Pattern Manga: Attractively Expressing Patterns of a Pattern Language in Manga Style

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In this research paper, we present the use of manga, a medium distinct from explanatory text, as a means of expressing patterns. This approach aims to convey and disseminate pattern languages to the general public. In recent years, pattern languages of practices have shifted from targeting experts, such as those in the software field, to engaging the general public as readers. It is believed that traditional explanatory texts may have limitations in reaching a broader audience. Therefore, to enable the contents of pattern languages to appeal to a wider audience, we propose the way of expressing patterns through *manga*. Manga is a medium beloved by people of all ages, from children to adults. It combines illustrations and dialogue within frames to depict the progression of a story. In this paper, we present examples of three types of manga representations as prototypes of pattern manga. Type I is "Four-frame Manga for a Pattern," which presents the content of a pattern as a short story in a four-frame format. For this type, we introduce multiple prototypes representing patterns from *Learning Patterns* and *Words for a Dialogue*, providing several models for composing the four-frame format. Additionally, four composition models in this format are provided as followed: "Behavioral Change," "Obedient Practitioner," "Solution Idea Starting," and "Witness and Learn." Type II is "A Short Story Manga for a Pattern," which introduces a single pattern as a standalone short story. For this type, we present a prototype showcasing a pattern from *Words for a Journey*, a pattern language for those with dementia and their families. Type III is "A Long Story Manga Including Patterns," which integrates multiple patterns within a series of stories. For this type, we illustrate with two prototypes: the first depicts a chapter from a series in which the protagonist employs a pattern of *Fearless Change* by Mary Lynn Manns and Linda Rising; the second portrays a chapter from a series where the protagonist adopts some patterns from *Collaboration Patterns*. All original descriptions of each pattern are provided in the Appendix. Lastly, we discuss why manga is a fitting medium for expressing pattern languages, focusing on characteristics such as (1) timeliness, (2) everydayness, and (3) entertainment value. We aspire to expand the possibilities for the broader dissemination and adoption of pattern languages.

Categories and Subject Descriptors: **[Social and professional topics]**: Professional topics—*Informal education*; **[Social and professional topics]**: User characteristics—*Cultural characteristics*; **[Applied computing]**: Arts and humanities—*Media arts*

General Terms: Human Factors

Additional Key Words and Phrases: pattern language, storytelling, manga, comic

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1. INTRODUCTION

In Christopher Alexander's proposal of pattern language, patterns were initially described and shared through written text, photographs, and sketches (Alexander *et al.*, 1977). Initially, the patterns were shared in the form of paper descriptions held together in binders, but, after the publication of *A Pattern Language* (Alexander *et al.*, 1977), people learned Alexander's pattern language by reading the book. Other pattern languages in the field of architecture that followed Alexander also consist of written text, photographs, and sketches. Pattern language in architecture was created to bridge the gap between architects and residents in designing and creating buildings and towns together. Therefore, pattern descriptions were intended to be accessible to the general public, written in simple language that evokes imagery.

About ten years later, pattern language was applied in the field of software (Beck and Cunningham, 1987). In this context, pattern descriptions were composed of written text and diagrams. Patterns were shared as web (wiki) pages, internal documents, and conference papers, and later compiled and published as books (Gamma, *et al*., 1994). Design Patterns became a widely read resource for many engineers and engineering students. In

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the software field, the readers of patterns were engineers. Patterns were used as a means to share design knowledge among engineers. While pattern language in architecture served as a medium between experts and the general public, in the software field, it was used to bridge the gap between expert engineers and novice engineers. Therefore, pattern descriptions were expected to be more precise and detailed.

As time went on, pattern language was applied in the realm of everyday practices. It expanded its application to areas such as education, work, creativity, daily life, and welfare. While the descriptions of patterns primarily consist of written text, especially us, Iba Laboratory, a single illustration symbolizing the content of the pattern is included as an important element in patterns alongside the pattern name (Harasawa *et al*., 2012; Miyazaki, *et al.*, 2015; Iba and Iba Lab, 2015; Munakata, *et al.*, 2018; Iba *et al.*, 2021).

The use of illustrations when creating *Learning Patterns* (Iba *et al.*, 2009; Iba and Iba Lab, 2014a) is justified because practice encompasses a set of behaviors of internal thinking and action, which cannot be represented with photographs or sketches used for the objective structures targeted in architecture or software. With illustrations, emotions and movements can be expressed clearly, omitting unnecessary parts. Metaphors can also be incorporated into the illustrations [specific details on pattern illustrations are presented in our paper, Iba *et al.*, (2021)].

In the domain of pattern language for practices (especially for us, Iba Laboratory), is used not only for learning through reading pattern descriptions but also as a medium for peer learning through dialogues, where individuals share their experiences using the pattern language (Iba, 2015). This suggests that pattern language is utilized to bridge the gap between the experiences of the general public, in addition to its ways of use in the architecture and software fields. Consequently, when pattern language is used among the general public rather than experts, new challenges arise. One such challenge is how to deliver pattern language more widely to the general, including elementary school students, middle and high school students, university students, parents raising children, busy business professionals and educators, as well as the elderly and individuals suffering from illness.

In response to this challenge, Takashi Iba, one of this paper's author, have created and provided "Pattern Cards" (Iba, 2016; Figure 1) since 2014. Instead of book or paper form, the cards are well-suited for workshops or individual use, serving as a tool for facilitating discussion or for re-arranging on a tabletop to stimulate thought. In Japan, such pattern cards have been created and provided across approximately 20 kinds of pattern languages. They have been widely used in various settings across the country, including households, elementary schools, middle and high schools, universities and graduate schools, workplaces, professional training sessions, gatherings of experts, elderly care facilities, and community meetings, as shown in Figure 2. And, Figure 3 shows the scenes of workshops with using Pattern Cards, which were held outside Japan, such as, United States, Austria, Portugal, and Democratic Republic of the Congo.

We also proposed "Pattern Objects" that embed patterns into everyday objects, making them visible in practical scenes, and created prototypes (Iba, *et al.*, 2016c). By printing pattern names and illustrations on items such as clips, candy boxes, cutting boards, baskets, and other everyday objects, the patterns were embedded into environments where their practice would be necessary to easily recalled and individuals are encouraged to follow them (Figure 4). We have also developed products like folders with pattern names and illustrations, which can be carried and used daily (e.g., *Project Design Patterns*, *Omotenashi Design Patterns*, *Active Learning Patterns for Teachers*, *Life with Reading* patterns). Additionally, we created "Pattern Coins," wooden chips with pattern names, illustrations, and solution sentence, which are gift-economic media for promoting chains of practice (Iba *et al*., 2023). We conducted trials of actually utilizing Pattern Coins at Iba Lab in Japan, and EuroPLoP2023 conference in Germany (Figure 5).

We have also created a "Pattern Song" as part of our efforts to make patterns more accessible in our daily lives (Iba, *et al.*, 2018). This song incorporates the essence of pattern content and pattern names into lyrics (Figure 6). It is not a mnemonic or parody song but an original pop song that naturally and enjoyably conveys the essential aspects of the patterns, encouraging listeners. Our first pattern song, "Everyday World," is currently available on various music streaming platforms, including Spotify[1], and plays a role in pushing people towards practical application.

In addition to the Pattern Song, we have taken on the challenge of finding ways to reach a wider audience with the pattern language and promote its practical use. One of our latest endeavors, which is presented in this paper, involves expressing patterns of a pattern language through *manga*. Recognizing that many people may not feel inclined to read serious texts, we believe that the possibility of engaging a broader range of individuals increases when patterns are presented in the form of manga. Therefore, we decided to represent pattern language through manga. We would like to emphasize that the aim of pattern manga is not to replace written pattern descriptions or to render them obsolete. Rather, the goal is, after creating written pattern descriptions, to represent them in manga form for broader dissemination and sharing.

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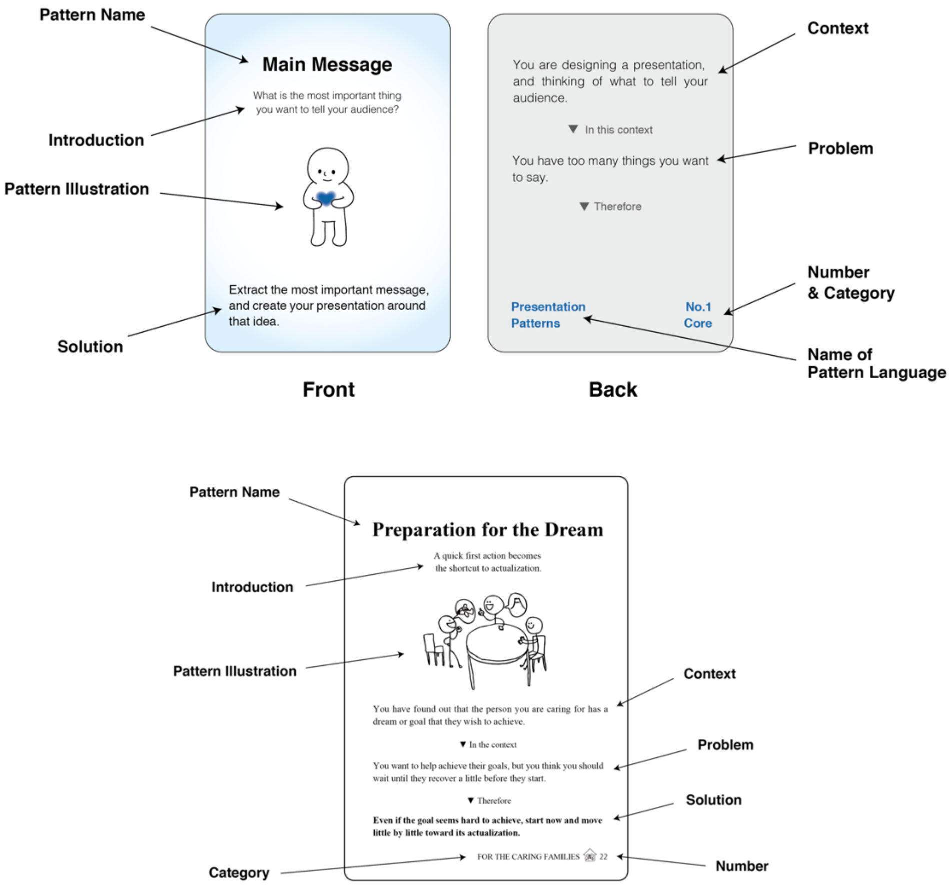
[1] https://open.spotify.com/album/2RmeBsS7tqKLuLbr9L69QQ



Main Message

What is the most important thing you want to tell your audience?

Extract the most important message, and create your presentation around that idea.

You are designing a presentation, and thinking of what to tell your audience.

▼ In this context

You have too many things you want to say.

▼ Therefore

Presentation Patterns

No.1 Core

Preparation for the Dream

A quick first action becomes the shortcut to actualization.

You have found out that the person you are caring for has a dream or goal that they wish to achieve.

▼ In the context

You want to help achieve their goals, but you think you should wait until they recover a little before they start.

▼ Therefore

Even if the goal seems hard to achieve, start now and move little by little toward its actualization.

FOR THE CARING FAMILIES 22

Pattern Name
Introduction
Pattern Illustration
Solution
Context
Problem
Number
& Category
Name of
Pattern Language
Front
Back
Pattern Name
Introduction
Pattern Illustration
Context
Problem
Solution
Category
Number

Fig. 1. Pattern Cards, which are well-suited for workshops or individual use, serving as a tool for facilitating discussion or for re-arranging on a tabletop to stimulate thought (Iba, 2016)

Fig. 2. Examples of workshops with using Pattern Cards in Japan

Fig. 3. Examples of workshops with using Pattern Cards in the world

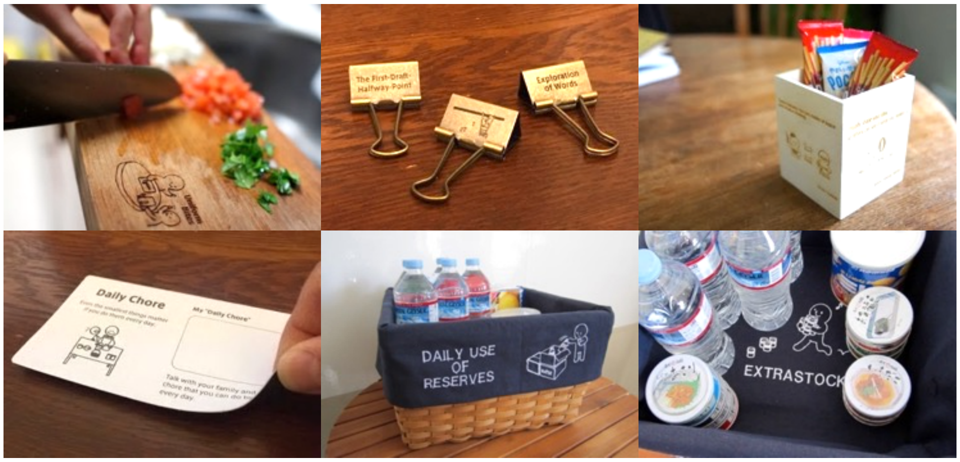

The First-Draft Halfway Point
Exploration of Words
Daily Chore
DAILY USE OF RESERVES
EXTRASTOCK

Fig. 4. Pattern Objects embedded in everyday life environment (Iba, *et al.*, 2016c)

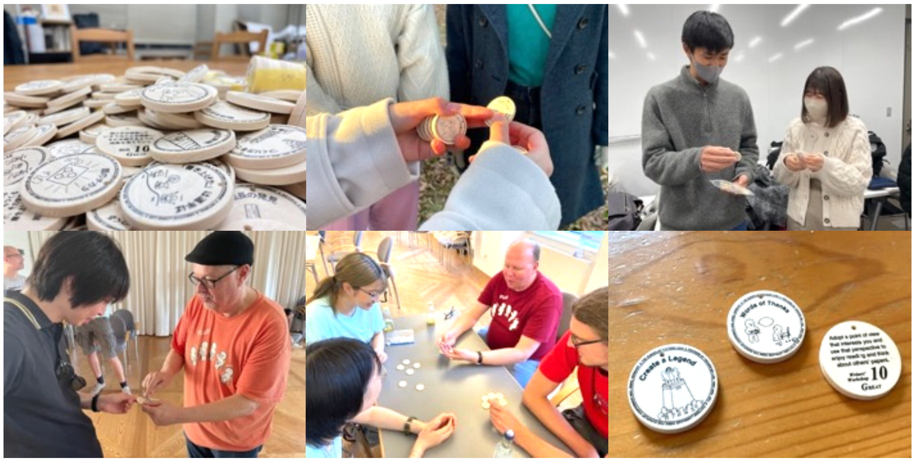

Create a Legend
Words of Thanks
10

Fig. 5. Pattern Coins, which are gift-economic media for promoting the chain of practice (Iba, *et al.*, 2023)

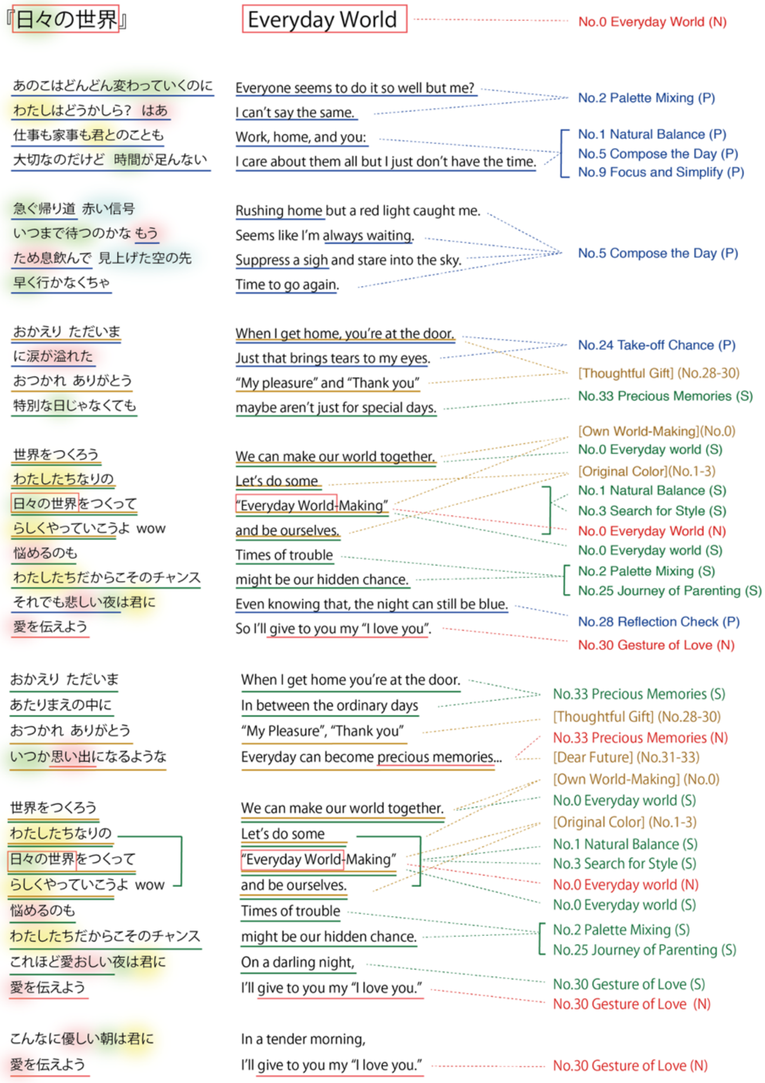

『日々の世界』
Everyday World
No.0 Everyday World (N)
あのこはどんどん変わっていくのに
わたしはどうかしら？　はあ
仕事も家事も君とのことも
大切なのだけど　時間が足んない
Everyone seems to do it so well but me?
I can't say the same.
Work, home, and you:
I care about them all but I just don't have the time.
No.2 Palette Mixing (P)
No.1 Natural Balance (P)
No.5 Compose the Day (P)
No.9 Focus and Simplify (P)
急ぐ帰り道　赤い信号
いつまで待つのかな もう
ため息飲んで　見上げた空の先
早く行かなくちゃ
Rushing home but a red light caught me.
Seems like I'm always waiting.
Suppress a sigh and stare into the sky.
Time to go again.
No.5 Compose the Day (P)
おかえり　ただいま
に涙が溢れた
おつかれ　ありがとう
特別な日じゃなくても
When I get home, you're at the door.
Just that brings tears to my eyes.
"My pleasure" and "Thank you"
maybe aren't just for special days.
No.24 Take-off Chance (P)
[Thoughtful Gift] (No.28-30)
No.33 Precious Memories (S)
世界をつくろう
わたしたちなりの
日々の世界をつくって
らしくやっていこうよ　wow
悩めるのも
わたしたちだからこそのチャンス
それでも悲しい夜は君に
愛を伝えよう
We can make our world together.
Let's do some
"Everyday World-Making"
and be ourselves.
Times of trouble
might be our hidden chance.
Even knowing that, the night can still be blue.
So I'll give to you my "I love you".
[Own World-Making](No.0)
No.0 Everyday world (S)
[Original Color](No.1-3)
No.1 Natural Balance (S)
No.3 Search for Style (S)
No.0 Everyday World (N)
No.0 Everyday world (S)
No.2 Palette Mixing (S)
No.25 Journey of Parenting (S)
No.28 Reflection Check (P)
No.30 Gesture of Love (N)
おかえり　ただいま
あたりまえの中に
おつかれ　ありがとう
いつか思い出になるような
When I get home you're at the door.
In between the ordinary days
"My Pleasure", "Thank you"
Everyday can become precious memories...
No.33 Precious Memories (S)
[Thoughtful Gift] (No.28-30)
No.33 Precious Memories (N)
[Dear Future] (No.31-33)
世界をつくろう
わたしたちなりの
日々の世界をつくって
らしくやっていこうよ　wow
悩めるのも
わたしたちだからこそのチャンス
これほど愛おしい夜は君に
愛を伝えよう
We can make our world together.
Let's do some
"Everyday World-Making"
and be ourselves.
Times of trouble
might be our hidden chance.
On a darling night,
I'll give to you my "I love you."
[Own World-Making] (No.0)
No.0 Everyday world (S)
[Original Color] (No.1-3)
No.1 Natural Balance (S)
No.3 Search for Style (S)
No.0 Everyday world (N)
No.0 Everyday world (S)
No.2 Palette Mixing (S)
No.25 Journey of Parenting (S)
No.30 Gesture of Love (S)
No.30 Gesture of Love (N)
こんなに優しい朝は君に
愛を伝えよう
In a tender morning,
I'll give to you my "I love you."
No.30 Gesture of Love (N)

Fig. 6. Pattern Song, which is auditory expression for pattern languages (Iba, *et al.*, 2018)

2. THREE TYPES OF PATTERN MANGA

In this paper, we introduce several types of manga representations for patterns and have created prototypes to explore this approach further (Figure 7). The first type (Type I) is "Four-frame Manga for a Pattern," which presents the content of a pattern as a short story in a four-frame format. The aim is to facilitate understanding of individual patterns. In this paper, we introduce several prototypes that depict patterns from *Learning Patterns* (Iba, *et. al.*, 2009; Iba and Sakamoto, 2011; Iba and Iba Lab, 2014a) and *Words for a Dialogue* (Iba, *et al.*, 2017; Nagai, *et al.*, 2017; Iba and Nagai, 2018) using this approach.

The second type (Type II) is "A Short Story Manga for a Pattern," which introduces a single pattern as a standalone short story to aim for deeper understanding of the pattern and appreciate its significance. By reading specific examples of patterns, the story is created so that readers can understand and feel what that pattern is like. In this paper, we present prototypes featuring one pattern from *Words for a Journey* (Iba and Okada, 2015a*, 2015b;* Iba *et al.,* 2016a, 2016b), which is a pattern language for those with dementia and their families.

The third type (Type III) is "A Long Story Manga Including Patterns," which integrates multiple patterns within a series of stories. The goal is to provide an image of how patterns can be used in a complex and interconnected manner while promoting understanding of individual patterns. In this paper, we introduce two prototypes: the first depicts a chapter from a series in which the protagonist employs a pattern of *Fearless Change* by Mary Lynn Manns and Linda Rising (Manns and Rising, 2004); the second portrays a chapter from a series where the protagonist adopts some patterns from *Collaboration Patterns* (Iba and Isaku, 2018; Iba and Iba Lab, 2014b).

Now, let us take a look at examples for demonstrating each type of manga as a prototype. All original pattern descriptions are provided in the Appendix.

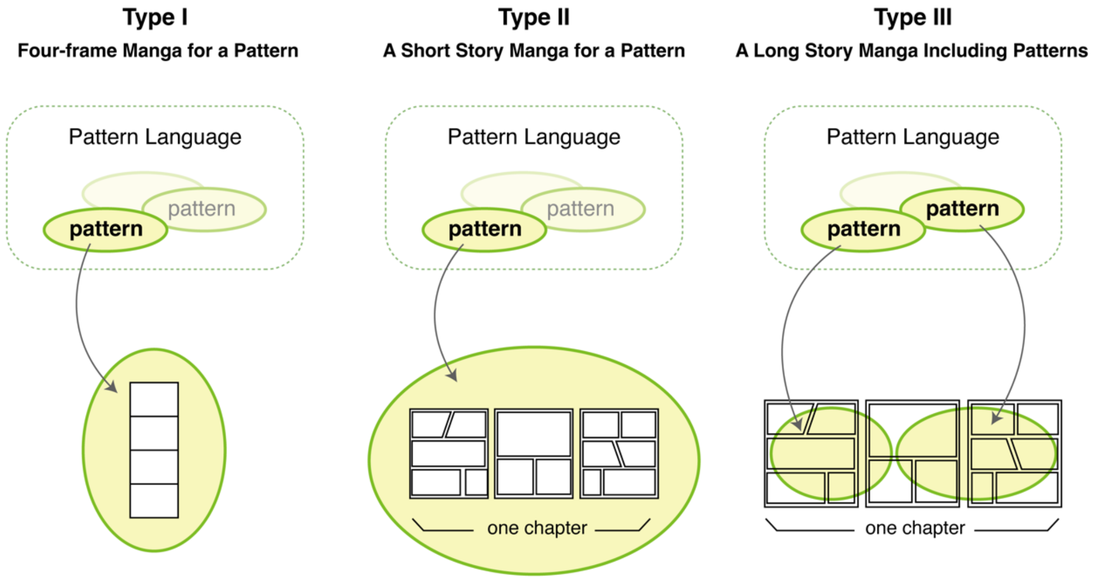

Type I
Four-frame Manga for a Pattern
Type II
A Short Story Manga for a Pattern
Type III
A Long Story Manga Including Patterns
Pattern Language
pattern
pattern
Pattern Language
pattern
pattern
Pattern Language
pattern
pattern
one chapter
one chapter

Fig. 7. Relation between pattern and manga in each type of pattern manga

3. MANGA TYPE I: FOUR-FRAME MANGA FOR A PATTERN

The first type of pattern manga aims to express the content of a single pattern, including the Context, Problem, Solution, and Consequence, in a concise four-frame manga format. Its purpose is to facilitate understanding of individual patterns. The following are prototypes of pattern manga of *Learning Patterns* and *Words for a Dialogue*.

3.1 Prototypes of Pattern Manga for *Learning Patterns*

Learning Patterns is a pattern language for creative learning (Iba, *et al.*, 2009; Iba and Sakamoto, 2011; Iba and Iba Lab, 2014a). Here, prototypes of four-frame pattern manga that depict the patterns ***Tangible Growth***, ***Community of Learning***, and ***Language Shower*** from the *Learning Patterns* are introduced. Note that these prototypes were created by Takashi Iba, one of the authors of this paper, who crafted both the story and the artwork. The dialogue in this manga was translated from Japanese to English by Sae Adachi.

3.1.1 ***Tangible Growth***

A prototype of Pattern Manga for ***Tangible Growth*** in the *Learning Patterns* is shown in Figure 8. The synopsis of this story is as follows: The protagonist is troubled by the uncertainty of whether reading books is actually contributing to their personal growth. That is when she is told that growth is often invisible to the eye; instead, one should gauge the amount of effort put in, as that can provide a sense of empowerment. When the protagonist actually tries this approach, she begins to see the books they've read as markers of their “growth” and feels a sense of attachment to them. Suddenly, a voice calling for help is heard. Upon investigating, they find someone with a massive stack of books that is on the verge of toppling over. Astonished by the sheer volume of reading, the protagonist concludes that the individual must have experienced tremendous growth.

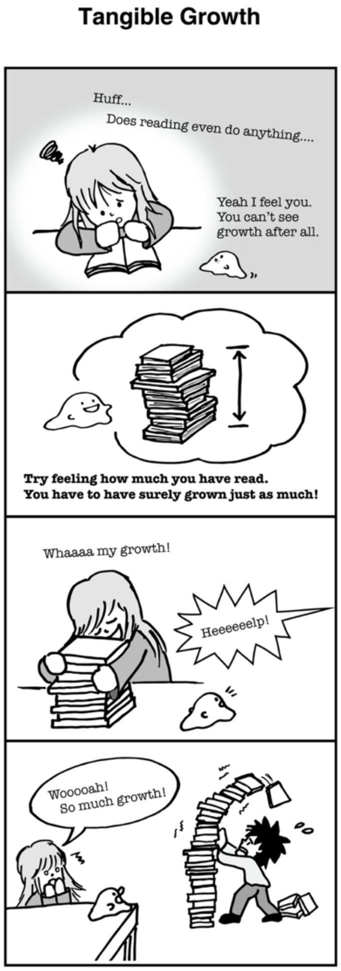

Tangible Growth
Huff...
Does reading even do anything....
Yeah I feel you. You can't see growth after all.
Try feeling how much you have read. You have to have surely grown just as much!
Whaaaa my growth!
Heeeeeelp!
Woooоah! So much growth!

Fig. 8. A prototype of pattern manga for ***Tangible Growth*** pattern in *the Learning Patterns*

3.1.2 *Community of Learning*

A prototype of Pattern Manga for ***Community of Learning*** in the *Learning Patterns* is shown in Figure 9. The synopsis of this story is as follows: The character accompanying the protagonist advises that learning becomes deeper and more sustainable when done in the company of others. The reason, the character explains, is that going it alone makes it easier to become disheartened. Inspired by this advice, the protagonist promptly decides to organize a study group on a topic they want to learn about and creates a poster to recruit participants. The topic listed on the poster is “Everyday Life of Earthworms.” The question now is, will anyone actually show up?

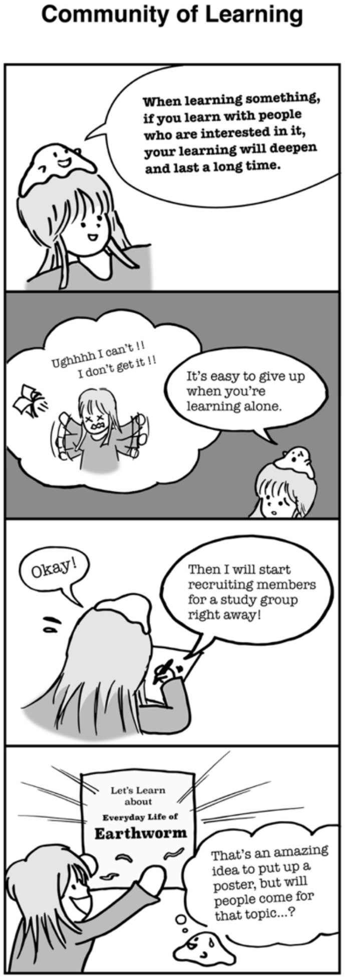
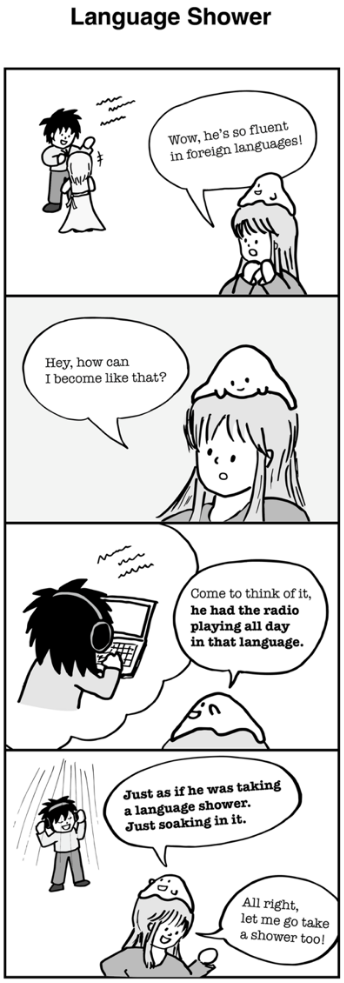

Community of Learning
When learning something, if you learn with people who are interested in it, your learning will deepen and last a long time.
Ughhhh I can't !! I don't get it !!
It's easy to give up when you're learning alone.
Okay!
Then I will start recruiting members for a study group right away!
Let's Learn about Everyday Life of Earthworm
That's an amazing idea to put up a poster, but will people come for that topic...?

Fig. 9. A prototype of pattern manga for ***Community of Learning*** pattern in *the Learning Patterns*

3.1.3 ***Language Shower***

A prototype of Pattern Manga for ***Language Shower*** in the *Learning Patterns* is shown in Figure 10. The synopsis of this story is as follows: The protagonist, upon witnessing a friend fluently speaking a foreign language, wondered how they could become so proficient and yearned to achieve the same fluency. She learned that the method was to immerse oneself by continuously listening to radio broadcasts in that language throughout the day, akin to taking a "language shower." Eagerly, the protagonist set out to immerse themselves in a shower.


Language Shower

Wow, he's so fluent in foreign languages!
Hey, how can I become like that?
Come to think of it, he had the radio playing all day in that language.
Just as if he was taking a language shower. Just soaking in it.
All right, let me go take a shower too!

Fig. 10. A prototype of pattern manga for ***Language Shower*** pattern in *the Learning Patterns*

3.2 Prototypes of Pattern Manga for *Words for a Dialogue*

Words for a Dialogue is a pattern language for practical dialogue derived from *Open Dialogue*, a form of psychotherapy, developed in Finland (Iba, *et al.*, 2017; Nagai, *et al.*, 2017; Iba and Nagai, 2018). Here, prototypes of four-frame pattern manga that depict the patterns ***Pause for Thinking*** and ***Open Question*** from *Words for a Dialogue* are introduced. Note that these prototypes were created by Ema Okubo, drawing the illustrations, and Takashi Iba, developing the story, with Sae Adachi's support to translate the dialogue in the manga.

3.2.1 ***Pause for Thinking***

A prototype of Pattern Manga for ***Pause for Thinking*** in *Words for a Dialogue* is shown in Figure 11. The synopsis of this story is as follows: The protagonist barrages his friend with questions, leaving her with no chance to speak; thus, finding himself faced with a silent interlocutor. Deciding to curb his speech, he adopts a strategy of ***Pause for Thinking***. Finally, his friend finds the opportunity to voice their thoughts.

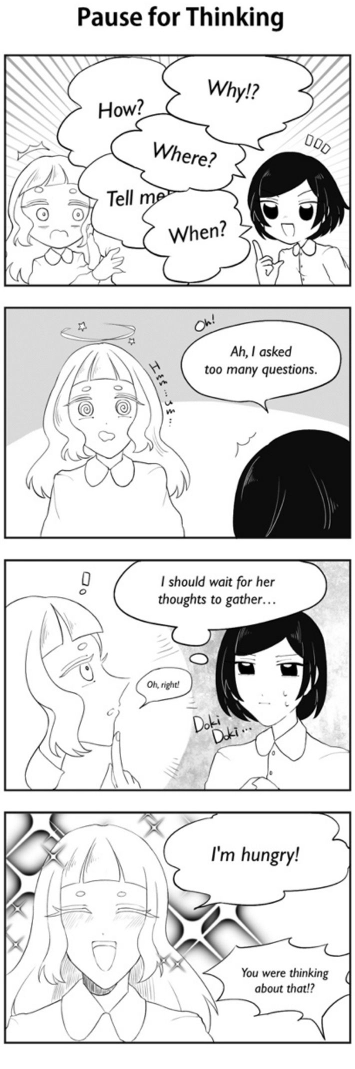

Pause for Thinking
Why!?
How?
Where?
Tell me
When?
Oh!
Ah, I asked too many questions.
I should wait for her thoughts to gather…
Oh, right!
Doki Doki…
I'm hungry!
You were thinking about that!?

Fig. 11. A prototype of pattern manga for ***Pause for Thinking*** pattern in *Words for a Dialogue*

3.2.2 ***Open Question***

A prototype of Pattern Manga for ***Open Question*** in *Words for a Dialogue* is shown in Figure 12. The synopsis of this story is as follows: When the protagonist hears from a friend about a new cafe she visited, he eagerly asks questions, seeking specific details that pique his interest. However, his friend stumbles over the answers, stymied by the focused line of questioning. Realizing his approach may not be the best, the protagonist reshapes his question into an ***Open Question***. In doing so, he allows his friend to share their unique perspective and the reasons for their fondness for the cafe.

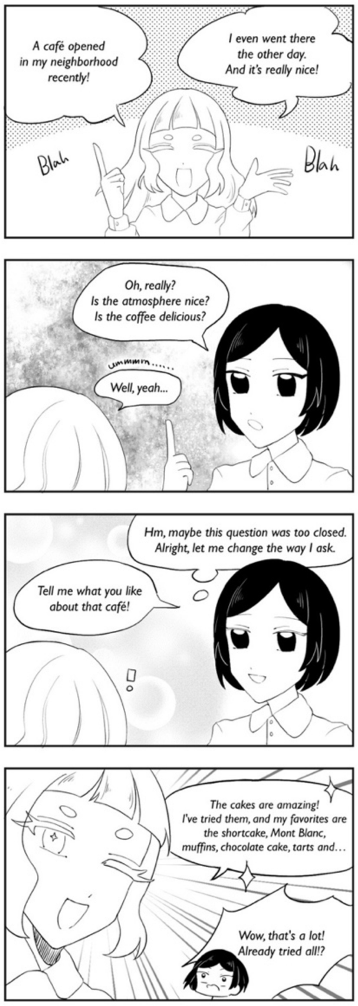

Open Question
A café opened in my neighborhood recently!
I even went there the other day. And it's really nice!
Blah
Blah
Oh, really? Is the atmosphere nice? Is the coffee delicious?
ummm......
Well, yeah...
Hm, maybe this question was too closed. Alright, let me change the way I ask.
Tell me what you like about that café!
!
The cakes are amazing! I've tried them, and my favorites are the shortcake, Mont Blanc, muffins, chocolate cake, tarts and…
Wow, that's a lot! Already tried all!?

Fig. 12. A prototype of pattern manga for ***Open Question*** pattern in *Words for a Dialogue*

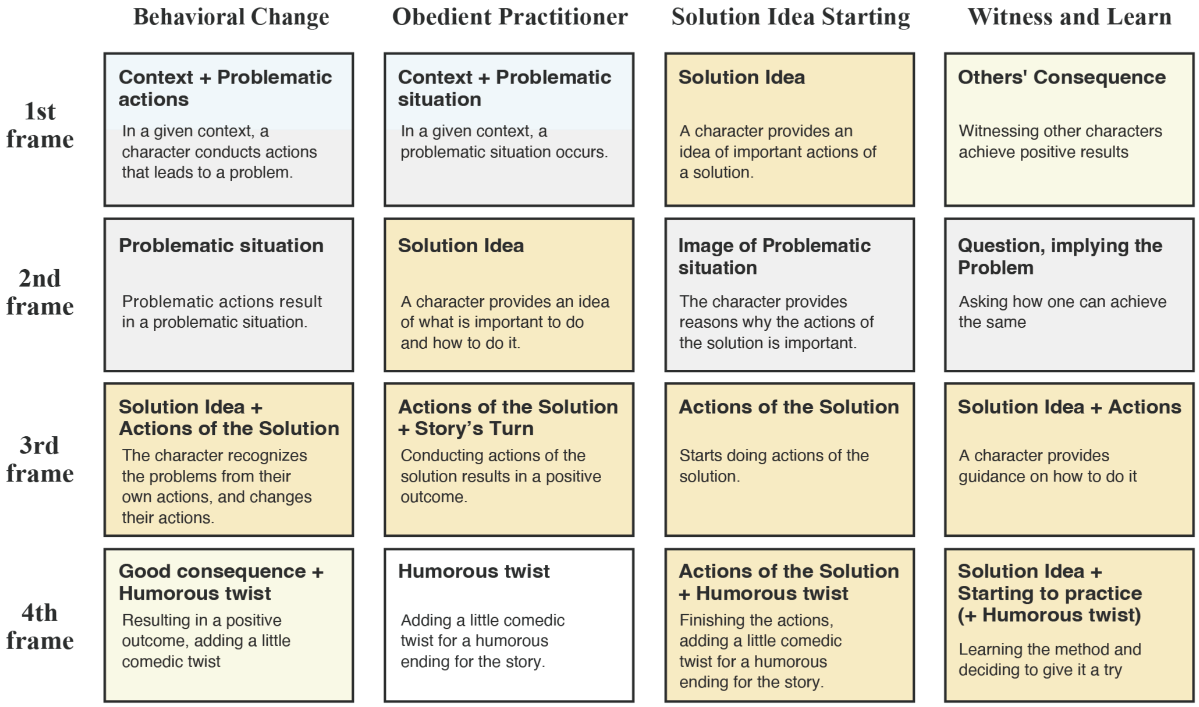
3.3 Several Models of Composition of Four-Frame Pattern Manga

Before starting to draw four-frame manga, we thought it was best fit to allocate each frame to one of the four elements: Context, Problem, Solution and Consequence. However, it was discovered that this simplistic approach did not yield satisfactory results when actually drawing the manga.

As far as we have reflected on our practice, if we create a story by dividing the Situation, Problem, Solution and Consequence equally among the four panels, it tends to become more of an explanatory narration as if each of the four slides describing the elements are explained one by one. In this case, the core of the message becomes ambiguous, and the humorous twist does not seem to come alive.

On the other hand, in order to convey the core of the pattern succinctly in a limited number of frames, effective staging that emphasizes the contrast between the Problem and the Solution should be prioritized. By doing so, many four-panel models were created in which the Context and the Problem are integrated into one panel, or the Context is cut off, and the Problem and the Solution are quickly developed.

As a result, we found four models of composition (Figure 13).



	Behavioral Change	Obedient Practitioner	Solution Idea Starting	Witness and Learn
1st frame	**Context + Problematic actions** In a given context, a character conducts actions that leads to a problem.	**Context + Problematic situation** In a given context, a problematic situation occurs.	**Solution Idea** A character provides an idea of important actions of a solution.	**Others' Consequence** Witnessing other characters achieve positive results
2nd frame	**Problematic situation** Problematic actions result in a problematic situation.	**Solution Idea** A character provides an idea of what is important to do and how to do it.	**Image of Problematic situation** The character provides reasons why the actions of the solution is important.	**Question, implying the Problem** Asking how one can achieve the same
3rd frame	**Solution Idea + Actions of the Solution** The character recognizes the problems from their own actions, and changes their actions.	**Actions of the Solution + Story's Turn** Conducting actions of the solution results in a positive outcome.	**Actions of the Solution** Starts doing actions of the solution.	**Solution Idea + Actions** A character provides guidance on how to do it
4th frame	**Good consequence + Humorous twist** Resulting in a positive outcome, adding a little comedic twist	**Humorous twist** Adding a little comedic twist for a humorous ending for the story.	**Actions of the Solution + Humorous twist** Finishing the actions, adding a little comedic twist for a humorous ending for the story.	**Solution Idea + Starting to practice (+ Humorous twist)** Learning the method and deciding to give it a try

Fig. 13. Several models of embedding a pattern content in four-frame manga format

The first model is what we call "Behavioral Change," which is as follows:

[Behavioral Change]

1st Frame: Context ＋Problematic actions (In a given context, a character conducts actions that leads to a problem)
2nd Frame: Problematic situation (Problematic actions result in a problematic situation)
3rd Frame: Solution Idea + Actions of the Solution (The character recognizes the problems from their own actions, and changes their actions)
4th Frame: Good consequence + Humorous twist (Resulting in a positive outcome, adding a little comedic twist)

The key point of this structure is that the problem is included in the first frame, and the second frame represents the stage of realization. In this case, the protagonist realizes the problem themselves, but it could also be someone else pointing it out in the second frame. By including the frame where the problem is recognized, it prevents the solution in the third frame from occurring abruptly, which would confuse the readers. To maintain the coherence of the story, it is important to have the frame of problem recognition in the second position. As a result, to fit the entire pattern into four frames, the first frame combines both the situation and the problem. This is crucial for condensing a pattern into a comprehensible four-frame format. This model is well-suited for patterns where the protagonist's actions lead to a problem, and by altering those actions, there is a favorable outcome.

The prototypes of pattern manga for ***Pause for Thinking*** (Figure 11) and ***Open Question*** (Figure 12) of *Words for a Dialogue* represents this "Behavioral Change" model.

The second model is what we call “Obedient Practitioner,” which is as follows:

[Obedient Practitioner]
1st Frame: Context + Problematic situation (In a given context, a problematic situation occurs)
2nd Frame: Solution Idea (A character provides an idea of what is important to do and how to do it)
3rd Frame: Actions of the Solution + Story’s Turn (Conducting actions of the solution results in a positive outcome)
4th Frame: Humorous twist (Adding a little comedic twist for a humorous ending for the story)

In this model, the protagonist finds themselves in a problematic situation in the first frame. Another character observes this and offers a solution idea in the second frame, which the protagonist dutifully executes in the third frame. While the story could easily conclude with a happy ending at this point, a narrative “turn” is often introduced to inject humor into the manga, culminating in a punchline in the fourth frame. This model is particularly suitable for scenarios where the problem doesn't arise from any specific actions taken by the protagonist; rather, they naturally find themselves entangled in a problematic situation.

The prototypes of pattern manga for ***Tangible Growth*** (Figure 8) of *Learning Patterns* represents this “Obedient Practitioner” model.

The third model is what we call “Obedient Practitioner,” which it is as follows:

[Solution Idea Starting]
1st Frame: Solution Idea (A character provides an idea of important actions of a solution)
2nd Frame: Image of Problematic situation (The character provides reasons why the actions of the solution is important)
3rd Frame: Actions of the Solution (Starts doing actions of the solution)
4th Frame: Actions of the Solution + Humorous twist (Finishing the actions, adding a little comedic twist for a humorous ending for the story)

In this model, the narrative begins directly by imparting a crucial advice, Solution. Unlike the pattern where a problem occurs and then a solution is sought, the first frame here starts with a declaration that “This is important,” followed by an explanation or rationale in the second frame. The protagonist then attempts to put this into practice in the third frame. While the fourth frame could depict the outcome, it is often already implied within the story, so the ending typically features a humorous twist as the punchline. This structure is versatile and can accommodate various kinds of patterns. However, it may be particularly well-suited for scenarios where the advice is universally applicable, as opposed to specific problem-solving. In this model, the solution is emphasized as a key insight from the very first frame, it leaves an immediate impression on the reader.

The prototypes of pattern manga for ***Community of Learning*** (Figure 9) of *Learning Patterns* represents this “Solution Idea Starting” model.

The fourth models what we call “Witness and Learn,” which is as follows:

[Witness and Learn]
1st Frame: Others' Consequence (Witnessing other characters achieve positive results)
2nd Frame: Question, implying the Problem (Asking how one can achieve the same)
3rd Frame: Solution Idea + Actions (A character provides guidance on how to do it)
4th Frame: Solution Idea + Starting to practice (+ Humorous twist) (Learning the method and deciding to give it a try)

In this model the protagonist witnesses others succeeding in a scene (the Consequence of the pattern) and ponders or inquires about how to achieve similar results. They then learn the approach (Solution Idea) and its specific methods (Actions) and contemplate trying it out for themselves. The third and fourth frames can be used to show the Solution, allowing for both an abstract level and a detailed level, or a depiction of the actual method alongside metaphors. Especially when the pattern name includes a metaphor, illustrating that metaphor can make the portrayal more impactful.

The prototypes of pattern manga for ***Language Shower*** (Figure 10) of *Learning Patterns* represents this “Witness and Learn” model.

We here have introduced four models; however, we do not assert that they are the only possible structures and compositions for a four-frame manga. Instead, we aim to present models that we have identified, which outlines the models of compositions that can constitute a four-frame manga naturally. While four-frame manga can be serialized, adhering to the same structure and composition across installments could lead to monotony, causing readers to lose interest. To achieve narrative diversity, it is important to have a variety of models, and it would be beneficial to continue expanding this assortment of variations in the future.

4. MANGA TYPE II: A SHORT STORY MANGA FOR A PATTERN

The second type introduces a single pattern as a complete story in one chapter to aim for deeper understanding of the pattern and appreciate its significance. By reading specific examples of patterns, the story is created so that readers can understand feel what that pattern is like. In what follows, we present a prototype featuring one pattern from *Words for a Journey*, which is a pattern language for those with dementia and their families.

4.1 A Prototype of Pattern Manga for *Words for a Journey*

Words for a journey is a pattern language for living well with dementia, consisting of 40 patterns for those with dementia and their families, and others in their community (Iba and Okada, 2015a, 2015b; Iba *et al.*, 2016a, 2016b). Here, we present a prototype of pattern manga focusing on ***Preparation for the Dream*** from the patterns.

A prototype of Pattern Manga for ***Preparation for the Dream*** is shown in Figure 14-18. Note that this prototype was created by Hiroaki Tanaka, one of the authors of this paper, who crafted both the story and the artwork, and dialogue in this manga was translated into English by Sae Adachi.

The synopsis of this story is as follows: The protagonist, living with her husband who has been diagnosed with dementia, discovers a pile of Hokkaido travel brochures in his room. He had always expressed a desire to visit Hokkaido, but prioritizing work, they never made the trip. Seeing these brochures, the protagonist realizes that despite his dementia, her husband's longing to travel to Hokkaido remains unchanged. However, considering her husband's propensity to get lost, she fears that a trip might be challenging. During one of her chats with those with dementia and their families, she brings up the idea of the Hokkaido trip. Those present, both those with dementia and their families, share how they make ***Preparation for the Dream***, striving towards the realization of what they want to do and embracing life positively despite dementia. Inspired by their stories, the protagonist decides to abandon her preconceived notion of 'impossibility.' She starts researching about those who have managed to make trips a reality despite dementia. This newfound determination reignites her resolve, prompting her to face her husband anew, and together, they begin to make strides towards making their dream come true.

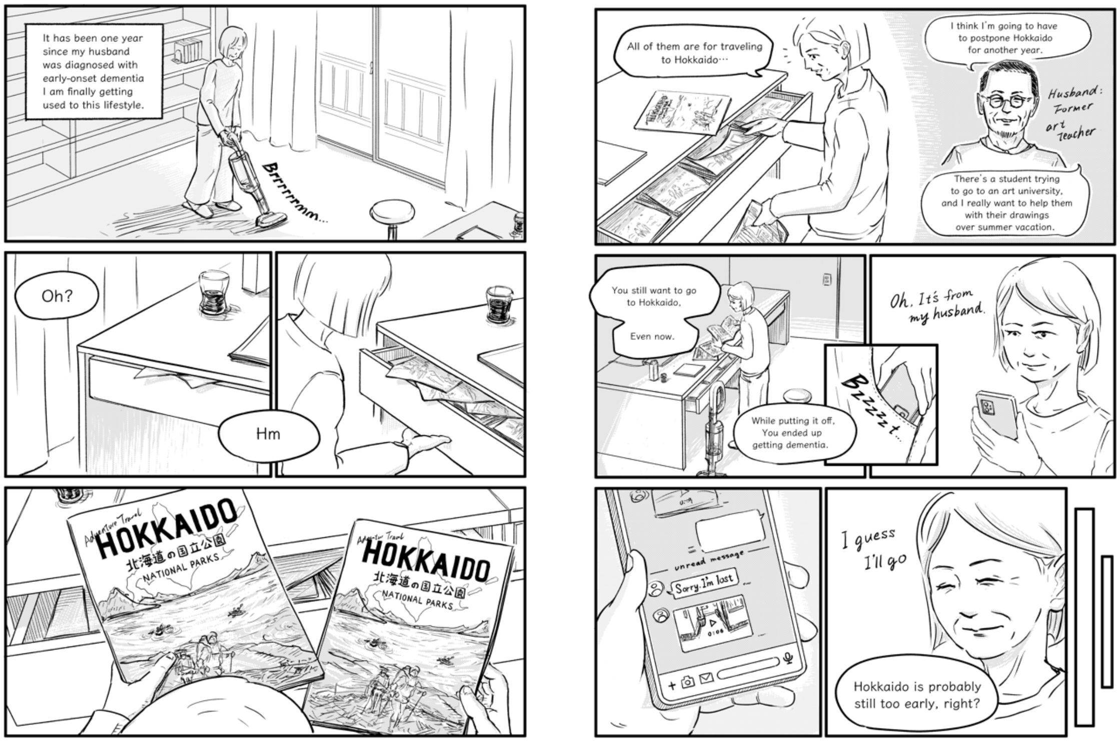

It has been one year since my husband was diagnosed with early-onset dementia I am finally getting used to this lifestyle.
Brrrrrmm...
Oh?
Hm
Adventure Travel HOKKAIDO 北海道の国立公園 NATIONAL PARKS
All of them are for traveling to Hokkaido…
I think I'm going to have to postpone Hokkaido for another year.
Husband: Former art teacher
There's a student trying to go to an art university, and I really want to help them with their drawings over summer vacation.
You still want to go to Hokkaido,
Even now.
While putting it off, You ended up getting dementia.
Bzzzzt...
Oh, It's from my husband.
unread message
Sorry, I'm lost
I guess I'll go
Hokkaido is probably still too early, right?

Fig. 14. A prototype of pattern manga for ***Preparation for the Dream*** pattern in *Words for a Journey* – page 1-2

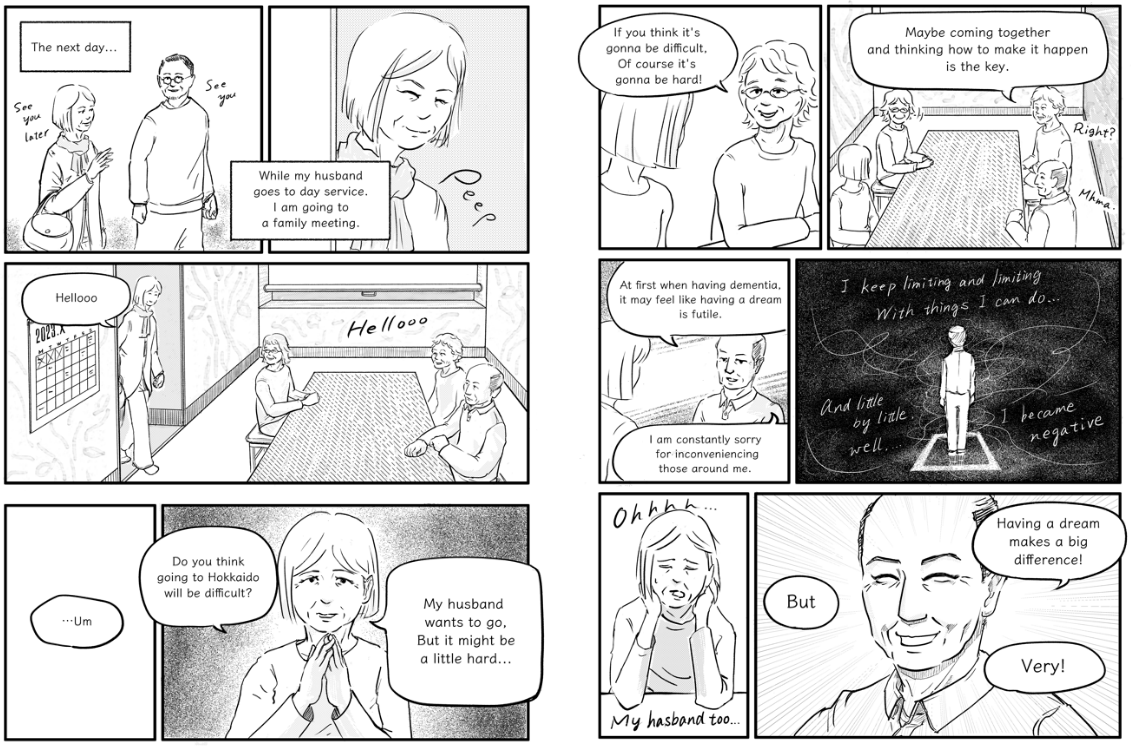

The next day…
See you later
See you
While my husband goes to day service. I am going to a family meeting.
Peep
Hellooo
Hellooo
…Um
Do you think going to Hokkaido will be difficult?
My husband wants to go, But it might be a little hard…
If you think it's gonna be difficult, Of course it's gonna be hard!
Maybe coming together and thinking how to make it happen is the key.
Right?
Mhm.
At first when having dementia, it may feel like having a dream is futile.
I am constantly sorry for inconveniencing those around me.
I keep limiting and limiting With things I can do…
And little by little, well…
I became negative
Ohhhh…
My hasband too…
But
Having a dream makes a big difference!
Very!

Fig. 15. A prototype of pattern manga for ***Preparation for the Dream*** pattern in *Words for a Journey* – page 3-4

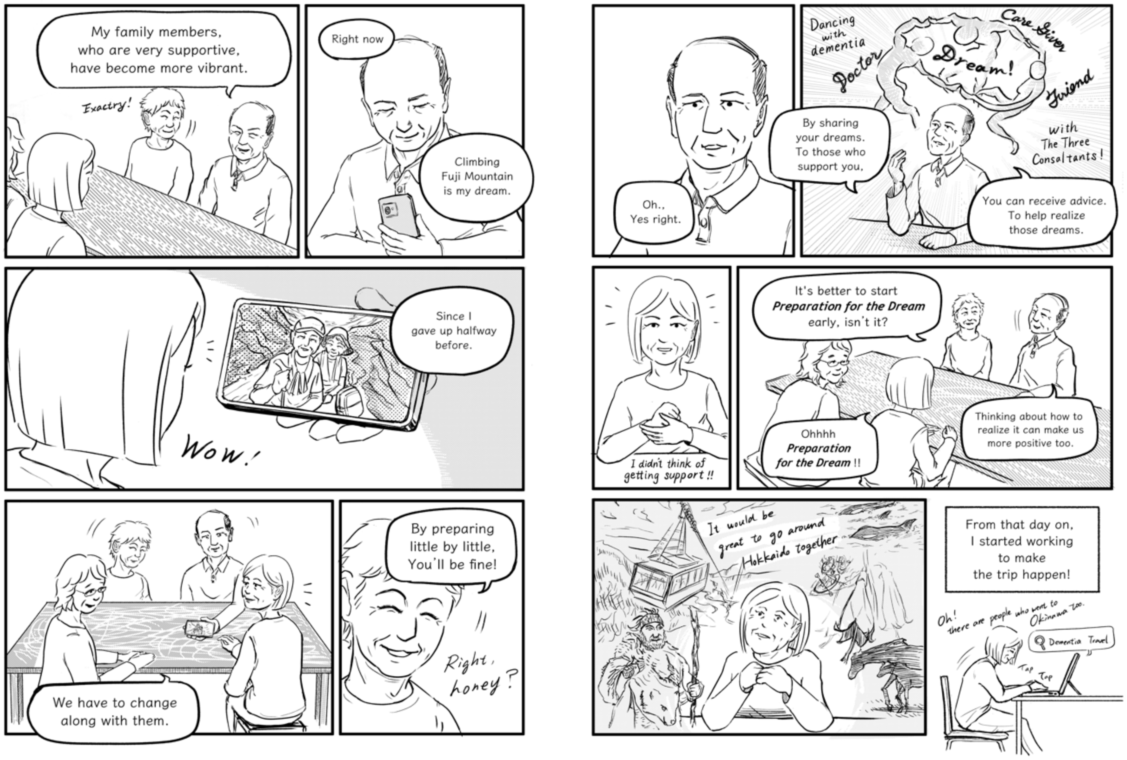

My family members, who are very supportive, have become more vibrant.
Exactry!
Right now
Climbing Fuji Mountain is my dream.
Since I gave up halfway before.
Wow!
We have to change along with them.
By preparing little by little, You'll be fine!
Right, honey?
By sharing your dreams. To those who support you,
Oh., Yes right.
Dancing with dementia
Doctor
Dream!
Care Giver
Friend
with The Three Consoltants!
You can receive advice. To help realize those dreams.
I didn't think of getting support!!
It's better to start Preparation for the Dream early, isn't it?
Ohhhh Preparation for the Dream!!
Thinking about how to realize it can make us more positive too.
It would be great to go around Hokkaido together
From that day on, I started working to make the trip happen!
Oh! there are people who went to Okinawa too.
Dementia Travel
Tap Tap

Fig. 16. A prototype of pattern manga for ***Preparation for the Dream*** pattern in *Words for a Journey* – page 5-6

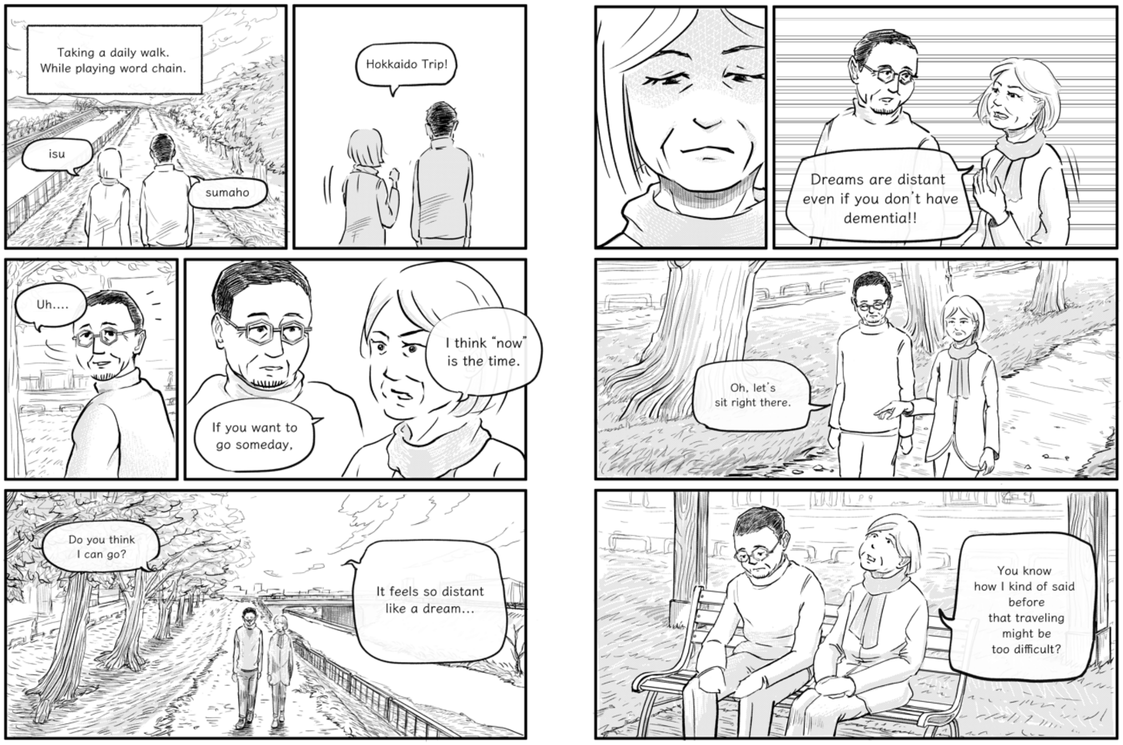

Taking a daily walk. While playing word chain.
isu
sumaho
Hokkaido Trip!
Uh....
If you want to go someday,
I think "now" is the time.
Do you think I can go?
It feels so distant like a dream...
Dreams are distant even if you don't have dementia!!
Oh, let's sit right there.
You know how I kind of said before that traveling might be too difficult?

Fig. 17. A prototype of pattern manga for ***Preparation for the Dream*** pattern in *Words for a Journey* – page 7-8

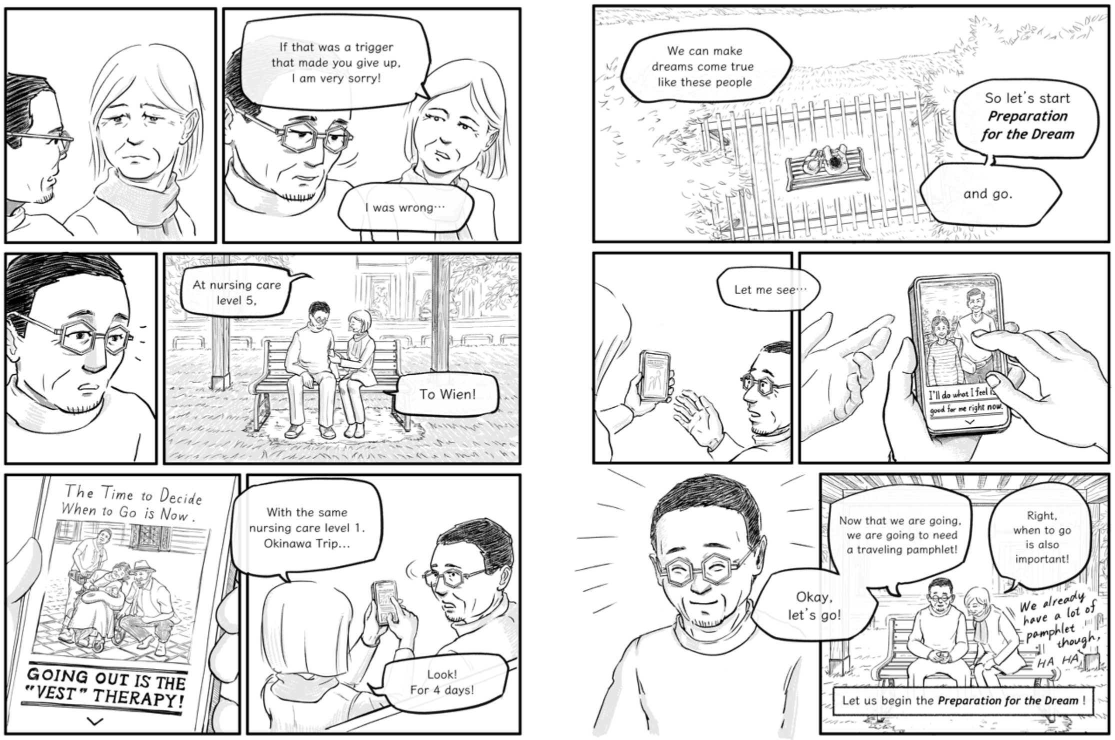

If that was a trigger that made you give up, I am very sorry!
I was wrong…
At nursing care level 5,
To Wien!
The Time to Decide When to Go is Now.
GOING OUT IS THE "VEST" THERAPY!
With the same nursing care level 1. Okinawa Trip…
Look! For 4 days!
We can make dreams come true like these people
So let's start Preparation for the Dream
and go.
Let me see…
I'll do what I feel is good for me right now.
Okay, let's go!
Now that we are going, we are going to need a traveling pamphlet!
Right, when to go is also important!
We already have a lot of pamphlet though, HA HA
Let us begin the Preparation for the Dream !

Fig. 18. A prototype of pattern manga for ***Preparation for the Dream*** pattern in *Words for a Journey* – page 9-10

4.2 Analysis on Composition of the Prototype

In pattern manga, the elements of a pattern, namely, Context, Problem (+Forces), Solution (+Actions) and Consequences, are expanded into a specific storyline[2]. Then, how does the abstract description of the pattern correspond to the concrete storyline development of the pattern manga?

Figure 19 shows the correspondence between the items of the pattern and the story of the pattern manga. In this figure, the Context is colored in light blue, the Problem (+Forces) in gray, the Solution (+Actions) in orange, and the Consequence in yellow. By visualizing in this way, we can confirm how much volume (number of pages) is allocated to the content of each item of the pattern in the story development of the manga.

In the case of this prototype, the introduction of the story, which is the Context, and the presentation of the Problem (+Forces) are contained within two pages each. Moreover, more than five pages are devoted to the part of Solution (+Actions), which is about problem-solving, and less than one page to the part of Consequence, where changes resulting from the implementation of Solution (+Actions) can be felt.

Upon further analysis, what is interesting is that more than half of the total page count is allocated to conveying the Solution (+Actions). If the main theme of the pattern manga is to demonstrate the Solution (+Actions) to the problems that arise in specific context, it would be natural to allocate many pages to Solution (+Actions). This is probably because, in contrast to the Context, Problem (+Forces), and Consequence, which depict a state, Solution (+Actions) includes a sequence of actions unfolding over time, as well as the depiction of changes in thought and emotion along the actions.

In the case of this prototype, the part that expresses Solution (+Actions) can be largely divided into two halves. The first half is a scene where the protagonist understands the content of the Solution (+Actions) by receiving advice from others, and the second half is a scene where the protagonist practices the Solution (+Actions) himself.

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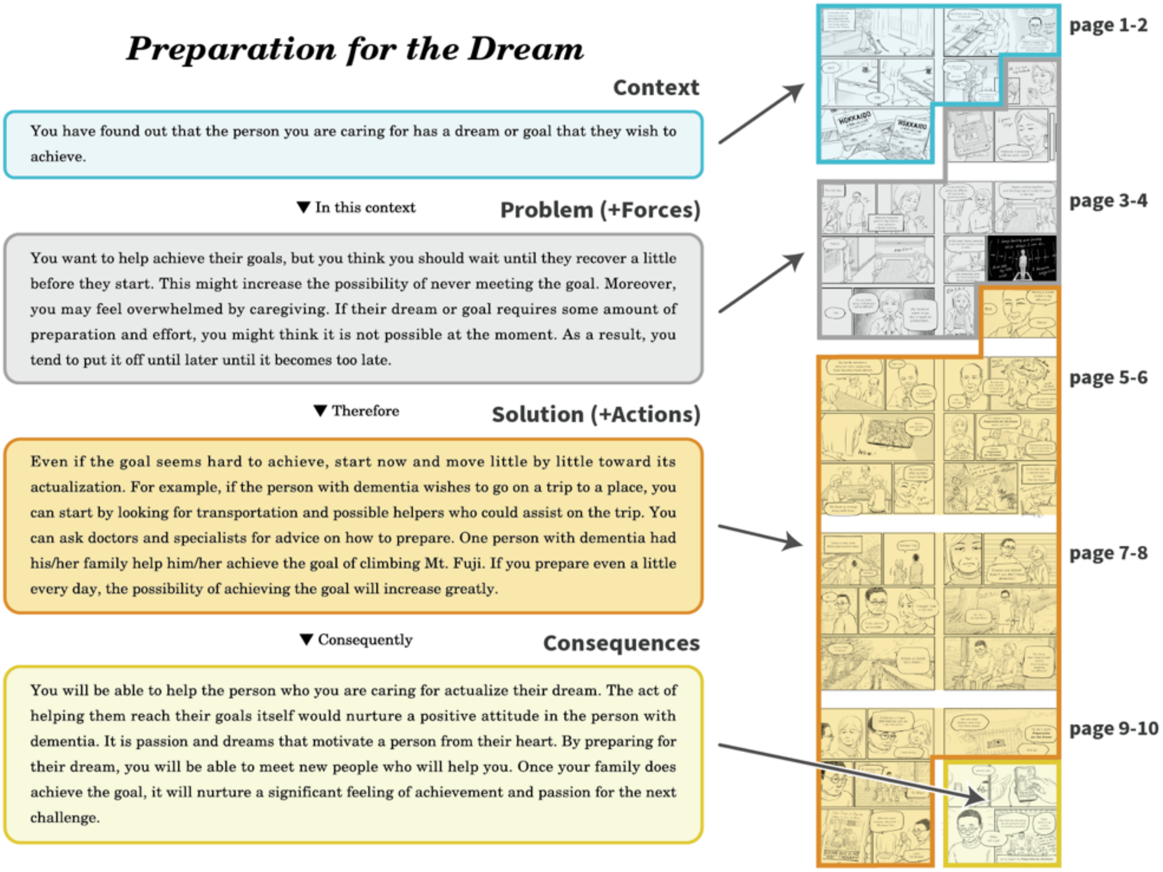
[2] While beyond the scope of this paper for a detailed discussion, it is intriguing to note that these components of a pattern can be easily mapped to narrative structures, including the three-act structure commonly used in Hollywood.

The climax of the story is the latter scene, where the protagonist takes actions based on advice received from a person with dementia and their families. In this pattern manga, a positive change (Consequence) resulting from practicing the Solution (+Actions) is depicted on the last page, aiming to encourage readers to practice just like the protagonist.

This analysis pertains to this prototype, and we do not know if it applies universally to other patterns and pattern manga. With more prototypes and analysis, we may be able to find a pattern in how much of the pattern manga makes up each part of a pattern.



Preparation for the Dream

Context

You have found out that the person you are caring for has a dream or goal that they wish to achieve.

▼ In this context

Problem (+Forces)

You want to help achieve their goals, but you think you should wait until they recover a little before they start. This might increase the possibility of never meeting the goal. Moreover, you may feel overwhelmed by caregiving. If their dream or goal requires some amount of preparation and effort, you might think it is not possible at the moment. As a result, you tend to put it off until later until it becomes too late.

▼ Therefore

Solution (+Actions)

Even if the goal seems hard to achieve, start now and move little by little toward its actualization. For example, if the person with dementia wishes to go on a trip to a place, you can start by looking for transportation and possible helpers who could assist on the trip. You can ask doctors and specialists for advice on how to prepare. One person with dementia had his/her family help him/her achieve the goal of climbing Mt. Fuji. If you prepare even a little every day, the possibility of achieving the goal will increase greatly.

▼ Consequently

Consequences

You will be able to help the person who you are caring for actualize their dream. The act of helping them reach their goals itself would nurture a positive attitude in the person with dementia. It is passion and dreams that motivate a person from their heart. By preparing for their dream, you will be able to meet new people who will help you. Once your family does achieve the goal, it will nurture a significant feeling of achievement and passion for the next challenge.

Fig. 19. Correspondence between the pattern elements and the prototype pattern manga for ***Preparation for the Dream***

5. MANGA TYPE III: A LONG STORY MANGA INCLUDING PATTERNS

The third type involves incorporating multiple patterns that emerge within a series of practices of one whole story. The goal is to provide an image of how patterns can be used in a complex and interconnected manner while promoting understanding of individual patterns.

Here, we present two prototypes of each from *Fearless Change* and *Collaboration Patterns*. These two are chapters within a long story series and both fall under Type III. However, in the first prototype, only one pattern is introduced, while in the second prototype, several patterns are introduced (see Figure 20). The number of patterns appearing in a single chapter is not an essential point. Yet, a story in which only one pattern appears resembles Type II, which is why we particularly wish to discuss it explicitly here. In the case of Type II, the emphasis is on the pattern, and the story is constructed to maximize its effectiveness. In contrast, in Type III, when only one pattern is present, the emphasis is on the broader story that includes subsequent chapters, and patterns are introduced as needed to support that story. At first glance, they may seem identical, but there is this distinction in their relationship with the patterns.

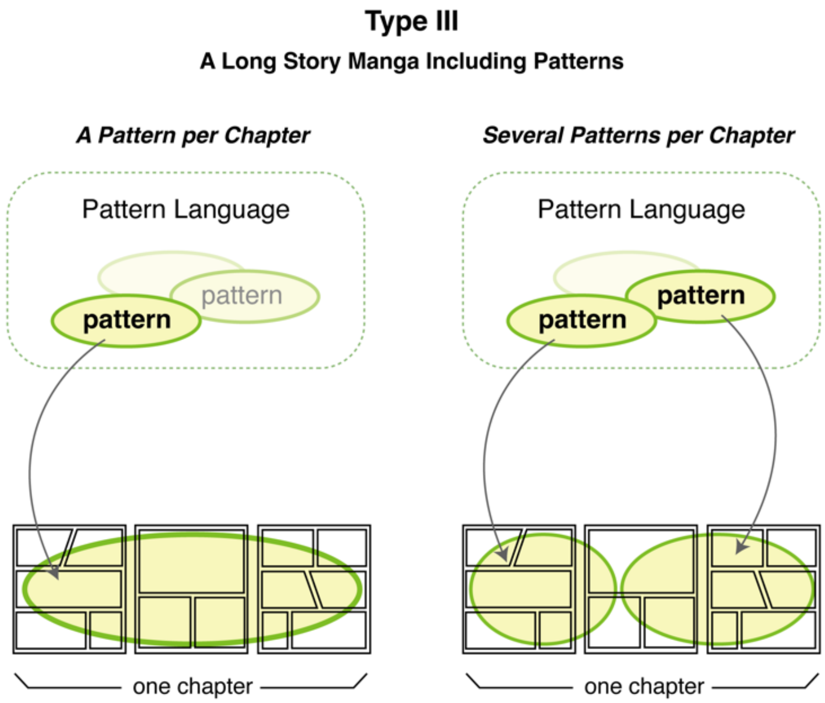


Fig. 20. Correspondence between the pattern elements and the prototype pattern manga for ***Preparation for the Dream*** pattern in *Words for a Journey*

5.1 A Prototype of Pattern Manga for *Fearless Change*

Fearless Change is a pattern language for introducing new idea to an organization, which is written by Mary Lynn Manns and Linda Rising, consisting of originally 48 patterns in *Fearless Change* book (Manns and Rising, 2004) and 15 patterns in *More Fearless Change* book (Manns and Rising, 2015). We pick up a key pattern ***Evangelist*** from the patterns to demonstrate pattern story manga.

A prototype of Pattern Manga for ***Evangelist*** in *Fearless Change* is shown in Figure 21-28. Note that this prototype was created by the authors of this paper, with Mizuki Ota and Takashi Iba developing the story and Mizuki Ota drawing the illustrations, and the dialogue in this manga was translated into English by Mizuki Ota.

The synopsis of this story is as follows: The protagonist is a young company employee. A new Innovation Planning Department is established within the company, and the protagonist is handpicked to join. After considering various options, the protagonist proposes the introduction of Pattern Language of Practices to transform internal communication in a creative way. However, despite presenting the idea, it is not well-received nor understood by superiors and colleagues, causing frustration. Then, a close colleague from the company comes to the rescue and introduces the concept of becoming an Evangelist for the idea they want to promote. With this advice in mind, the protagonist decides that in the next meeting, they will have everyone to experience the benefits of pattern language by engaging in dialogue using pattern cards. As a result, the superiors and colleagues begin to grasp its value, leading to its introduction into their own departments.

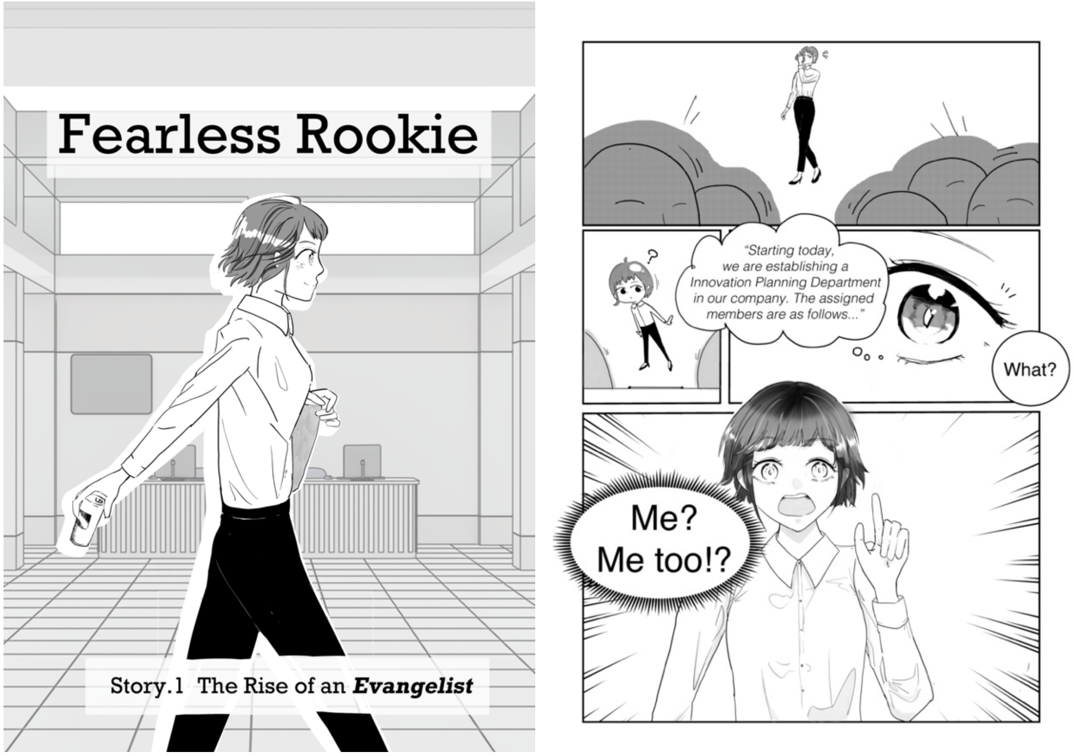

Fearless Rookie
Story.1 The Rise of an *Evangelist*
"Starting today, we are establishing a Innovation Planning Department in our company. The assigned members are as follows..."
What?
Me? Me too!?

Fig. 21 A prototype of pattern manga for ***Evangelist*** pattern in *Fearless Change* – page 1-2

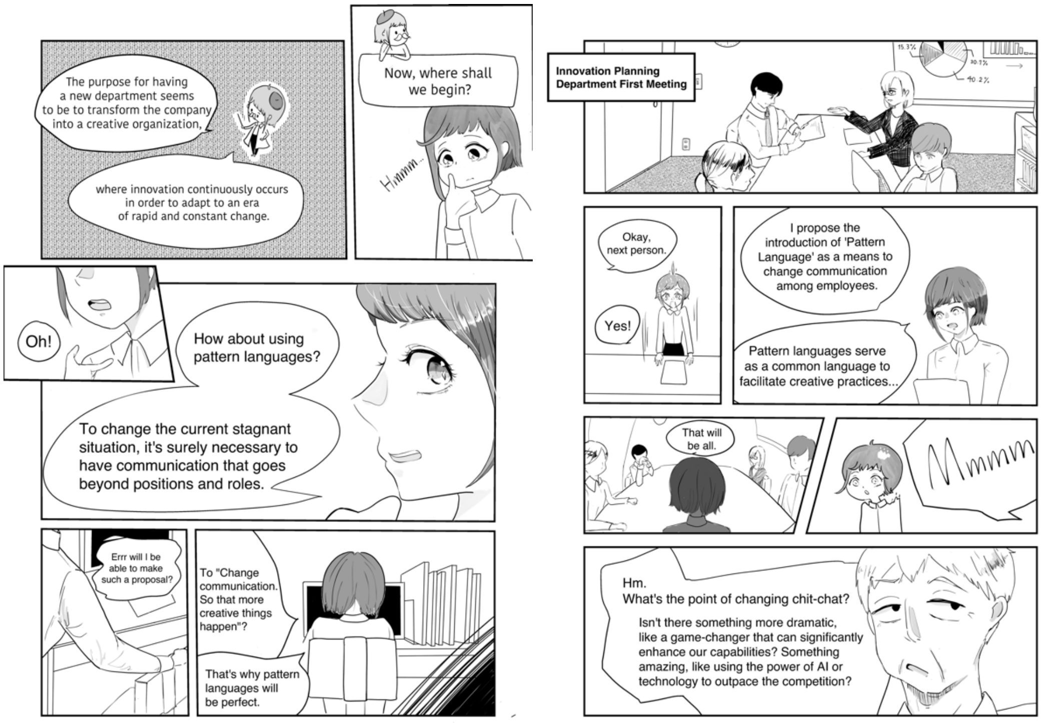

The purpose for having a new department seems to be to transform the company into a creative organization,
where innovation continuously occurs in order to adapt to an era of rapid and constant change.
Now, where shall we begin?
Hmmm...
Oh!
How about using pattern languages?
To change the current stagnant situation, it's surely necessary to have communication that goes beyond positions and roles.
Errr will I be able to make such a proposal?
To "Change communication. So that more creative things happen"?
That's why pattern languages will be perfect.
Innovation Planning Department First Meeting
15.3%
30.7%
40.2%
Okay, next person.
Yes!
I propose the introduction of 'Pattern Language' as a means to change communication among employees.
Pattern languages serve as a common language to facilitate creative practices...
That will be all.
Mmmm
Hm. What's the point of changing chit-chat?
Isn't there something more dramatic, like a game-changer that can significantly enhance our capabilities? Something amazing, like using the power of AI or technology to outpace the competition?

Fig. 22 A prototype of pattern manga for ***Evangelist*** pattern in *Fearless Change* – page 3-4

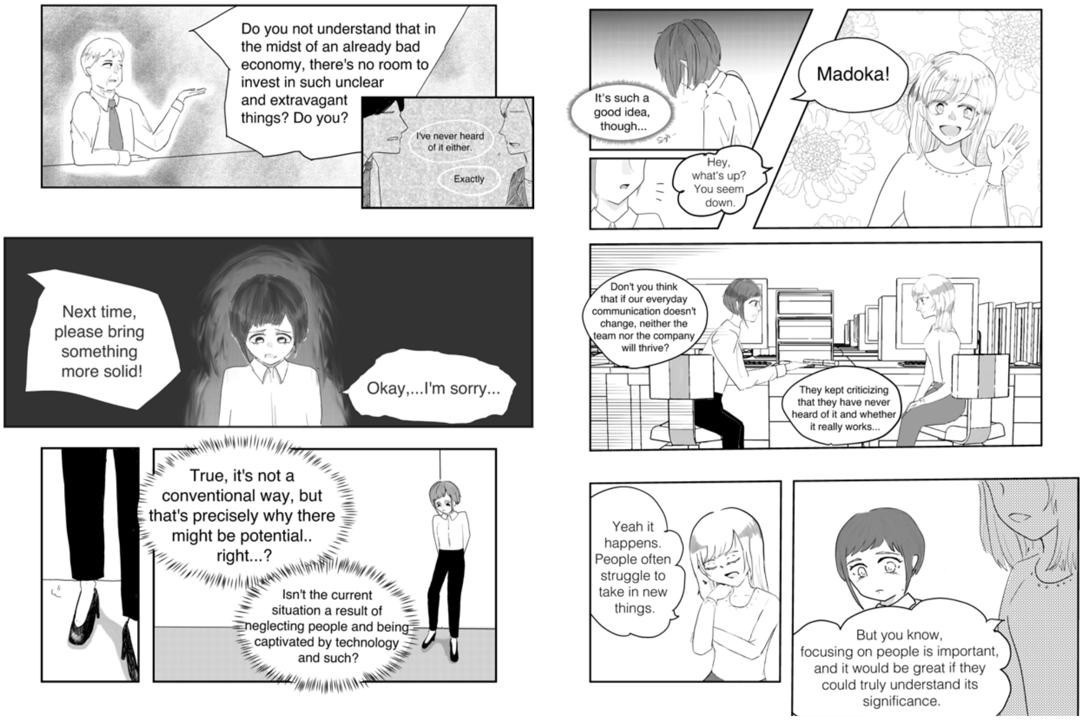

Do you not understand that in the midst of an already bad economy, there's no room to invest in such unclear and extravagant things? Do you?
I've never heard of it either.
Exactly
Next time, please bring something more solid!
Okay,...I'm sorry...
True, it's not a conventional way, but that's precisely why there might be potential.. right...?
Isn't the current situation a result of neglecting people and being captivated by technology and such?
It's such a good idea, though...
Sigh...
Hey, what's up? You seem down.
Madoka!
Don't you think that if our everyday communication doesn't change, neither the team nor the company will thrive?
They kept criticizing that they have never heard of it and whether it really works...
Yeah it happens. People often struggle to take in new things.
But you know, focusing on people is important, and it would be great if they could truly understand its significance.

Fig. 23 A prototype of pattern manga for ***Evangelist*** pattern in *Fearless Change* – page 5-6

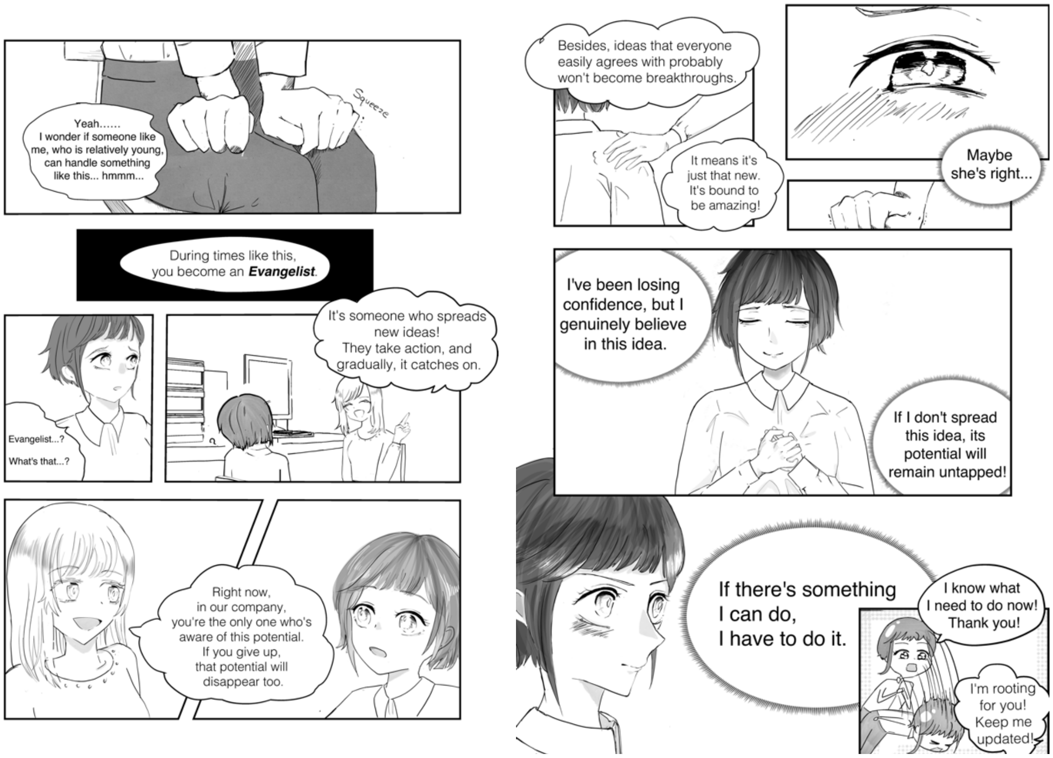

Yeah...... I wonder if someone like me, who is relatively young, can handle something like this... hmmm...
Squeeze
During times like this, you become an Evangelist.
Evangelist...? What's that...?
It's someone who spreads new ideas! They take action, and gradually, it catches on.
Right now, in our company, you're the only one who's aware of this potential. If you give up, that potential will disappear too.
Besides, ideas that everyone easily agrees with probably won't become breakthroughs.
It means it's just that new. It's bound to be amazing!
Maybe she's right...
I've been losing confidence, but I genuinely believe in this idea.
If I don't spread this idea, its potential will remain untapped!
If there's something I can do, I have to do it.
I know what I need to do now! Thank you!
I'm rooting for you! Keep me updated!

Fig. 24 A prototype of pattern manga for ***Evangelist*** pattern in *Fearless Change* – page 7-8

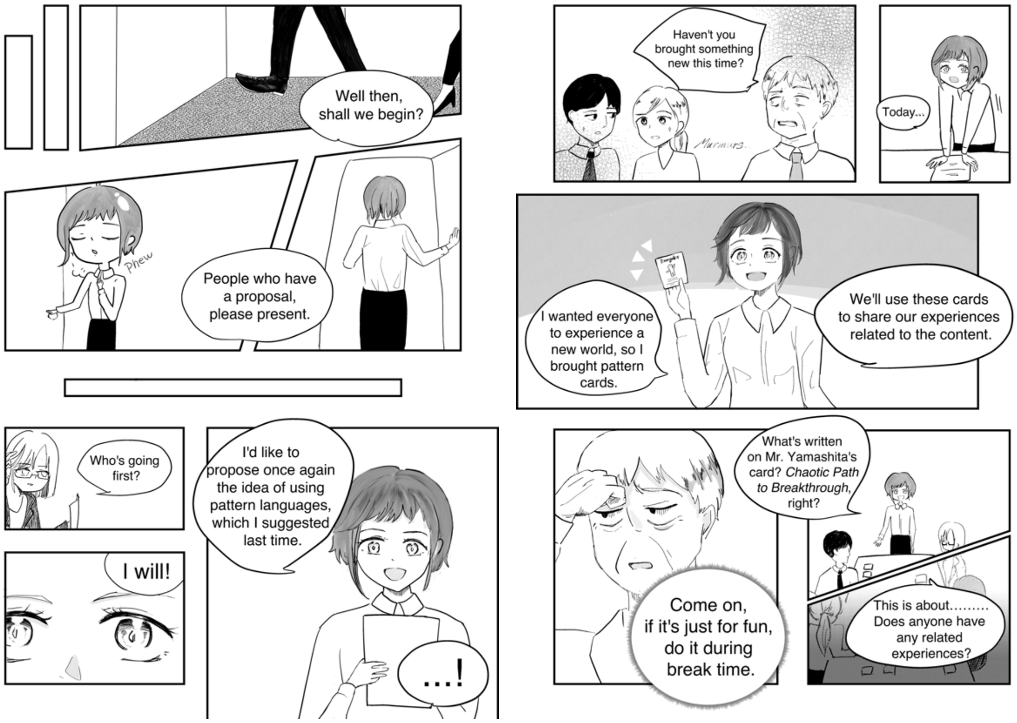

Well then, shall we begin?
People who have a proposal, please present.
Phew
Who's going first?
I will!
I'd like to propose once again the idea of using pattern languages, which I suggested last time.
...!
Haven't you brought something new this time?
Murmurs
Today...
I wanted everyone to experience a new world, so I brought pattern cards.
We'll use these cards to share our experiences related to the content.
Come on, if it's just for fun, do it during break time.
What's written on Mr. Yamashita's card? *Chaotic Path to Breakthrough*, right?
This is about……… Does anyone have any related experiences?

Fig. 25 A prototype of pattern manga for ***Evangelist*** pattern in *Fearless Change* – page 9-10

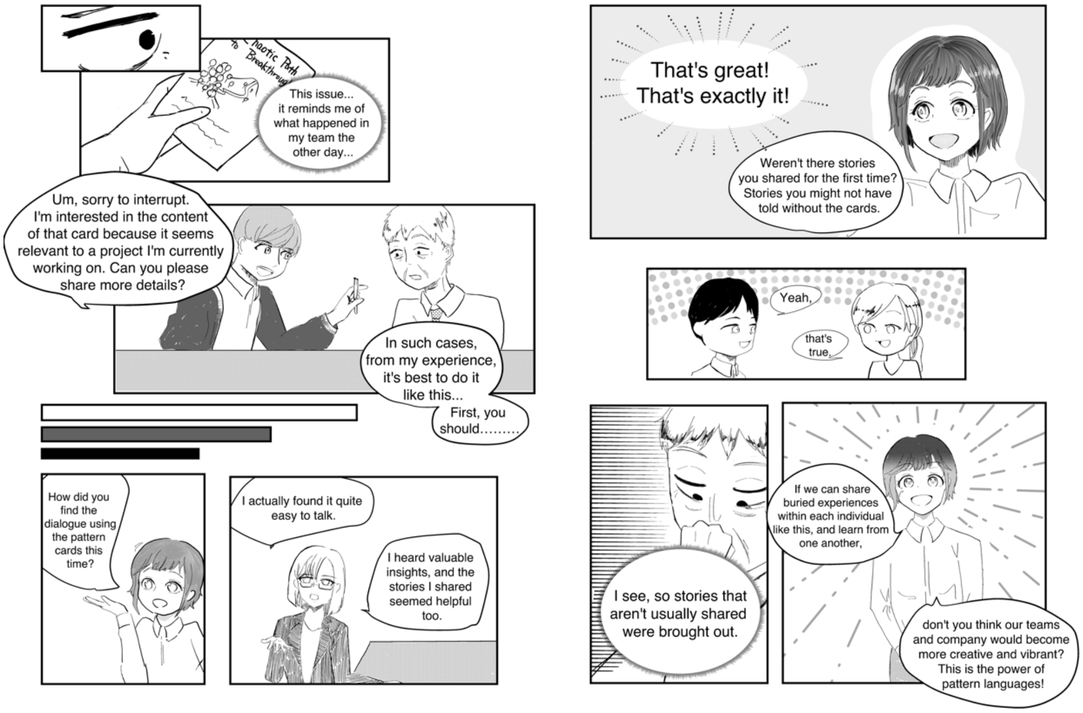

Chaotic Path to Breakthrough
This issue... it reminds me of what happened in my team the other day...
Um, sorry to interrupt. I'm interested in the content of that card because it seems relevant to a project I'm currently working on. Can you please share more details?
In such cases, from my experience, it's best to do it like this...
First, you should………
How did you find the dialogue using the pattern cards this time?
I actually found it quite easy to talk.
I heard valuable insights, and the stories I shared seemed helpful too.
That's great! That's exactly it!
Weren't there stories you shared for the first time? Stories you might not have told without the cards.
Yeah,
that's true,
I see, so stories that aren't usually shared were brought out.
If we can share buried experiences within each individual like this, and learn from one another,
don't you think our teams and company would become more creative and vibrant? This is the power of pattern languages!

Fig. 26 A prototype of pattern manga for ***Evangelist*** pattern in *Fearless Change* – page 11-12

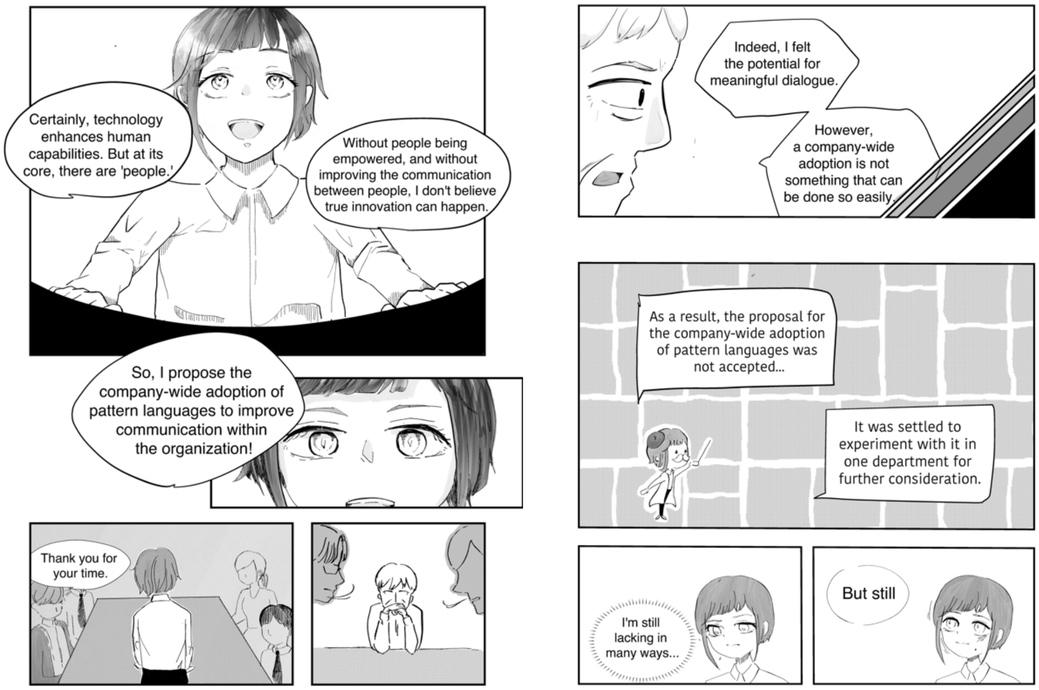

Certainly, technology enhances human capabilities. But at its core, there are 'people.'
Without people being empowered, and without improving the communication between people, I don't believe true innovation can happen.
So, I propose the company-wide adoption of pattern languages to improve communication within the organization!
Thank you for your time.
Indeed, I felt the potential for meaningful dialogue.
However, a company-wide adoption is not something that can be done so easily.
As a result, the proposal for the company-wide adoption of pattern languages was not accepted...
It was settled to experiment with it in one department for further consideration.
I'm still lacking in many ways...
But still

Fig. 27 A prototype of pattern manga for ***Evangelist*** pattern in *Fearless Change* – page 13-14

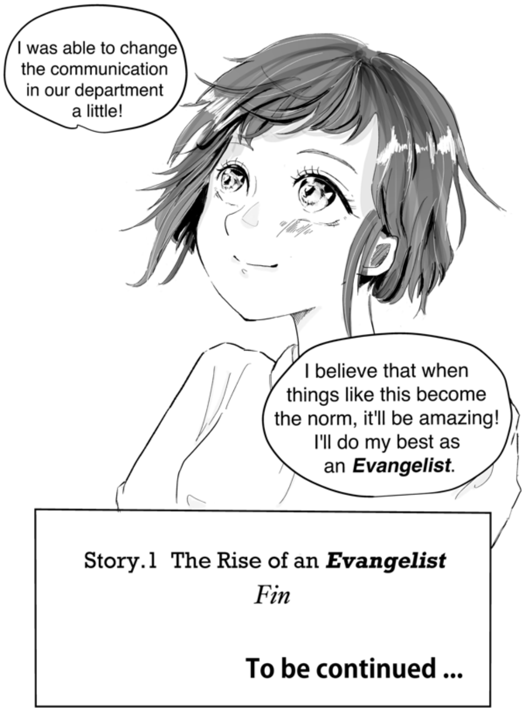

I was able to change the communication in our department a little!
I believe that when things like this become the norm, it'll be amazing! I'll do my best as an ***Evangelist***.
Story.1 The Rise of an ***Evangelist***
Fin
To be continued ...

Fig. 28 A prototype of pattern manga for ***Evangelist*** pattern in *Fearless Change* – page 15

5.2 A Prototype of Pattern Manga for Collaboration Patterns

Collaboration Patterns is a pattern language for creative collaboration, consisting of 34 patterns (Iba and Isaku, 2018; Iba and Iba Lab, 2014b). Here, we present a prototype of pattern manga focusing on patterns from the patterns such as ***Create a Legend***, ***Chaotic Path to Breakthrough***, and ***Ideas Taking Shape***.

A prototype of Pattern Manga for *Collaboration Patterns* is shown in Figure 29-34. Note that this prototype was created by the authors of this paper, with Takashi Iba developing the story and Urara Tajima drawing the illustrations, and dialogue in this manga was translated into English by Sae Adachi.

The synopsis of this story is as follows: The protagonists, who are high school students, decide to organize the school festival in a new and unprecedented style, aiming to Create a Legend with a groundbreaking project as it is their last festival before graduation. However, when they actually begin preparations, they encounter difficulties like never before, plunging them into chaos. Some of the other students even suggest that maybe they should just go back to the traditional way. During this time, a friend introduces a concept (pattern) called ***Chaotic Path to Breakthrough***. It suggests that any creative endeavor will inevitably lead to a state of chaos, and by enduring and persisting through this, a breakthrough will occur. Hearing this, the protagonist decides to try a little harder.

In the next meeting, the protagonist talked about ***Chaotic Path to Breakthrough*** and, after thinking a bit more, came up with a fantastic idea of involving children. The protagonist suggested creating posters to invite children, but it seemed that other team members were not quite enthusiastic about the idea. Therefore, recognizing the importance of ***Ideas Taking Shape***, the protagonist decided to quickly sketch out the poster concept. When the finished poster was presented, the other team members understood the idea, and they proceeded to put up the posters around the town. Now, the question remains whether the children will be interested in the event.

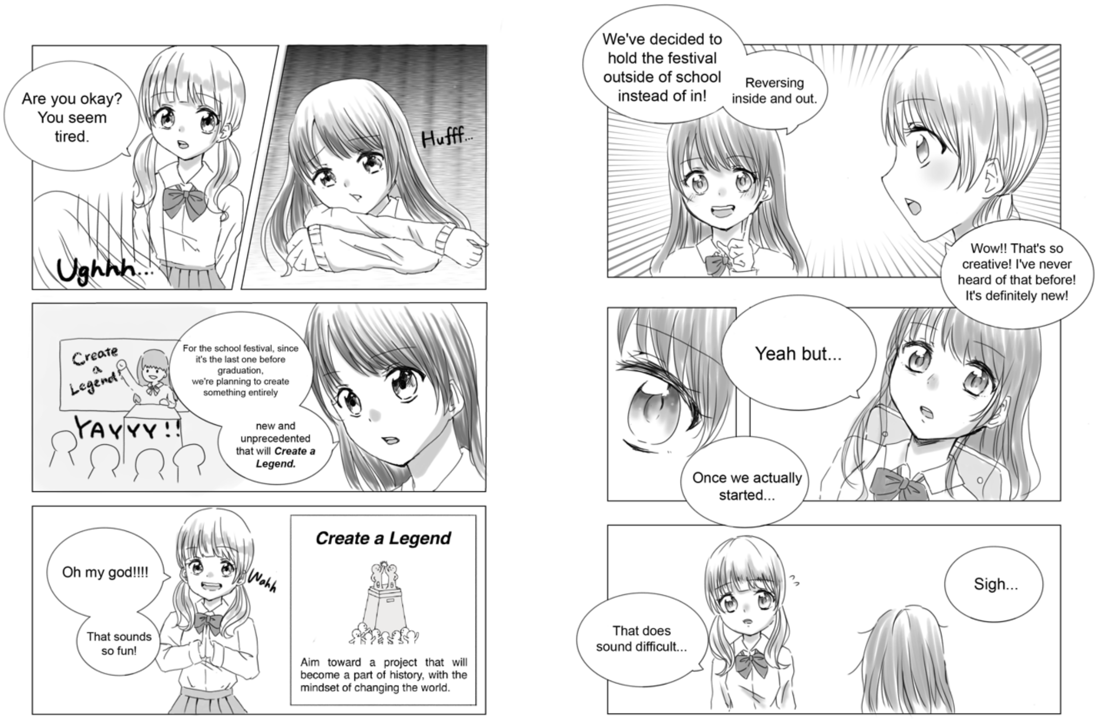

Are you okay? You seem tired.
Ughhh...
Hufff...
Create a Legend!
YAYYY!!
For the school festival, since it's the last one before graduation, we're planning to create something entirely
new and unprecedented that will Create a Legend.
Oh my god!!!!
That sounds so fun!
Wohh
Create a Legend
Aim toward a project that will become a part of history, with the mindset of changing the world.
We've decided to hold the festival outside of school instead of in!
Reversing inside and out.
Wow!! That's so creative! I've never heard of that before! It's definitely new!
Yeah but...
Once we actually started...
Sigh...
That does sound difficult...

Fig. 29. A prototype of pattern manga for *Collaboration Patterns* – page 1-2

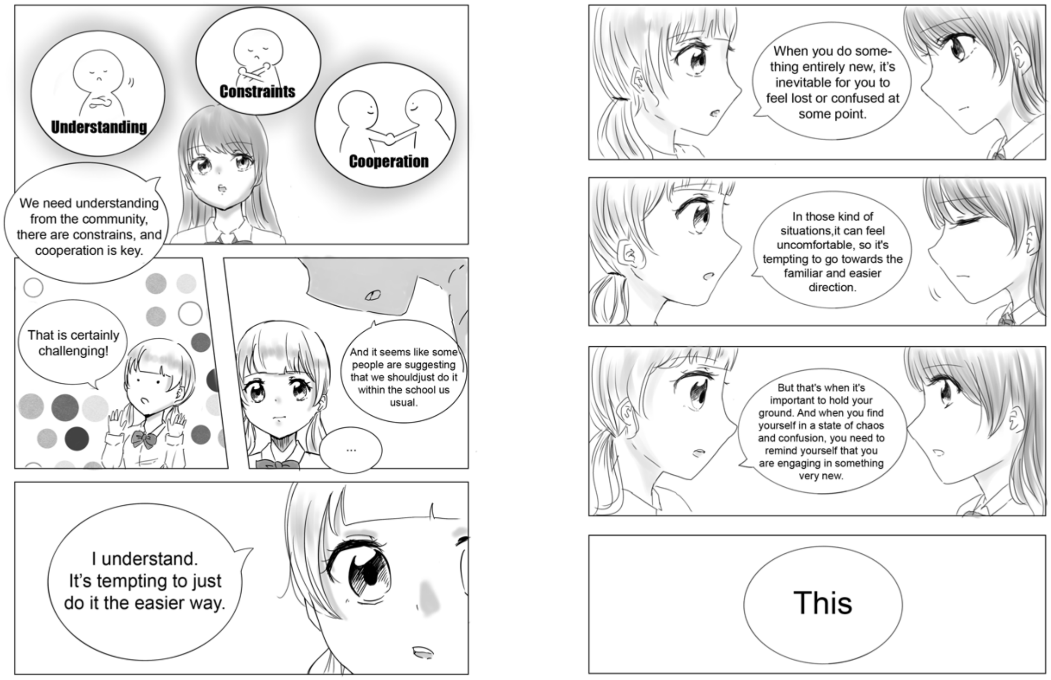

Understanding
Constraints
Cooperation
We need understanding from the community, there are constrains, and cooperation is key.
That is certainly challenging!
And it seems like some people are suggesting that we shouldjust do it within the school us usual.
…
I understand. It's tempting to just do it the easier way.
When you do something entirely new, it's inevitable for you to feel lost or confused at some point.
In those kind of situations,it can feel uncomfortable, so it's tempting to go towards the familiar and easier direction.
But that's when it's important to hold your ground. And when you find yourself in a state of chaos and confusion, you need to remind yourself that you are engaging in something very new.
This

Fig. 30. A prototype of pattern manga for *Collaboration Patterns* – page 3-4

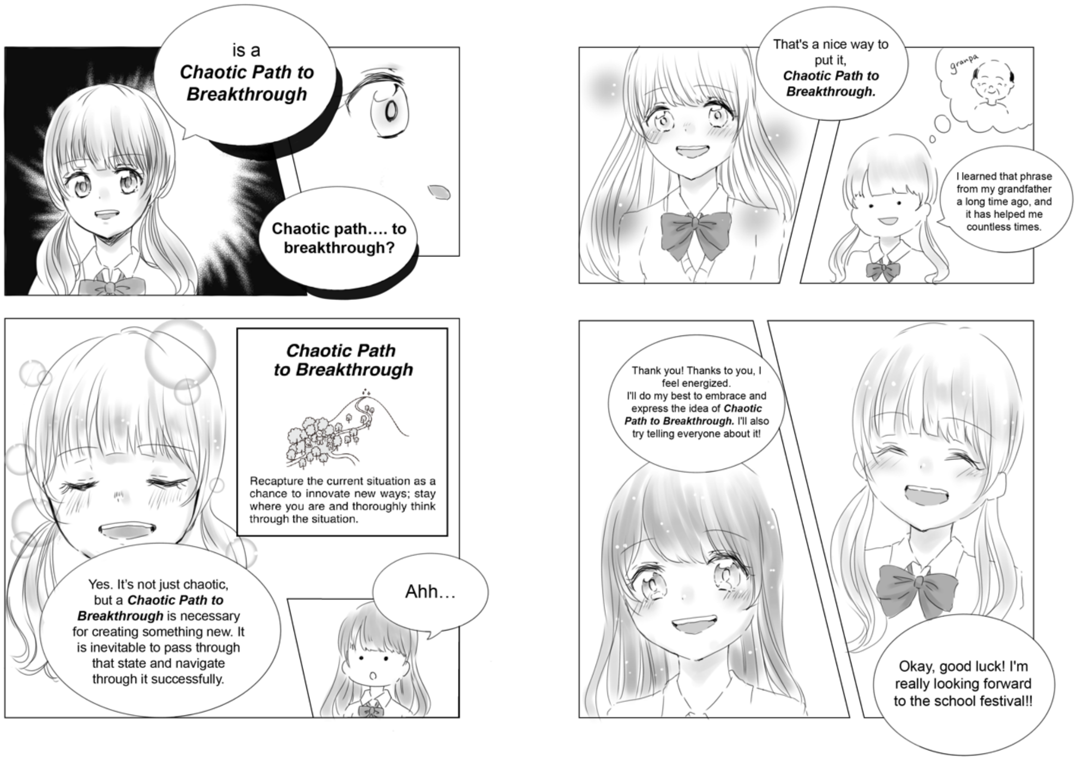

is a *Chaotic Path to Breakthrough*
Chaotic path…. to breakthrough?
Chaotic Path to Breakthrough
Recapture the current situation as a chance to innovate new ways; stay where you are and thoroughly think through the situation.
Yes. It's not just chaotic, but a *Chaotic Path to Breakthrough* is necessary for creating something new. It is inevitable to pass through that state and navigate through it successfully.
Ahh…
That's a nice way to put it, *Chaotic Path to Breakthrough.*
grampa
I learned that phrase from my grandfather a long time ago, and it has helped me countless times.
Thank you! Thanks to you, I feel energized. I'll do my best to embrace and express the idea of *Chaotic Path to Breakthrough.* I'll also try telling everyone about it!
Okay, good luck! I'm really looking forward to the school festival!!

Fig. 31. A prototype of pattern manga for *Collaboration Patterns* – page 5-6

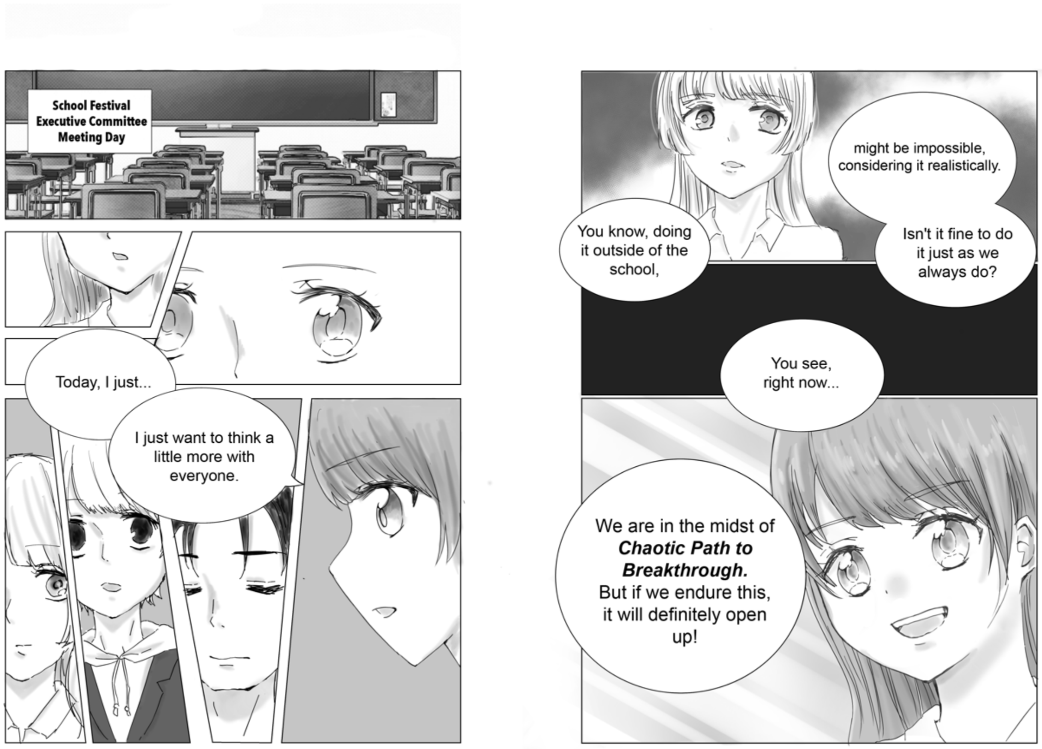

School Festival Executive Committee Meeting Day
Today, I just...
I just want to think a little more with everyone.
You know, doing it outside of the school,
might be impossible, considering it realistically.
Isn't it fine to do it just as we always do?
You see, right now...
We are in the midst of ***Chaotic Path to Breakthrough.*** But if we endure this, it will definitely open up!

Fig. 32. A prototype of pattern manga for *Collaboration Patterns* – page 7-8

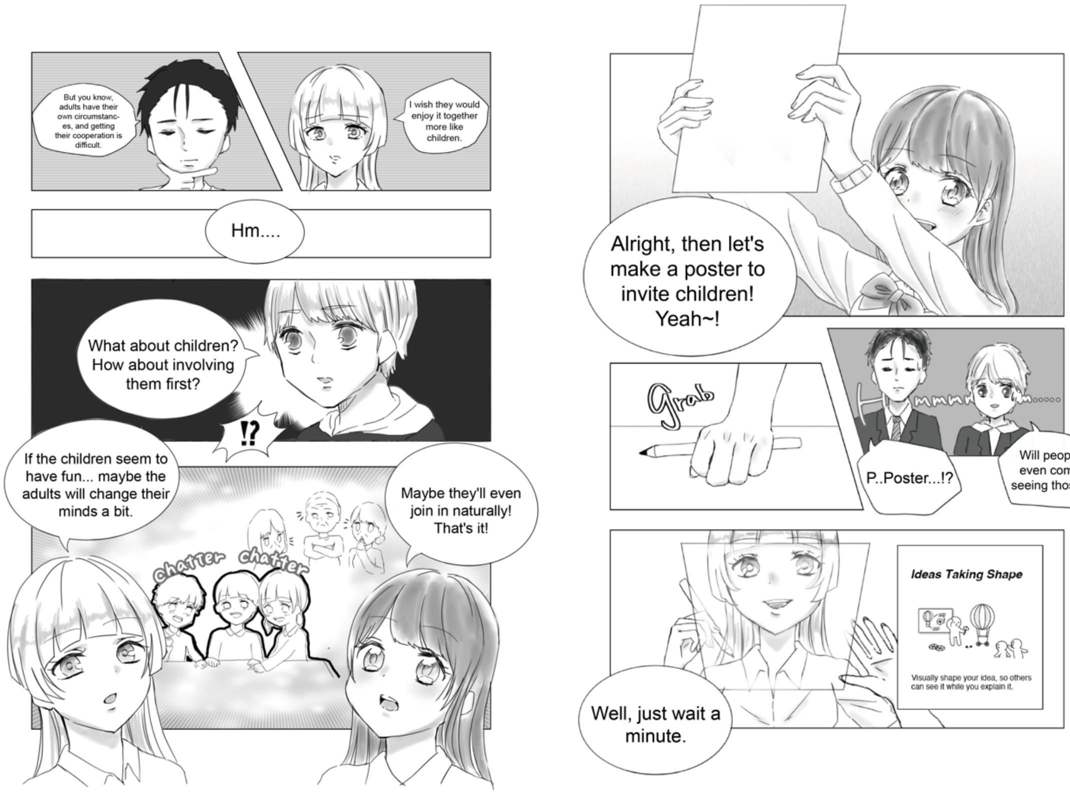

But you know, adults have their own circumstances, and getting their cooperation is difficult.
I wish they would enjoy it together more like children.
Hm....
What about children? How about involving them first?
!?
If the children seem to have fun... maybe the adults will change their minds a bit.
Maybe they'll even join in naturally! That's it!
chatter chatter
Alright, then let's make a poster to invite children! Yeah~!
Grab
Hmmmmm......
P..Poster...!?
Will people even come seeing those?
Ideas Taking Shape
Visually shape your idea, so others can see it while you explain it.
Well, just wait a minute.

Fig. 33. A prototype of pattern manga for *Collaboration Patterns* – page 9-10

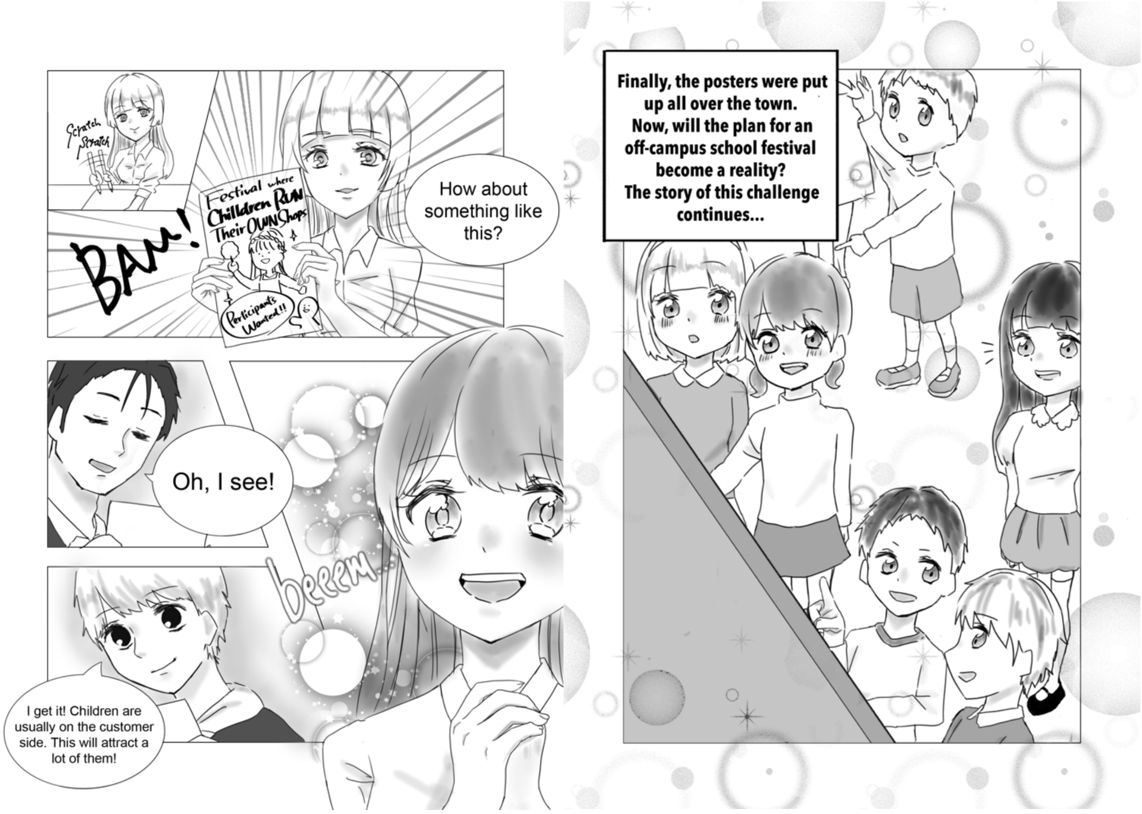

Finally, the posters were put up all over the town. Now, will the plan for an off-campus school festival become a reality? The story of this challenge continues...
How about something like this?
Festival where Children Run Their OWN Shops
Participants Wanted!!
BAM!
Scratch Scratch
Oh, I see!
beeem
I get it! Children are usually on the customer side. This will attract a lot of them!

Fig. 34 A prototype of pattern manga for *Collaboration Patterns* – page 11-12

5.3 Analysis on Composition of the Prototype

*5.3.1 Composition of the Prototype of Pattern Manga for **Evangelist***

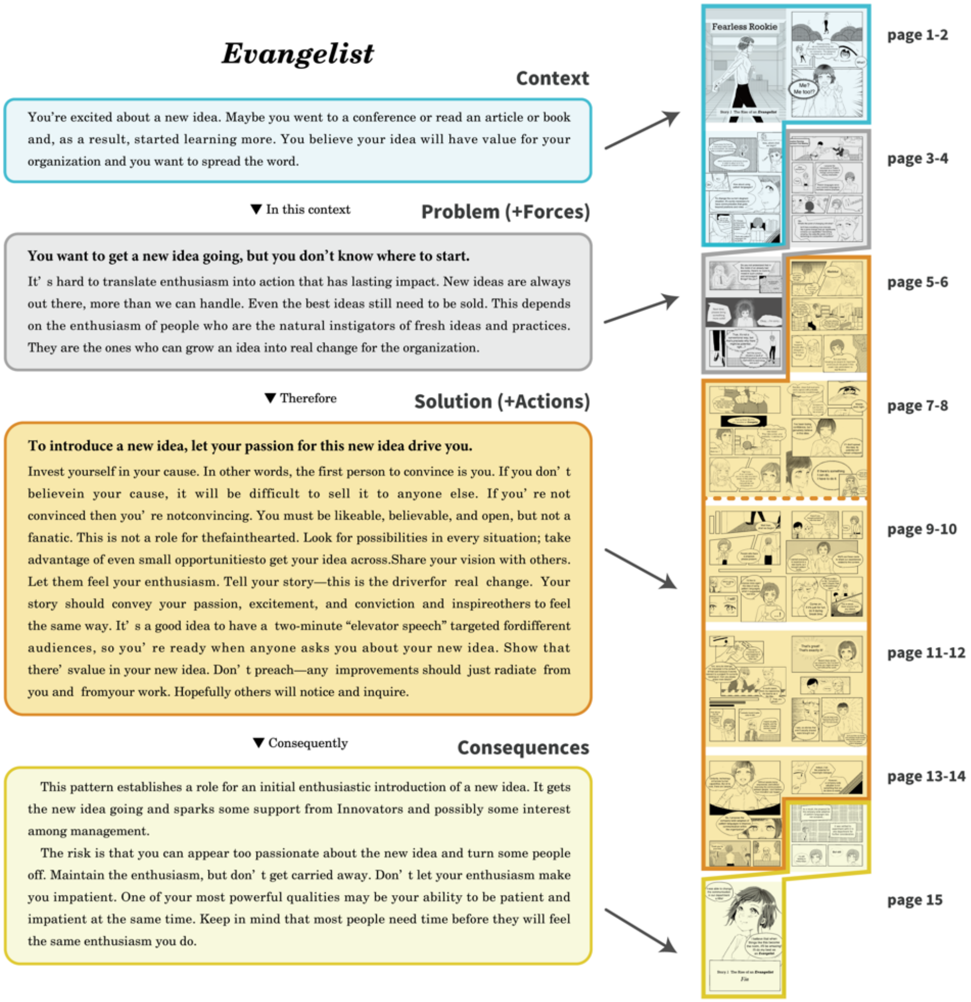
Here, we will consider the structure of manga for Fearless Change where only one pattern appears in a single chapter. When there is one pattern per chapter, we can correlate the narrative structure with the pattern description, similar to Type II, Preparing for Dreams.

Figure 35 illustrates the relationship between the Evangelist pattern elements and the storyline of the pattern manga. The color coding of the elements is the same as in Figure 19, with Context in light blue, Problem (+Forces) in gray, Solution (+Actions) in orange, and Consequences in yellow.

This prototype consists of 15 pages in total. Three pages are dedicated to the Context, which serves as the introduction to the story. Two pages are allocated for presenting the Problem (+Forces), and eight pages depict the description of the Solution (+Actions) for resolving the problem. Finally, two pages illustrate the Consequences of the actions taken.

In this context, two commonalities were identified with this manga and Preparation for the Dream manga. One is the allocation of a significant number of pages to the Solution (+Actions) throughout the entire story. The other is that the scenes representing the Solution (+Actions) are composed of both scenes for coming to know of the pattern and practicing the pattern.

In the prototype for the Evangelist, it is evident that there are three pages for scenes about coming to know of the pattern, while there are five pages for scenes about practicing the pattern. This may be influenced by the nature of the story where the actions taken to resolve the Problem + Forces faced by the protagonist also bring about changes in the Problem + Forces of their superior and the organization. In other words, the meticulous depiction of not only the protagonist's but also the changes in the emotions and thoughts of the superior over time necessitated a higher page count.



You’re excited about a new idea. Maybe you went to a conference or read an article or book and, as a result, started learning more. You believe your idea will have value for your organization and you want to spread the word.

You want to get a new idea going, but you don’t know where to start.

It’ s hard to translate enthusiasm into action that has lasting impact. New ideas are always out there, more than we can handle. Even the best ideas still need to be sold. This depends on the enthusiasm of people who are the natural instigators of fresh ideas and practices. They are the ones who can grow an idea into real change for the organization.

To introduce a new idea, let your passion for this new idea drive you.

Invest yourself in your cause. In other words, the first person to convince is you. If you don’ t believein your cause, it will be difficult to sell it to anyone else. If you’ re not convinced then you’ re notconvincing. You must be likeable, believable, and open, but not a fanatic. This is not a role for thefainthearted. Look for possibilities in every situation; take advantage of even small opportunitiesto get your idea across.Share your vision with others. Let them feel your enthusiasm. Tell your story—this is the driverfor real change. Your story should convey your passion, excitement, and conviction and inspireothers to feel the same way. It’ s a good idea to have a two-minute “elevator speech” targeted fordifferent audiences, so you’ re ready when anyone asks you about your new idea. Show that there’ svalue in your new idea. Don’ t preach—any improvements should just radiate from you and fromyour work. Hopefully others will notice and inquire.

This pattern establishes a role for an initial enthusiastic introduction of a new idea. It gets the new idea going and sparks some support from Innovators and possibly some interest among management.

The risk is that you can appear too passionate about the new idea and turn some people off. Maintain the enthusiasm, but don’ t get carried away. Don’ t let your enthusiasm make you impatient. One of your most powerful qualities may be your ability to be patient and impatient at the same time. Keep in mind that most people need time before they will feel the same enthusiasm you do.

Fig. 35. Correspondence between the items of the pattern and the story of the pattern manga in the case of a prototype for ***Evangelist*** pattern in *Fearless Change*

In this way, it becomes clear that in story manga, the situations and psychological depictions of characters allow readers to have a pseudo-experience of learning and practicing the pattern. On the other hand, as mentioned at the beginning of this section, in Type III when there is only one pattern, the focus is on a larger story that includes subsequent chapters, and patterns are introduced as needed. This premise sets Type III apart from Type II.

5.3.2 Composition of the Prototype of Pattern Manga for Collaboration Patterns

Here, we will consider the composition of a pattern manga where three patterns are introduced in a single chapter. When dealing with patterns individually, as we have already shown, we were able to align the elements of a pattern (Context, Problem, Solution, Consequence) with the narrative structure of the manga. However, when dealing with multiple patterns, it is not a one-to-one correspondence between pattern elements and the narrative structure. So, how are the patterns incorporated into the narrative?

Figure 36 illustrates the correspondence between the story’s narrative structure (introduction, development, turning point, conclusion) of the prototype presented earlier and the frames where patterns are introduced. Similar to Figure 19, the introduction is represented in blue, development in gray, turning point in orange, and conclusion in yellow. Additionally, frames with pattern introductions are emphasized using the colors of the narrative structure. By looking at this figure, it becomes evident that there is one pattern introduction frame for each of the introduction, development, and turning point phases.

However, upon closer examination of the turning point phase, it becomes clear that two patterns are being addressed. The first half depicts the practice of Chaotic Path to Breakthrough, while the second half depicts the practice of Ideas Taking Shape. In summary:

Introduction **- Create a Legend** (Recollection **->** Problematic Situation)
Development **- Chaotic Path to Breakthrough** (Understanding)
Turning Point 1 **- Chaotic Path to Breakthrough** (Practice)
Turning Point 2 **- Ideas Taking Shape** (Practice)
Conclusion **-** Towards a Positive Outcome

Figure 37 provides a clear illustration of the relationship between the patterns being addressed and the story. It can be seen from this figure that the story focuses prominently on the Chaotic Path to Breakthrough, and is the only pattern that has both scenes of coming to know of the pattern and practicing the pattern depicted by the protagonist.

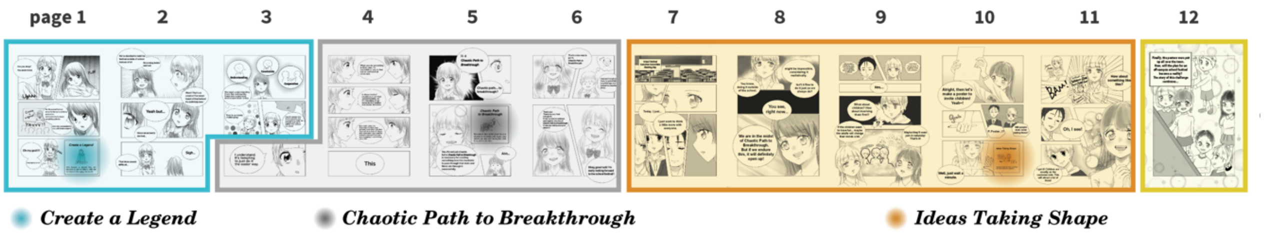


Fig. 36. Correspondence between ***Create a Legend**, **Chaotic Path to Breakthrough** and **Ideas Taking Shape*** patterns from *Collaboration Patterns* and the prototype of pattern manga for Collaboration Patterns

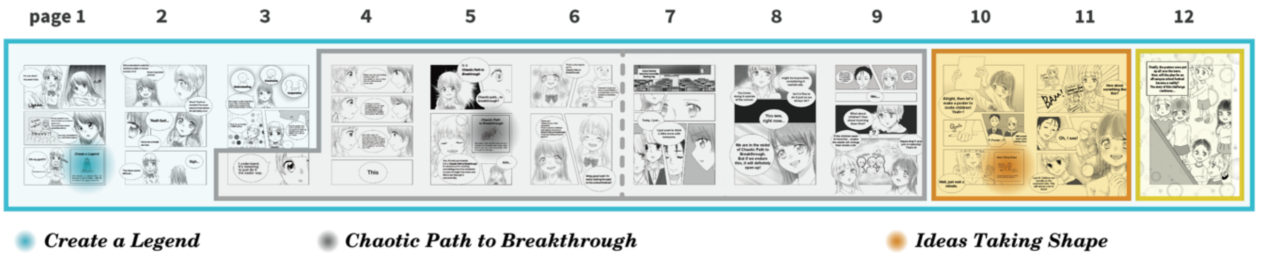


Fig. 37. Relationship between ***Create a Legend**, **Chaotic Path to Breakthrough** and **Ideas Taking Shape*** patterns from *Collaboration Patterns* and the prototype of pattern manga for **Collaboration Patterns**

Next, let us confirm the position of the patterns in the overall structure of Collaboration Patterns (Figure 38). In Collaboration Patterns, Creative Collaboration serves as the core (No.0), with highly abstract Core Patterns (No.1-3) and more specific patterns (No.4-33) providing detailed approaches.

In this prototype, the high-level pattern Create a Legend (No.3) is introduced as the premise of the story, and the practices corresponding to Chaotic Path to Breakthrough (No.18) and Ideas Taking Shape (No.19) are specifically depicted. Thus, patterns of different levels are used within a single story, which is quite intriguing.

In a manga that deals with multiple patterns, it is plausible that related patterns are introduced sequentially. However, as in this prototype, it is also possible that (1) patterns with different levels of perspective are combined, (2) patterns of wider perspective are integrated into the problem situation that serves as the premise of the story, and (3) more specific patterns become the central focus of the story. This suggests that fundamental patterns or patterns indicating broader directions set the premise for the story, followed by specific practices within that context. In this prototype, this is indeed the case.

It is important to note that this analysis pertains to one specific prototype created in this instance and may not be universally applicable. Further exploration is needed after creating pattern manga that deals with multiple patterns to confirm these findings.

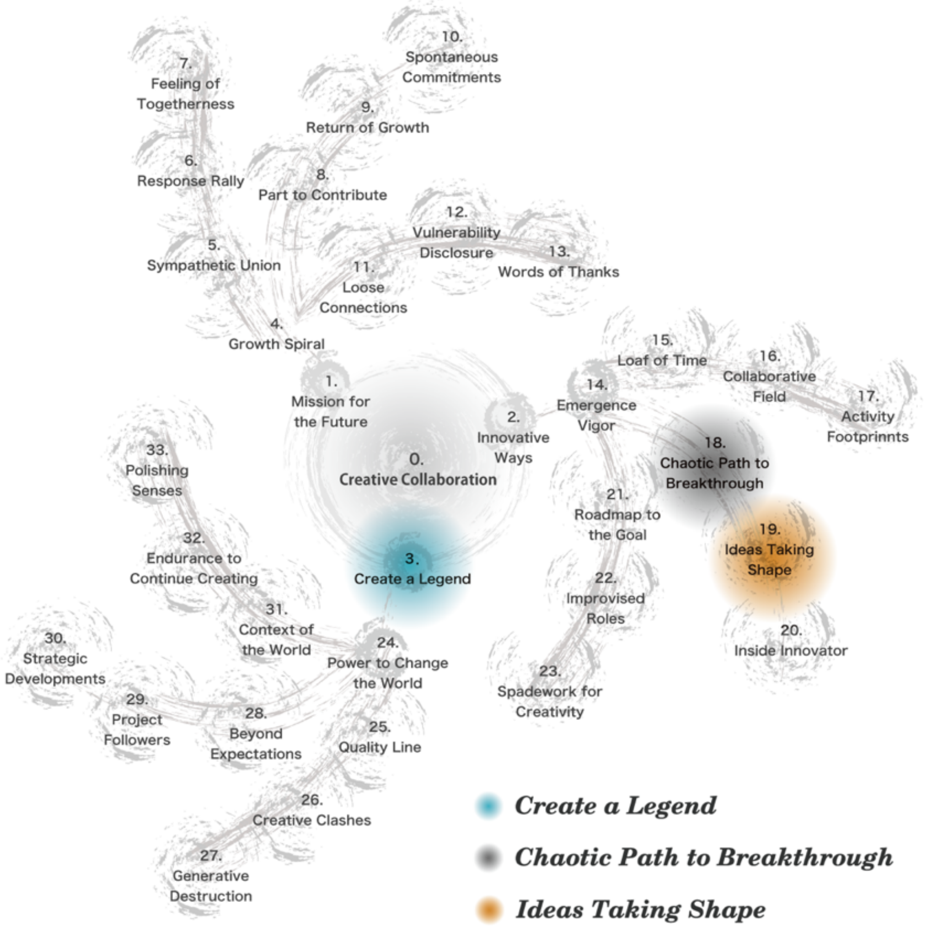

10. Spontaneous Commitments
7. Feeling of Togetherness
9. Return of Growth
6. Response Rally
8. Part to Contribute
12. Vulnerability Disclosure
5. Sympathetic Union
11. Loose Connections
13. Words of Thanks
4. Growth Spiral
15. Loaf of Time
16. Collaborative Field
1. Mission for the Future
14. Emergence Vigor
17. Activity Footprinnts
2. Innovative Ways
33. Polishing Senses
0. Creative Collaboration
18. Chaotic Path to Breakthrough
21. Roadmap to the Goal
32. Endurance to Continue Creating
3. Create a Legend
19. Ideas Taking Shape
22. Improvised Roles
31. Context of the World
30. Strategic Developments
24. Power to Change the World
20. Inside Innovator
23. Spadework for Creativity
29. Project Followers
28. Beyond Expectations
25. Quality Line
26. Creative Clashes
27. Generative Destruction
● Create a Legend
● Chaotic Path to Breakthrough
● Ideas Taking Shape

Fig. 38. Overall Pattern Language Structure of *Collaboration Patterns*

6. CONSIDERATION ON MANGA STYLE

Manga-like expression can be traced back to around 800 years ago in Japan, specifically during the period from the mid-12th century to the mid-13th century. Although there is a possibility that such expressions existed even before that time, the surviving paintings that confirm its origin date back to that period. One such example is the *Chōjū-jinbutsu-giga* (Scrolls of Frolicking Animals and Humans), which depicts adorable behavior and interactions among animal characters.

Chōjū-jinbutsu-giga "is a compilation of individual works by multiple artists, each with their own unique characteristics, forming a collection of satirical drawings from the Heian and Kamakura periods, and features comical depictions of anthropomorphized animals such as monkeys, frogs, and rabbits, as well as humorous human caricatures, spanning one and a half scrolls" (Sawamura, 2020, p.22, translated by authors of this paper; This applies similarly to the following). The author of *Nihon Manga Zenshi* (The Complete History of Japanese Manga), Osamu Sawamura, remarks about this Chōjū-jinbutsu-giga as follows:

> "It is filled with playful humor and shows a sense of entertainment in the narrative. The drawings are skillful, employing deformations and simplifications throughout. These aspects make *Chōjū-jinbutsu-giga* renowned as a representation of manga-like expressions that have already appeared in Japan from ancient to medieval times" (Sawamura, 2022, p.24).

Later, around 350 years ago (late 17th century), a revised version of a book teaching Buddhist doctrines incorporated a six-page section with humorous illustrations. In the section, "1. satirical elements and comical scenes, 2. prominent (skeletons of) characters, 3. dialogue inclusion (later known as speech balloons), and 4. frame divisions" (Sawamura, 2022, p.26) exhibited manga-like expressions. Additionally, the globally acclaimed *ukiyo-e* prints also began around the same period in the late 17th century. *Ukiyo-e* prints are also known for their "imaginative and unrestricted depictions, containing numerous manga-like expressions" (Sawamura, 2022, p.28).

Then, around 200 years ago (early 19th century), Hokusai Katsushika (1760-1849), famous for his *ukiyo-e* prints such as "Thirty-Six Views of Mount Fuji", drew a picture book called "Hokusai Manga", where the term "manga" was introduced. The word "*manga*" derives from the term "*man*," meaning "as one pleases," and Hokusai referred to his casually drawn pictures as "*manga*." Hokusai also described his "Hokusai Manga" as "pictures drawn aimlessly as one pleases."

The book featured lively depictions of townspeople, warriors, landscapes, and plants, capturing everyday life with an eye that resonates with modern manga. Additionally, the humorous expressions often portrayed in contemporary ukiyo-e prints also connect to the entertainment and humor found in manga today. The artistic style emphasized frame divisions and narrative storytelling. Due to these factors, Hokusai is sometimes referred to as the "First Manga Master".

In the 20th century, manga appeared in newspapers initially as political and social satires, but they soon expanded into entertainment for the general public. During this process, techniques that are now characteristic of modern manga, such as frame layout, speech balloons, and consistent character designs, were established. During this period, there were also serialized works in newspapers and magazines that depicted the lives of ordinary people as story manga, gaining popularity.

After the Great Kanto Earthquake in 1923, it is said that manga played a role in comforting the hearts of the common people. The newspaper industry was also affected by the disaster and had to start over, but "Making the restart from the earthquake as an opportunity, each newspaper worked on refreshing their page layouts. Manga was considered one of the selling points due to its popularity among readers, and as a result, the format of '4-koma' (four-frame manga) with daily serialization became commonplace in newspapers" (Sawamura, 2022, p. 53).

In this way, manga can be seen as an expression that is deeply intertwined with the era it belongs to, rather than just stories of imaginary worlds. While being tied to the times, manga also possesses entertainment value, which is one of its defining features. The book *Nihon Manga Zenshi (The Complete History of Japanese Manga)* points out that manga "has constantly pursued entertainment value, wit, and joy, skillfully capturing the customs of the times while incorporating satirical elements," and as a result, "popularity and high culture go hand in hand, becoming an integrated whole" (Sawamura, 2022, p.16-17).

Based on the above, this paper aims to summarize the characteristics of manga in the following three points:

(1) Relevance to the times (timeliness)
(2) A perspective on everyday life (everydayness)
(3) Fun and humor (entertainment value)

When it comes to expressing pattern language through manga, it is acceptable to simply use manga as a means of expression; however, if one wishes to inherit these characteristics of manga, pattern manga can be considered as one style within the realm of manga.

If we take the pattern manga for *Words for a Journey* as an example, there is (1) relevance to the times (timeliness) in the sense that it represents one of the societal characteristics symbolizing the present era, where it is currently said to be "The Age of Eight Million People with Dementia" in Japan's aging society. Also, *Words for a Journey* focuses on the lives of individuals with dementia and their families, truly capturing the essence of daily life, thus giving (2) a perspective on everyday life (everydayness). As for (3) fun and humor (entertainment value), while the pattern language itself may not be strong in this aspect, when transformed into a pattern manga, it becomes an engaging and enjoyable story of one family's heartwarming challenges.

In the pattern manga of *Collaboration Patterns* the (1) relevance to the times (timeliness) is relatively weak; however, one could argue that it can be seen as a reaction to the repetition of similar events in a stagnant society. For (2) a perspective on everyday life (everydayness) revolves around the daily life of teenagers in school. The

(3) fun and humor (entertainment value) arise from the idea of holding a school festival outside of school, which may seem reckless, but the anticipation of where the concept will lead captures the readers' interest.

In the pattern manga of *Words for a Dialogue* and *Learning Patterns* follows the structure of a comedic four-frame manga, and a slightly humorous punchline is depicted at the end. It can be said that it exhibits (3) fun and humor (entertainment value) characteristic. When it comes to pattern manga, if the humor is overly emphasized and overshadows the content of the pattern, it becomes counterproductive, as the essence of the pattern may be overshadowed, so, it is necessary to have a soft punchline that doesn't overshadow the content of the pattern but still elicits laughter.

Overall, we can see that pattern manga are a good way to present specific scenarios. Also, in addition to and different from traditional pattern descriptions or explanatory text, pattern manga can be a new way to communicate crucial messages patterns convey. If the pattern can be reached to a more general audience, no matter the method, the message can be spread even more.

7. CONCLUSION

In this paper, we presented a method of expressing and communicating pattern languages through manga, different from text, and presented a prototype to illustrate this approach. In Japan, manga have permeated society from children to adults, making it arguably the most widely consumed media.

Moreover, as is well known, Japanese manga, along with animation, have spread throughout the world. These observations highlight the power of manga to reach people and their approachability. Currently, various themes are being introduced through manga with titles like *Understanding ***** through Manga*, leveraging these strengths. Examples include organizational learning, SDGs management, design thinking, problem-solving, Drucker's management theory, Adlerian psychology, active listening techniques, and natural farming, among others.

Considering these trends in manga, we realized that pattern languages have traditionally been conveyed solely through serious expressions for serious content. However, we wondered if it would be possible to deliver serious content in a more approachable and enjoyable manner. In this paper, we demonstrated such an attempt by actually creating prototype manga. It should be noted that all the authors were beginners in drawing manga, and this was our first endeavor in this field. Also, the pattern manga types and patterns expressed were not selected with any criteria but coincidentally, and we believe any pattern can be expressed in any manga type or format.

The manga presented in this paper is available as *Pattern Mangazine Vol. 1* on our website [3] (Figure 39). What we have presented here is merely a beginning. In the future, as we continue to create pattern manga, we hope to invite other pattern language creators to explore the possibilities of collaborating with manga and raise awareness among manga creators about the potential of pattern languages.

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[3] http://mangazine.jp

PATTERN
MANGAZINE
VOL. 1
Context
Quality
Problem
Without
Solution
A Name

Fig. 39. The Book Cover of the *Pattern Mangazine Vol. 1*

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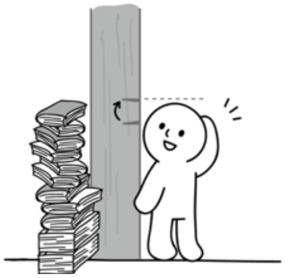
APPENDIX

A.1 Original Pattern Description of ***Tangible Growth***

The content of ***Tangible Growth*** pattern in *the Learning Patterns* is as follows (Iba and Iba Lab, 2014a):

Tangible Growth

You don't grow in a day.



You need to continue practicing for *Skill Embodiment* or taking a L*anguage Shower*.

▼In this context

It is not easy to keep yourself motivated to learn.

- It takes a long time before you realize the effect of learning.
- It is difficult to maintain your motivation to work hard.

▼Therefore

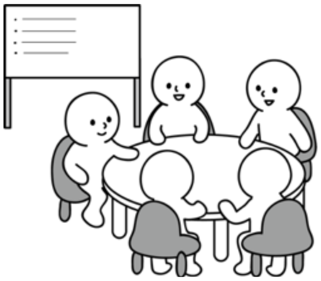
Record your learning activities so you can reflect on your path and improve. Underline passages and write notes when reading books, set out the books and papers you've read, or hang your own work on the wall. Sometimes, look back at your learning path to realize how your knowledge and skills have grown.

A.2 Original Pattern Description of ***Community of Learning***

The content of ***Community of Learning*** pattern in *the Learning Patterns* is as follows (Iba and Iba Lab, 2014a):

Community of Learning

Two heads or more are likely better than one.



You've realized that what you are starting to work on is a challenging problem or activity.

▼In this context

What you want to study is too big and too difficult to explore alone.

- A person's time is limited.
- A person's knowledge is limited.
- Knowing various viewpoints leads to a deeper understanding.
- It is difficult to continue efforts alone.

▼Therefore

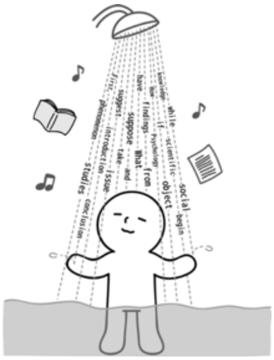
Build a community of learning with people who share similar interests. Form a plan to build a "community of learning," thinking about what type of workshops or projects you want to conduct. Recruit members from your surroundings who are interested in your plan. Then, decide how to demonstrate your efforts. For example, write a paper, publish online, or conduct a seminar; these will sustain your activities. Based on this plan, recruit more members beyond your acquaintances with similar interests. Thereafter, hold frequent formal and informal meetings. Sometimes, reflect on what you have done to maintain member motivation.

A.3 Original Pattern Description of ***Language Shower***

The content of ***Language Shower*** pattern in *the Learning Patterns* is as follows (Iba and Iba Lab, 2014a):

Language Shower

Submerge yourself in an environment where you are
exposed to the language you want to master.


first
phenomenon
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You want a good command of a foreign language.

▼In this context

Mastering languages is difficult.

- The sense of a language is affected by the nature and culture where it is used.
- Expressions enable you to convey what you want to say.
- It takes a long time to master a language.

▼Therefore

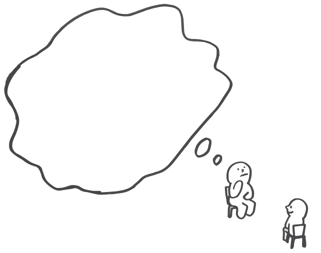
Establish an environment where you can always listen to and read a foreign language. If you want to master a foreign language, establish your environment — for example using mobile media — to continue listening to and reading it. Then, make rules to use the language every day, for example, listen to an online radio broadcast or audio book in the background. Physically recording your learning activities as ***Tangible Growth*** (5) is a good way to maintain your motivation.

A.4 Original Pattern Description of ***Pause for Thinking***

For reference, let us include the content of the ***Pause for Thinking*** pattern of *Words for a Dialogue* (Iba and Nagai, 2018):

Pause for Thinking

Wait for words to be born.



You asked the other a question about themselves.

▼In this context

When they do not respond to you right away, you may want to change topics or reword your question, but this may intercept their thoughts and words as they are forming. If you do not get an answer right way, you may think that they did not understand your question and try to rephrase it. But the deeper the question makes them reflect, the more time they need to think and put their thoughts into words.

▼Therefore

Wait for them to think and gather their thoughts into words. The Silence after asking a question is not something meaningless. Rather, it is time for them to recall their past experiences and feelings, and search for the words to express them. Trying to rush their answer would disrupt this time. You should relax and wait with them until they are ready to respond.

▼Consequently

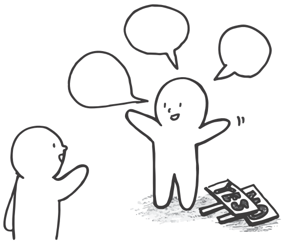
Instead of simply saying what they already knew, they will be able to look back at their experience, see it in a new light and find the words to talk about it. In this way, not only will the dialogue about their ***Experienced World*** expand, but the other will also gain an opportunity to redefine their ***Experienced World***.

A.5 Original Pattern Description of ***Open Question***

The content of ***Open Question*** pattern in *Words for a Dialogue* is as follows (Iba and Nagai, 2018):

Open Question

Questions that open the other person's mind and make them think.



You want to ask questions to hear the other person's story.

▼In this context

If you ask closed questions where their response is limited to what you can think of, it will be difficult for them to express their true feelings. People use questions when trying to understand another person. However, if you ask questions that limit them to 'yes' or 'no' responses or ask questions that offer a limited choice from multiple answers, you can never expand the dialogue beyond your imagination. You should try to reach the raw thoughts and feelings that they have never released.

▼Therefore

Ask open questions that make it easier for them to freely express themselves. When initiating a dialogue, you should begin with an open question such as 'How do you want us to spend this time?'. When they are talking about their experience, you should keep asking questions such as 'When did that happen?', 'What did you feel when that happened?' and 'What happened next?'. In this manner, they can maintain focus on their experience and deeply discuss it.

▼Consequently

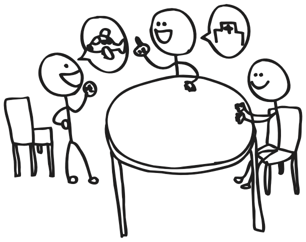
It becomes easier to deepen the understanding of their 'Experienced World' by generating an environment where the person can speak freely and discuss things that they find important. This makes the other person feel that they can take initiative to deepen the dialogue by talking about what they want without being limited to what they are asked.

A.6 Original Pattern Description of ***Preparation for the Dream***

The contents of ***Preparation for the Dream*** pattern in *Words for a Journey* is as follows (Iba and Okada, 2015b):

Preparation for the Dream

A quick first action becomes the shortcut to actualization.



You have found out that the person you are caring for has a dream or goal that they wish to achieve.

▼ In this context

You want to help achieve their goals, but you think you should wait until they recover a little before they start. This might increase the possibility of never meeting the goal. Moreover, you may feel overwhelmed by caregiving. If their dream or goal requires some amount of preparation and effort, you might think it is not possible at the moment. As a result, you tend to put it off until later until it becomes too late.

▼ Therefore

Even if the goal seems hard to achieve, start now and move little by little toward its actualization. For example, if the person with dementia wishes to go on a trip to a place, you can start by looking for transportation and possible helpers who could assist on the trip. You can ask doctors and specialists for advice on how to prepare. One person with dementia had his/her family help him/her achieve the goal of climbing Mt. Fuji. If you prepare even a little every day, the possibility of achieving the goal will increase greatly.

▼ Consequently

You will be able to help the person who you are caring for actualize their dream. The act of helping them reach their goals itself would nurture a positive attitude in the person with dementia. It is passion and dreams that motivate a person from their heart. By preparing for their dream, you will be able to meet new people who will help you. Once your family does achieve the goal, it will nurture a significant feeling of achievement and passion for the next challenge.

A.7 Original Pattern Description of ***Evangelist***

Evangelist pattern in *Fearless Change* offers “To begin to introduce the new idea into your organization, do everything you can to share your passion for it” (Manns and Rising, 2004). The solution of the pattern is described as follows:

> “**To introduce a new idea, let your passion for this new idea drive you.**
> Invest yourself in your cause. In other words, the first person to convince is you. If you don’t believe in your cause, it will be difficult to sell it to anyone else. If you’re not convinced then you’re not convincing. You must be likeable, believable, and open, but not a fanatic. This is not a role for the

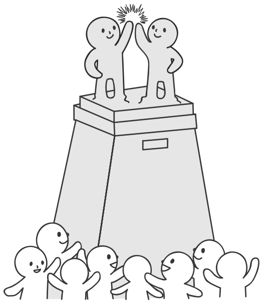
> fainthearted. Look for possibilities in every situation; take advantage of even small opportunities to get your idea across.
>
> Share your vision with others. Let them feel your enthusiasm. Tell your story–this is the driver for real change. Your story should convey your passion, excitement, and conviction and inspire others to feel the same way. It's a good idea to have a two-minute "elevator speech" targeted for different audiences, so you're ready when anyone asks you about your new idea. Show that there's value in your new idea. Don't preach—any improvements should just radiate from you and from your work. Hopefully others will notice and inquire." (Manns and Rising, 2014)

A.8 Original Pattern Description of ***Create a Legend***

The contents of ***Create a Legend*** pattern in *Collaboration Patterns* is as follows (Iba and Iba Lab, 2014b):

Create a Legend

A project whose story will be passed down to the next generation.



The team is working on their project.

▼ In this context

The project will be absorbed by all other events that are going on and will not remain in people's minds.

- New products are being produced every day.
- To stand out in the world, "good" is not good enough.
- Impact is needed to leave an impression on someone's mind.

▼ Therefore

Aim toward a project that will become a part of history, with the mindset of changing the world. Mere completion of the product is not the goal. Work out every last detail and attract the minds of people. Let the project become a legend that will be told to future generations.

▼ Consequently

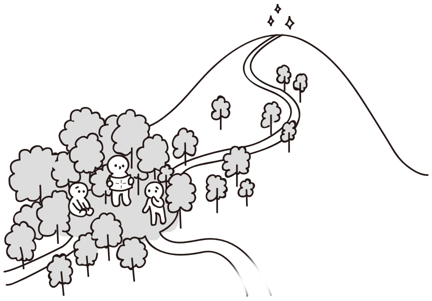
The project will be able to produce a new value that no one has ever thought of. It will have a strong impact on people and will be recognized long into the future. These legends will trigger people in the next generation to also work toward a significant goal, and the people involved in the project will also become legends and models for future creators.

A.9 Original Pattern Description of ***Chaotic Path to Breakthrough***

The contents of ***Chaotic Path to Breakthrough*** pattern in *Collaboration Patterns* is as follows (Iba and Iba Lab, 2014b):

Chaotic Path to Breakthrough

A new path awaits beyond the struggle of not knowing what to do.



The project is stuck and is making slow or no progress.

▼ In this context

Considering the project's schedule and efficiency, you become tempted to settle at a quality that is lower than the team's usual standards.

- It takes stamina to struggle through uncertainty.
- Deadlines are unmovable and approaching.
- Easily thought up ideas will never drive innovations.

▼ Therefore

Recapture the current situation as a chance to innovate new ways; stay where you are and thoroughly think through the situation. Continued silence is time spent carefully thinking; it is by no means wasted time. These situations should not be hurried or broken, but should be carefully thought out together as a team. Creating something truly new also requires creating new significance and meaning in the world.

▼ Consequently

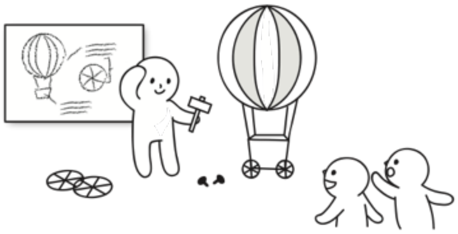
New ideas, new methods, new values will be created in the world. These novelties will bump the project up a level that is higher than the one before the struggle began. After this breakthrough, the project will again begin to rapidly progress, perhaps causing an ***Emergence Vigor*** (14). At this stage in the project, it may be helpful to rethink the ***Roadmap to the Finish*** (21) because situations may have changed.

A.10 Original Pattern Description of ***Ideas Taking Shape***

The contents of ***Ideas Taking Shape*** pattern in *Collaboration Patterns* is as follows (Iba and Iba Lab, 2014b):

Ideas Taking Shape

Some ideas are better explained visually.



You have an idea you want to share with your teammates.

▼ In this context

The newer the idea is, the more people will not understand it.

- People cannot read others' minds.
- It is hard to imagine something that does not exist.
- Words are limited.

▼ Therefore

Visually shape your idea, so others can see it while you explain it. Draw a rough sketch or make a simple prototype that visualizes your idea so both you and others can see it. While creating the visualization, work out the details of the parts that were unclear in your head.

▼ Consequently

The ideas you have will be shared with the team. These visualizations will become ***Spadework for Creativity*** (23), and give new ideas to other members. Thus, you can easily become an ***Inside Innovator*** (20) in the team. Also by visualizing and explaining it to someone else, you can gain a better understanding about the idea.