

Seeds of Transformation Cultivated by the Change Laboratory: A Case Study of Seijo Gakuen Elementary School

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***Abstract:** This study explores the potential of bottom-up school reform through the Change Laboratory. At the outset, school faced seemingly irreconcilable contradictions, such as “subject-based learning is dominant” vs. “creating a grand design for the school.” However, as the Change Laboratory process unfolded, it became evident that teachers were strengthening their transformative agency, advancing toward the stage of materializing and implementing a model for “new education” based on the concepts they had developed. Specifically, the concept of “creating,” cultivated through the Change Laboratory, served as a “springboard” for initiating concrete actions—not to eliminate contradictions, but to explore ways to enable their coexistence. This growing transformative agency has fostered the emergence of the concept of “creating new education,” highlighting the potential of the Change Laboratory to drive school reform forward.*

***Keywords:** Cultural-historical activity theory (CHAT). Expansive learning theory, Change Laboratory, Transformative agency, School reform*

Introduction

This paper analyzes a case study conducted at Seijo Gakuen Elementary School during the 2023 academic year as part of the scientific research project “Creating Expanding Schools – Toward the Formation of Transformative Agency” (Grant-in-Aid for Scientific Research (A), 2022–2026, Principal Investigator: Katsuhiro Yamazumi, Co-Investigator: Tetsuhisa Shirasu, and six others, Project Number: 22H0084). This project serves as a Change Laboratory aimed at collaboratively shaping the future of schools. By examining how the Change Laboratory has influenced participants’ actions through interviews, this

study explores the potential of bottom-up school transformation.

The Change Laboratory is a research methodology based on Cultural-Historical Activity Theory (CHAT) and Expansive Learning Theory, employing formative intervention. This method was developed in the mid-1990s by the research team of Yrjö Engeström at the University of Helsinki, enabling participants to collaboratively create their own future (Engeström, Y. et al., 1996). Yamazumi, K. (2021), a leading scholar of activity theory in Japan and a close associate of Yrjö Engeström, introduced the Change Laboratory in his book and presented cases where formative intervention research has facilitated school reform in Japan. School reform in Japan is generally conducted through a top-down approach by administrators and policymakers. However, in addition to Yamazumi, K. (2021), other scholars such as Sato, M. (2018) have examined efforts in bottom-up school reform. Furthermore, some private elementary schools, including Seijo Gakuen Elementary School, have successfully established unique educational models through bottom-up approaches.

Nevertheless, Japan's standardized curriculum, which is legally binding, creates an environment where the development of unique subjects or cross-disciplinary curricula remains challenging. Education rooted in "child-centeredism," influenced by the progressive education movement in Western countries in the 1920s and passed down in private elementary schools, is becoming increasingly rare. For example, the subject of "Walks and Play" (called "Sanpo·Asobi" in Japanese, a form of educational walk and Play designed to foster children's intrinsic curiosity and deepen their sense of humanity) remains in only a few elementary schools.

Under these circumstances, the growing global emphasis on inquiry-based learning has begun to spark changes in Japan. For instance, all 18 elementary schools in Shibuya Ward, Tokyo, have adopted a curriculum structure where morning sessions are dedicated to subject-based learning, while the afternoons focus on inquiry-based learning, starting in the 2024 academic year. In such schools, curricula for inquiry learning can be determined at the school level. This trend is expected to expand across Japan.

In this context, analysis of the first-ever case study of a Change Laboratory implemented in a Japanese elementary school holds significant meaning for future Japanese educators aiming to engage in school development through a teacher-driven approach.

1. Research Objectives

Top-down school reforms often fail to bring about meaningful internal changes in teachers. In contrast, intervention studies based on the Change Laboratory approach adopt a participatory model in which teachers actively identify and address issues themselves. This participatory nature has drawn attention as a new method for school transformation.

Thus, this study aims to clarify teachers' experiences and perceptions at Seijo

Gakuen Elementary School regarding the Change Laboratory process —what they felt, what remained in their subconscious, and the trajectory of their insights. By doing so, we examine the potential of the Change Laboratory as a tool for school reform.

2. Research Methods

- **The first phase:** From December 2022 to March 2023, prior to the implementation of the Change Laboratory, semi-structured interviews were conducted with six teachers (A, B, C, D, E, F) regarding the issues they perceived in elementary school education. The collected data served as mirror materials (documents) for the first session of the Change Laboratory. From March 2023 to March 2024, a total of ten Change Laboratory sessions were conducted. The recorded discussions from these sessions were used for analysis.
- **The second phase:** From June to July 2024, after the completion of the Change Laboratory, semi-structured interviews were conducted with the six participating teachers (A, B, C, G, H, I) regarding their reflections on the Change Laboratory process. The transcripts were analyzed using the Modified Grounded Theory Approach (M-GTA; Corbin, J. & Strauss, A., 2008), with the aim of generating a results diagram.

Ethical Considerations

The participants were provided with both verbal and written explanations of the study's purpose, methods, voluntary participation and withdrawal, privacy protection, and the scope of data usage. Informed consent was obtained both verbally and in writing.

3. Results and Discussion of the First Phase

Private elementary schools in the Tokyo metropolitan area have been experiencing a decline in applicants due to the decreasing birthrate. In response, these schools are increasingly seeking prominent reforms to attract more applicants. At Seijo Gakuen Elementary School, there has been a growing trend in recent years toward developing new educational practices that could contribute to the broader educational community.

A significant driving force behind this movement was the resumption, after 13 years, of an academic conference held at the school in 2021. This conference provided an opportunity for teachers nationwide to observe lessons and offer feedback on research findings to the school. The impact of this event was substantial in fostering the school's commitment to innovative educational practices.

The following boxed sections present excerpts from interviews. The letters A, B, E, and F correspond to four different teachers.

A: As long as teachers are allowed to do things their own way, I feel that the school may struggle to establish a unified value.

B: As faculty members representing the school, I believe it is time for us to take a more concrete and collective perspective on what the school stands for.

As these statements suggest, a grand design is gradually being developed to share the school's values, foster unity, and advance research collectively. However, at Seijo Gakuen Elementary School, there has traditionally been a policy of "not establishing a school policy."

A: There is a policy of not establishing a school policy. It feels like a paradox, but in a way, not having a policy itself is considered a value.

E: The question of what defines "Seijo-ness" has been continuously asked, for better or worse. However, since it is also something that is felt intuitively, it is difficult to articulate in words. That aspect is, to some extent, gradually being lost.

What can be inferred from these statements is that a school's philosophy should be passed down over time rather than codified into written form. As E expresses concern that it is "gradually being lost," the decrease in dialogue among teachers during the COVID-19 pandemic, along with the lack of a clearly articulated school policy, has increased the risk of losing tradition. However, there are also advantages to not formalizing the school's policy in written form:

- The lack of a fully articulated policy reduces the risk of being bound by tradition. When attempting to initiate something new, discussions among teachers become necessary. Therefore, all teachers have the potential to take a leading role in school reform.
- School cultures that hold significance for children are preserved, while those with less meaning are gradually eliminated. Consequently, the school's direction can flexibly adapt to the needs of the times.

The movement toward creating a grand design contradicts and conflicts with the policy of "not establishing a school policy." Resolving this contradiction is not easy. Furthermore, as seen in F's statement below, the desire of some teachers to maintain the school's tradition also makes reform more challenging.

F: In a school where alumni frequently visit, there is often a strong desire to preserve as much of the enjoyable past image of Seijo as possible. There are probably teachers as well who remember the good old days and wish for things to remain unchanged.

As these contradictions have surfaced, the need for thorough discussions among teachers has increased.

A: If advancing reforms were to erase the values that Seijo has cherished, that would be a great loss, wouldn't it? I feel that there may be things that will inevitably be lost in the process of working together, which is why I truly want everyone to engage in discussions about this.

From these statements, it becomes clear that at the beginning of the Change Laboratory, the question of "What defines Seijo's identity?" had emerged.

4. Implementation and Analysis of the Change Laboratory Conducted at Seijo Gakuen Elementary School

The Change Laboratory at Seijo Gakuen Elementary School began with the presentation of a list of nine conflicting contradictions and a "Current Report on Walks and Play" as mirrors, proceeding as outlined in Table 1. Examples of these contradictions include "Subject-based learning is dominant" vs. "Creating a grand design for the school" and "Few rules are imposed on children, emphasizing their individuality and life skills" vs. "Instilling manners and learning discipline. Ito,D. & Yamazumi,K. (2024) conducted a hierarchical cluster analysis using text mining to examine the flow of discussions, and evaluated this Change Laboratory as follows.

- Thorough preliminary research and preparation were conducted, and appropriate mirror materials were presented, which had a significant impact on enabling stakeholders to share information about the current situation.
- The presence of contradictions and conflicts is presumed to have triggered expansive learning actions, serving as the driving force to initiate the cycle.
- Practitioners exhibited extremely horizontal relationships, as seen in their practice of calling each other by nicknames, which allowed them to freely and unhesitatingly express their thoughts and opinions.
- Through discussions on the purpose of the school's establishment and historical analyses of educational practices, materials that facilitated modeling were repeatedly presented and shared with practitioners.

- During class observations by practitioners, ideas for sketching initial models were sometimes discovered.

Table 1: Overview of the Implementation of the Change Laboratory at Seijo Gakuen Elementary School

	Date/Time spent	# of participants	Targeted aspects	Targeted expansive learning activities
1	3/3/23 Fri. 126 min.	1 principal, and 1 vice-principal 12 teachers 7 research team members	Mirror (past and present)	1_Questioning
2	4/21/23 Fri. 129 min.	8 teachers 7 research team members	Mirror (past and present)	2_Analysis (# 1) -Analysis of history + present experiences
3	5/19/23 Fri. 131 min.	5 teachers 8 research team members	Mirror (past and present)	2_Analysis (# 2) -Analysis of history + present experiences
4	7/21/23 Fri. 118 min.	8 teachers 4 research team members	Mirror (past and present)	2_Analysis (# 3) -Analysis of activities in history and present contradiction using Activity System Model
5	9/15/23 Fri. 181 min.	5 teachers 5 research team members	Mirror (past and present)	2_Analysis (# 4) -Analysis of activities in history and present contradiction using Activity System Model
6	10/27/23 Fri. 209 min.	5 teachers 1 educational research institute staff 5 research team members	Idea and Tool/Model and Vision (future)	3_Modeling the new solution (#1) -Utilization of 4 quadrant model of 'Zone of proximal development'
7	11/17/23 Fri. 170 min.	2 teachers 6 research team members	Idea and Tool/Model and Vision (future)	3_Modeling the new solution (#2) -Proposal of new experimental projects
8	12/15/23 Fri. 166 min.	8 teachers 5 research team members	Model and Vision (past, present, and future)	4_Examining and testing the new model
9	1/26/24 Fri. 170 min.	6 teachers 6 research team members	Mirror/Idea and Tool/Model and Vision (past, present and future)	5_Implementing the new model
10	3/8/24 Fri. 158 min.	5 teachers 6 research team members	Mirror/Idea and Tool/Model and Vision (past, present and future)	6_Reflecting on the process 7_Consolidating and generalizing the new practice

(Ito,D. and Yamazumi,K. 2024)

5. Results and Discussion of the Second Phase

From June to July 2024, three months after the completion of the ten-session Change Laboratory conducted over one year, semi-structured interviews were conducted to explore participants’ reflections on the Change Laboratory experience. The interview subjects were six teachers (A, B, C, G, H, I) who had participated in at least four sessions of the Change Laboratory. Saturation was reached with these six participants. Their participation across the ten sessions was as follows:

- A: Sessions 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
- B: Sessions 1, 2, 4, 6, 9
- C: Sessions 1, 2, 4, 8
- G: Sessions 2, 3, 4, 5, 8, 9, 10
- H: Sessions 2, 6, 7, 8, 9, 10
- I: Sessions 3, 4, 8, 10

The interviews were recorded and transcribed verbatim with the participants’ consent, and analyzed using the Modified Grounded Theory Approach (M-GTA). Through M-GTA analysis, the study generated nine concepts, three categories, one subcategory, one core category, and one result diagram (Figure 1).

The first to fifth sessions of the Change Laboratory were theoretically conducted through the following three processes, as shown in Table 2: ① Reflecting on the history of the school: ② Verbalizing concepts: ③ Utilizing the

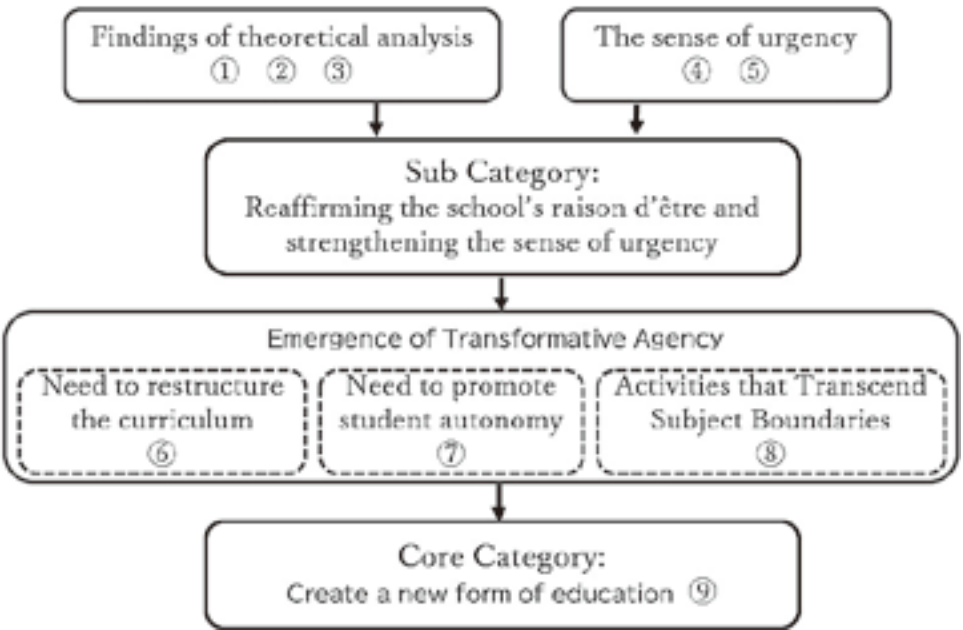


Figure 1: Results Diagram on the Flow of Consciousness of Teachers Who Participated in Change Laboratory

triangular-Activity System Model.

Through these processes, participants were able to deeply explore the gap between Seijo Gakuen Elementary School’s educational philosophy and its current state, ultimately fostering a shared understanding.

A concrete example of this occurred in the second session of the Change Laboratory, where a discussion emerged about how the school’s founder, Sawayanagi, had established Seijo Gakuen Elementary School as an experimental school in opposition to the national education system. As an answer to the question of “why” subject-based education has taken root, it was revealed that the school had adopted a “multi-subject approach” to fulfill its mission as an experimental school.

From Table 3, contradictions become apparent. Despite being an experimental school, there are very few opportunities for discussions that transcend subject boundaries. Additionally, the school’s unique approach makes it difficult

Table 2: Findings of Theoretical Analysis (category concept list)

	Concept name [teaching]	Definition and variations
①	Reflecting on the History of the School 【A, B, G, H, I】	Understanding the significance and mission of the school in the educational community from a historical perspective is considered to be connected to thinking about its future.
		I: It was the first time that external individuals analyzed the historical movements and ideas in that direction or provided proposals from an outside perspective, so in that sense, it felt very refreshing. I believe I was able to realize quite a bit about the true origins of the school and our own footing in the present.
②	Verbalizing Concepts 【A, B, C, H】	By articulating concepts in words how the school differs from other schools with external researchers, participants were able to deepen their understanding and reaffirm the unique characteristics of the school.
		C: What left a strong impression on me was the discussion about current emphasis on individual subjects was stemmed from “multi-subjectism.” I realized that this was where it originally came from.
③	Utilizing the trian- gular-Activity System Model 【G, I】	By analyzing the school’s situation using the triangular-Activity System Model, participants found the research method helpful in gradually deepening everyone’s understanding.
		I: I remember the triangularle-Activity System Model. As the research progressed, I felt that the Change Laboratory itself was growing along with it. Gradually, we discovered that there was a structured way to approach this, and our understanding deepened.

for other schools to follow its example. These contradictions heightened participants’ sense of urgency. Specifically: ④ The excessive compartmentalization of subjects, which hinders cohesive proposals to society: ⑤ The diminishing clarity of the school’s value as an elementary school.

Table 3: The Sense of Urgency (category concept list)

	Concept name [teaching]	Definition and variations
④	The Excessive Compartmentalization of Subjects, which Hinders Cohesive Proposals to Society 【B, G, I】	<p>The reason why the school’s education is not being effectively communicated to the rest of Japan may be due to the strong subject-based structure, which discourages teachers from engaging in discussions beyond their own subjects.</p> <p>G: “Everyone is becoming more focused on just their own subject. That’s what I’m most concerned about right now.”</p>
⑤	The Diminishing Clarity of the School’s Value as an Elementary School. 【B, I】	<p>Participants think that rather than remaining isolated and following its own independent path, the school should be objectively evaluated.</p> <p>I: I believe that as practitioners, we must also be researchers. Without that mindset, I don’t think we can survive as a private school in the future. A school where its value is unclear will struggle unless it can clearly articulate and communicate what makes it valuable.</p>

From points ① to ⑤, the subcategory of “Reaffirmation of the School’s Raison D’être and Strengthening the Sense of Urgency” was generated. Here, by engaging with the historical question of “Where are we headed?” the participants formed a concept akin to a “germ cell,” which serves as the foundation for generating a new activity system. As a concrete example, the following statements from the 6th session of the Change Laboratory are presented below.

A: At Seijo, I think there was a discussion about how “walks and play” should be maintained throughout all six years. In other words, if the fundamental philosophy behind “walks and play” is integrated into every subject for six years, it should be possible to incorporate it across all subjects. “Walks and play” are essentially described as “unintentional time,” meaning that it is not a class in which teachers intentionally set tasks for problem-solving, as you mentioned.

As can be inferred from this statement, teachers are revisiting the “germ cell” of Seijo Gakuen Elementary School’s philosophy—“child-centered education”—and reinterpreting the meaning of the “walks and Play” subject as “unintentional time,” rather than a teacher-led activity. From this reinterpretation, they have become aware of the “contradiction” that as students progress to higher

grades, this “unintentional time” gradually disappears. This realization has led to the idea of creating a new educational model—one that could extend “unintentional time” across all subjects for six years.

This experience in the Change Laboratory subsequently led to various actions, as shown in Table 4.

Table 4 Emergence of Transformative Agency (category concept list)

	Concept name [teaching]	Definition and variations
⑥	Awareness of the Need to Restructure the Curriculum [A, B, C, G, H, I]	The statement reflecting the recognition that the school should embark on curriculum reorganization in the future.
		H: Of course, lesson research is important, but when Professor Yamazumi mentioned curriculum research at the end, I felt a strong sense of agreement—like, “That’s exactly right! That’s what this school has always been about!” It really reaffirmed that for me.
⑦	Awareness of the Need to promote student autonomy [A, C]	The statement reflecting a concrete action aimed at promoting student self-governance.
		A: Perhaps influenced by the Change Laboratory, a movement to review school rules has begun within the student council (annotation added by the author).
⑧	Activities that Transcend Subject Boundaries [B, C, G, H, I]	The statement suggesting that instructional practices connecting different subjects and efforts to voice opinions beyond subject boundaries are beginning to take shape.
		I: The idea of developing reading and literature with a focus on “creating” may have emerged as a result of the Change Laboratory.

What can be inferred from Table 4 is that: ⑥ There is a growing awareness that curriculum restructuring should also be considered: ⑦ Concrete actions to promote student self-governance have begun: and ⑧ Efforts to transcend subject boundaries are emerging.

Although these actions are still in their early stages, teachers’ transformative agency deems undoubtedly increasing. As concrete examples of ⑦ and ⑧, the following statements from the 8th session of the Change Laboratory are provided below.

G: Creation, freedom, and self-governance are completely interconnected. I believe it is an extremely important concept for utilizing the unique character of this school to develop practices that exist only here.

A: For me, ‘creation’ and ‘inquiry’ are already completely linked. (Omitted) Earlier, the topic of ‘rule-makers’ came up, right? That essentially means creating a society, creating a world, and creating systems.

C : Lately, I’ve been having students draw pictures based on books they’ve read, create something inspired by them, or write stories about the things they’ve made. I’m currently pondering how to create time for students to connect with society and their surroundings through words and books.

At the beginning of the Change Laboratory, contradictions such as “ Subject-based learning is dominant” vs. “ Creating a grand design for the school”, and “ Few rules are imposed on children, emphasizing their individuality and life skills “ vs. “Instilling manners and learning discipline” were seen as mutually exclusive conflicts. However, as can be inferred from the statements of G, A, and C above, the concept of “creation” has become a “springboard,” not to resolve these contradictions but to explore ways to allow both perspectives to coexist. This has led to concrete actions being taken. This increasing sense of transformative agency has resulted in the formation of the core category: ⑨ Create a New Form of Education. The following are interview excerpts that characterize this core category.

A : Idea of “Change Laboratory” isn’t just about figuring out what to do in education; it’s about exploring deeper ideas, systems, and concepts that don’t yet exist in the world. (Omitted) I felt that creating something new means going beyond the framework of education and pushing further ahead.

From this statement, an action leading to expansive learning—creating an education that does not yet exist—deems to be taking shape.

6. General Discussion and Future Challenges

The flow of actions taken by teachers throughout the ten Change Laboratory intervention sessions can be summarized as follows:

- Teachers analyzed and identified contradictions by questioning the “why?” of the activity system.
- Teachers, guided by the historical question of “where to?”, formed germ cell-like concepts that could give rise to a new activity system.
- Based on these newly formed concepts, teachers have demonstrated an increasing level of transformative agency, moving toward the stage of materializing and implementing a model for a “new form of education” in practice.

Through this bottom-up intervention research approach of the Change Laboratory, the path toward enhancing teachers' transformative agency was made clear. However, the process did not yet reach the stage of yielding pilot projects through team collaboration. A bottom-up approach to school transformation is expected to require a significant amount of time. The challenge ahead is to continue investigating how the teachers who participated in the Change Laboratory will develop their projects and to clarify the trajectory of school transformation rooted in transformative agency.

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