Knowledge Creation and Valenzuela City: A Case Study of the 3S in Public Service Program

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Abstract. The article uses the knowledge creation theory to explain the innovation process within the local government. It investigates the artifacts of an innovative program and traces the development process of the artifacts backward to reveal relevant activities and situational aspects. The activities are analyzed to determine whether they correspond to the four modes of knowledge conversion (i.e., socialization, externalization, combination, and internalization or SECI). Situations are examined to determine whether phronetic leadership abilities facilitate knowledge synthesis in the local government. For this case study, the researchers select the 3S in Public Service Program of Valenzuela City as the case and three managers as respondents. The study employs semi-structured interviews and document reviews and adopts a qualitative content analysis procedure to analyze the data. The findings reveal that the SECI processes manifest during the development and implementation of the 3S Program, and the chief executive is the most important driver of knowledge conversion. Future research on knowledge creation in the city can explore whether middle managers facilitate knowledge synthesis, self-organizing teams are present, and entities external to the organization (e.g., clients, suppliers, and developers) are impacted by and contribute to knowledge creation.

There has been a growing interest among scholars in Southeast Asian countries and Japan in proposing alternative management approaches applicable to the context of public administrations. In 2013, a project involving experts from the region sought to determine the applicability of knowledge creation theory to the management of government and community organizations by looking into innovations in relevant sectors (Nishihara et al., 2018a; Nishihara et al., 2018b). The article of Nonaka and Yokomichi (2018) concluded that the knowledge creation theory applies to public management, as it was determined that innovative processes

of public sector organizations could be understood better by using the framework over other organizational theories primarily placed within Western contexts. The same article also found evidence that members of government organizations practice knowledge creation despite having no knowledge of the paradigm, thus reinforcing their argument of its applicability to public management.

The Philippines has produced several studies on knowledge creation, highlighting the importance of this theory in public administration and community development. One such study by Mendoza et al. (2018, as cited in Nishihara et al., 2018b) examined the organizational change in the National Statistics Office.[1] It made the case that the vision and leadership of its former administrator helped transform the organization into a very relevant institution for Filipinos. Meanwhile, Gonzalez and Calugay (2018, as cited in Nishihara et al., 2018b) looked at how Quezon City changed from being economically underdeveloped to being one of the richest and best-managed cities in the nation. A study by Brillantes, Jr. (2018, as cited in Nishihara et al., 2018a) investigated the community development started by the founder of the Gawad Kalinga. This non-governmental organization seeks to provide every Filipino with a home and a higher standard of living. Lastly, Perante-Calina et al. (2020) showed how a former governor's vision and phronetic leadership abilities, specifically creating shared spaces, exercising political will, and inspiring local leaders, were crucial to the successful union of three towns to form the Island Garden City of Samal. Together, these studies provide insights into the different applications of the knowledge creation theory and its relevance in various fields in the Philippines.

Through case studies, scholars provided evidence that members of public organizations utilize the knowledge creation theory, even if they do not possess prior knowledge about the concept. To further prove the suitability of knowledge creation to public management, this qualitative research explains the process of organizational innovation within a local government unit using the knowledge creation theory. Specifically, the study answers these questions:

> 1. How did the problem-setting and problem-solving processes occur in the selected innovative program?
> 2. How did the knowledge creation theory (primarily socialization, externalization, combination, and internalization or SECI model and phronetic leadership) manifest in the problem-setting and problem-solving processes of the innovative program?

Literature Review
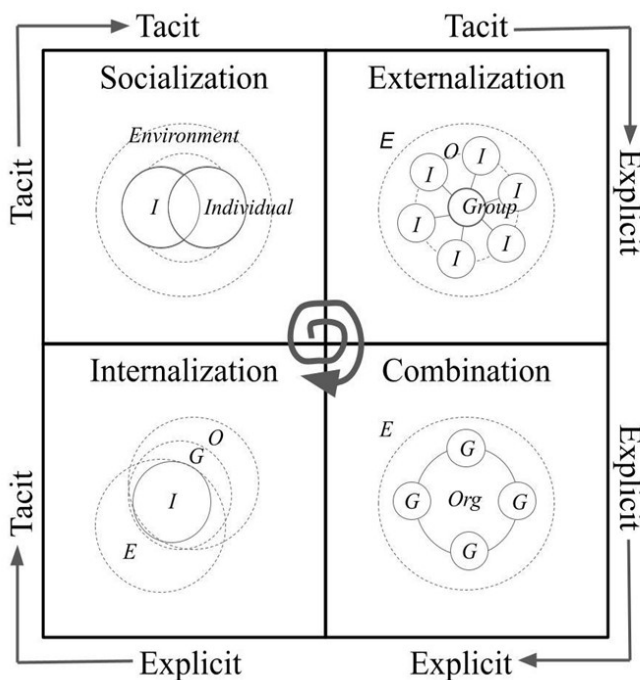### Knowledge Creation Theory

Epistemological and ontological dimensions make up Nonaka and Takeuchi's (1995) theory of organizational knowledge creation. The epistemological component deals with the distinction and conversion between tacit knowledge and explicit knowledge. Explicit knowledge is expressed in comprehensible forms through formal and systematic language (Nonaka, 1994; Nonaka et al., 2018). It is commonly transferred using structured channels and processes, such as dialogues and information systems (Easa, 2012; Nonaka et al., 2018). Tacit knowledge, on the other hand, is difficult to translate into a formal and systematic language, since it deals

with one's thinking and feeling (Nonaka, 1994). It is the expertise and principles of an individual accumulated and formed through experience (Nonaka, 1994; Easa, 2012).

The SECI model demonstrates the synthesis of these two types of knowledge over time. The model represents four modes of conversion: socialization, externalization, combination, and internalization (Figure 1). According to Nonaka and Konno (1998), socialization occurs when individuals exchange tacit knowledge through participation in shared activities within the same environment. Tacit knowledge can be shared between individuals through direct interaction and observation (Martin-de-Castro, 2007; Schulze & Hoegl, 2008). On the other hand, externalization involves translating tacit knowledge into verbal or written forms, such as concepts and plans (Nonaka & Konno, 1998). It is communicating and sharing individual knowledge in forms that are understandable to others, including dialogues and meetings (Martin-de-Castro, 2007; Nishihara et al., 2018a; Nishihara et al., 2018b). Combination, the third mode, refers to producing new knowledge by editing explicit knowledge (Nonaka & Konno, 1998). It can involve synthesizing concepts and information to develop a prototype or operating mechanism (Martin-de-Castro, 2007; Nishihara et al., 2018a; Nishihara et al., 2018b). Lastly, internalization happens when new tacit knowledge is gained from the actualization of innovations (Nonaka & Konno, 1998). When newly developed improvements are practiced, explicit knowledge is converted to tacit knowledge and absorbed into the existing knowledge base of an individual or organization (Nishihara et al., 2018a; Nishihara et al., 2018b).

The theory of organizational knowledge creation defines its ontology as the interplay between the individual, group, organization, and environment. According to Nonaka and Takeuchi (1995), organizations cannot develop new knowledge independently and must utilize tacit knowledge as a source of new knowledge. Thus, in the SECI model, organizational knowledge creation begins at the individual level, where tacit knowledge is formed and kept (Figure 1). As knowledge flows through the modes of conversion, there becomes a growing network of interaction that transcends group and organizational borders. These boundaries may correspond to sections, departments, and divisions in an organization. However, the fields of interaction can also include entities outside the organization, such as clients and suppliers. Each ontological level is not isolated from the other, but instead engages in a dynamic and ongoing interaction (Nonaka & Takeuchi, 1995). In sum, the spiral process, as shown in Figure 1, represents the synthesis of tacit and explicit knowledge and the transformation of knowledge across individual, group, and organizational levels. Over time, the interactions between the two knowledge spirals—epistemological and ontological dimensions—give rise to new organizational knowledge.

Figure 1
SECI Model

**Phronetic Leadership as an Essential Driver of Knowledge Creation**

Phronesis, or practical wisdom, according to Aristotle, emphasizes the ability to understand what must be done and what is not necessary and to act after evaluating a situation (Halverson, 2002). Nonaka and his colleagues incorporated phronesis in creating new knowledge and argued that leaders who possess high levels of practical wisdom, called "phronetic leaders," enable the continuous spinning of the knowledge spirals (Nonaka et al., 2014). The authors developed the concept of a phronetic leader or "wise leader" that highlighted the context-specific nature of phronesis, consistent with Aristotle's concept of practical wisdom, while expanding on the prevailing definition by including other abilities, such as creating *ba*. *Ba* is a field of interaction involving individuals, groups, organizations, and the environment, whether physical, virtual, or mental (Nonaka et al., 2014; Nonaka & Konno, 1998). It is where knowledge is synthesized and shared. Creating *ba* is one of the six abilities of a wise leader, as described by Nonaka et al. (2018). The other five abilities are: setting goals and making judgments based on their degree of goodness; perceiving reality as it is; articulating into narratives the essence behind situations; exercising political power to accomplish one's vision; and fostering phronesis in others.

Aristotle also pointed out the difficulties in documenting phronesis without considering the context (Halverson, 2004). According to Nonaka et al. (2014), phronesis is a specific type of tacit knowledge, and, as previously mentioned, this type

of knowledge is difficult to codify and communicate. Practical wisdom is also context-specific, in which its application depends on real situations. It is challenging to capture the exercise of phronesis without analyzing relevant situational constraints and implicit culture (Halverson, 2002). Within these actual contexts, leaders practice their ability to judge a situation and make appropriate actions based on that understanding.

Halverson (2002) claimed that artifacts, such as developed prototypes and procedures, can be used as a tool to capture phronesis in context. The author argued that, by looking into artifacts and tracing their development process backward, the practical wisdom of leaders can be revealed. The process of breaking down the activities associated with producing an artifact is demonstrated in Halverson's design cycle analysis model (DCAM) (Figure 2). The DCAM framework works by identifying the problem-setting and problem-solving processes that lead to the creation of artifacts. First, problem setting concerns the framing of a problem, which depends on the internal and external goals identified by the leaders and their resources. Strategies are utilized to frame the issue and move from problem setting to problem solving. Secondly, problem solving refers to activities in which the practitioners work with other stakeholders to develop relevant solutions. Resources, strategies, constraints, and affordances influence this process of developing solutions. Lastly, artifacts are outputs that can be used eventually as resources in the iterative and continuous process of problem setting and problem solving.

Figure 2
*Design Cycle Analysis Model (DCAM)*
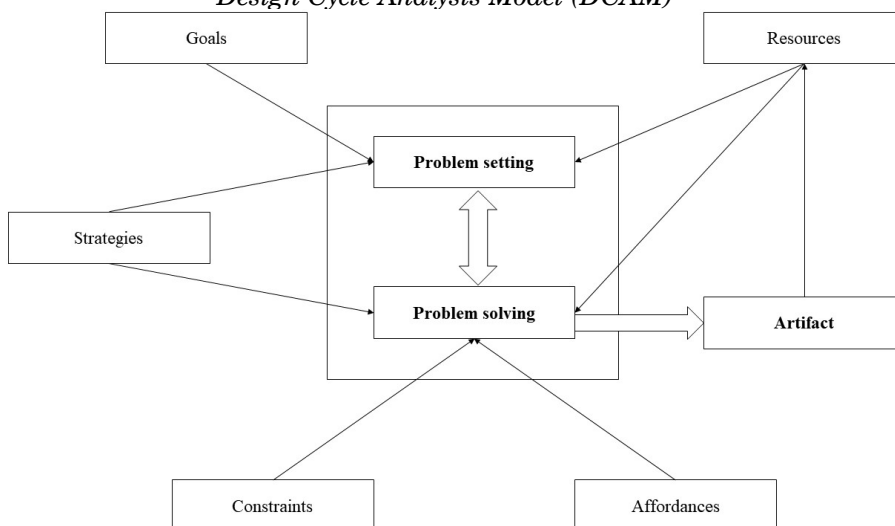
Source. Halverson (2002).

Framework

The conceptual framework combines two distinct frameworks, namely, the SECI model and the DCAM (Figure 3). First, the combined framework includes the dynamic processes of problem setting and problem solving. Second, the integrated framework contains a spiral that denotes knowledge conversion across four stages (i.e., socialization, externalization, combination, and internalization) and the transformation of knowledge across individual, group, and organization levels. Third, the framework highlights the six abilities of a phronetic leader (i.e., setting goals and making judgments based on their degree of goodness; perceiving reality as it is; creating *ba* or shared spaces; articulating into narratives the essence behind situations; exercising political power to accomplish one's vision; and fostering phronesis in others) and situational aspects (i.e., goals, resources, strategies, constraints, and affordances). Finally, the framework has implications for understanding knowledge creation in an organization. It suggests looking into the artifacts, which are closely aligned to the combination construct of the SECI model, and retracing the development process of artifacts to resurface activities and reveal situational aspects during problem setting and problem solving. The emerging activities can correspond to socialization, externalization, combination, and internalization. The uncovered aspects of actual situations can show how phronesis drives the spiraling process of knowledge creation.

Figure 3
Integrated Framework to Explain Organizational Innovation
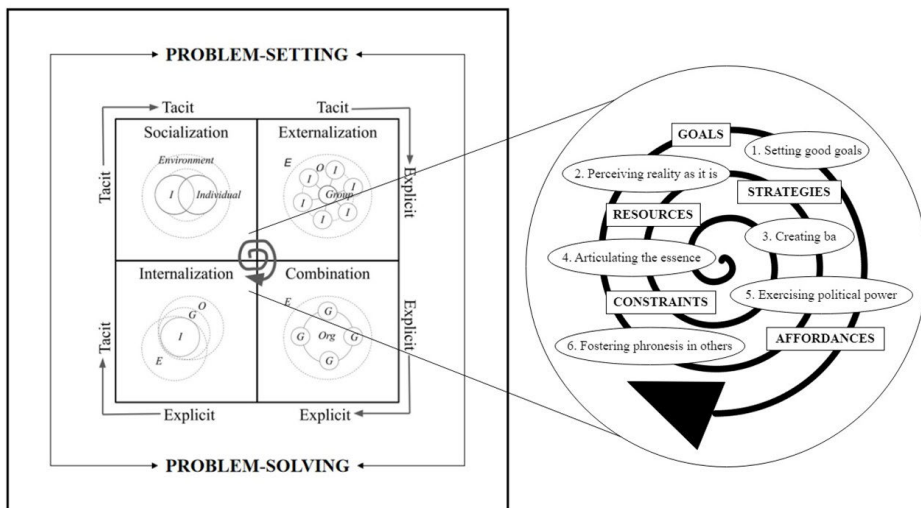
Note. Adapted from Nonaka et al. (2018)

However, the limitations of the conceptual framework must be highlighted. Narratives of practice are used to communicate how artifacts are developed and implemented. Using narratives in demonstrating how an innovative program has been developed and implemented can be limiting, since it does not highlight the iterative nature of problem-setting and problem-solving processes and the overlapping and

repetitive synthesis of knowledge across the four modes of knowledge conversion. In addition, although the theory of knowledge creation presents tacit and explicit knowledge as distinct concepts, these types of knowledge are difficult to differentiate, since they compose two ends of a continuum (Schulze & Hoegl, 2008). Previous studies about the knowledge creation theory designed scale variables that focused on behaviors to produce empirical evidence of the SECI processes. Hence, the authors do not argue based on the extent to which knowledge is tacit or explicit, but, instead, on the patterns of thinking and behavior associated with each step of the SECI model, as described by scholars, like Nonaka et al. (2018), Schulze and Hoegl (2008), Ease (2012), Martin-de-Castro (2007), and Rice and Rice (2005). Lastly, the study focuses only on a single innovation driver: phronesis. The study does not cover other organizational conditions for knowledge creation identified by Nonaka and Takeuchi (1995), such as intention, fluctuation or chaos, autonomy, redundancy, and requisite variety.

Methodology

This study employed a qualitative research design to examine the phenomenon of knowledge creation in Valenzuela City. It utilized a case study approach and used semi-structured interviews and document reviews as data collection methods. A qualitative content analysis was undertaken to process the data from the interviews.

Case Selection

The research utilized a single-case design due to the authors' interest in examining a specific program that displayed innovativeness in dealing with societal issues. The study applied a purposive sampling technique to determine the innovative program. In choosing the case, the study adopted the principle of maximization used by Morse and Field (1996). This principle asserts that the extent to which the topic of the study exhibited itself in a particular entity is the basis for selecting the study area (Morse & Field, 1996).

The 3S (Simple, Speed, Service) in Public Service Program, which won Valenzuela City its Galing Pook Award for Outstanding Local Governance Program in 2012 and multiple Most Business-Friendly City recognitions from the Philippine Chamber of Commerce and Industry, was selected as the case (Galing Pook, 2012; de Guzman, 2015).[2] In the selection of respondents, the criteria used were the display of organizational memory and position in the program (i.e., within the top and middle management). The local chief executive represented the top management, while the office heads composed the middle management group. The characteristics of the respondents are presented in Table 1.

Data Collection

The data collection using semi-structured interviews and document reviews was conducted in October 2019. Semi-structured interviews were conducted to allow flexibility in participant responses and enable researchers to clarify information provided by participants (Morris, 2015). The authors interviewed three managers: the local chief executive and two middle managers. The researchers also collected primary data, specifically city ordinances, local government reports, Valenzuela City

magazine issues, and program documents from Galing Pook. The document reviews revealed information used to describe the program, provided prompts during the interviews, and triangulated the information provideded by key informants.

The study developed an interview guide for each participant. The researchers began the interviews by reading the informed consent form to the respondents. After obtaining the consent of the participants, the authors asked questions divided into the following segments: preliminary questions, local government vision and program goals, problem identification, program planning, and program implementation.

Table 1
Respondent Characteristics (During the Time of Interview)

Respondent Identifier	Position	Start Year	Years of Service in City Government
Interviewee 1	Local chief executive	2013	6
Interviewee 2	Head of Information and Communication Technical (ICT) Office	2007	12
Interviewee 3	Head of City Budgeting Office	2005	14

Data Analysis

After conducting the interviews, the study produced interview transcripts of audio recordings. The research adopted the qualitative content analysis procedure of Erlingsson and Brysiewicz (2017) to analyze the verbatim transcripts. Relevant documents about the program were used to inform the analysis.

The analysis was conducted in a spreadsheet using the templates provided by Erlingsson and Brysiewicz (2017). To allow researcher triangulation, the authors broke into pairs to generate the meaning units, condensed meaning units, codes, and categories for each interview. The resulting codes were then reviewed as a group. The researchers followed a coding guide developed deductively based on how the concepts were defined in the design cycle analysis model (DCAM) (i.e., goals, resources, strategies, constraints, affordances), SECI model (i.e., socialization, externalization, combination, internalization), and phronetic leadership (i.e., setting goals and making judgments based on their degree of goodness; perceiving reality as it is; creating *ba* or shared spaces; articulating into narratives the essence behind situations; exercising political power to accomplish one's vision; and fostering phronesis in others). The purpose of employing a codebook was to ensure consistency in assigning codes. In developing the final analysis, the study utilized the essence of the DCAM framework by creating a narrative of the program development and implementation. The research added representative quotations, which were translated and edited for clarity, and deviant results.

Results and Discussion

This qualitative study examined the 3S Program to understand the phenomenon of organizational innovation in Valenzuela City. To achieve this goal, this section is divided into three main sub-sections. The first sub-section provides a narrative

showing how the program and its salient features were conceptualized, implemented, and enhanced. The second presents how the processes during the development and implementation of the program reflected the four modes of knowledge conversion: socialization, externalization, combination, and internalization. Finally, in the third, the paper illustrates how phronetic leadership impacts the different modes in the SECI model, driving organizational knowledge creation.

Problem-Setting and Problem-Solving Processes

The ensuing narrative provides how the program and its salient features were formulated, implemented, and enhanced. It is organized as follows: (a) articulating the goals and strategies, (b) the management team as an experiential resource, (c) improving the process of revenue collection, (d) fixing the tax inventory, (e) enhancing the service standard, (f) institutionalizing the 3S Program, and (g) evolution of the 3S Program.

Articulating the goals and strategies

According to a respondent, the priority of then-Mayor Sherwin Gatchalian when he was elected in 2004 was the computerization of the city hall (Interviewee 2). The former mayor noticed that the offices were still using index cards and out-of-date software for record-keeping. He also experienced the complicated and tedious process that businesspersons went through to secure permits. As a respondent put it, "that is why . . . [the former mayor] decided to run because he said . . . our experiences as businessmen showed us that there is so much to be desired in this city hall, especially when it comes to ease of doing business" (Interviewer 1).

The respondent also talked about the goals of the former mayor to address the issues (Interviewee 2). The former mayor's overarching vision is to provide his constituents a *magandang buhay* [good life]. He emphasized increasing the city's income to intensify local government programs. Thus, he proposed a plan to simplify and streamline processes to attract businesses, increase tax revenues, and eliminate opportunities for illegal practices. Another important aspect that he put forward was changing the employees' culture, values, and behaviors and increasing public engagement through government oversight. These were the goals around which the 3S Program was developed (City Government of Valenzuela, 2012).

During the conceptualization stage, study tours also informed the program's goals. The local government of Valenzuela observed the best practices of Marikina City in simplifying and streamlining business processes (Galing Pook, 2012). The local government unit (LGU) improved on tried-and-true techniques.

To achieve their goals and resolve the issues, the local government used systems thinking as stated in their application to Galing Pook:

> The formulation and implementation of the 3S Program is a systemic and holistic reform of how service is delivered by the city government. It meant looking at all systems (not just one or two) and changing all related processes, structures, and behavior so that they form a coherent whole (City Government of Valenzuela, 2012, p. 5)

The city employed a systematic and holistic approach to service delivery. In addition, the local government followed two frameworks: good governance (i.e., accountability, transparency, and citizen participation) and a business-friendly environment (i.e., computerization of operations, and streamlining processes) (Galing Pook, 2012).

The people of Valenzuela City support the initiatives to computerize city hall and enhance administrative processes, claimed a respondent. The respondent said that "actually, constituents *din naman ang nag*-push *sa amin na mag*-computerize *na kami kasi alam nila ang* benefits *(ng* computerization)" [actually, the constituents are the ones who pushed us to pursue computerization because they are aware of the benefits (of computerization)] (Interviewee 2). The plans of the former mayor are also worthwhile for the city's constituents.

The management team as an experiential resource

The former mayor organized a management team consisting of office heads. The management team members made significant contributions to the eventual success of the 3S Program. The Information and Communications Technology (ICT) Office head shared that the resources utilized by the local government to design the program were "*syempre,* resources are *tao*" [definitely, the people are the resources] (Interviewee 2). The head has extensive experience as a management information system (MIS) manager. His role involved suggesting projects to the former mayor, guiding him during decision making, and proposing solutions to technology-related issues. Furthermore, the budget office head, who has served in the city hall for a long time, helped the local government work around budget limitations. When met with resource demands, she would weigh which aspects should be prioritized or bring questions about resource prioritization to the mayor.

The office heads regularly conducted team meetings with their employees to promote collaboration and effective communication (City Government of Valenzuela, 2012). When asked about issues encountered during the planning phase, a respondent shared that meetings only sometimes went smoothly since there were different opinions (Interviewer 2). The disagreements were often resolved by the mayor, who had the final say on matters. The respondent explained that the former mayor would listen to all the suggestions from the management team before deciding on which course of action to take (Interviewer 2).

Improving the process of revenue collection

The city leveraged technology to improve business processes under the leadership of the former mayor X. Since the goals were to increase the income of the LGU and strengthen the city's projects, the former mayor began with the computerization of income-generating offices. The priority offices included the city assessor's office, business permit and license office, city treasurer's office, and city engineering office.

During the initial parts of program implementation, the ICT Office head recalled how he discovered problems within the system that needed to be immediately solved when he joined the local government in 2007. The head alerted the former mayor that all users had full access to tax records when only higher-ranked employees should be allowed to obtain these records. When the ICT Office head began working in Valenzuela, he focused on fixing the employees' access to tax records. He shared

that *"'Yan ang una kong tinira. . . . pumapasok kami [ng dating mayor] noon, Sabado at Linggo, para ayusin ang* access *ng mga tao"* [That was the first matter that I addressed. . . [The former mayor] and I used to work, Saturday and Sunday, to fix the access of the employees] (Interviewee 2). He and the former mayor committed several hours during their weekends to restrict employee access to tax records.

At one point, the city's budget was insufficient to pay for all the costs related to computerization. The ICT office head explained that their strategy to address the challenge was to focus on components within budget constraints. He said "for the meantime*, na kulang ang* budget *natin, ano ang pwede nating gawin? 'Yun ang* approach" [for the meantime, since we lack the budget, what can we do? That is our approach] (Interviewer 2). The budget office head also recalled their strategy to purchase hardware and software gradually. When met with resource demands, she explained, *"ikaw naman* best effort *. . . ako din* on my part *. . . i-we*-weigh *mo or itanong mo kay* mayor *. . .*[are we] doing it this year *o* next [year] *na lang muna to?"* [you also put in your best effort. . . . me also, on my part . . . you will weigh [the options] or ask the mayor . . . [are we] doing it this year or next year?] (Interviewee 3). The budget manager helped find the budget for computerization and brought questions about resource prioritization to the former mayor.

Another challenge during computerization was assessing the trustworthiness of a supplier, especially that *"marami diyan i-po-*promise *sayo ang langit at lupa eh"* [Many (suppliers) will promise you heaven and earth] (Interviewee 2). The ICT Office head expressed how important it was to know the cost-effective equipment available in the market. He also stressed how choosing a developer is crucial in information technology (IT) since it is challenging to change developers when the computer systems have already been set up.

Many users hesitated to use new devices during the transition to the use of computers. To address the constraint, the management team transferred employees who refused to use the computers away from the frontline and replaced them with young personnel who were willing to learn. Despite some opposition from employees, the former mayor stood firm in accomplishing the set goals. He also expressed willingness to use coercive powers if necessary (Interviewee 2).

The former mayor also organized a technical working group that reviewed the internal procedures in the city hall. This step allowed the local government to rationalize the operations of the income-generating offices and simplify and increase the speed of transactions by reviewing and rationalizing the operations of their offices. The LGU streamlined its procedures for acquiring business permits into three steps (receiving, assessment and payment, and releasing) and set the time of transactions under each step (City Government of Valenzuela, 2012). They also put in place a business one-stop-shop (BOSS) to reduce the movement time and a post-audit scheme to follow up on businesses' compliance with the city's regulations (Valenzuela City Ordinance No. 62, s, 2012).

Fixing the tax inventory

The local government also focused on digitizing the inventory of taxable properties and businesses. The ICT Office head and his team used the geographic information system (GIS) to check the tax declarations of businesses and property owners accurately. By using the GIS, the local government made sure that *walang*

makakatakas [no one can get away] (Interviewee 2). The ICT Office head expressed that when clients do not declare their taxes correctly, *"Pinahahabol ko yan. Sinisingil namin"* [I have someone go after that person. We make them pay their dues] (Interviewee 2). He added that *"marami kaming nakaaway diyan. Nagulat na lang din ang mga* taxpayer. *Tapos pagpasok sa opisina, nagrereklamo sila"* [we had a lot of fights there. Taxpayers were also surprised. When they enter the office, they complain] (Interviewee 2). Many stakeholders raised complaints and concerns about their tax dues. The ICT Office head and his team responded to these complaints and concerns by enlightening the taxpayers on the process of property mapping using GIS (Interviewee 2).

To complement their "stick" approach in ensuring tax compliance, the local government incentivized taxpayers by providing a pleasant experience when paying taxes in the city hall through comfortable lounges and courteous service (Galing Pook, 2012). The city also added online billing and mobile payment options to make transactions more convenient for taxpayers (City Government of Valenzuela, 2013). However, they faced issues concerning the Commission on Audit (COA) requirements, which slowed down the implementation of alternative modes of payment. The ICT Office head explained by saying *"Di kami maka-*go *kasi ang COA nga 'di ba. [Sabi nila] kailangan ganito, ganyan pero wala naman sila mabigay na payo. Sinabi sa amin [ng dating* mayor*], 'diretso niyo na balak niyo, ako na bahala sa COA.' May* online *na rin kami.* Actually, it's … political will *talaga"* [we can't proceed because of COA. (They say) we need this or that, but they did not give any advice. (The former mayor) told us, 'Continue with your plans. I'll handle the COA.' We now have online (payment). Actually, it is (through) political will] (Interviewee 2). Despite the constraints, the city continued with its plans, a circumstance which the respondent attributed to the political will of the former mayor.

Enhancing the service standard

Another integral part of the 3S Program was its emphasis on service. The local government adopted a corporate culture that pushed for a customer orientation and standards based on professionalism and performance (City Government of Valenzuela, 2012, p. 5). They also employed a flat organizational structure, which increased responsiveness and collaboration among employees, reinforcing the spread of the corporate culture (Galing Pook, 2012). The city also offered tangible solutions to increase accountability by creating transparent office partitions. Moreover, officials and employees were required to engage in a training program facilitated by an external group to internalize the new service standards (Interviewee 2). They were oriented about the 3S objectives and taught how to deal with people. The training was essential for frontline employees and city officials, who were required to interact with clients personally (Galing Pook, 2012). The contact information of the office heads was made available on the city's website.

The city empowered citizens to take an active role in monitoring the performance of city officials in delivering services. They were encouraged to report their concerns directly to the mayor via text, email, and social media (Galing Pook, 2012). A respondent explained, *"*not only in paying taxes*, kundi lahat. Kung may* complaint*, gusto niya* (former mayor) *mabilis maaksyunan"* [not only in paying taxes but in everything. If there is a complaint, he (former mayor) wants it addressed immediately]

(Interviewee 3). The former mayor personally replied to the queries and forwarded the concerns to his management team group chat. According to the respondent, the city officials were provided with BlackBerry phones and used BlackBerry Messenger during the term of the former mayor to facilitate communication (Interviewee 2). The local government also kept an open line of communication with the public through "People's Day," a regular event where residents met with the former mayor to discuss their concerns (City Government of Valenzuela, 2013, p. 7).

Institutionalizing the 3S Program

During the former mayor's term, the income from the business permits increased as more businesses registered in the city. The real property tax revenues also increased significantly. Ultimately, the city's total income increased from PHP 864 million in 2004 to PHP2.1 billion in 2012 (City Government of Valenzuela, 2013). Due to the increase in city income, the local government provided more public services, thereby improving the quality of life of their constituents (City Government of Valenzuela, 2013).

The former mayor used several strategies to ensure the program's longevity considering its success. He approved and implemented an ordinance that established "simple" processes, "speed" in delivery, and "service" excellence in all frontline services (Valenzuela City Ordinance No. 62, s. 2012, Section 3, para. 2). The ordinance institutionalized steps in doing business in the city, establishment of a BOSS, and post-audit inspection. The local government also integrated the streamlined procedures into the IT system of the city hall (Galing Pook, 2012). Moreover, the program cultivated a "way of life" for the stakeholders by introducing new processes, culture, and values (City Government of Valenzuela, 2012, p. 6). It was crucial for whoever succeeded the mayor to continue good programs because, as one respondent put it, "I have come to believe that good programs are hard to kill or to end… because the constituency has already learned that it is not a want but a need that the government owes them. Once something becomes a staple in their culture, they tend to look for it. It is political suicide to remove them" (Interviewee 1). Aside from institutionalizing programs through ordinances, programs cherished by the people can also outlive a mayoral term.

Evolution of the 3S Program

The term of the former Mayor Sherwin Gatchalian ended in 2013, and his brother, Mayor Rex Gatchalian, took over the mayoral seat from 2013 to 2022. Even though the person in charge changed, the brothers largely employed the same personnel (Interviewee 1). During the term of Mayor Rex, many aspects of the 3S Program were improved, and new features were added. Concerning the simple processes and speed in delivery aspects of the program, consultants were hired to help with the ISO certification, especially in reviewing the speed and efficiency of procedures (City Government of Valenzuela, 2020). While Mayor Rex was in office, the city fully computerized the business permit and licensing system (City Government of Valenzuela, 2019). They also implemented a fully automated system for building and construction permit applications at the city hall (City Government of Valenzuela,

2017). Furthermore, the local government built 3S Centers, which were "*parang mini-city halls*" [like mini-city halls] that allowed the constituents to access public services near their homes (Interviewee 3).

Concerning the program's service excellence facet, the former mayor shared that mystery shopping was routinely conducted to follow up on the training (Interviewee 1). The local government commissioned a third-party vendor to conduct behavioral training. The mayor received the results of the incognito testing, and his team used the findings to inform employee evaluation and the need for retraining. He was also actively involved in ensuring the proper implementation of services. He elaborated on his role by saying, "I do checks. I just came from a check this morning—physical hands-on checks, spot checks, spot audits" (Interviewee 1). Mayor Rex also actively responded to the messages from his constituents via text and social media applications, and he forwarded the concerns to the "Valenzuela Management" group chat in WhatsApp (Interviewee 2). He also continued People's Day.

In 2016, the Valenzuela City Council passed an ordinance that institutionalized the improved 3S Program called the 3S Plus in Public Service Program (City Government of Valenzuela, 2017). The new ordinance approved by Mayor Rex sought to maximize the power of technology in providing services that residents can avail themselves of during their most convenient time.

SECI Model

The research initially analyzed the problem-setting and problem-solving processes that led to the creation of the 3S Program. In this section, the salient processes during the development and implementation of the program were analyzed to determine whether they exhibit the basic constructs of the knowledge creation theory, particularly the SECI model. The section is divided into four parts, each corresponding to a mode of knowledge conversion: socialization, externalization, combination, and internalization.

Socialization

As previously mentioned, organizations must use tacit knowledge as a source of new knowledge because they cannot create new knowledge independently (Nonaka & Takeuchi, 1995). Under the SECI paradigm, tacit knowledge is produced and maintained at the individual level, where organizational knowledge generation starts. In the case of the 3S Program, the former Mayor Sherwin Gatchalian possessed rich tacit knowledge that prompted the development of the program. The former mayor experienced transacting in the city hall since his family's factory used to run in Valenzuela before he was elected. His experiences revealed that the city's business permits and licensing system left much to be desired. He also visited a neighboring city to study their best practices concerning the provision of business permits. A business background, extensive experience managing a firm in the city, direct contact with the city hall, and study tours allowed for the development of tacit knowledge.

Nonaka and Konno (1998) assert that socialization occurs when individuals exchange tacit knowledge through participation in shared activities within the same environment. While developing solutions, the former mayor formally created groups for exchanging knowledge. These groups were the management team, composed of

office heads, and a technical working group (TWG), which reviewed the internal procedures of various offices. Aside from the former mayor, the management team's members, specifically the heads of the ICT and budget offices, had been essential sources of tacit knowledge. The former had substantial experience in handling MIS and assessing the trustworthiness of suppliers and IT developers. At the same time, the latter was a long-serving budget office head, who had assisted the local government in overcoming financial constraints. The former mayor and the city officials continuously interacted with each other through regular team meetings, and tacit knowledge was shared among individuals within these fields of interaction.

Externalization

In the shared spaces created by Mayor Rex, individuals pertinent to the program could express in words their personal and professional experiences among one another. For instance, the regular meetings provided the mayor opportunities to share his automation experiences in the corporate world and for the ICT Office head to convey his technical knowledge as a former MIS manager. This scenario occurred continuously through regular meetings, and later these ideas shared among each other materialized into explicit concepts. In developing the program, for example, the local government used the tagline "Simple, Speed, Service," which captures their goal to simplify and streamline processes and change the culture of employees in the city hall. The plans of the mayor and his management team to limit employee access to tax records, prioritize the computerization of income-generating offices, and digitize the inventory of taxable properties, among others, were also made explicit during the ongoing interactions within the shared spaces.

Combination

According to Nonaka and Konno (1998), when newly created explicit knowledge, such as concepts and plans, is converted into a prototype or operating mechanism, the combination mode of conversion takes place. The local government transformed its plans into artifacts by improving its procedures and maximizing technology's potential.

The local government edited their business registration and licensing procedures into user-oriented forms, an action associated with combination (Nishihara et al., 2018a; Nishihara et al., 2018b). They streamlined the procedures of the income-generating offices to ensure more straightforward and faster transactions apart from being client-friendly. They also employed a business one-stop shop, which was adopted from other business-friendly cities, to increase the speed of transactions. The modified procedures were posted in the conspicuous places of the business one-stop-shop to guide clients during transactions (*Valenzuela City Ordinance No. 62, s. 2012*). They were also added to the information technology system of the city hall. Moreover, the city adopted a post-audit program. This post-audit system was implemented differently from typical government audit schemes since it emphasized quality control or continued compliance with regulations (City Government of Valenzuela, 2012).

The utilization of information technology to improve service delivery also relates to combination (Nishihara et al., 2018a; Nishihara et al., 2018b). The problem-solving processes revealed many such instances. For example, the combination mode of conversion played a part in improving the city's tax collection. The local

government encoded and digitized land titles to determine property boundaries when using GIS for tax mapping purposes. They also created an online payment option to make financial transactions convenient for taxpayers.

Internalization

Internalization happens when newly-developed improvements are practiced. It also occurs when the tacit knowledge produced from the actualization of innovations is absorbed into the knowledge base of an individual or organization (Nonaka & Konno, 1998; Nishihara et al., 2018a; Nishihara et al., 2018b). This mode of conversion was reflected in the training and monitoring activities conducted by the LGU concerning the service aspect of the 3S Program. The training oriented the city officials and the rank-and-file employees about the new service standards, and the performance monitoring ensured that the local government employees properly internalized the improved service standards. This ongoing practice of training employees and monitoring their behavior ensured that the explicit knowledge was converted into tacit knowledge and transferred to the individuals within the organization (Schulze & Hoegl, 2008; Martin-de-Castro, 2007).

The institutionalization of the 3S Program through an ordinance ensured its continuous implementation and guaranteed the constant accumulation of new tacit knowledge into the organization's knowledge base regardless of the chief executive. When Mayor Rex succeeded his brother, he triggered a new round of improvements to the program. The tacit knowledge of the mayor, as well as the members of the management team who were retained in his administration, became sources of new knowledge in program development. Many aspects of the 3S Program were improved, and new features were added during the term of Mayor Rex. The changes to the program culminated in the creation of the 3S Plus in Public Service Program.

The previous cases of internalization showed how tacit knowledge was distributed within the organization. However, the fourth conversion mode can transcend organizational borders (Nonaka & Takeuchi, 1995). The actualization of the 3S Program brought about changes to the behavior of the residents of the city. The citizens transacting in the city hall underwent simpler and faster procedures and were provided comfortable lounges and courteous service. They were also given convenient and accessible means to report their concerns about local government services and received prompt responses from mayors Sherwin and Rex Gatchalian. The enhanced service standards in the LGU became a staple in the constituents' culture, and a negative reaction or feedback from clients prompted a new round of service improvements.

Phronetic Leadership

The article started by looking at the problem-setting and problem-solving processes that resulted in the development of the 3S Program. The processes in the formulation and implementation of the program were examined in the second section to determine whether they demonstrate the fundamental ideas of the knowledge creation theory, particularly the SECI model. This section shows whether phronetic leadership abilities were practiced and drove the continuous synthesis of knowledge in the local government. It is divided into six parts, where each part represents one of the six abilities—(a) setting goals and making judgments based on their

degree of goodness, (b) perceiving reality as it is, (c) creating *ba* or shared spaces, (d) articulating into narratives the essence behind situations, (e) exercising political power to accomplish one's vision, and (f) fostering phronesis in others—and how it affected knowledge conversion.

Setting goals and making judgments based on their degree of goodness

Former Mayor Sherwin Gatchalian exhibited the ability to set good goals during the formulation of the 3S Program. His vision for the city was to give his constituents a *magandang buhay* [good life]. To achieve his vision, he emphasized the need to increase the city's income to strengthen LGU programs. This overarching goal impacted the various concepts and plans associated with the 3S Program, such as the city hall's computerization, improving the revenue collection process, and fixing the tax inventory. For the city's citizens, the former mayor's plans are also worthwhile since they understood the benefits of computerization (Interviewee 2).

The former mayor's ability to judge the level of goodness was also evident from his display of strong ethical behavior. This ability was evident when he championed good governance in business registration and licensing in the city. He eliminated opportunities for corrupt practices by harnessing the power of technology through computerizing frontline operations and minimizing human intervention.

Furthermore, his capacity for judgment was also derived from his experiences as a businessperson. The former mayor's capacity was evident when he spearheaded the efforts to refine the IT system of the local government. He also paid attention to where the city spent its money and ensured the return on investments. This case was evident during their investment in satellite technology for the GIS project, which significantly increased tax collection.

Perceiving reality as it is

Former Mayor Sherwin demonstrated his firm grasp of the city's realities by gearing the finance offices' technological reforms to be income-generating. For instance, he sought to reform the business permits and licensing procedures to motivate more businesses to register in the city, thereby increasing revenues from business permits. Moreover, he planned to use satellite technology to assess the tax declarations and improve tax collection. To achieve his vision of improving the quality of life for his constituents, the former mayor understood the importance of increasing the city's income to intensify the projects concerning education, health, peace and order, and infrastructure (City Government of Valenzuela, 2013).

Creating ba or shared spaces

The former mayor formally established groups for knowledge exchange. These groups included a TWG, which examined the internal practices of various offices, and the management team, which comprised office heads. Through routine team meetings, the city officials were constantly interacting with one another. They communicated their knowledge in ways their team members could comprehend in these shared spaces.

The former mayor efforts to encourage open lines of communication between city officials and residents also demonstrated his capacity for building *ba*. First, to improve communication between top and middle management, the local government

provided the office heads with BlackBerry phones. Public concerns sent directly to the former mayor by his constituents were forwarded to the management team group chat. Second, apart from utilizing online and text messaging to interact with the residents, the former mayor also continuously engaged with his constituents face-to-face during People's Day. By creating physical and virtual shared spaces, the former mayor and the city officials could directly interact with the residents, exchanging knowledge (Nonaka & Konno, 1998; Schulze & Hoegl, 2008).

Articulating into narratives the essence behind situations

The local government thoroughly examined the tax declarations of businesses and property owners using the GIS. The shift to GIS was challenging for the taxpayers. The ICT Office head and his team explained to the taxpayers how satellite technology works to allay their worries. This response relates to their ability to articulate the essence behind situations. The city uses the tagline, "Simple, Speed, Service," which represents the program's goals to simplify and streamline processes and increase professionalism and performance in the LGU.

Exercising political power to accomplish one's vision

The impact of wise leadership, specifically the ability to exercise political power, enabled the accomplishment of program goals. The respondents used the term "political will" to describe the ability of the former mayor to overcome constraints (Interviewee 2; Interviewee 3). Under the leadership of former Mayor Sherwin Gatchalian, the city used both carrot-and-stick approaches to achieve what it envisioned and to address constraints. They used incentives, such as comfortable lounges and courteous service, to minimize the trouble of taxpayers with tax compliance. The former mayor also promptly responded to the concerns of his constituents, which encouraged the public to monitor service delivery actively.

On the other hand, the city demonstrated its willingness to utilize punishments by telling the taxpayers that they would be held liable if they did not pay, did not declare correctly, or did not declare their taxes. Moreover, during the computerization of the offices, the management team replaced the frontline employees who refused to use the computers, motivating other employees to cooperate. In these situations, the local government mainly used extrinsic motivation to drive behavior. Although a wise leader must be able to utilize hard power in specific circumstances, phronetic leadership emphasizes the importance of inspiring people to act (Nye, 2013, as cited in Nonaka & Yokomichi, 2018). The findings did not reveal the processes in which soft power was utilized.

Fostering phronesis in others

Another ability of a wise leader, namely, the ability to foster phronesis in others, manifests in situations where self-organizing teams emerge during the formulation and implementation of the program (Nonaka & Takeuchi, 1995). The evidence in Valenzuela City government revealed how the processes were primarily top-down. Other than former Mayor Sherwin, hardly any autonomous team or individual facilitated knowledge conversion within the LGU. However, there were instances in which office heads and their respective teams showed proactiveness in dealing with concerns regarding computerization. For instance, the ICT Office head told the

former mayor about the issue concerning access to tax records. He was also expected to anticipate potential issues, such as when dealing with suppliers and developers, and figure out ways to solve the problems. The budget office head, on the other hand, must first deal with the resource demands before bringing questions about resource prioritization to the former mayor.

Conclusion

Nonaka and Yokomichi (2018) argued that organizational innovation in the public sector could be understood better by using the knowledge creation theory than other organizational theories rooted in Western contexts. Scholars across Southeast Asia and Japan organized to determine the applicability of Nonaka's theory to the management of government and community organizations (Nishihara et al., 2018a; Nishihara et al., 2018b). Through case studies, they provided evidence that members of public organizations practiced knowledge creation theory despite having no knowledge of the paradigm. To further prove the suitability of knowledge creation to public management, this qualitative research explained the process of organizational innovation within a local government unit using the core principles of knowledge creation—the SECI model and phronetic leadership. The study investigated the artifacts of the 3S Program and traced the development process of the artifacts backward, revealing relevant activities and situational aspects. The framework used in this research demonstrated its usefulness in understanding organizational knowledge creation by uncovering the activities that correspond to the four modes of conversion and real contexts that show how the abilities of a wise leader were practiced. While it addressed the difficulties in documenting phronesis by integrating Halverson's DCAM, the documentation of the overlapping and repetitive synthesis of knowledge, remains to be a challenge in forming narratives of practice.

There are relevant findings that can serve as starting points for further research on knowledge creation in the local government. First, the results revealed that former Mayor Sherwin Gatchalian was the most important facilitator of knowledge conversion. However, the findings also signaled the extent to which office heads practice a proactive approach in dealing with concerns. There were instances when the city officials were expected to anticipate issues and figure out ways to solve the problems without being told. This approach may have been customary in the organization. Thus, future research can explore the capacity of middle managers to drive knowledge conversion and their level of influence in the organization, which impacts their ability to facilitate innovation. This phenomenon, described by Nonaka and Yokomichi (2018) as a "middle-up-down" approach, can help explain the factors behind organizational innovation in the city.

Second, the local government possesses some of the features of a sustainably innovative organization, as described by Nonaka et al. (2014). According to Nonaka et al. (2014), an organization becomes sustainably innovative when it has multi-layered networks of *ba* (i.e., shared spaces among management levels and between multiple organizations) that successfully synthesize the three types of knowledge. The formal *ba* of the 3S Program, which can be broken down further into physical (e.g., management teams, technical working group, ICT Office head and his team) and virtual (e.g., messaging applications), indicated that there were shared spaces involving the different management layers and the public. These findings may serve

as preliminary evidence that can facilitate more extensive research on the innovative nature of the local government by revealing whether self-organizing teams exist inside and outside the organization.

Third, research to explore the views of the program beneficiaries may help validate whether local managers possess phronetic leadership abilities and determine how their feedback initiated changes within the local government. Similarly, it is also worthwhile to explore how the operating mechanisms of entities external to the organization, such as trainers, suppliers, and developers, were impacted by the concepts and plans of the LGU concerning the 3S Program.

Endnotes

[1] Today, this is known as the Philippine Statistics Authority.
[2] The 3S in Public Service Program is now called the 3S Plus in Public Service Program.

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