activities. Specifically, project team members should communicate fully before the project starts, and continue to do it until the end of the project for smooth delivery. Rather than rushing into a project with conflicting goals that lead to unnecessary delays or cost increases. More importantly, it is significant to focus on specific project phases and members, and to communicate the characteristics of specific projects to promote project success.

Although this report analyzes the theory and practice of communication management, there are still some limitations. To be specific, although the report has focused the topic further, there is still room for further concretization. For example, the research on communication management can focus on the innovation of a certain stage of project communication management or stakeholders. Secondly, based on the above situation, although many aspects have been covered, from the depth of the degree may be lacking.

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