International Journal of Scientific and Management Research
Volume 8 Issue 5 (May) 2025
ISSN: 2581-6888
Page: 171-176

Analysis of Factors Influencing Successful Interaction between the Client, Contractor, and Engineer on Construction Sites

Kissabekov Almas[1*]
[1]Kazakh Academy of Transport and Communications named M. Tynyshpayev, Almaty, **Kazakhstan**
DOI - http://doi.org/10.37502/IJSMR.2025.8514

Abstract

Effective collaboration between the client, contractor, and engineer is a crucial element in the successful completion of a construction project. This article analyzes the key aspects influencing the coordination of project participants, including organizational, economic, and communicative factors. The study examines theoretical models, illustrating the impact of communication quality, financial transparency, and adherence to contractual obligations on the implementation of construction projects. Examples of successful project management practices are analyzed, along with common challenges that hinder effective interaction among stakeholders. Based on the identified patterns, recommendations are formulated to optimize processes and reduce the risk of conflicts.

Keywords: Construction projects, Client, Contractor, Interaction, Project management, Business communication.

1. Introduction

Successful execution of construction projects depends on successful collaboration between the client, contractor and engineer. Not only timely completion, but also quality of the end product and financial viability of the project depend on this collaboration. But in construction industry there are many situations capable of making cooperation between key players complicated or even ruining it.

Among the problems in construction projects is that there are cases of conflict and misunderstandings between the parties, which have a tendency to lead to delays, cost overruns and deterioration in the quality of implementation. The construction industry has increasingly been exposed to problems of project management, as well as the mismatch of expectations of the participants of a project. These issues require careful and in-depth analysis to identify their causes and propose possible solutions.

The purpose of this study is to analyze the factors that influence successful interaction between the customer, contractor and engineer at construction sites. To achieve this goal, an analysis of the theoretical aspects of the interaction of participants will be conducted, organizational, economic and socio-cultural factors that influence the effectiveness of their joint work will be studied.

The article employs methods of analysis, synthesis, comparison, and generalization, allowing for the identification of key factors influencing the interaction of participants in construction

projects. Additionally, a systematic approach is used to provide an examination of the organizational, economic, and communicative aspects of interaction in the construction sector.

2. Main part. Theoretical aspects of interaction of participants of construction projects

In construction projects, the interaction between the customer, contractor and engineer is the most important factor influencing the efficiency and effectiveness of the work. Each of the participants plays a unique role, and their interaction is determined not only by professional responsibilities, but also by a number of other factors: organizational, economic, as well as cultural and communicative. The **customer**, as the initiator of the project, is responsible for defining the main goals and requirements, while the **contractor** is responsible for the execution of all construction work within the established conditions. The role of the **engineer** is to monitor compliance with building codes, as well as to ensure technical and technological literacy of the entire process.

There are several theoretical concepts that explain the mechanisms of interaction between participants. One of them is the **concept of partnership relations** in construction projects, which assumes the most transparent and open cooperation of all parties. This model is based on the idea of mutual trust and the desire for the overall success of the project. Effective project management is possible only under the condition of clear coordination and communication of all participants, which helps to minimize the risk of conflicts and misunderstandings [1].

Other concepts that examine participant interaction include **agency theory**, examining the client-contractor relationship in the context of information asymmetry and control mechanisms; the **Integrated Project Delivery (IPD) model**, which is based on the early involvement of all participants and the distribution of risk; and the **network approach**, which delves into the dynamics of interaction through a network of relationships and information flow. Additionally, **transaction cost theory** explains the impact of contractual mechanisms on reducing risks and costs. These concepts provide a deeper understanding of the principles of effective collaboration and the optimization of processes in construction projects.

However, interactions between participants do not always proceed smoothly. Conflict situations can be caused by both underestimating the importance of other parties and inadequate understanding of expectations. For example, the customer and the contractor often have different ideas about the quality, timing or cost of the project, which leads to discrepancies between plans and reality [2]. The engineer, in turn, may face the need to resolve these disagreements, while his position as a technical expert is sometimes secondary to the economic and political interests of other participants.

When considering the economic side of the interaction, we can highlight the importance of contractual relations and strict compliance with financial conditions. At most construction sites, it is the financial aspects that cause delays or poor performance of work. For example, in case of uncertainty regarding whether the timely payment will occur, the latter may exert its influence on both the quality and timing of the construction work. Of great importance as well is employing new technology and computer aids in such a way that effective cooperation of workers and reduction of human factor mistakes occur.

Theoretical studies of the interaction of participants in construction projects emphasize the complexity of this process, which requires taking into account many factors. A clear

understanding of roles, mutual trust and effective project management are the key components for achieving successful results.

3. Approaches to the study of interaction factors

For a deeper understanding of the factors influencing successful interaction between the customer, contractor and engineer, it is necessary to use a comprehensive methodological approach that combines both qualitative and quantitative methods of analysis. First of all, it is recommended to use the **analysis of communication processes**, which will allow identifying not only obvious problems, but also hidden barriers in the interaction of the parties. This approach helps to better understand how information is exchanged between the participants, and where misunderstandings or conflicts may arise (fig. 1).

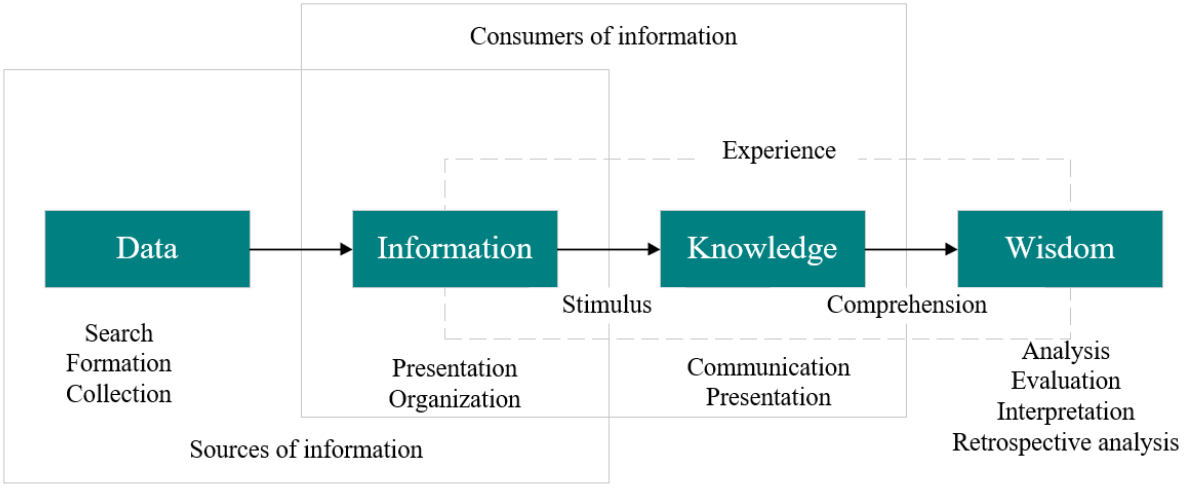

Fig. 1: Method of analysis of communication processes [3]

One of the key research tools that can be recommended is the use of **semi-structured interviews** with various participants in the construction process. This will allow the collection of diverse viewpoints and establishment of some issues that cannot always be easily derived from using traditional questionnaires or questionnaires. The questions of the level of trust between parties, the motivating of the parties, and the effect of external factors (e.g. legislative updates or the economy) must be covered by the interviews. This approach will help to provide a more complete and objective understanding of the interaction issues.

In addition, to effectively assess the impact of various interaction factors on the project outcome, it is recommended to implement **quantitative analysis methods**. Collecting statistical data on the time spent on resolving conflict situations, the number of revisions of contract terms and the amount of additional costs allows for obtaining clear and measurable results. This approach makes it possible to compare projects with successful interaction and projects where cooperation was problematic, which will help identify key patterns and proposals for optimizing the interaction of the parties [4].

It is important to note that the combination of qualitative and quantitative methods in the study will not only assess current problems, but also offer scientifically based recommendations for optimizing the interaction process, which, in turn, will affect the increase in the overall efficiency of construction projects.

4. Factors affecting successful interaction

Successful communication between the customer, contractor and engineer on construction sites significantly depends on various organizational and individual factors. **Organizational structure of project management** is one of the most crucial factors since it determines the level of clarity and transparency of responsibilities of both sides. Having clearly defined roles and responsibilities helps improve the efficiency of all project participants [5].

In addition, an equally important factor is the **financial stability of the project participants.** When the contractor or customer encounters financial difficulties, this always affects the overall construction process. For example, payment delays can cause material delay of supply or even work stoppage. Where the threat of financial complications is very high in projects, conflicts usually arise due to cost overruns and unsuccessful redistribution of responsibility. It is important that financial terms are transparent and detailed in contractual agreements, which helps to minimize possible financial risks.

Another important factor influencing the success of interaction is the **communication process** between the parties. Effective communication promotes a better understanding of tasks and expectations, which minimizes the likelihood of conflict situations (table 1).

Table 1: Factors influencing successful collaboration

Error	Cause	Example situations	Consequences	Prevention methods
Unclear agreements	Lack of a detailed contract, weak legal framework.	The contract does not specify exact deadlines, responsibilities, and penalties.	Legal disputes, conflicts, increased project duration and budget.	Development of detailed contracts, involvement of legal consultants.
Lack of communication	Infrequent meetings, ineffective communication channels.	The contractor did not inform the client about a delay in material delivery.	Design errors, work delays, increased costs.	Regular meetings, use of digital platforms for reporting and information exchange.
Payment delays	Client's financial problems, insufficient project funding.	The client delayed payment for a project stage, the contractor suspended construction.	Work suspension, penalties, deterioration of relationships between parties.	Clear budget planning, financial risk insurance, contractually defined payment schedules.

Communication problems, such as a lack of information sharing or insufficient frequency of meetings, can lead to misunderstandings and delays in the project. Construction projects that actively use modern communication tools and hold regular meetings tend to have more successful results.

The **cultural factor** has a significant impact on successful collaboration. Members of the project who come from diverse corporate and professional backgrounds may also possess different beliefs about the importance of deadlines, cost and quality of work. This can create conflict and tension unless due thought is given to establishing a shared corporate culture on the foundation of principles of cooperation and mutual respect. Construction projects that are committed to maintaining a culture of openness and mutual respect often show better results, since participants are willing to compromise and work for the sake of common success.

Thus, successful interaction at construction sites is only possible with a comprehensive approach that takes into account all these factors: from the organizational structure to the cultural characteristics of the participants.

5. Impact of collaboration and transparency on construction project success

Effective collaboration and transparency between stakeholders of a project are necessary in order to mitigate risks and guarantee smooth project execution. Facilitating open lines of communication and systematic reporting ensures accountability and consistency across all parties. In particular, encouraging a cooperative spirit results in proactive problem-solving, avoiding disputes and project delay.

One of the most striking examples is the GSA (General Service Administrator) policy of using **partnerships between** the customer and the contractor. This promotes the establishment of regular meetings to discuss progress, as well as the creation of an open reporting system with an emphasis on reducing conflicts and increasing the satisfaction of all parties. A particularly important factor in this policy is the existence of agreed deadlines and commitments, which helps to avoid delays and budget overruns [6]. Communication between the parties can be organized through digital platforms, which, in practice, speeds up decision-making processes and increases the accuracy of reporting [7].

But not all project and solution go well with the same level of success. For example, the **Associated Builders and Contractors (ABC) of Southern California** has released a report that outlines common types of construction claims, including delay claims on a project, change orders, payments, defective workmanship, and contract breach. Delays, particularly, can lead to cost overruns as well as disputes between contractors, owners, and subcontractors. The report confirms that being open and clear in finance terms, the contract terms made crystal clear, and strict adherence to payment schedules is a foremost determiner of successful construction project delivery [8].

6. Conclusion

Successful interaction between the customer, contractor and engineer in construction projects depends on a whole range of factors, including clarity of contractual relations, transparency of financial transactions, effective communication and the use of modern management technologies. Projects with established mechanisms for regular information exchange and the use of digital tools for work coordination are less susceptible to conflicts and delays. At the

same time, the lack of clear agreements and financial guarantees leads to the risk of litigation, budget overruns and reduced construction quality. Optimization of interaction requires the introduction of partnership models of cooperation, regulation of decision-making processes and adaptation of project management to changing market conditions. Thus, effective interaction of participants in the construction process is not only a key factor in the success of individual projects, but also an important condition for the sustainable development of the construction industry as a whole.

References

1) Menon S. (2024). Best Practices and Implementation Challenges in Effective Project Management. International Business Research, 17(2), 66. http://dx.doi.org/10.5539/ibr.v17n2p66
2) Yarov Y. (2024). Optimization of quality control methods in construction: innovative approaches and their effectiveness. Slovak international scientific journal, 90, 22–24.
3) Abidovna A. S. (2024). Communication process management as a tool to improve the efficiency of modern organizations. Gospodarka i Innowacje, 49, 211–217.
4) Cheng L., Cao D. (2024). Evolution model and quantitative assessment of risk network in housing construction accidents. Engineering, construction and architectural management, 31(1), 227–246. http://dx.doi.org/10.1108/ECAM-05-2022-0446
5) Borodin I. (2024). Methodological approaches in construction project management: a comparative analysis of Agile and Waterfall methodologies. Cold Science, 12, 48–55.
6) Partnering / US General Services Administration // URL: https://www.gsa.gov/real-estate/design-and-construction/construction-excellence/partnering (date of access: 13.02.2025).
7) Ahmed M. O., El-adaway I. H., Caldwell A. (2024). Comprehensive understanding of factors impacting competitive construction bidding. Journal of Construction Engineering and Management, 150(4), 04024017. http://dx.doi.org/10.1061/JCEMD4.COENG-14090
8) Common Types of Construction Claims / ABC Southern California // URL: https://abcsocal.org/common-types-of-construction-claims (date of access: 16.02.2025).