Portraits of Passionate Creators of Pattern Languages of Practices in Japan

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This paper explores the appeal of pattern languages by portraying the process through which individuals captivated by pattern languages encountered them, were attracted by certain issues they sought to address, and subsequently created and utilized them. We conducted interviews with five creators of practical pattern languages in Japan to illustrate why they decided to create pattern languages and what they experienced during the process of creation and utilization. The individuals featured in this paper include: a person who discovered pattern languages while exploring various forms of expression and collaborated with students to create a dementia-focused pattern language; a local government employee who created pattern languages in different domains with each departmental transfer; a local government employee who consistently created, utilized, and implemented pattern languages in administrative work; a university professor who crafted pattern languages, employed them in lectures, and consistently published papers on their outcomes at academic conferences; and a person who supported the creation of pattern languages for diverse clients while fostering a growing community of passionate pattern language creators. This research revealed that the appeal of pattern languages perceived by these creators is common across different fields and positions. From these commonalities, we highlight four key appeals: (1) being able to learn the voices from the field when entering from outside a domain, (2) being able to support intrinsic practices from the perspective of practitioners themselves, (3) being able to develop attachment and have patterns inherited within communities over long periods, and (4) experiencing many learnings and discoveries for oneself and those collaborating in the process of creating pattern languages. Through this research, we hope readers will gain a tangible understanding of the possibilities and expanding world of pattern languages, and we hope that readers will be inspired to take a step toward utilizing and creating pattern languages after being captivated by them.

1. INTRODUCTION

The concept of a pattern language was introduced by Christopher Alexander in the field of architectural design in the late 1970s [1,2]. About a decade later, it was applied to the field of software development [3,4]. Since the late 2000s, it has shown diverse applications in the fields of human action and life design. Reflecting this development, the Hillside Board, the international governing body of the pattern language community, decided to add "People and Practices" to the name of the premier conference on patterns and pattern languages, known as PLoP. Thus, it became the Conference on Pattern Languages of Programs, People and Practices. This was first applied by AsianPLoP 2024, which became the first conference to be organized under this new name. Subsequently, EuroPLoP has also adopted this new naming convention.

In Japan too, pattern languages continue to expand into diverse fields such as education, welfare, and administration. A research laboratory of a digital service company and the Iba Laboratory at Keio University created the world's first pattern language for welfare. The Kawasaki City Office, a local government, has developed pattern languages for creating workplaces for people with disabilities and for social work practices. Pattern languages have also been created across various domains by diverse creators, including junior high schools, universities, architectural vocational schools, bookstores, and various companies. This paper focuses on the creators who have been creating and utilizing pattern languages of practices in Japan. Behind this widespread adoption of pattern languages in Japan are many individuals who create, utilize, and apply pattern languages to new fields and organizations where they had not previously existed. Why did these creators decide to create

pattern languages? What fascinated them about pattern languages, and with what thoughts did they create and utilize them?

In this study, from June 2023 to March 2024, we conducted interviews with five individuals who were creating or utilizing pattern languages for practices in Japan. The interviewees were selected based on the following criteria: they were central figures in creating and utilizing pattern languages and applying them to their fields or organizations; they represented diversity in the creators' fields and positions; and they were accessible to authors. We conducted two interviews with everyone, either via Zoom or in person. In the first interview, we asked about their initial encounter with pattern languages and delved deeper into the words that expressed their feelings and thoughts that emerged during the conversation. In the second interview, while reviewing the summary of the first interview, we focused on areas where we wanted to hear more details and additional stories that the interviewees wanted to share. Through these interviews, we explored how they encountered pattern languages, what concerns drew them to this approach, and what thoughts they developed as they created and utilized them.

This paper presents stories from interviews with Makoto Okada, Kazuo Takiguchi, Koichi Kakuno, Naoko Osada, and Yuri Abe, which the authors believe should be shared with pattern language creators outside Japan (their titles are as of the time of the interviews). We describe how they encountered pattern languages, what concerns drew them to this approach, and what thoughts they developed as they created and utilized them. The stories incorporate the creators' memorable quotes both in indented blocks and with quotation marks, along with the author's perspectives to convey both the creators' thoughts and the author's excitement and surprises. The described stories were verified by the narrators, and any factual inaccuracies or necessary additions were corrected. These stories, when shared more widely, are expected to help readers gain a tangible understanding of the possibilities and expanding scope of pattern languages.

In the second section, each subsection introduces the story of one creator. The third section discusses the appeal of pattern languages that fascinated these creators and the culture of patterns. The fourth section summarizes this research and presents the conclusion.

2.   THE STORIES OF FIVE PASSIONATE CREATORS

2.1   MAKOTO OKADA — DISCOVERING PATTERN LANGUAGE THROUGH VARIOUS EXPRESSION METHODS AND CREATING ONE ON DEMENTIA WITH STUDENTS

Makoto Okada is an employee at a research laboratory of a digital services company in Japan and also serves as the co-representative director of an organization (DFJI: Dementia Friendly Japan Initiative) where companies, local governments, and NPOs come together to tackle issues related to dementia (Figure 1). He is the creator of the pattern language "Words for a Journey: The Art of Being with Dementia" [5,6,7,8], which aims to help people with dementia and their families live better lives.

Fig. 1. Interview with Makoto Okada (pictured at bottom) (2023).

Why did he decide to create a pattern language while working on dementia-related issues? What fascinated him about pattern language, and with what thoughts did he create it? Let's unravel the background story from his narrative. The tale begins in 2013.

In 2013, while researching work-related papers, he learned about pattern language and became interested in the "Generative Beauty Patterns" (a pattern language for living beautifully and vibrantly as oneself) created

by the Iba Laboratory in collaboration with a cosmetics company [9,10]. In November 2013, he learned that the Iba Laboratory would be distributing booklets of the Generative Beauty Patterns at a research presentation event at Keio University. He happened to have an acquaintance near the event venue, so he called and asked them to bring him a booklet, which is how he obtained a copy [9]. After that, he read several pattern languages created by the Iba Laboratory.

At this point, he was thinking about expressing the thoughts and good practices of people in the field of dementia. Since starting the dementia project in 2011, he had been involved as one of the main organizers in the "RUN TOMO" event. In this event, people with dementia, their families, and medical and welfare professionals run together, passing the baton from Hokkaido to Tokyo, Kansai, Okinawa, and other regions. Through this event, he met people with dementia who participated in the innovative event of running together, as well as medical and welfare professionals.

> People who engage in unconventional activities are often serious thinkers and interesting individuals. I thought it would be great if their various initiatives and ideas could be expressed more. The thoughts of different people from different regions.

He talked with them and learned that each participant had something they wanted to overcome by participating in the event. People with dementia sought to move from a state of disappointment after being diagnosed to a new state by participating in the event. Medical and welfare professionals, on the other hand, believed that more could be done to help people with dementia live vibrant lives and participated in the event with that in mind.

> There are people who are doing good things while dealing with various challenges, and they have found ways to gradually overcome them. I witnessed many such people overcoming challenges, and I wanted to convey that more.

In this way, as he traveled around the country, he began to think that he wanted to, as he said, "carefully gather and give form to the scattered thoughts of people in the field, such as how people in this region think this way is good, while people in that region are troubled by that way of thinking."

In March 2014, having been interested in pattern language for a long time, he attended a lecture by Takashi Iba, Japan's leading expert in pattern language creation and research. He thought, "Pattern languages are indeed fascinating."

At this time, he had actually been trying various methods to effectively express the thoughts of people in the field but had not been successful. For example, when trying to express through unique graphic design, he would have to rely on professional designers, and the expression would be based on their values, which was a drawback. In the case of pictograms, it was inherently difficult to express because dementia involves invisible disabilities and hardships that are not easily understood by others. He also conducted workshops to create games based on the lives of individual participants, but since each person's life is diverse, it was difficult to summarize them. The workshops became lengthy, and it was challenging to derive learnings from them.

Therefore, he saw the potential in pattern languages, which can express abstract ideas based on interviews with the people involved. After the seminar, he suggested to Takashi Iba, "I think it would be interesting to create patterns for dementia," and Iba replied, "That's a good idea." Later, he learned that these words from Iba meant "feel free to create them," but at that time, he thought, "I can create a pattern language about dementia together with Mr. Iba."

He then contacted Takashi Iba and held a meeting. He brought handwritten notes to the meeting. The notes contained information about the current number of people with dementia and their families, and how the numbers are increasing yearly, making dementia a familiar issue that anyone may become involved with. His reference for this was a book that compiled interviews with survivors of the Great Hanshin-Awaji Earthquake, a major earthquake that occurred in Japan.

> Dementia is not something that the general public or young people feel familiar with. So, when they start to see the need to care for their parents, it feels like it happened suddenly. Especially with the trend of nuclear families and an increase in households not living with older members, caregiving seems to occur abruptly one day. It's kind of similar to an earthquake in that sense.

You know it will definitely happen when thinking probabilistically, but you don't think it will happen to you.

Based on this idea, he found the combination of the concept "if you always think it will happen tomorrow, you won't be surprised; you can think it came as expected" and the idea of interviewing various people to be interesting. And he thought that this could be realized through a pattern language.

He then informed Takashi Iba of his desire to create a pattern language. It was officially decided that the pattern language would be created as a joint project between the company he belongs to, the NPO working on dementia-related issues, and the Iba Lab.

First, he and the students from the Iba Lab conducted interviews with people with dementia and their families who were living positively despite their diagnosis. They asked the interviewees, "I'm sure there are things that aren't going well, but I'd like to specifically ask about the good things you've been doing." Through this interview process, he felt that "the approach of pattern language to focus on the good aspects is effective." This was because, during his travels around the country, he noticed that people in the welfare field often talked about negative things, but at the same time, he discovered that "if you listen carefully, they always have something they value."

Rather than trying to elicit good stories, I wanted to collect them. I knew they were there, so I wanted to gather them. It's a feeling of wanting to put into words the things that are not yet verbalized.

Furthermore, as he progressed in creating the pattern language, he became increasingly drawn to the process of creating it together with students who had no prior knowledge or involvement with dementia. The author of this paper was surprised to learn that he, who had been working on dementia-related issues while traveling around the country, and the students, who had no knowledge or connection to dementia, had been creating the pattern language together.

Ah, it is meaningful to have young people and those not involved with dementia participate. Originally, I had a desire to express the various good aspects that exist in the field but are hidden. But I realized while creating the pattern language that perhaps it's not us, but the young people who can bring out the goodness in the field.

In this way, he became increasingly fascinated by pattern languages. From our perspective as the author of this paper, the intriguing point of his story is that pattern languages, which were just one of the many experimental methods of expression for him, matched his ideal method of expression so well that he found himself immersed in them before he knew it.

He devoted an enormous amount of time and effort to creating the pattern language. This project began conducting interviews in May 2014 and aimed to complete the patterns within just six months by November. It was a challenging endeavor for the Iba Lab, which usually takes over a year to complete a pattern language. Furthermore, he believed that a significant difference between the patterns in "Words for a Journey" and the patterns being created at the Iba Lab at the time was the inclusion of multiple perspectives: those of the individuals, their families, and the people surrounding them. Amidst various challenges, around July, he thought they might not make it in time for completion at this pace. In August and September, he visited the university laboratory every week and worked diligently on creating the patterns. The university was on summer break, and without air conditioning, they worked with the windows open in the heat.

However, despite the difficulties, the driving force behind his passionate creation of the pattern language was his feelings for the people he had met during his travels around the country for "RUN TOMO," which could be considered his starting point.

I might have been constantly thinking about how the people involved would feel. In other words, even though they weren't exactly the readers, the thought of the people who would see these patterns might have always been in the back of my mind.

The resulting "Words for a Journey" captures the hearts of many readers, users, and practitioners precisely because it expresses the positive thoughts that had not been articulated before, even within seemingly negative events, which was a point he was particular about.

He also conducts workshops utilizing "Words for a Journey." In one of these workshops, the participants were remarkably diverse, including care workers, city council members, city hall employees unrelated to dementia, and young people active in Non-Profit Organizations dealing with issues other than dementia. Reflecting on that experience, he says, "When there are patterns, it feels like it really neutralizes people's positions." He realized that when people were asked to select three patterns and explain their reasons for choosing them, it had a remarkable effect. Instead of using broad subjects like 'Japan,' 'men/women,' or 'young people,' participants began to use 'I' as the subject, enabling everyone to share their personal stories.

Additionally, "Words for a Journey" has brought significant innovation not only to those involved with dementia but also to the creators of pattern languages. Kazuo Takiguchi and Koichi Kakuno, mentioned later, are among them. This pattern language has inspired new creators, and their stories continue to unfold.

2.2   KAZUO TAKIGUCHI — CREATING PATTERN LANGUAGES IN DIFFERENT DOMAINS WITH EACH TRANSFER TO A NEW DEPARTMENT IN THE LOCAL GOVERNMENT OFFICE

Kazuo Takiguchi is an employee at a local government office who has created four pattern languages (Figure 2). Remarkably, each of the pattern languages he has created focuses on a different domain: a pattern language for creating workplaces for employing people with disabilities in 2015 [11], a pattern language for welfare innovation for companies and welfare service providers in 2016 [12], a pattern language for care support using welfare equipment in elderly care facilities in 2017 [12], and a pattern language for creating communities where people can support each other in 2019 [13].

Fig. 2. Interview with Kazuo Takiguchi (pictured at bottom left) (2023).

Why did he decide to create pattern languages, a new approach, while working at a local government office? What fascinated him about pattern languages, and with what thoughts did he create and utilize these four works? Let's delve into the backstory through his account. The origin of the story dates back to 2015 when he first encountered pattern languages.

In 2015, while working in a department promoting the employment of people with disabilities, he was introduced to pattern languages by Makoto Okada, whom he met through work connections. Makoto Okada is the person who created "Words for a Journey" [5,6,7,8], and at that time, he had just completed a preliminary version. Initially, he thought that the topic of dementia was not related to his current work, but as he listened to the story and read "Words for a Journey," he intuitively felt, "This could be useful for my work somehow." He describes this moment as follows:

> Some specific individuals would say things like, 'If you do it this way, the employment of people with disabilities will go smoothly,' but everyone has their own methods, and they are not necessarily verbalized. There are academic societies and research papers in the field of employment for people with disabilities, but not everyone involved in the measures reads

papers, so I thought it would be useful if there was something that could convey the information in an easy-to-understand way.

After hearing about it from Mr. Okada, he immediately visited a research presentation event at Keio University where Takashi Iba's laboratory, which has been pioneering pattern language research in Japan and co-created "Words for a Journey" with Mr. Okada, was exhibiting. He spoke with Takashi Iba there, and a few days later, he sent an email saying, "I would like to somehow create a pattern language," and was introduced to members of Takashi Iba's pattern language creation support company (CreativeShift).

Before the end of the month, he began creating a pattern language with the members of the creation support company, as well as colleagues from the government office and support service providers. First, they conducted interviews with about ten people, including companies he had been involved with and employment support staff for people with disabilities. He was moved by the process.

> The things I had been vaguely thinking about were easy to extract and gather, realizing that everyone was saying these things, and then verbalizing them. There was a kind of excitement in that.

The field of employment for people with disabilities was still a new area at the time, so although there were laws and regulations, it was not clearly defined how to proceed with the measures, and they had to be carried out in accordance with the actual conditions of each region. Additionally, he had previously worked in departments where work was carried out in accordance with what the government had decided by law, so he was unsure and troubled about how to proceed with work in the new department. Therefore, he was excited by the fact that "the independent practices of various individuals can be shared and consolidated using language."

Furthermore, before being transferred to the department for the employment of people with disabilities, he had neither studied social welfare nor worked with people with disabilities. While he had to work with professionals who were active on the front lines, he had no experience or knowledge necessary to carry out his work.

> When I entered a field I didn't know about, I think I used pattern languages as a tool to explore the essence.

Through interviews, he learned about the field he had never studied or been involved with by listening to the words of the people involved in those measures. After working in the department for the employment of people with disabilities, he was transferred to a department related to care equipment, and there, too, he created a pattern language in his first year after the transfer.

> When we have to make a plan and carry out a project as part of city administration, I thought that if we don't understand what the essence, we will end up going in the wrong direction. When I created the pattern language for the employment of people with disabilities (the first work), I felt that I was able to grasp the essence, so I thought this method could be utilized for the field of care equipment, which was also still a chaotic field at the time.

In local government offices in Japan, everyone has to change departments every three years and must immediately start working in different fields. He created the four pattern languages in different departments and also says, "It was meaningful to create them precisely because the departments were chaotic."

> I created all the pattern languages right after moving to a new department. Not after three years or so, but in the first year after the transfer. It doesn't work if you don't create them; you won't understand.

He says, "I think this point encapsulates my motivation for being involved with pattern languages." The author of this paper finds it extremely interesting that he resolves issues specific to local government offices by conducting interviews for pattern languages, and I think this is a symbolic story in this paper.

However, there were many difficulties and efforts involved in the process of repeatedly creating pattern languages, a new approach, at a local government office. For example, when he was working on the first work and told the people around him that he wanted to create a pattern language, they said, "I don't really understand, but the direction seems good. But please don't burden us too much." Creating the patterns was challenging, but the process of creating the patterns was interesting for both him and his colleagues. He was so enthusiastic about it on a daily basis that he completed the pattern language at an incredible speed, starting interviews in November and finishing by February.

> We were working late into the night, until around 10 or 11 PM, earnestly creating with a team of 3-4 people. That's not usually the working style in a government office.

After completing the creation of a pattern language, he thinks, "It was hard, so honestly, I don't want to create another one." However, he also says, "If I move to a different department again, there might be a possibility of creating a pattern language." The driving force behind creating pattern languages multiple times, even with great difficulties, is his belief in connecting the work he has been entrusted with to the next opportunity. The author of this paper finds it remarkable that he has incorporated pattern languages into a local government office in Japan and completes patterns at an incredible speed while also having regular duties. I was moved by his belief, which became the driving force behind it.

> There are people involved in the policy issues. It's probably not something I can allow myself to do, to leave out the important things those people think about and do my own work. I think I'm pursuing that. I could compromise and get it done, but I would lose confidence in what I'm doing and in the projects of the work.

Because he has been incorporating, creating, and continuing to create pattern languages at a local government office, he is called a "pattern author" by the people around him. The patterns he has created continue to spread, being updated after his transfer and used in seminars hosted by the city. He also utilizes patterns himself to ensure that important aspects of work and the thoughts of those involved in policymaking are continuously passed down within the department. When new staff are assigned to the department, he provides them with the created pattern language and interview texts and explains the process leading up to the completion of the patterns. He explains that if only the pattern language is introduced, it becomes difficult to understand why certain patterns are important, how they were created, and how to effectively use them. By providing the original interviews along with the patterns, not only is the passion of the creators conveyed, but also the real atmosphere of the field. This approach, he says, helps to transmit both the emotional investment and the practical context behind the patterns.

Even more amazingly, his junior colleague, Koichi Kakuno, has started creating pattern languages, and pattern languages are being passed down within the same local government office.

2.3 KOICHI KAKUNO — CREATING, UTILIZING, AND IMPLEMENTING PATTERN LANGUAGES FROM AN ADMINISTRATIVE PERSPECTIVE

Koichi Kakuno is a Japanese local government employee who, in 2017, created the "Dementia Action Guidebook" utilizing "Words for a Journey" [5,6,7,8] to illustrate the medical and nursing care services available to people with dementia and their families [14] (Figure 3). In 2023, he developed a pattern language for social work practice [15]. He also participated in AsianPLoP in 2024.

Fig. 3. Interview with Koichi Kakuno (pictured at bottom) (2023).

Why did he, from an administrative standpoint, decide to utilize and create pattern languages in the fields of healthcare and nursing care? Moreover, what fascinated him about pattern languages, and with what thoughts and feelings did he utilize and create them? Let's piece together the context from his narrative. The story's origins lie in 2015.

In 2015, during his first or second year as the person in charge of dementia measures, he learned about "Words for a Journey," which was a hot topic in the field of dementia, from his senior colleague Kazuo Takiguchi. He was shocked when he first read it.

> At first, I was surprised that a book about dementia could be so positive, and the patterns described were a bit different from what had been said before. It showed that with such ingenuity, one's perspective could change a little and become more positive. It was something that seemed to have been there but wasn't, so when I first read it, I couldn't verbalize it to that extent, but I vaguely felt that it was really good.

When he encountered "Words for a Journey," he felt uncomfortable with the lack of dementia measures from the perspective of the person with dementia.

> Basically, the explanation of dementia at that time strongly emphasized that symptoms would gradually progress, that there would be more and more things one couldn't do, and that people around should support them. Also, many of the materials created by the government were aimed at families. There were many materials on how to support and respond to someone who developed dementia, but there weren't many for the person themselves... In that sense, it was also shocking to see that it was written for the person themselves.

In the field of welfare for persons with disabilities, where he had previously worked, the perspective and decision-making of the person were highly valued. In this field, there were many organizations of persons with disabilities, various requests were made to the government, and he worked while facing persons with disabilities on a daily basis. Therefore, he naturally developed the ability to consider policies from the perspective of the person.

> In the field of elderly welfare, older people don't typically form their own advocacy organizations, so there's basically no scenario where senior citizens' groups come to petition the government office. So honestly, even when working in a government office, there aren't many opportunities to sense the perspectives and viewpoints of the elderly themselves, and work can proceed without this input. I think this discomfort I felt was probably because I had previously been working in the disability field.

Therefore, although new systems have been established now, at that time there was no system to reflect the voices of people with dementia in government policies, and only a few people were speaking up. "Words for a Journey," written for the person themselves, gave him a new perspective. "I think it was one of the triggers that

really changed dementia policy, to the extent that people involved in dementia realized that there was such a perspective through this book," he said, and continued:

> I felt that it had the power to influence the feelings of the person themselves.

The following year, in 2016, he was working on a project to create a "Dementia Care Path" (a document summarizing the flow of appropriate service provision according to the state of dementia) that the national government had requested from each local government. At that time, he remembered "Words for a Journey." The author of this paper feels that this point reveals his beliefs.

> When I thought about what to do, I didn't want to create something like the conventional 'Dementia Care Path.' One thing was that I wanted to create it for the person diagnosed with dementia so that they could understand it. I also wanted to create something that would make them feel positive.

So, he thought, "Can't we use 'Words for a Journey' to make the person's awareness and thinking more positive?" He consulted with Makoto Okada, the creator of "Words for a Journey" and members of Takashi Iba's pattern language creation support company (CreativeShift), and began creating the guidebook. At the beginning of this document, he included four patterns from "Words for a Journey" and conveyed a positive message: "Being diagnosed with dementia is, in a sense, the first step of a new journey." At that time, it was said that it took some people 1-2 years to accept their diagnosis of dementia, that is, to accept the illness or disability in their own way and try to live positively.

> During those 1-2 years, what happens to the person is that they become depressed, thinking they can't do anything, and in some cases, they become housebound or quit their job. But I thought I wanted to make that gap as short and shallow as possible.

Furthermore, while creating the guidebook, he thought that if people could read the pattern language, feel positive, and want to do something, and if government services and resources were listed, it could effectively lead to action by the person.

For example, when disposing of bulky waste, it would be easy to understand which system to use to carry it out. However, for a person who has suddenly been diagnosed with dementia, they may not know what systems are available because they have never paid attention to it before. Therefore, the government creates and distributes a list of contact points and support centers, but he believed that "it's not enough to just provide information; ideally, there should be someone to give a push."

> If we use "Words for a Journey," for example, when someone is diagnosed with dementia, they feel like trying out this pattern, right? If we can present them what services are available for this feeling, I think it will connect well. I thought the pattern could bridge the gaps, so I created this.

For example, if there is a clear intention, such as wanting to dispose of bulky waste, it would be good to know what systems are available, but for people who don't even know what they want to do, it won't lead to action. It would be best if there was someone who could give the person a push, but it was difficult in a local government with a population of 1.5 million. He felt that another step was needed, and that's why he utilized pattern languages.

> The idea was to start from making the feelings positive (with pattern languages) and create from there.

After creating the "Dementia Action Guidebook," he was transferred to a department in charge of social work with the elderly, and he began creating pattern languages for social work practice. Even after the patterns were once completed, he conducted additional interviews and created a revised version. Even in the government, where most people are unfamiliar with pattern languages, he continues to study by attending lectures and reading books from Takashi Iba's research group in order to convey the value of pattern languages to his superiors and budget officials.

Furthermore, using that pattern language, he holds pattern usage workshops and reading groups that people from outside the city can participate in, with more than 500 people having attended so far. In 2023, he also appeared in a video that local governments and comprehensive community support centers nationwide watch for training purposes and gave a presentation on pattern languages. Additionally, in 2025, he plans to start an initiative to train people who will help promote pattern languages alongside the city. Fascinated by pattern languages, he connects his government work with pattern languages and continues to implement them in the field of welfare in government work.

2.4 NAOKO OSADA — CREATING PATTERN LANGUAGES, UTILIZING THEM IN UNIVERSITY CLASSES, AND SUBMITTING PAPERS ON THE RESULTS TO ACADEMIC CONFERENCES

Naoko Osada is an associate professor at Ritsumeikan University, researching education, human interface interaction, and other related fields (Figure 4). She has collaborated with students to create a pattern language for student approaches in university-industry collaborative PBL (Project-Based Learning) [16]. She has also created and researched a pattern language with university faculty members nationwide, focusing on the activities and organizational characteristics of educational practice communities for university faculty [17,18]. Additionally, she has participated in AsianPLoP2018 and AsianPLoP2024.
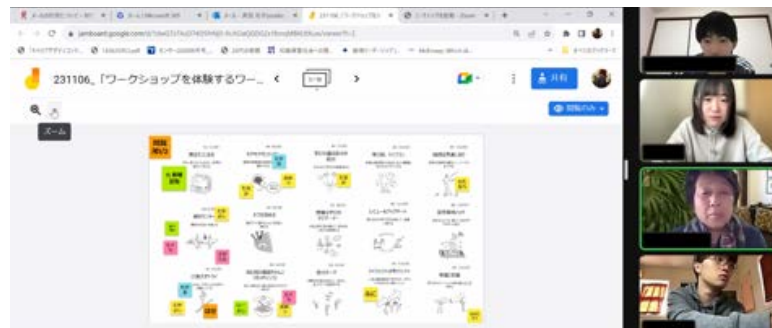

Fig. 4. Interview with Naoko Osada (pictured third from top) (2023).

Why did she decide to create and introduce pattern languages in the field of education? What fascinated her about pattern languages, and with what thoughts did she create and research them? Let's unravel the background story from her narrative, which begins around 2017.

While teaching a Project-Based Learning course at Ritsumeikan University, she once participated in a workshop on design thinking to learn more about service design. It was during this workshop that she first learned about pattern languages. She heard about a professor who conducted a class where students collected good designs and ideas from the town, turned them into patterns, and used those patterns to develop new proposals for their teams. After that, she forgot about patterns for a while.

Some time passed, and in 2017, she thought, "Patterns are indeed important," and wondered if they could be used in a PBL course where students are assigned to companies and propose plans as a team based on given themes. At this time, she reflected on her previous work experience as a systems engineer and consultant, which involved project-based work.

> I realized that I had been working in a way where I would abstract what I noticed or experienced with one client and apply it to other clients. I remembered that there were people in the company who wouldn't grow if they just kept doing things without this kind of thinking. That's when I thought that abstracting and applying it to the next situation was important, and I felt that patterns were similar to this idea I had been thinking about for a long time.

She believed that this idea was also crucial in PBL classes. Before being assigned to companies, students learn various ideas through case studies in her class.

> If what I teach in class is the base, I want students to abstract it a little and apply it in the company, but they usually forget. Becoming able to grasp and propose solutions to a company's

problems on one's own usually takes about three or four years, even in a company, so it's not something that can be done immediately. But I thought that pattern languages could be utilized to support that process a little.

So, together with students who had taken the PBL course, she created a pattern language for student approaches in PBL. At the time, there was no literature on how to create pattern languages, so she read books written by Takashi Iba and tried to imitate the process. She created prototype patterns with two students who were assistants in the PBL course she was teaching and submitted a paper to AsianPLoP, which was held in March 2018. The author of this paper was also surprised by this speed.

After that, she decided to use the created pattern language in her classes. In the course, there were one or two opportunities for students to receive feedback before finally presenting their proposals to the companies. Most teams received harsh feedback and felt discouraged. In those situations, she shared relevant patterns while explaining the problems occurring within the team. Instead of giving one-sided advice as a teacher, she communicated in a way that allowed students to discover important things on their own. She says, "Pattern languages are a medium that connects teachers and students."

> I think that in many universities, there is a misconception that if you respect students' autonomy, you can just let them do things and make them struggle, and they will grow. There are things that people can't notice unless someone tells them. It would be great if they could be in an environment where someone tells them such things (abstract advice), but if they can't, it's difficult for them to develop their core abilities.

For students to receive abstract advice, teachers and students need to look at specific situations together, and teachers need to convey the occurring problems and important points abstractly. However, she felt that providing such opportunities for students takes time and cannot be done in one or two days of classes. Pattern Languages filled that gap.

In this way, she conducted classes to enable students to design their own learning. She felt uncomfortable with the idea of teachers working hard to design classes thoroughly to make students learn well. When students' activities do not go well according to the teacher's guidelines, they tend to blame the teacher's guidance instead of considering the real problem. It is not a learning experience for the students.

> The ones who really should be designing learning are the students who are learning, so I thought it was strange for the teachers who accompany them to talk about designing the environment. That's why I thought pattern languages would be good for handing over such knowledge to the learners themselves.

In the past, when she lived in the United States for two years, she was struck by the fact that the curriculum of the local public elementary school her children attended was designed around project-based learning, and students were thinking about what they wanted to learn and what questions they had. However, when she returned to Japan, she felt uncomfortable with how classes progressed, with teachers providing problems, answers written in textbooks, and guiding students towards the answers.

Even at the university where she taught, students sought answers. For example, when proposing a plan to a hotel, students would ask about the age group the hotel was targeting, thinking that was the answer, and set it as their target. She says that the plans proposed without questioning the obvious viewpoints tend to be conventional.

When using pattern languages to conduct classes, both the way of collaborating in teams and the content of proposals improved.

> Another thing I found amazing was that when I told them these patterns were created by their seniors, they accepted them readily. If I told them they were patterns created by teachers, I don't think they would pay attention, but when I said they were the realizations of their seniors who struggled with the same issues as everyone else, they accepted them smoothly.

In this way, she became fascinated by pattern languages. What enabled her to create and utilize pattern languages was her persistence. At the writers' workshop of AsianPLoP2018, where she submitted a paper after creating prototype patterns, she received feedback from a participant saying, "These patterns lack sophistication." Subsequently, to create patterns with quality, she attended presentations and lectures at the Iba Lab and participated in workshops by the company CreativeShift, which supports the creation of pattern languages, as mentioned later. She learned from those experiences. They reconsidered together, and the PBL patterns with quality were completed, and a new paper was written.

She has repeated the process of improving the PBL pattern language many times since then. Originally, this pattern language was created with graduate students who had experienced PBL, but as the curriculum changed to have lower-grade students take PBL courses, she has been recreating it to adapt to those changes. Furthermore, she has started creating a pattern language with faculty members nationwide, focusing on the activities and organizational characteristics of educational practice communities for university faculty. She continues to submit papers to Japanese academic societies regarding the creation and utilization of these two pattern languages, which the author of this paper believes is a point that impresses many Japanese pattern language researchers. Captivated by pattern languages based on her previous work experience, she continues to pursue her challenges to this day.

2.5 YURI ABE — SUPPORTING PATTERN LANGUAGE CREATION FOR DIVERSE CLIENTS AND INCREASING THE NUMBER OF PASSIONATE PATTERN LANGUAGE CREATORS

Yuri Abe is a member of CreativeShift, a company founded by Takashi Iba to support the creation of pattern languages. (Figure 5) She has worked with companies and local government offices to create many pattern languages [19,20,21]. She also participated in PLoP 2023 and AsianPLoP 2024.

Fig. 5. Interview with Yuri Abe (pictured in the back) (2023).

Why does she continue to support the creation of pattern languages? What fascinates her about pattern languages, and what thoughts and feelings has she had while creating them? Let's unravel the background from her narrative. The story begins in 2015.

In November 2015, she was invited by a faculty member who had been her academic advisor during her university days to participate in a barbecue, where she reunited with classmates, she had been close to after 5 or 6 years. After the barbecue, she sent a photo taken that day to one of the classmates, saying "Thank you for today." Before even acknowledging the photo, the classmate replied, "I need your help with work." She was surprised because they hadn't talked about work at all when they met, but she decided to meet with him later to hear more details.

Later, when she first learned about pattern languages, she thought, "There are many different methods out there," and didn't think much more of it. However, when she was actually given "Words for a Journey" and flipped through it, she recalled her beloved grandfather who had passed away a year and a half earlier at the age of 97. Despite becoming blind, he had continued to work in his garden, and somehow knew which flowers were blooming even though he couldn't see. It gave her goosebumps, as if she had been confronted with a key to tracing her grandfather's worldview, which she as a grandchild had been unable to fully understand. She felt, "How wonderful it is to be able to express things this way," and decided to work at CreativeShift.

In 2015, she started working at the company, and after completing her first job, she became involved in supporting the creation of pattern languages. She worked on pattern languages for an educational company to draw out students' and children's ability to learn independently [19], and for a preparatory school management company to help students think about their future paths [20]. She taught clients how to create pattern languages and participated in the creation process alongside them. For her, the interviews she conducted while creating these patterns were fascinating.

> One of the things that makes me feel incredibly happy and excited when creating pattern languages is that I get to interview people who are doing well in their field, people who I think should increase in number. In a sense, I get to interview people who are outstanding. Then, I can hear amazing episodes without any noise, and everyone feels this excitement, right?

Although her company sometimes creates pattern languages on a fully commissioned basis, she recommends that clients create them on their own as much as possible. The author of this paper feels that this reflects the goodness of pattern languages that she experiences. For example, when conducting interviews with 10 people, the company members conduct the first one while the clients observe, and from the second one onward, the clients conduct the interviews. The process of clustering and systematizing the information gathered from the interviews is sometimes open to people who didn't participate in the interviews, encouraging as many people as possible to participate in the work.

> There are many moments when everyone comes to a realization of 'So this is what it's about' while combining everyone's opinions, and that's very important. It's close to unraveling 'So this is what it's about' regarding the work we're involved in.

She felt that the interesting aspect of creating pattern languages is the ability to have in-depth discussions about what's important in the work and the reasons for engaging in it, which are often overlooked in the process of clustering and systematizing.

People who request CreativeShift's services are those who appreciate the value of pattern languages to the extent that they secure a budget to create them in their own organizations. On the other hand, others who are not as involved are sometimes stunned when faced with a large number of sticky notes, sometimes exceeding 1,000, containing elements obtained from interviews. However, she enjoyed seeing the clients change rapidly as they worked together.

> When working, I haven't encountered anyone who didn't have any insights, and everyone seems to enjoy the clustering and other tasks, so I believe the participating members definitely have insights.

She witnessed all the clients adopting the perspective of "diving into what others consider essential," thinking about the thoughts and intentions behind the practices of colleagues and people doing the same work in other organizations, and engaging in ongoing discussions in various places.

Therefore, she encouraged clients to secure as much dedicated time as possible for creating pattern languages, such as 10 sessions of 2 hours each, and to think of it as separate from their regular work. This is because in typical companies, efficiency is crucial in terms of increasing productivity and getting things done, and with that mindset, it's difficult to realize "the joy of deepening thoughts through discussion and discovering something."

She felt that the mentality of being forced to work as instructed by higher-ups still persists among people in Japanese companies. For example, when promoting DX (digital transformation) in line with the times, if the reason for doing the work is not considered, they try to copy what works well in other companies or struggle with how to proceed with the work. When creating something new while being firmly rooted in past thoughts, creating pattern languages allows for at least some discussion among everyone about why DX is being implemented and what benefits it brings, deepening their understanding and making it a less painful endeavor.

> Just by having everyone properly discuss why something is important and trying to find answers together, I think the mentality will change.

As clients enjoy learning and invest time and effort in creating pattern languages, she discovered that the patterns become easier to use within the organization. If they created the patterns themselves, they actually use them within the organization, and even if the person in charge is transferred, they approach their juniors or colleagues and ask, "Have you been using that pattern language recently?" The author of this paper feels that creators of pattern languages can relate to this point.

> When they create it themselves, they have more attachment to it, and with attachment, what's different is that it drives the initiative forward afterward... That movement needs to be created, otherwise, things won't change. So, no matter how much we experts are involved, it's the people in that company or organization who create the subsequent movement, and unless they share their soul, so to speak, in the patterns, things won't change.

She believed that what's important is not creating high-quality pattern languages, but "infusing the souls of the people who will ultimately create and use them" into the pattern languages. She always asks clients, "Will you use this pattern in the next training session?" If the client responds with "I'll definitely use this pattern!" she thinks, "This is a great pattern." Also, when using the creators' caricatures as illustrations for the pattern languages and valuing the thought put into creating pattern names that the clients envision using in specific situations or conversations, even if she finds them long, it results in deeply meaningful patterns.

In this way, she became fascinated with creating pattern languages together with clients from companies and organizations. In the process, she values preserving the "sparkle" that each person felt when they thought, "Wow, this is a great story," until the end of pattern creation. If they don't think one step deeper about the content and essence of the patterns, it becomes a superficial summary of facts, and the sparkle gets buried.

> I think our company and I really value providing support while maintaining that sense of sparkle.

Since she started working at CreativeShift in 2015, she has created numerous pattern languages with companies, local government offices, non-profit organizations incorporated under Japanese law, and government departments. In addition to providing support for creation, she also conducts seminars on utilizing pattern languages and workshops where participants can experience creating pattern languages.

She says the most enjoyable pattern language workshop she's been involved with was one where people over 70 years old rediscovered their sense of purpose using a pattern language designed for middle and high school students to consider their future paths [20]. Up until then, she had heard that in the workshops she had been involved with, there were many female participants, and older men didn't tend to speak much. However, in this workshop, there were many older men, and it was incredibly lively. In the latter half of the workshop, many participants were walking around the venue, happily engaging in conversations with groups other than their own. "It was the happiest I've ever been in my pattern language utilization workshops, or rather, I felt like 'Ah, I'm glad I did this,'" she says.

She supports people who are attracted to pattern languages and want to create them, draws them into the world of patterns, and increases the number of passionate creators of pattern language.

3. DISCUSSION

3.1   The appeal of pattern languages

From the stories of five individuals, we identified the appeal of pattern languages that captivated them. While there were overlaps in the field-specific challenges in education, welfare, administration, management, and support, as well as in the unique awareness of issues and beliefs from each position, there were also common attractions to pattern languages that transcended fields and positions.

From the stories featured, four points were identified: Okada Makoto and Kazuo Takiguchi were drawn to the ability to express the thoughts and voices of people in the field when intervening from outside, and to learn from them. Okada Makoto, Koichi Kakuno, and Naoko Osada spoke positively about being able to create patterns from the perspective of those carrying out the practice. Naoko Osada and Yuri Abe felt goodness in being able to develop an attachment to patterns created by themselves or their seniors and colleagues in their organization, and in the ease of implementation after learning about the patterns. Additionally, all five creators were attracted to the process of creating pattern languages itself, feeling that there were many learnings and discoveries among themselves and those they were working with during this process.

In previous research, the merits and effectiveness of pattern languages have been discussed through three functions: as a lens for recognition, as constituent elements of thought, and as vocabulary for communication [22], as well as through quantitative evaluation of workshops [23,24]. However, what has emerged in this study is the previously unarticulated appeal of pattern languages. From these perspectives, we posit that this research can be positioned as a study that elucidates and documents the appeal of a specific phenomenon. Individuals captivated by pattern languages shared their perceived appeal toward pattern languages by reflecting on their personal experiences while engaging in dialogue with the authors during interviews. Through the narrative portrayal of these accounts, we have elucidated and documented the intrinsic appeal of pattern languages.

Furthermore, Christopher Alexander argues that the central quality inherent in something is objective and precise yet cannot be designated by a single term [1]. This nameless quality cannot be expressed in any words because the quality is specific, while words are too broad in scope. Nevertheless, this quality represents the most significant attribute present in any entity. This study might also be said to be describing the 'quality without a name' of pattern languages.

3.2   The culture of pattern languages of practices

The activities of passionate pattern language creators depicted in this study may be positioned as a part of the descriptions of the culture of patterns. While Coplien focuses on the culture of patterns in software development [25], this paper focuses on the culture of patterns of practices. This study specifically highlighted Japanese creators of practical pattern languages and captured their passion for early adoption and novel application of pattern languages to their respective fields and organizations. Furthermore, it presented the stories of multiple creators and identified commonalities among them.

The creators featured in this study were all captivated by pattern languages, quickly adopting and advancing pattern languages within their respective domains. Simultaneously, they engaged colleagues, students, and individuals outside their organizations in the process of creating and refining patterns, with their created pattern languages significantly influencing many people. Indeed, they catalyzed the emergence of new pattern language creators and communities actively utilizing pattern languages. This narrative exemplifies the formation and development of the culture of pattern languages of practices.

4.   CONCLUSION

In this paper, we have explored the appeal of pattern languages by portraying the process through which people captivated by pattern languages encountered them, were attracted by certain awareness of issues, and created and utilized them. Through the stories of five creators of practical pattern languages in Japan, we introduced the appeal of pattern languages: (1) being able to learn the voices from the field when entering from outside a domain, (2) being able to support intrinsic practices from the perspective of practitioners themselves, (3) being able to develop attachment and be inherited within communities over long periods, and (4) experiencing many learnings and discoveries for oneself and those collaborating in the process of creating pattern languages. The significance of this research lies in its focus on pattern language creators, whose records are not easily preserved, and in depicting their stories of creation and the appeal of pattern languages as they perceive it.

Through this paper, we hope readers will sense the possibilities and expanding world of pattern languages from the stories of passionate creators who were captivated by them. First, we wish to reach those who are interested in pattern languages or who are hesitant to take the first step in creating or utilizing them. Reading these stories may help them empathize with the creators' awareness of issues, become more attracted to pattern languages, and find it easier to convey the appeal of pattern languages to colleagues, supervisors, and others around them. Additionally, those who are already creators or users of pattern languages may be able to reconsider their own thoughts and passion by encountering the passion of these creators through these stories.

In the future, we aim to explore the multifaceted appeal of pattern languages by interviewing more people, including creators from overseas and users in Japan. We also plan to conduct additional interviews with the individuals featured in this paper to gain a deeper understanding of each of their stories. In this way, we hope to further develop this research.

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REFERENCES

［1］ Alexander, C. (1979) *The Timeless Way of Building*, Oxford University Press.

［2］ Alexander, C., Ishikawa, S., Silverstein, M., Jacobson, M., Fiksdahl-King, I. and Angel, S. (1977) *A Pattern Language: Towns, Buildings, Construction*, Oxford University Press.

［3］ Beck, K. and Cunningham, W. (1987) Using Pattern Languages for Object-oriented Programs, OOPSLA-87 Workshop on the Specification and Design for Object-Oriented Programming.

［4］ Gamma, E., Helm, R., Johnson, R. and Vlissides, J. (1994) *Design Patterns: Elements of Reusable Object-Oriented Software*, Addison-Wesley.

［5］ Iba, T., & Okada, M. (Eds.). (2015). *Tabino Kotoba: Ninchisho to Tomoni Yoriyoku Ikirrutameno Hinto [Words for a Journey: The Art of Being with Dementia]*. Maruzen Publishing. (in Japanese)

［6］ Iba, T., & Okada, M. (Eds), Iba Laboratory and Dementia Friendly Japan Initiative,.（2015）*Words for a Journey: The Art of Being with Dementia*, CreativeShift.

［7］ Iba, T., Kaneko, T., Kamada, A., Tamaki, N., & Okada, M. (2016). Words for a Journey: A Pattern Language for Living Well with Dementia. In P. Baumgartner, T. Gruber-Muecke, & R. Sickinger (Eds.), *Pursuit of Pattern Languages for Societal Change. Designing Lively Scenarios in Various Fields* , (pp. 152-176). epubli.

［8］ Iba, T., Matsumoto, A., Kamada, A., Tamaki, N., Kaneko, T., & Okada, M. (2016). A Pattern Language for Living Well with Dementia: Words for a Journey. *International Journal of Organisational Design and Engineering*, *4*(1/2), 85-112.

［9］ Iba Laboratory. (2012). *Generative Beauty Patterns* [Booklet]. SFC Open Research Forum (ORF 2012), Tokyo, Japan. （in Japanese）

［10］ Arao, R., Tamefusa, A., Kadotani, M., Harasawa, K., Sakai, S., Saruwatari, K., & Iba, T. (2012). Generative Beauty Patterns: A Pattern Language for Living Lively and Beautiful. In *Proceedings of the 19th Conference on Pattern Languages of Programs (PLoP 2012)*.

［11］ Kawasaki City. (2021). KIRAPATA (pattern language). Kawasaki City Official Web Site. https://www.city.kawasaki.jp/350/page/0000068524.html (in Japanese) [Accessed on August 5, 2024]

［12］ Kawasaki City. (2023). The pattern language which invents welfare innovation. Kawasaki City Official Web Site. https://www.city.kawasaki.jp/280/page/0000096478.html (in Japanese) [Accessed on August 5, 2024]

［13］ Kawasaki City. (2024). Tool which the connection of the area is produced from a dialogue [MACHIPATA]. Kawasaki City Official Web Site. https://www.city.kawasaki.jp/saiwai/page/0000116240.html (in Japanese) [Accessed on August 5, 2024]

［14］ Kawasaki City. (2022). Dementia action guidebook (Kawasaki-City dementia care pass). Kawasaki City Official. Web Site. https://www.city.kawasaki.jp/350/page/0000087024.html (in Japanese) [Accessed on August 5, 2024]

［15］ Kawasaki City. (2024). Pattern language for social work: practice-hint of 30 with which the future is made together. Kawasaki City Official. Web Site. https://www.city.kawasaki.jp/350/page/0000149753.html (in Japanese) [Accessed on August 5, 2024]

［16］ Osada, N. (2021). An ethnographic analysis of a community of practice that appreciates trial and error: Through the. development of pattern languages that describe experiences in PBL. *Journal of Human Interface Society*, *23*(3), 287-302. (in Japanese)

［17］ Osada, N., Davis, E., Kohzaki, H., Machida, S., Takao, I., & Tanaka, H. (2021). An attempt to develop a pattern language in a boundary-crossing teachers' community of practice. *Research Report of JET Conferences*, *2021*(4), 33-40. (in Japanese)

［18］ Osada, N., Davis, E., Takao, I., Kohzaki, H., & Tanaka, H. (2022). A case study on a community of mutual faculty development through the development of a pattern language. *Research Report of JET Conferences*, *2022*(3), 34-41. (in Japanese)

［19］ CreativeShift & Benesse Corporation. (2019). *Inquiry-based Learning Pattern Cards: A Pattern Language for Creative Inquiry*. Benesse Corporation and CreativeShift. (in Japanese)

［20］ CreativeShift, & Kawaijuku Educational Institution. (2017). *Mirapata: Place for Creating Your Future Self: A Pattern Language for Career Planning*. CreativeShift. (in Japanese)

［21］ Digital Agency. (2022). *Leveraging Digital Technology to Build a Better Future*. Digital Agency, Japan. (in Japanese)

［22］ Iba, T. (Ed.), Nakano, H., Eto, K., Nakanishi, Y., Takenaka, H., & Hanyuda, E. (2013a). *Pattern languages: A language for creating creative futures*. Keio University Press. (in Japanese)

［23］ Yamano, D., Kobayashi, T., & Iba, T. (2022). Effects of creating evaluations and guidance using pattern languages in housing design assignments. *Japan Journal of Educational Technology*, *46*(3), 493-507. (in Japanese)

［24］ Yamano, D., Kobayashi, T., Watanabe, H., & Iba, T. (2023). Effects of architectural freshman workshops using pattern languages at vocational schools. *Journal of Human Interface Society*, *25*(2), 99-114. (in Japanese)

［25］ Coplien, J. O. (2004). The Culture of Patterns. *Computer Science and Information Systems*, 1(2), 1-26.