Knowledge-Oriented in the Claim Management (Providing a documentation process model for claim management)

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ABSTRACT *: Despite extensive studies and research done on various aspects of claim management, the method used by management to evaluate and measure the effectiveness of claim management process, and how to respond to them, also the rate of claims in projects, especially civil projects is increasing. This suggests that current principles and processes of claim management should be reviewed. Knowledge-oriented and the application of knowledge management is a strategy, which in this article to prevent, identify and track claims is suggested. Successful knowledge management requires a good knowledge management, strategy development, and proper implementation for it. The strategy for knowledge management determines and guides knowledge management efforts in the area of claim management. In this present paper, we have studied the strategies of knowledge management in addition to the documentation and personalization strategies. Then, with review of the literature of claim management in the area of project management, documentation strategy, as the main strategy of processes was introduced, and finally, process model of documentation and being a regulated claim management were presented.*
KEYWORDS*: Claim Management, Knowledge Management, Documentation Strategy, Personalization Strategy, process model*

I. INTRODUCTION

Benefiting from the modern management methods and passing aside the traditional and useless ones as to establish the modern concepts of management as well as combination and utilize of the project management processes have been turned into the most significant executive approaches in the design of development missions in the societies. In this regard, simplification and the practical adoption of the project procedures as well as their explanation and analyze are considered as important steps in the path [1]. The numerous effective factors lead to the coalition of the projects including high financial turnover, the specialization of works, the works' volumes, innovation, sensitivity, and different positions [2]. Therefore, the probability of disagreement in various levels of project will increase. The project implementation regardless of considering the disagreements and increase of the contract sides' potentials in solving them is difficult. Sometimes, a critical parameter can deflect the project away from its regional path as the changes in the bounds of a project, which can make trouble as well as commotion between the projects' involved men [3]. Therefore, the issue "claim" is turned up. The issue "*claim management*" is one of the subjects in project management and is categorized in the category of the stakeholder's management, which clearly might not be accounted too much [4]. However, its role is irrefutable, and is considered as one of the fundamental parts of a project's process. In spite of extensive studies on the theories and operational methods of claim management, increase of conflicts and claims reflects that the current principles and processes of claim facing the needs industry are ineffective.

Due to the unpredictable nature of the claims within the areas of civil and construction projects, the expectation saying that the claim is solvable and preventable through only one principle and method, is unrealistic [5,6]. Prevention, detection, and following the claims require strong management and will have an effective impact in case.

Conversion of irregular documentation and archiving to an efficient and justified system will affect a significant effect on the prevention and controlling the illogical claims [4]. Inadequacy of supporting documents from the unaware and ignorant personnel of the project, as well as lack of suitability in documentation system is such factors that must be addressed as the reasons of lack of effectiveness in the claims management, which should be regarded by the project managers as well [6,7]. Therefore, it can be concluded that the role of knowledge management in the claim management is too highlighted.Knowledge has recognized as a key and important asset, which is the base of resistant growth and the protection code of resistant competitive advantage of an organization. There is no doubt in the current atmosphere of universal competition increasing about knowledge and learning values to improve the organizational deserve [8].

Since the 1990s, the knowledge management became as a critical factor in order to increase the efficiency and effectiveness [9]. The knowledge management is a process, which helps the organization identify, organize, distribute, and transfer the information of the significant specialties that is part of an organization memory and are usually as unstructured mode in the organization. On the other hand, the organization knowledge requires a proper management [10]. The guideline of knowledge management specifies the path to the organization purposes, which its main purpose is to make the knowledge management actual in the organization. The implementation, activities and standardize process of main components of the solutions is considered in the knowledge management [11] and this guideline codify in order to filling the gap between existed knowledge and required knowledge [12, 13]. Hansen et al (1999) stated that the successful organization in knowledge management does not use the same method for these tablishment and exploitation of the knowledge management and on the whole, two documental and personalize strategies are used for applying the knowledge management by these organizations [14].

In the documental strategy, by individual approach to documents, the knowledge become independent from the person who participate in the documental strategy and expand it and the other people can use them again. This approach allows others to search and recover the documented knowledge without having contact with the people who create it. Whether, in the personalize strategy, the existed knowledge of the organization have relation with a person who create and expand it and dissemination of this kind of knowledge is done direct contact of person-to-person [15].

The correct recognition of these two strategies and get familiar with their various points and aspects can lead the managers and knowledge management projects to the correct investment and better programming in terms of the knowledge-oriented and knowledge management [14]. In the field of the projects of the claim management, various organizations can take each of the documental, personalize strategies and consolidated of these strategies according to their organization requirements; or they can consider the suitable knowledge strategy for every stages of the claim management.

In the present study, with respect to this point that documentation and accurate systematic submission of claims play a vital role in claim management, the evidences demonstrated that it has not fully comprehended and paid to this matter [16, 17]. Therefore, this research engaged in documentation strategy in this field of project management and proposed for all the steps of claim management process, and then the model of documentation and regulating claim management is presented at the end.

II. KNOWLEDGE MANAGEMENT STRATEGY

In the millennium of knowledge, researchers and experts of knowledge management stated that the organizations are not able to maintain their existence, unless they choose a proper strategy to manage their thinking and knowledge [18]. The strategies of knowledge management are about processes and infrastructures that the organization utilizes to obtain, create, and share knowledge in order to formulate the organization's strategy and strategic decisions [19] and in fact, it is a special method for utilizing knowledge creation and its conversion into a competitive advantage within the organization [20].

Halawi et al. (2005) states that the knowledge management strategy is knowledge, production process, documentation, and implicit and explicit transfer of it in the organization so that the appropriate data is presented to the proper people in the right place and at the right time. The knowledge management strategy is the main idea, which determines and directs the attempts of organization's knowledge management. However, there is no comprehensive concept of strategy in association with knowledge and knowledge management [21, 22]. In addition, the knowledge management strategies vary too much, which refers to their contingency [12, 23].

Jordan and Jones (1997) divided the knowledge management strategies into two phases: *implicit* and *explicit* ones by the examination of the key aspects of knowledge, in organizations [24]. Nonaka and Takeuchi (1995) presented four strategies including socialization, externalization, combination, and internalization [25].Swan et al (2000) reviewed the knowledge management as IT from the perspective of both cognitive and social strategies. Many researchers claim that each knowledge management strategy emphasizes two main aspects of system integration and humanism. System-oriented strategy emphasizes the documented knowledge in the knowledge management processes, concentrates on documenting and storing knowledge through information technology, and tries to share knowledge officially. On the other hand, the human-oriented strategy is based on conversation through social networks as well as face-to-face communication. This strategy focuses on the acquisition of knowledge through individual experience, skills and tries to expand knowledge as informal [26, 27].Hansen et al (1999) introduced two separate strategies i.e. documentation and personalization ones in his study[14, 28]. In the present research, the knowledge management strategy is reviewed in relation to the claim management based on these two strategies. In following, investigation of the strategies documentation and personalization is followed.

III.   KNOWLEDGE DOCUMENTATION STRATEGY

An organization, which its business strategy requires applicatory processes and re-using the current knowledge must first pay to the documentation strategy [29]. This method allows different people to search and retrieve documented information without contacting people who have had main roles in developing knowledge [15, 30].

Documentation strategy is about documenting knowledge and saving it in databases for organization's staff use. By using the documentation strategy, knowledge is extracted from one who was involved in it and then in order for reuse, this knowledge is explicitly re-written and after ensuring of the knowledge's value and refining it in a user-friendly way it is saved in a database containing information records which is called repository of knowledge. Records of knowledge repository are formatted and edited in the knowledge repository in such a way that is independent of who they belong to so they would be comprehendible for all members of the group and all users (Hansen et al, 1999) and thus documented knowledge sharing improves activities performance [14, 22]. Information technology and information systems can be considered as facilitating tools of knowledge documentation and building networks within the organizations [31] such as decision support systems, expert systems, management information systems, the internet, portals, repositories and databases, knowledge map (shows where knowledge is located in the organization) and electronic libraries.

IV.   KNOWLEDGE PERSONALIZATION STRATEGY

In this strategy, the knowledge is tied to the people involved in its development and people share their knowledge with each other [29].These organizations focus on dialogue between people and information technology and computers are used to help people exchange knowledge directly [15, 29].Using the personalization strategy, knowledge that cannot be documented, through conference sessions and interactions can be transmitted from person to person, and thereby, knowledge workers to solve the problems discussed achieve a collective conclusion with an in-depth viewpoint. Organizations to develop personalization strategies invest on the creation of social networks [15].Personalization strategy is able to provide creative suggestions and solutions through exchange experiences between people for strategic important problems [29].

V.   CLAIM MANAGEMENT

Claim is literally defined as demands, disputes, and litigation. Claims in legal terms are defined as the action taken placed to prove rightness, in other words, it is an action, conducted to run the right, which has been denied or raped. It is a tool to prove the right to compensate cost or the forced time, out of the failure of any of the parties [31]. This concept is also along with such results as breaking relations, the views conflict, and the need for arbitration or legal proceedings that all these cases result in the delay in the works as well as paying exorbitant fees [32]. Claim is a real element fluid and effective in the plans. It is very likely and obvious that can influence all areas of project management including scope, cost, time, quality, logistics, integration, communication, human resources, and risk [33]. A combination of various reasons may lead a claim. Sometimes a simple reason spark to make a claim and its impact can probably influence another situation. Therefore, it creates a basic set of complicated claims linked to each other [6, 34].

The *claim* is a process in which strives to correct this imbalance and achieve to the ideal point for the parties and it can be a financial times to the parties [35]. Many experienced project managers know the claim management subject as equivalent as the project management subject. Even some of these managers go beyond and know the real project management as the claim management. However, for many people, the claims management is a juridical subject. However, in this paper, the Claim Management is in the project management subject. Whether eventually the project's claim management become a legal subject, but mainly has root in the project program and it is a relative subject with the project engineering and management. To specify the importance of the correct method of managing, the claim processes lead to many efforts about studying various types of the claim (construction) [36, 37, 38, and 39].

Kululanga et al (2001) have argued that claim management is the process of implementation and coordination of resources in order to improve the claim process, from the identification and analysis to the preparation and presentation it, then attempt to resolve it [40,41].Claim management, as well as other areas of project management, independent and separate from other areas cannot be verified, but this scope is related to other areas, such as time, procurement, and risk management. Based on global standards development of project management (Extension of PMBOK[1]), claim management consists of four processes (Claim Identification, Claim Quantification, Claim Prevention, Claim Resolution).With closer examination of the issue, and in order to answer the needs of all elements of the project, the required processes can be reform as Claim Identification, Claim Quantification, Claim Planning, Claim Execution, and Claim Resolution. The implementation of them in each of the Components of the project has helped the formation and action within the framework of their duties,

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[1]*Project Management Body of Knowledge*

obligations, responsibilities and powers, and finally it will be very effective on guiding and the successful completion of the project [42]. Also, Zaneldine (2006) has listed six steps as the claim management process, including: Claim Identification, Claim Notifications, Claim Testing, Claim documentation, Claim Presentation and Claim Resolution [39, 41, 43].

Some claims, because of the multitude of possibilities of them usually in contracts are predict and consequently prevented. However, claims may be raised depending on the structure of the contract, the terms of the project, and what events happened during the project, and therefore, prediction of all of them, and deal with it, will not be allowed in the contract [44].Therefore, the need to use claims management processes is more important in these cases. However, apart from the stages, which according to research in this area have been developed for claims management processes, it should be noted that the claim management is a process that can minimize the claims raised in the parties or control and manage claims raised in the shortest time. Claim Management is meant to create understanding of the challenges and the areas of claims, and providing solutions to resolve these challenges according to the rules and regulations of the country [35].

VI.   KNOWLEDGE MANAGEMENT STRATEGY IN CLAIM MANAGEMENT

The knowledge strategy is a set of guidelines, which form an organization's decisions regarding to the identification, acquisition, development, storage, management, retrieval and using its own knowledge. The knowledge strategy can be considered as guide principles for knowledge management systems [45]. With the availability of adequate knowledge in the field of the claims management, the project managers can manage the coordination feature between strengths and weaknesses points (internal factors), opportunity, and threat (external factors) to reduce the amount of the claim, to prevent it and eventually manage them effectively and efficiently.

As it was stated earlier, this paper is based on knowledge strategies, which are introduced, by Hansen et al. (1999), i.e. documental strategy and personalization strategy is studied based on knowledge about the claim management [14]. In this regard, Schulz &Jobe (2001) used the personalization strategies in order to prevent the outflow of information to the competitors and they have mentioned the reason of using the documental strategies as facilitating the process of the organization data [46].
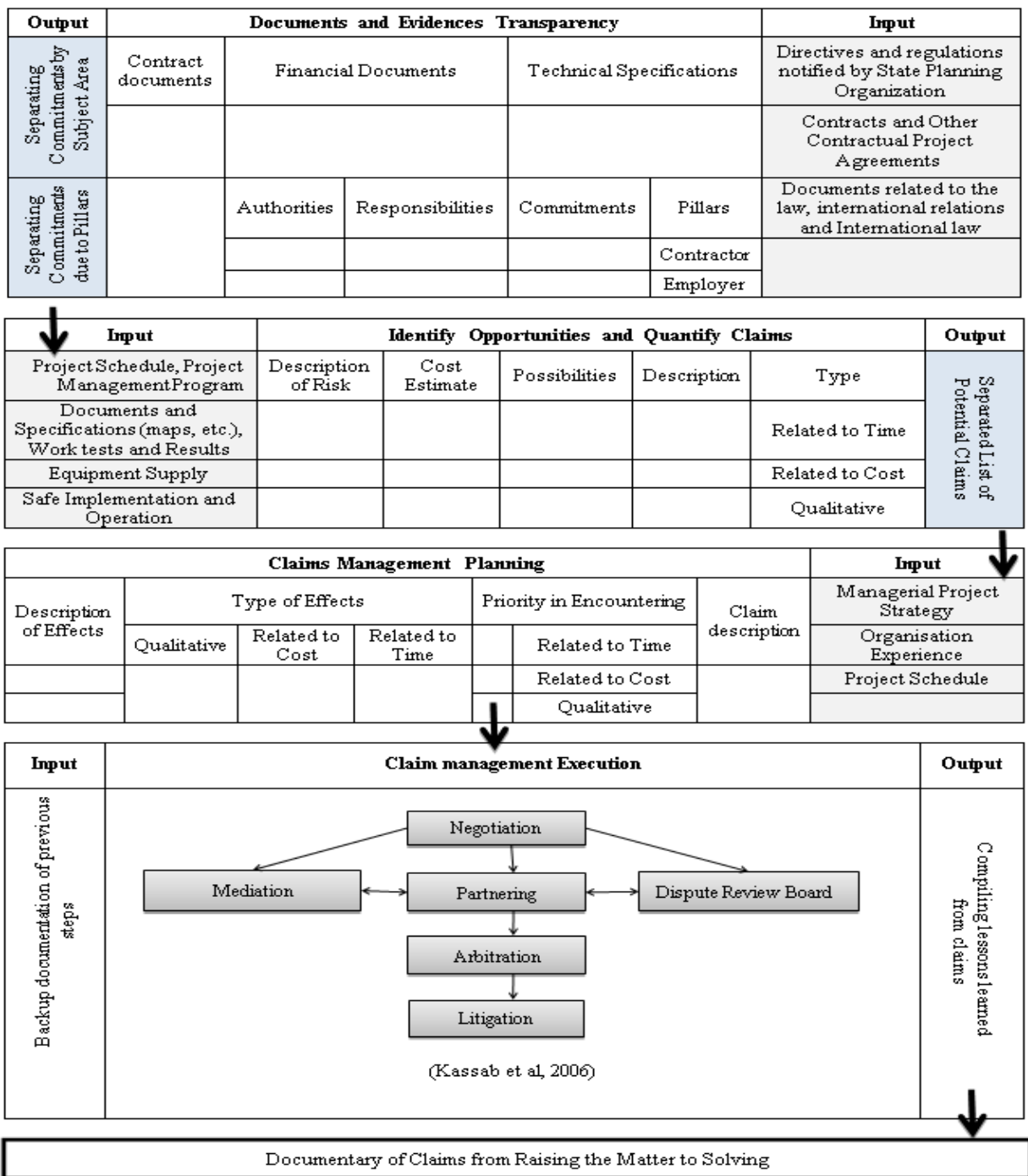
In relation to the claim management processes, each organization, depending on their needs, may adopt each of the documentation, personalization strategies, or a combination of both strategies. However, with respect to the explanations provided in the previous sections, the documentation role is prominent in the claim management and reduction and the prevention of claims in civil projects. Therefore, the documentation strategy is considered as a key strategy in all stages of claim management processes. According to the explanations provided, documentation process model has been developed in five stages that its result leads to provide the documentary obtained from the claim, from the plan to the solution. Finally, all of these steps lead to project knowledge management (coordinator of knowledge and organizational information in order to create high capabilities in project management and to achieve business value through that ability) in the field of claim management. These five steps have been given, respectively, as follows: Then, they will be described and finally, the process model will be offered.
1. The clarification of the archives and project documents
2. Identifying claim chances
3. Planning claim management
- Receiving or creating claim
- Claim prevention
4. Administrative procedures of claim management
- Negotiation
- Arbitration and Mediation
- Arbitration
 - Litigation
5. Documenting in the form of taught lessons

In any contract and the attached documents to it, there are uncertainties that create a claim space for both parties. These uncertainties will lead to disputes between the employer and the contractor [31]. Thus, the clarification of the archives and project documents is the first step in the process of claim management documentation. The second step is identifying and recognizing the claims including tracking and the timely and accurate discovering of the claims in the projects, which are among the key steps in the claim management process [40]. In this step, the chances of the parties are investigated (There chances can be negative or positive. In positive opportunities, it is tried to create a theme lawsuits and to develop prevention initiatives in the negative ones), and then it is paid to quantify (results estimated based on delay time consequences or amount of losses associated with costs). By analyzing the issue in order to fulfill the parties' needs, the above processes can be improved by claim management. Therefore, the third step is claim management, which is divided in two

sections of claim generating and claim prevention and according to the position of each element of the project it is defined to strengthen doing their obligations timeliness and with quality in every aspect besides other elements [42]. The fourth step is administrative procedures of claim management, which consists of all the efforts taken in order to resolve the created/identified claim. In this section, administrative procedures and measures that are done to resolve the issue of claim in construction projects are considered corresponding with model [47]. If an agreement is reached on the issue of possible claims, the claim evolves into a change (or amendment) thus is resolved. Otherwise, it remains a claim and goes through the steps of negotiation, arbitration or mediation, arbitration, and finally litigation to be resolved [31]. Finally, in the fifth step, any claim might be resolved at any of the mentioned steps, but it must be noted that regardless of the method it is resolved, according to the procedure that is taken for its management, has a positive or instructive process and improvement opportunities, which must be documented in the form of the taught lessons.

VII.   CLAIM MANAGEMENT PROCESS MODEL

Output	Documents and Evidences Transparency				Input
Separating Commitments by Subject Area	Contract documents	Financial Documents		Technical Specifications	Directives and regulations notified by State Planning Organization
					Contracts and Other Contractual Project Agreements
Separating Commitments due to Pillars		Authorities	Responsibilities	Commitments	Pillars	Documents related to the law, international relations and International law
					Contractor	
					Employer	

Input	Identify Opportunities and Quantify Claims					Output
Project Schedule, Project Management Program	Description of Risk	Cost Estimate	Possibilities	Description	Type	Separated List of Potential Claims
Documents and Specifications (maps, etc.), Work tests and Results					Related to Time	
Equipment Supply					Related to Cost	
Safe Implementation and Operation					Qualitative	

Claims Management Planning						Input
Description of Effects	Type of Effects			Priority in Encountering		Claim description	Managerial Project Strategy
	Qualitative	Related to Cost	Related to Time		Related to Time		Organisation Experience
					Related to Cost		Project Schedule
					Qualitative		

Input	Claim management Execution	Output
Backup documentation of previous steps	(diagram: Negotiation → Partnering, with Mediation ↔ Partnering ↔ Dispute Review Board; Partnering → Arbitration → Litigation) (Kassab et al, 2006)	Compiling lessons learned from claims

Documentary of Claims from Raising the Matter to Solving

VIII.   CONCLUSION

Any matter that is brought forth to discussion as a claim, regardless of the process method of managing its resolution has both explicit and implicit knowledge that needs to be managed. Whether since it is recognized as an issue with the potential of being claimed, or when it is stated as a claim to the time when it is resolved after the regarded processes. To manage this knowledge, it is necessary to take advantage of a knowledge management strategy. Knowledge management strategy of claiming processes management states that how the organization must act in order to implement knowledge management processes and manage its assets in the field of knowledge, and to control its knowledge site assets while using its explicit and implicit knowledge and on what sort of knowledge should it be most focused. According to Hansen et al. (1999), personalization strategy is more focused on tacit knowledge and organizations that are deeper and more subjective in their knowledge use this strategy; while in document strategy, the emphasis is on the apparent knowledge. In the present study, it is suggested that to adopt a knowledge-oriented approach in claim management, document strategy is applied in all phases of the process of claim management organizations (client and contractor). If necessary, consolidated strategy can be used as well.In fact, personalization strategy would be used with document strategy. This is while the main strategy knowledge management in the field of claiming processes management is document strategy. Therefore, the documentation model and regulating the management of claims are provided in this article, which can be found useful considering the capacities and infrastructure in organizations.

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