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Araştırma Makalesi / Research Article

Linking Public Sector Innovation with Learning in the Inter-Organisational Context*

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Abstract

This research intends to contribute to investigations into innovation and inter-organizational learning as newly emerging fields in the public sector literature. Both concepts are considered as interrelated and sequential since innovations are disseminated via learning and learning mostly creates innovation. In this paper, a framework, which aims to improve both theoretical background and praxis on the subject, is propounded on the relationship between innovation and learning in the inter-organizational context. Within this typology, changes acquired within the organizations after the process of inter-organizational learning are divided into two categories, innovation and improvement, in parallel with inter-organizational learning being realized in three parts — collaboration, diffusion and knowledge transfer. Organizational capacity of the originating and recipient organizations are also seen at a level that is competent enough to handle the learning process to carry it out properly. Hence, the suggested framework puts forward four different variations for the public sector innovation and learning among the organizational relations: Innovation can be fully transferred, or it is partially transferred by reason of insufficient capacity of either originating or recipient organizations and become improvement at the end of these two processes or finally no innovation is adopted to the receiver organizations.

Keywords: *Innovation, Learning, Inter-Organizational Relations, Public Sector.*

Örgütler Arası İlişkiler Bağlamında Kamu Sektöründe İnovasyon ve Öğrenme

Öz

Bu çalışma, kamu sektöründe son dönemlerde gelişen alanlar olan inovasyon ve öğrenmeyi örgütler arası ilişkiler bağlamında ele alarak literatüre katkıda bulunmayı amaçlamaktadır. İnovasyonlar öğrenme yoluyla yayıldığından ve örgütsel öğrenme inovasyona yol açtığından bu iki kavram yakın ilişkili hatta birbirinin ardılı olarak kabul edilmektedir. Bununla birlikte kamu yönetimi alan yazınında konuyla ilgili hem teorik hem de pratik çalışmaların sayısı oldukça kısıtlıdır. Araştırmada kamu kurumlarının ürettiği inovasyonun diğer kurumlarca uyarlanması sonucunda ortaya çıkabilecek olası sonuçlar üzerinde durulmakta dolayısıyla konunun hem teorik hem de pratik alt yapısını geliştirmeyi amaçlayan bir kavramsal çerçeve sunulmaktadır. Bu tipolojide, örgütler arası öğrenme sürecinin muhtemel sonuçlarının inovasyon veya gelişme olduğu; örgütler arası öğrenme süreci aşamalarının ise iş birliği, yayım ve bilgi transferi şeklinde gerçekleştiği öne sürülmüştür. Ayrıca öğrenme sürecinin düzgün bir şekilde işleyebilmesi için kaynak ve alıcı kuruluşların da örgütsel kapasitesinin yeterli olması gerekmektedir. Dolayısıyla önerilen çerçeve, kamu sektörü inovasyonu ve kurumları arasındaki öğrenme için dört farklı olası uygulama sonucu ortaya koymaktadır: İnovasyon, hem kaynak hem de alıcı kuruluşların yeterli kapasitesi nedeniyle tamamen transfer edilebilir; ya kaynak ya da alıcı kurumun yetersiz kapasitesi nedeniyle kısmen transfer edilebilir ve iki durum da kurumsal iyileşme ile sonuçlanabilir veya tüm tarafların yetersiz kapasitesi neticesinde ne inovasyon ne de iyileşme aktarılabilir.

Anahtar Kelimeler: *İnovasyon, Öğrenme, Örgütler Arası İlişkiler, Kamu Sektörü.*

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INTRODUCTION

Despite remarkable improvements in the areas of inter-organizational learning and public sector innovation since the 1990s, and the public sector organizations have also experienced noteworthy reforms regarding to these areas in practice, inquiries on these topics in academia are at best scanty (Hartley & Rashman, 2018). Therefore, identifying public sector innovation with its distinct characteristics is crucial to understand why it requires further research particularly with the relation to the concept of learning. One of the reasons is that there is an over-dependence on the business sector regarding theoretical comprehension and empirical examinations and this results ambiguity in the conceptual perception of the area in the discipline of public administration (Thenint, 2010). While changes in the public sector are oriented towards policies and scrutinised for performance, transformations in the business industry occurring mostly with the production of new products and services are triggered by market competition. In addition, the public sector intends not to make profit primarily, however public value, and at the present times one of the substantial responsibilities of the sector is to ensure an appropriate market environment for the stakeholders for the sake of governance. Innovation research frequently refer to contextual analysis, tending principally to focus on the profit expectation in the private sector (Clausen et al., 2019), while research on public sector institutions give particular importance to the exterior context of organizations called as *growing together*, which are paired with inter-organizational relationships and learning (Rashman, 2009).

Innovation is basically understood as an action that realizes through learning. Knowledge in all forms can potentially create innovation — verbal, written, individual or organizational — and all these forms can be transformed into learning. Moreover, it is assumed that innovation ought to bring about fundamental change and any learning that generate such major transformations have to logically be complicated (Brown & Osborne, 2005). Here, the concept of learning in the inter-organizational context comes into the picture as a mechanism gathering many organizations (Rashman & Hartley, 2002; Hartley & Rashman, 2018). Exchanging knowledge and sharing mutual benefits are essential among different organizations for today's world inclines to urge on convergence instead of divergence. Besides, it is indispensable that organizations have a capacity at a certain level before attending the process (Department for Communities and Local Government [DCLG], 2008). Put it differently, the participant organization ought to have the adequate capacity to exchange knowledge, while the organisation to which this knowledge to be transferred should also have enough adoption capacity. If one of the preconditions is not satisfied, then organizational learning, which is supposed to be triggering for change remains more likely to be unrealized.

Outside the idealised realm claiming that the interorganizational learning always ends up transferring full innovation, the ideas addressed in the following parts of the assumption — which cover the idea of considering innovative learning could also result in organizational improvement— establish the premise for the main framework to be explained in this research. While the notion of radicality aligns with the nature of innovation (Tiberius et al*.,* 2021), a type of learning, which are widely seen as gradual process rather than radical, is in no direct way connected to innovation. Transfer of gradual innovation cannot be incorporated in the specifications of innovation through interorganizational learning because it requires to be far more than a certain level of improvement, and it cannot be regarded as the radical learning, which is expected to result in revolutionary improvements (Lapuente & Suzuki, 2021).

Consequently, it is worth arguing that obtaining improvement at the end of the interorganizational learning is as possible as adopting innovation.

This research primarily aims to put forward an applicable and a convenient model explaining public sector innovation, inter-organizational learning and the outcomes originating in the interaction between the two. It also intends to fill the gap in the context of public sector innovation, organizational improvement and learning, which is adequately embodied in neither practical nor theoretical terms in the present literature. The first part of the paper discusses public sector innovation along with its features and classifications and presents the elements of inter-organizational learning. From there, the study moves on to address innovation in the inter-organizational learning context before concluding with a proposed framework on the relationship between innovation and inter-organizational learning in the public administration.

1. PUBLIC SECTOR INNOVATION

Over the last three decades, the organizational management in the public sector has transformed substantially. The conventional way of administrating public sector suffered a large blow from a new paradigm suggesting that private sector management methods can be applied in government. Since then, good government meant less bureaucracy and a stronger sense of innovation (Vigoda-Gadot, 2005; Borins, 2008).

The concept of innovation entered the public sector in the mid-1980s, bringing transformations that enhanced its popularity as a phenomenon — specifically over the past 20 years — in leading countries such as the UK, Australia and Canada (Osborne & Brown, 2011). Those processes of public sector improvement can be viewed as specific phases of innovation by classifying the first as a preliminary step towards innovation in the public sector, and successive phases as its learning and practice (*mostly called best practices*). Public sector innovation, as Brown & Osborne (2005, p. 116) determined, has 20 different definitions. In the broadest sense, innovation is:

"The introduction of newness into a system usually, but not always, in relative terms and by the application (and occasionally invention) of a new idea. This produces a process of transformation that brings about a discontinuity in terms of the subject itself (such as a product or service) and/or its environment (such as an organization, market or a company)".

This exhaustive definition refers directly to transformational changes in product, process and service domains that overcome discontinuity in organizations. Also, execution of innovation is needed to add value and to monitor whether these implementations work. Innovation carries innate risk: not all attempts of innovations will be achieved although innovation intends to get benefits from both triumphs and failures irrespective of the results. This definition reveals four distinct characteristics of innovation: Novelty, invention, process and radical changes. Considering these characteristics, an argument will be improved in the subsequent section based on whether radical changes and gradual improvement in the organizations would be regarded as innovation.

1.1. The Nature of Innovation in the Public Sector: Radical Changes versus Gradual Improvements

Most of the research conducted before the millennium argue that *new ideas* that belonged to an individual, an institution or a society are called as innovation. Nevertheless,

Downs & Mohr (1976) claim that undertaking thoughts into emergent situations by different groups in any setting would also be seen as innovation (i.e. intrinsic and extrinsic innovation). Recently, methods referred to as *good or best practices* have gained worldwide popularity and have been given closer attention by policymakers and executives. The relevant literature claims that adopting innovation from one organization to another is also *novelty* (Hartley & Benington, 2006). Another characteristic of innovation is its direct link to the *invention*. This diverges from novelty insofar as it involves performing the novel reflection. Actualizing original ideas during the innovation making process is as crucial as getting new ones at first, with the caveat that not all ideas implemented will be accomplished, as not all promising ideas will be followed by innovation (DCLG, 2008).

Furthermore, Brown & Osborne (2005) approach the concept of innovation as both *a process* (innovating) and an outcome of that process (innovation). They also state that the innovation process indicates an incrementally improved output or outcome, while innovation itself stands for radical innovation. Hartley (2006) widens this argument by breaking innovation down into certain types to identify it either in the process, outcome, system or in other mechanisms being influential. The final characteristic includes the approach that innovation brings about *discontinuity* or *radical change*, setting forward a movement from the present pattern to create a fresh one (Brown & Osborne, 2005). Thus, it is inherent to comprehend the point of discontinuity when dealing with the concept of innovation. Continuous amendments are part of an established paradigm, on the other hand, innovation have a strong possibility to culminate in a breakdown of the dominant order.

Even so, the most prominent determining characteristic of innovation is that it has to hold out not only a move but also an unprecedented path and even a transformation. Supporting this definition, Hartley (2006) argues that innovation should result in a sudden change instead of a gradual improvement. Borins (2008) also argues that if every organization struggles to find some radical ideas from scratch, it would be like *reinventing the wheel* because each organization will attempt to innovate separately. Moreover, Mulgan & Aldbury (2003) suggest that innovation should be one of the basic duties of governments, ushering in novel ideas and praxis. However, the White Paper on Modernizing UK Government sees innovation as an ongoing improvement in the central government's service delivery and policy-making process, instead of a process that would generate abrupt changes in public organizations as well as services. The UK government might have used the notion "innovation" for reforming public organization, benefitting from the power of the term; however, the misuse of the concept intensifies the inconsistency between the theoretical and practical sides.

When public sector innovation has been discussed, there are three main classifications in the literature as typologies of Brown & Osborne (2005), Osborne & Brown (2011) and Hartley (2006). Based upon the previous discussion, Osborne & Brown (2011) propound four types of innovation: "Radical, incremental, architectural and product & service development". Radical innovation is a rare occurrence that leads to breakthroughs in production including products and services. Architectural innovation is a change in the components, settings and utilizers of the organizations with no variation in production. Incremental innovation, which affects either solely organizations or the setting where they locate, despite some disagreement, is typically considered as a sharp change in the existing pattern of services or products. Eventually, set apart from the previous three, they are the innovations that represent improvements in services and products. The final one reflects noteworthy learning in current skills and environments without

covering the elements of novelty or breakthrough. Osborne & Brown (2011) claim that innovation should be taken into account from various aspects instead of one-dimensional view in the complex environment of global setting.

Brown & Osborne (2005) examine a second classification in their research paper to present another four types of innovations referring to the taxonomy of Abernathy & Clark (1985): "regular, revolutionary, architectural and niche creation". They set them out under two aspects — production process and ultimate products in organizations, service utilizers and current markets — to identify what sort of innovations are. Architectural innovation can be described as classical innovation that elicits shifts in production, external environment along with stakeholders. Regular innovation gradually regenerates production progress and external setting at the lowest level. Niche-creation creates new stakeholders and users by preserving the existing production type the same however changing the product or service. Finally, revolutionary innovation gets benefits from novel technologies to present production in present markets and with existing products or services.

The second set of classification presented is quite different from the first one, though the names given to the types of innovation are the similar. When comparing both categorizations, it is indicated that the most featured innovation is architectural in the second category, while it is the radical innovation in first. The latter classification also approaches architectural innovation as productional change, whilst the same concept in the former is seen as environment and stakeholder changes without any production change. Furthermore, the second classification considers regular innovation as incremental, but the first demonstrates it as a different type of innovation with a distinct definition. Ultimately, regular innovation, regarded as incremental in the second classification, specifies organizational changes in the former one. Such big differences between the two sets of innovation show that the concept is still searching for its optimum identification. Considering the definitions and classifications above, some implications can be inferred to improve the field of innovation in the public sector.

Indeed, both classifications with the features help to assess public sector innovation in the fields of environment, stakeholder, users\utilizers or production and services. However, this can be a result of direct adaptation of private sector innovation as production innovation or market-user benefits are more essential than the other types in the business context (Thenint, 2010). Beyond these classifications, Hartley (2006) divides her typology into seven categories: "product, process, system, service, strategy, governance and rhetorical". Her classification makes more sense in the context of public sector because unlike others, which break down and examine innovation in production at organizational or external environmental level, she adds other components including system, governance and process, which are much more relevant to the public sector of today. These dimensions of innovation, particularly governance, become greater issues, along with collaborative innovation, which is also quite topical in the public sector (Bekkers & Tummers, 2018; Torfing, 2018). Nevertheless, any of the framework is not sufficient enough to elucidate public sector innovation as a learning process since they only concentrate on the concept of innovation itself. Particularly, in the context of inter-organizational innovation exchange, there has been yet no determined framework how the types of innovation actualize in the public sector setting. That's why, this study would like to contribute to the existing public sector innovation by developing arguments at the centre of learning within the interorganizational setting.

2. INTER-ORGANISATIONAL LEARNING

The concept of interorganizational learning refers to group learning or organizations that come together to exchange knowledge and practices. It mainly occurs in the way in which organizations acquire the experience of other organizations through the transfer of practical experience in the areas of technologies, norms, procedures or products (Lampela, 2009). Inter-organizational learning is also a level of learning embedded within several different levels of knowledge absorption (Hartley & Allison, 2002; Hartley & Rashman, 2018).

Organizational learning primarily starts with individual learning as a prerequisite as Nonaka (1994) addresses that an organization itself doesn't learn – people learn. Nonetheless, Easterby & Lyles (2005) assert that while individuals may learn from their experiences, this does not inevitably lead to organizational learning. Even if these learning levels are regarded as opposing concepts, individual and organizational learning are inextricably linked in practice. To put it simply, they represent interrelated learning since learning involves organizational cognitive activities which are only realized with human participation and interference (Lundberg, 1995; Beeby & Booth, 2000). Therefore, considering these levels of learning separately from each other or appraising one of them and deny others would be an error of judgment.

To avoid any misunderstanding, Hartley (2008) identifies four characteristics, which possibly have influence on inter-organizational learning relations:

- The context in which inter-organizational learning occurs.
- The characteristics of the interrelation between transmitter and recipient organizations.
- The inter-organizational features of both organizations
- The type of knowledge being shared.

Research on knowledge transfer and learning in the context of public sector organizational capacity is relatively less than the private sector studies (Willem & Buelens, 2005). Nevertheless, it is largely accepted that knowledge is regarded as the main element of organizational and interorganizational learning since the transfer capacity of the recipient and diffusion capacity of the originating organization are required to ensure the adoption of knowledge in the receiver organization (Rashman et al*.,* 2009). Learning process in the inter-organizational context have certain components and a procedure to follow, which are explained in the following section in detail.

2.1. The Fundamental Components of Inter-Organizational Learning Process

Learning in the organizations begins with knowledge creation, which involves two types of knowledge: explicit and tacit. While explicit knowledge can be learned without any interaction between organizations, tacit knowledge transfer requires personal interaction in the forms of workshops, meetings, open days, and seminars etc. (Nonaka, 1994). More clearly, explicit knowledge can be depicted in concrete systems via language or numerically and stored in written records in libraries, archives and databases. Tacit knowledge, however, cannot be rooted into written systems as it cannot physically be collected (Polanyi, 1966). Despite the significance of tacit knowledge, it is more difficult to obtain and share because of its intangible nature. For example, the transfer of tacit knowledge can be difficult if a significant volume of tacit knowledge needs to be transferred to the rest of the organisation.

What's more, if the knowledge learned is not directly required after the interactive activity, the outcome could be forgotten by the members of the organization, which is called as 'organisational amnesia' (Lampela, 2009). Besides, by considering both types of knowledge, which are two sides of the same coin, tacit knowledge predominantly underlies explicit knowledge (Rashman et al., 2009). It is considered that the conversion of explicit and tacit knowledge is a kind of facilitated knowledge creation that favours the transfer of organizational tacit knowledge between or within organizations (Lampela, 2009). Clearly, this process provides an opportunity for the soft transition of knowledge by transforming explicit knowledge into a more tacit one to ensure better learning.

Furthermore, even if transfer of knowledge was made perfectly, knowledge creation and transfer may encounter some barriers to bring about organizational learning such as absorptive capacity of the receiver organization. As another essential component of the inter-organizational relations, learning cannot occur without a receiver being in place during the process of knowledge creation and transfer. According to Cohen & Levinthal (1990), absorptive capacity refers to the capability of organizations to utilise external knowledge needed during the learning process. Nooteboom (2004) identifies that absorptive capacity as the ability to understand others at different levels of cognitive distance. The presence of proper absorptive capacity means that an organization is ready to transfer knowledge inwards from another organization.

On the other hand, the absorptive capacity theory, propounded by Dyer & Singh (1998), presents a partner-specific absorptive capacity concept to describe the ability to determine and transfer useful knowledge from a certain partner. This notion addresses that organizations should make themselves ready for joint relations predetermined and the absorptive capacity of the organization should be accordingly developed depending on certain situation rather than as an overall concept. Logically, the latter idea finds greater support, as absorptive capacity requires three stages: 'the ability to recognize the value of new exterior knowledge, assimilate it, and apply it to commercial ends' (Rashman et al., 2009, p.481). Whilst the assimilation of knowledge happens only within organizations, the other two stages acquire external knowledge and commerce by way of partnership between organizations. Hence, absorptive capacity, as it is such an important component of the inter-organizational learning process, should exist dynamically.

One of the best-known organisational learning models, improved by Argyris & Schön (1978), is the single and double loop learning model. Single loop/exploitation process is a learning type, causing changes to existing behaviour according to the differences between expected and obtained results. Double loop/exploration learning, on the other hand, is a more radical process, questioning and changing the complications by fixing the root causes. Whenever a mistake is discovered or refinements take place without questioning or changing the components of the system, it is considered single-loop learning. It absorbs success and failure by concentrating on specific areas and activities in the scope of present information and organizational capacity (Choi & Chandler, 2015). Double-loop learning occurs when an imperfection in the system is corrected by considering and changing the governing variables of the system and delineating alterations in organisational processes and structures. According to McKee (1992), double-loop learning is based upon questioning current norms, values, structures and requires radical transitions. It realizes by testing, innovating and taking risks beyond single-loop learning (March, 1991). Argyris (1999) states that both types of learning are required in

organisations, concluding that single-loop learning is predominantly referred to basic operative actions, whereas double-loop activities are relevant to complex and strategic organisational processes, which frequently control the effectiveness of the system. Holmqviste (2003) asserts that there are relationships between organizational-interorganizational learning and single-loop\exploitation – double-loop\exploration learning. As some authors support this idea (Gibson & Birkinsaw, 2004; Gieske et al., 2018), they make a more definite distinction, arguing that single-loop\exploitation learning occurs in organizational relations and double-loop\exploration learning tends to exist in inter-organizational relations.

It is crucial to note that an organisation can utilise both types of learning and identify the appropriate level required contingent upon the situation. In generating innovations, single-loop corrective learning\exploitation learning is sufficient for incremental improvements, but to reach radical innovations, the organisation must possess the ability for double-loop learning\exploration learning (McKee, 1992). "Adjusting this idea to include a partner relationship or larger networks of several participants means that the network needs to have the ability to utilize both levels of learning" (Lampela, 2009, p.16). In other words, organisations can correct their actions based upon experience, however, also be able to question the foundations of common beliefs and norms. This requires a shared understanding and interpretation of the fundamental operating rules between the originating and receiving partners. In the subsequent part, what ways of the process of learning and innovation can have two-way interaction with each other will be explored in detail.

3. INNOVATION AND LEARNING IN INTER-ORGANIZATIONAL RELATIONS: A SUGGESTED FRAMEWORK

It is widely known that there is a shift from the conventional bureaucratic model to new public management and subsequently to a post-managerial era which is widely referred to as network governance (Mcgann et al., 2018). A closer examination of these phases demonstrates that the phenomenon of public sector change or reform has affected the direction of innovation. For instance, when innovation was initially just regarded as alterations in production to reflect a more business-like model, the recent post-managerial wave has primarily altered public sector innovation into a more collaborative sense of innovation (Micheali, 2012; Arundel et al*.,* 2019).

Organizations also qualify for interacting in the contemporary world, experiencing close interaction and information flow. Thus, cutting edge learning types including inter-organizational learning or network learning have grown in popularity over recent years. Inter-organizational learning, in other words, strategic alliance, is a voluntary initiative realized between organizations for strategic interdependence and competitive benefits such as resource exchange and sharing. In the literature, it is described as a learning type based upon collaboration with exterior co-operators, however, the primary focus is mostly on organization-level learning while touching on inter-organizational learning (Lampela, 2009). On the other hand, Holmquvist (2003) claims that organizational learning and interorganizational learning have been presented in the literature as the concepts irrelevant to each other. He adds that inter-organizational learning originates by comparing and combining organizations singly with reference to their experiences in practice, as opposed to something that happens naturally. Inter-organizational learning as the acquisition of knowledge, technique and practice from another organization has gained considerable importance and the consequences of this are mostly the changes in organizational rules, behaviour and processes (Argyris & Shön, 1978). In

a systems-thinking view, interaction and interdependencies are essential prerequisites for effective learning. Innovations are made and implemented even more often in inter-organisational relationships and networks, rather than in one single organisation. (Lampela, 2009).

Considering the literature claiming that organizational culture would dominantly affect the relationship between innovation and inter-organizational learning. Van der Sluis (2004) argues that organizations having a type of culture with the elements of risk-taking, adaptability, cooperation and outward looking could better align with other organizations to learn from them in a double-loop way. On the other hand, more static culture with top-down structure, strict procedures and stability and inward looking would limit the capacity of organizations to build a connection between innovation and learning from other organizations (Skerlavaj et al., 2010). Therefore, organizational culture is one of the most crucial moderating factors influencing the relationship between innovation and learning positively or adversely depending upon the type of culture.

The concept of collaboration has solid ties with innovation in the context of governance. It is typically acknowledged that public organizations with a bureaucratic and hierarchical structure incline to perform less effectively and more slowly than business sector companies. Barzelay (2002) emphasises that hierarchical structures in the public organizations decrease productivity and innovation. According to Bommert's view (2010), collaborative innovation, created via the inclusion of all actors in society (private & public sector organizations, third sector as well as active citizens) should replace bureaucratic innovation to reach better solutions to public issues. Characteristics of bureaucratic structures in public organizations such as 'the top-down process, the silo structure and hierarchical impact' innovation creation are considered negatively as more of a bottom-up approach. To resolve this, Bommert (2010) offers that more empirical research would contribute to defining innovation in the public sector. Nevertheless, his idea can be negated by examining innovation types and levels in different countries.

The levels at which innovations realize are variant in large and prosperous countries including the UK, Australia and Canada. For example, central government takes the lead to innovation in the UK because Whitehall forms local government responsibilities in a traditional top-down model (Osborne & Brown, 2011). Australian local government is also oriented on an innovation programme designed by central government, despite its federal construction (Staley, 2008). Also, the USA approaches innovation under the Innovation in American Government programme, carrying it out in collaboration with The Kennedy School's Ash Institute and the Ford Foundation (Borins, 2008). It is hard to find out such collaboration as an opposing idea of bureaucracy or that collaboration is an alternative view of bureaucratic structure. Introducing them as contrary concepts can lead to a wrong perception, even though collaboration is a focal point for innovation. Despite that comparison, collaboration is primarily a mechanism to assist the diffusion of innovation in the public sector (Zhang et al*.,* 2021) no matter it happens in top-down or bottom-up directions. According to the contemporary trends, most social or organizational transformations realize by firstly invention and then via dissemination. Rogers (2003, p.5) addresses that:

"Diffusion is a process by which innovation is transferred by certain channels in a certain time among members of the social system. Diffusion is a special communication type of messages which are about new ideas".

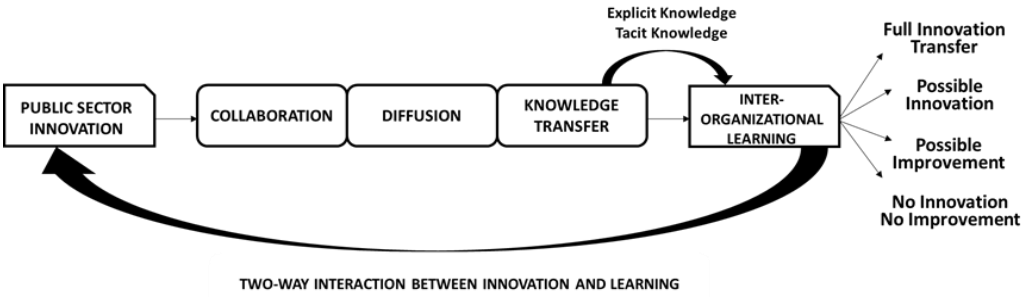
Diffusion theory asserts that individuals or organizations should be responsible for the failure of innovation. For instance, if a shoe does not suit someone, it is because the foot is the wrong size rather than the shoe. In the same way, if an organization employs an idea or innovation from another source and it doesn't work, the adopting organisation may have the mistake. However, the theory also propounds the concept of systemic blame instead of individual blame. That means, if an innovation is unsuccessful, the responsibility will be assigned to the system at large. The systemic idea can be explained from a different angle in public sector terms. Public organizations do not incline to espouse innovation because they do not look for profit. Therefore, a public sector, lacking a culture of innovation is encouraged to be innovative by sharing the blame with the larger system collaboratively (Rogers, 2003). In other words, failure is more bearable when it is shared with the whole system under a collaborative approach. Some collective ideas, such as sharing good practices or benchmarking, are the catalysts that trigger diffusion of innovation in the public sector. Nonetheless, both transfer and adoption capacity of innovation should be differentiated from each other and assess accordingly.

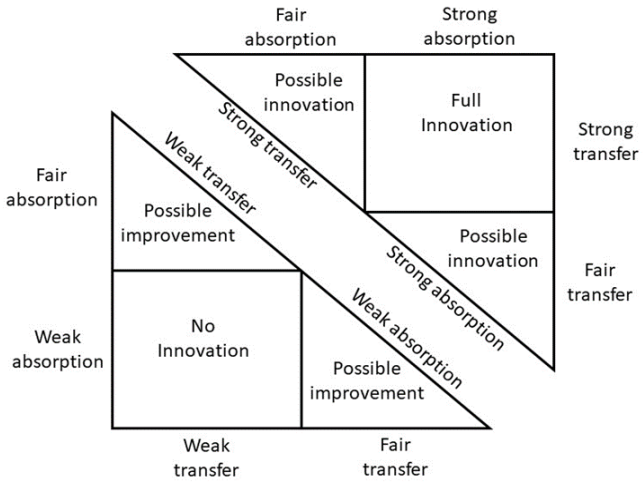
The main reasoning that underlies the diffusion of innovation is the transference and creation of knowledge. Nonaka (1994, p.59) argues that "information is a flow of messages, while knowledge is created by that flow, anchored in the beliefs and commitment of its holder". This argument puts emphasise on the idea that knowledge is physically and socially embedded (DCLG, 2008); that knowledge is information learned and created by people. At this point, explicit and tacit knowledge can be separated in terms of their values and priorities. Explicit knowledge is a process acquiring plain knowledge such as performance data to develop performance targets, without regarding developments in the broader context. Nevertheless, the present literature about knowledge stresses importance of a more tacit kind of knowledge. Tacit knowledge is basically shared to observe small numbers of groups organizing their learning by activities such as face to face meetings, open days and practical actions as explained in the previous sections in detail (Lam, 2000). Most experts have a consensus on that implicit knowledge should be a means to spread tacit knowledge. That's to say, the transfer of knowledge would only be successful if explicit knowledge perceptibly transforms into tacit knowledge via interaction between organizations (Polanyi, 1966; Nonaka, 1994; Nonaka & Takeuch, 1995).

Explicit knowledge aligns with the single-loop learning, closely related to existing organizational experiences and can be utilized ideally to bring about improvement including the practices of local knowledge, experimental refinement and the selection and re-application of existing routines. On the other hand, double-loop learning is a way in which knowledge and opportunities for innovative activities can be obtained by injecting novel and radical knowledge into organizations, which is directly relevant to tacit knowledge creation. Activities surrounding this type of knowledge can be classified as research, invention, organized variation, planned experimentation and action processes. Common literature indicates that single-loop learning stimulates double-loop learning and vice versa during sequential learning (Holmqvist, 2003; Gieske et al., 2018). It also claims that innovation and improvement cannot happen in an organization simultaneously, although the interdependency between them is often neglected. Hartley (2008) argues against this position by claiming that there are different possibilities for innovation and improvement, one of which relates to the idea that innovation and improvement can in fact occur together because when innovation is done successfully, it will also enable to improve the organization.

Innovation has certain catalysers, such as collaboration, dissemination, and explicit\tacit knowledge transfer, which are meaningful only within inter-organizational concepts that apply to interaction among organizations. The current study took the first position by asserting that the outcome of interorganizational interactions could be either innovation or improvement depending upon the readiness of the contextual parameters. The parameters include the level of collaboration, the diffusion or inclusion capacities of the included organizations, the types of knowledge being transferred, and the learning method adopted. Hartley & Rashman (2018) argue that the learning outcomes of the organizational interaction would create another process to commence knowledge exchange for innovation. However, it should be kept in mind that inter-organizational learning could dependently result in innovation or improvement to a certain level. As not all the results of learning could be innovation, this process would reversely be set up with a new learning process to the degree the organizations receive knowledge.

Figure 1: Suggested Framework of Public Sector Innovation and Inter-Organizational Learning





Modern alliances among organizations are preferred as ways to encourage innovation and to disseminate innovative knowledge through these processes (Anand et al., 2021). Innovation starts with collaboration, the aim of which is to diffuse best practices and ideas. Diffusion of the created innovations leads to knowledge creation and transfer. In the subsequent step, knowledge acquired or generated by organization (desirably tacit knowledge) is converted into learning. Eventually, knowledge, which becomes learning, transforms itself into innovation or organizational advancement, and all proceed among organizations as a smoothly running circle as indicated in the Figure above.

Inter-organizational learning is realised if and only if the transmitter organization has the capacity for knowledge transfer and the recipient organization has the absorption capacity to obtain knowledge. The Figure can help to clarify the links that depict the possibilities for inter-organizational learning; on the upper right side, when both transmitter and recipient organizations interact with full capacity in the learning process, innovation will be realized to its maximum capacity between the organizations. On the other hand, at the lower left-hand corner, innovation or improvement will not realize if transmitter and recipient both do not have enough capacity to exchange knowledge. Apart from these two, four possible scenarios also exist; if the transmitter organization has a low capacity of knowledge transfer and the adoption potential of the recipient organization is not sufficient to receive the necessary knowledge or these absorption and transfer capabilities are not strong enough, then the probable outcome will be improvement rather than innovation. On the other side, when either transmitter or recipient organization has a strong absorption or transfer capacity and the opposite sides in the framework have fair capacities, innovation can be potentially adopted but not in the form of full innovation. As a final step of the framework, it should be considered that inter-organizational learning also generates innovation in some premises in the backward procedure. In a processional structure, these stages as well as the variations help to explain inter-organizational learning, innovation and improvement from a particular point of view by interlinking them with each other like links in a chain.

4. CONCLUSION and DISCUSSION

One of the most revealing consequences of the transformation experienced in the public sector with the idea of governance is the necessity for public organizations to establish closer relations with each other. While public sector organizations were the structures where the knowledge and experience they produce are only used within themselves, today, with the development of network governance (*or governance network*), the knowledge and experience are shared with other stakeholders. When it comes to creating and sharing value, there is an established literature on the processes in which innovative ideas created and implemented solely by an institution (De Vries, 2016). On the other hand, multi-value and multi-stakeholder perspectives enable collaborative value creation and sharing in the contemporary public administration, as Bekkers & Tummers (2018) state. That's why, in an age of public governance, the process of sharing innovations with other institutions in the network needs more investigation.

This research has investigated innovation as a learning process in the inter-organizational context in the public organizations. Although a series of research have been performed by the academics in the area of public management, this investigation would like to propose an implementable framework to have a functional learning and innovation creation process at the age of numerous interactions among organizations. It has underlined two possible outcomes of the interorganizational learning process: Innovation as a breakthrough change as most desired and improvement as an incremental development. In connection with these, it has been purported that when the transmitter organization supplies required information and the recipient organisation is able to receive it to its full capacity, information exchange will be much straightforward and subsequently, any innovation may occur, or any value might be created as a result.

The explanations also cohere with inter-organizational learning models. Different types of learning models — single loop and double loop — have been discussed, highlighting that the formers are only developmental changes whilst the latter covers innovation. This leads to the assertation that while incremental changes can be put into a single loop learning category, radical changes can be assessed in the second category, as double loop learning. Hence, the multi-layered and sophisticated relationship between innovation and learning has been examined and explained to some extent. Finally, the absorptive capacity of the receiver organization and the knowledge transfer capacity from the source organization are two pre-conditions of the inter-organizational learning process. These have been put forward to establish suitable provisions for both innovative changes and improvements.

What's more, the path leading innovation to inter-organizational learning has been made precise in the first part of the framework. Collaboration is the focal point for any interaction, which will be made in the learning process among organizations. Today, innovation in the public sector has been more relevant than ever to collaboration and co-creation of the stakeholders (Voorberg et al*.,* 2015). Therefore, the relationship between innovation and inter- organizational learning in the public organizations is built on the strong connections among cooperation, knowledge creation, transfer and dissemination.

When laying emphasis on examining this topic from a wider perspective, questions can be raised on the different approaches, that would be taken to study innovation and learning in the public sector. When all developments that mankind has accumulated up to now are compared to innovative changes acquired over the past two centuries, it is very clear how especially changes, made in an innovative way, have accelerated. The public sector has certainly benefitted from the transformations emerging in the previous centuries in many radical ways and adopted the principle of '*learning from each other*'. The study should be considered alongside its potential limitation. Since the area has predominantly improved as practical-based, the literature and empirical examinations, which the current study is built upon, are rather scant. For future research, testing the suggested framework in an empirical investigation in a public sector setting is recommended.

AUTHOR STATEMENT

Statement of Research and Publication Ethics

This study has been prepared in accordance with scientific research and publication ethics.

Author Contribution

Elif, Genc-Tetik: Contribution rate (100%)

Conflict of Interest

There is no conflict of interest for the authors or third parties arising from the study.

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