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Why Do We Need Adventure Playgrounds in Rural Areas? The Revitalization Project of Ishikawa, Fukushima, Japan

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Abstract

This project attempted to understand the current situation of children's play in depopulating rural areas of Japan and improve the situation through a participatory adventure playground planning project. Questionnaires revealed the children's lack of friends to play with and reduction in nature play experience. The authors—a team from the Spatial Planning Laboratory, Chiba University, Japan—suggest that an adventure playground can contribute to resolving these problems. For that, a series of workshops was organized, triggering discussion of the need for nature experiences and risky play as well as responsibilities in case of injury. As a result, a plan for the adventure playground was agreed upon despite the fear of injuries and the original unwillingness of town officers to take responsibility for children's risky play.

Keywords: rural revitalization, adventure playground, risky play, workshop, citizen's participation

Introduction

The Child Growth Environment Group of the Science Council of Japan (2008) suggested the Ministry of Japan take measures to improve the child-rearing environment, focusing on children's play, in both urban and rural areas. As Japanese rural areas are depopulating, schools are being merged and there is decreased community involvement in children's daily social experiences.

During 2016–2017, a team from the Spatial Planning Laboratory, Chiba University worked as consultants on the rural revitalization project in Fukushima Prefecture, which gave us an opportunity to bring the idea of adventure playgrounds to the area. In this field report, we share the participatory playground planning project, in which we saw a change of citizens' attitudes toward risky play—defined as thrilling and exciting play that can include the possibility of physical injury. Risky play includes play at height, at speed, near dangerous elements (such as water or fire), with dangerous tools, rough and tumble play, and play where there is potential for disappearing or getting lost (Sandseter, 2009; Brussoni et al., 2015)—and how the design plan was approved and implemented as a result.

This report will describe how the following questions were addressed through this project:

1. What is the current situation of children's play in rural areas?
2. Could adventure playgrounds be beneficial to children living in depopulating rural areas?
3. How can we facilitate the development of adventure playgrounds in rural areas?

Background of Japanese Rural Areas

Depopulation and School Integration Policy

In 2016, only 12.4 percent of the population of Japan were children, the lowest level on record according to official statistics (Statistical Bureau of Japan, 2017). Since the Japan Policy Council reported on regional depopulation in 2014, the possibility of regional cities disappearing became clear, and these municipalities received directives to reduce their administrative and public expenditures (Japan Policy Council, 2014). Young people from these regions continue to move to metropolitan areas. In response, the Japanese government organized a council on overcoming population decline and revitalizing local economies, aiming to ensure local communities have opportunities for work and child-rearing.

However, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) changed the guidelines for the location of schools (MEXT, 2015), making school consolidation (the process of merging schools together for social and economic reasons) easier. The government anticipated negative consequences for children's health and well-being, such as decreases in physical activity, playtime, and at-home learning time, and an increase in fatigue caused by using bus or automobile transportation to and from school when previously most children would have walked or cycled. The government recommended that children have a break after school

lesson time to provide time and space for physical activity and provided a flexible timetable for transportation (MEXT, 2015).

Adventure Playgrounds in Japan (Citizens' Movement and Rural Development)

Adventure playgrounds are outdoor play environments that have the potential to offer an abundance of opportunities for children to grow emotionally, socially, and physically (Staempfli, 2009). In Japan, a citizen-led adventure playground movement has developed motivated by the lack of good play environments in cities. According to a survey (Japan Adventure Playground Association, 2016), more than half of Japan's adventure playgrounds are concentrated in the most urbanized regions, including the Tokyo metropolitan area and the Kansai area. However, recently, the adventure playground movement in rural areas such as Higashine City (Yamagata) and Bizen City (Okayama) has offered a new perspective on adventure playgrounds in the context of rural revitalization. The movement's potential for community revitalization and attracting the younger generation to depopulating areas is gradually starting to be recognized.

Project

Request to Create an Adventure Playground in Ishikawa, Fukushima

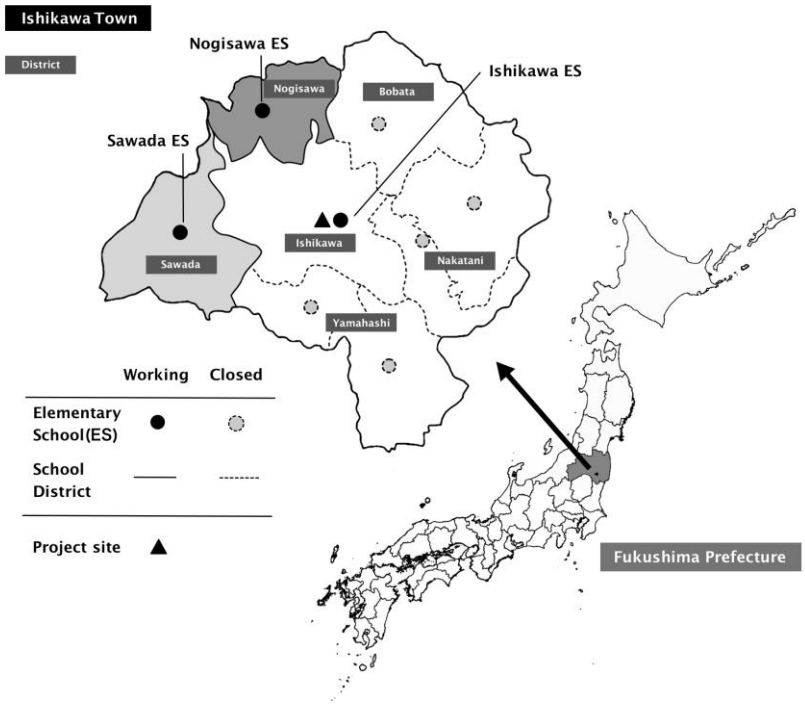
Ishikawa is a town in a mountainous area in the southern part of Fukushima Prefecture, Japan (Figures 1 and 2). Fukushima Prefecture became well-known around the world after the Great East Japan Earthquake and the nuclear power station disaster, however Ishikawa is one of the places fortunate to have been bypassed by radioactive fallout (Ishikawa Town, 2017).

Figure 1. Landscape of Ishikawa district

From 1950 to 2015, the population of children under 14 years old in Ishikawa decreased from 9,376 to 1,741, with the total population decreasing from 24,493 to 15,884 (Ishikawa Town, 2017). It was identified as a depopulating area according to the policy of the Japanese government. After 2015, the local government had to close

six elementary schools out of eight, merge them, and open a new one. Now there are only three schools in this town (Figure 2). Some of the merged schools had more than 150 years of history and closing them was very traumatic for the area, with the empty buildings silently reminding people that they were not able to manage the local decline.

Figure 2. Location of Ishikawa and its elementary schools



Project Purpose and Goals

As a depopulating rural town, Ishikawa received a budget from the Japanese government's rural revitalization strategy project. Supported by the central government, Ishikawa is trying to overcome the challenges of rural depopulation and, despite rumors about radioactive pollution, to increase the younger population by creating an outstanding child-rearing environment. The playground project described here is an example of this revitalization program in action.

In 2016, Ishikawa began the search for a professional group to be consultants for the design and development of the "old Ishikawa elementary school renovation project" (Figures 3 and 4).

Figure 3. Typical playground in Ishikawa

Figure 4. Project site: Old Ishikawa elementary school

One part of the project was to create a new playground in the schoolyard, and the Town Office wanted to have an adventure playground, which would be managed by citizens. The contract period was one year, starting in April 2016 (the budget of government programs must be used in one fiscal year) and the Town Office set two goals:

1. Plan the playground, to be implemented using commercial manufactured play equipment
2. Seek to establish an adventure playground management team.

Normally, adventure playgrounds in Japan are equipped with hand-made play equipment and managed by citizens. From experience, we knew that building an

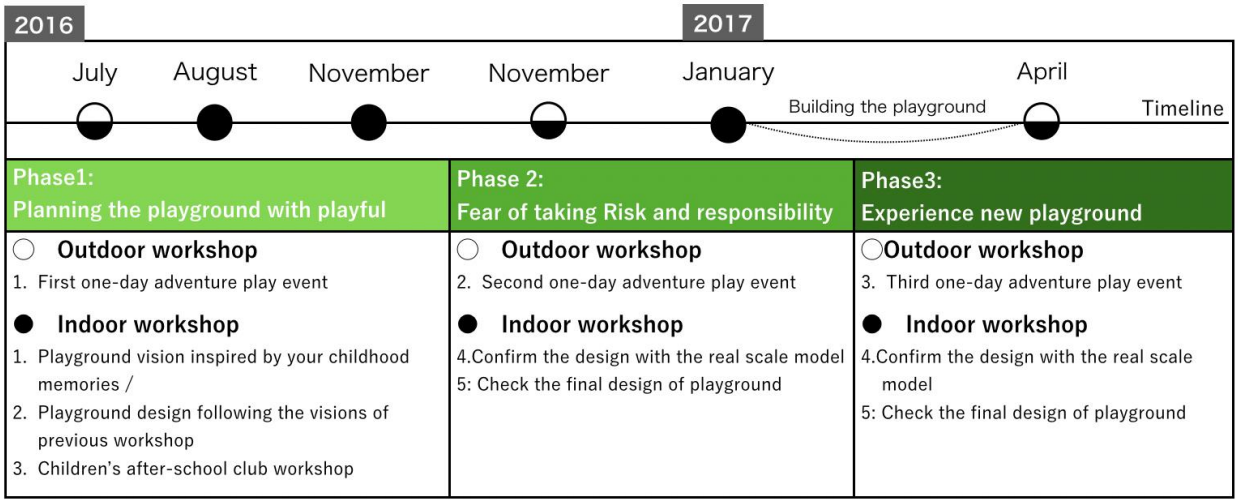
adventure playground management team can take up to 10 years. Considering that, we suggested installing some play equipment as a base for the playground, which would allow development of an adventure playground in the future.

Project Plan

We organized a questionnaire and series of outdoor and indoor workshops with citizens (Figure 5). We designed the workshops not only to ask citizens what they wanted on the playground but to teach them about adventure playgrounds through real experience (adventure play events) and creating the possibility to reflect on their experience and bring it to the next workshop (implement into design). We used this action-reflection loop, an action research system, as a framework for the project.

To attract citizens to workshops and events, we used local newspaper advertisements, announcements to citizens' circles by town officers, and the Ishikawa home page.

Figure 5. The process of the project



Questionnaire

We conducted a questionnaire survey of three generations from October 15th to 22nd in 2016. Elementary school children in 3rd, 4th, 5th, and 6th grades (aged 9 to 12) received the survey and filled it in at home with their family. Only responses of people who grew up in the town were included in the findings. There were 454 total questionnaires, and 397 (87.4 percent) of the responses included children, 246 (54.2 percent) of the responses included parents, and 79 (17.2 percent) of the responses included grandparents.

Outdoor Workshops: One-Day Adventure Play Events

Outdoor workshops took the form of adventure play events organized by experienced playworkers (see Acknowledgement). The events suggested a variety of play: water slide, making fire, cooking on the fire, access to tools, woodwork, etc. They brought new play experiences to children and created an environment to stimulate thinking

about playground design outside standard limits and beyond participants' previous experience. Town officers who would make decisions and had responsibility for project implementation had the opportunity to see the adventure play events including risky play. These workshops ensured the children's participation in the playground design process through observation of children's behavior and actively asking their opinions in interviews. The outdoor workshops helped us respond to the question, "Could adventure playgrounds be beneficial to children living in depopulating rural areas?" The number of participants varied from 25 to 50 people of different ages.

Indoor Workshops: Citizen Participatory Adventure Playground Planning Process

Town officers pointed out this would be the first project for citizens to work together on merged territories of consolidated schools on the town level (rather than in their communities or previous school district). For that reason, we expected a low number of participants and suggested involving stakeholders who would be expected to be the key persons for organizing the adventure playground management team. Indoor workshops took place in the old school gym and focused on the design of a new playground. The workshops aimed to raise awareness of children's play situation in Ishikawa, to discuss possible solutions and, as a result, develop a design for the playground. These workshops helped to answer questions around how we can facilitate the development of adventure playgrounds in rural areas, and in particular we learned about the length of time implementing a new idea could take. The number of participants in each indoor workshop varied from 5 to 12 people.

Project Process and Results

Summary of Main Findings of Questionnaire

A striking finding of the questionnaire was the lack of friends and nature play in the rural area. We found that: 1) 31 percent of children who responded did not have friends to play with after school (children going to school by bus or car had fewer friends than those walking); 2) nature spaces were not used as a play spaces by most children—for example, rivers and ponds were used by only 3 percent of children, forests by 5 percent, and agricultural land by 7 percent, compared to indoor environments like homes (82 percent); and 3) not only is nature play experience decreasing from generation to generation, the number of children having nature play experiences by themselves, without parents, is also decreasing (Ishikawa Town, 2017).

Phase 1: Planning the Playground with a Playful Mind

First Adventure Play Event Brings New Experience to the Town

The town officers showed uncertainty and nervousness about the first adventure play event as this was the first event of its kind held in Ishikawa, so we agreed to use only a limited area for the event. The event made an impact on both citizens and town officers. Children showed creativity and invented play by themselves (Figure 6); for example, children used the wheelbarrow as a bath, and one boy saw the fire play and bought a chicken at a supermarket to make a barbecue. We observed that children who at first hesitated to get dirty, gradually played freely with others; they had time

to observe activity around them until they gained confidence. Similarly, children who were at first afraid of the water slide gradually overcame their fear. Parents were happy to see their children play freely without limits: "It is nice to have a playground where children can try so many things; we did not have it before!" Town officers experienced the meaning of "freedom to play" and considered using a larger space for the next outdoor workshop.

Figure 6. Some examples from the first adventure play event. Clockwise from top: water play, constructive play, water slide

Indoor Workshop: Citizen Participatory Planning Workshop

Participants recalled their childhood memories of play and compared them to current children's play. At the adventure play event, adults and children experienced free play and drew inspiration for the future playground design. As a result, the working group focused on concepts of nature and risky play for design and the idea emerged to use the mountain slope (see Figure 9, below) in the design.

Phase 2: Fear of Taking Risk and Responsibility

Second One-Day Adventure Play Event

Play equipment was set up on the site to reflect the design suggestions from the second indoor workshop. To show that the adventure playground movement is formed through collaboration with many actors, we asked local companies and non-profit organizations to provide materials and human resources. Landscape design students came for practical training. Both the design suggestions and experience from the last event persuaded town officers to agree to using the broader area, including the mountain slope. The children hesitated to play on the slope because in daily life it is prohibited, or they feared insects and dirt under the trees. The authors observed that it was quite difficult for children to organize adventurous play by themselves but with guidance, and after seeing examples, they started playing (Figure 7). We observed that older children helped younger ones test themselves in risky play and tried to organize groups to invent and sustain the play. Older children's abilities were limited from lack of experience too, but the opportunity to pass on play knowledge to younger children was welcomed.

Figure 7. Some examples from the second adventure play event; adults helped children initiate the play. Clockwise from top: Slope where play had previously been prohibited, fire in soil oven, rope swing.

Indoor Workshop: Expressing and Addressing Fears

After proceeding with the adventure playground concept, fear and criticism came from citizens and town officers. Some participants who joined the workshops for the first

time showed their fears and challenged others with statements and questions such as: "Safety is a priority"; "Children don't need this type of playground because they don't play outside like this"; "Can you take responsibility if an accident happens while children play with the pulley rope?" One of them linked the conversation to mass media coverage of injuries and accidents. Informed by the design process of the playground, experienced participants replied: "because of these kinds of fears, children are playing less and less outside," and "because of citizens like you, the town office is afraid to be sued by citizens, and playgrounds are getting less attractive. Children with all their might asked to put it here." As a result of the dialogue, someone suggested softening the ground, so a fall would not lead to major injuries. In addition, the need for a management organization was acknowledged.

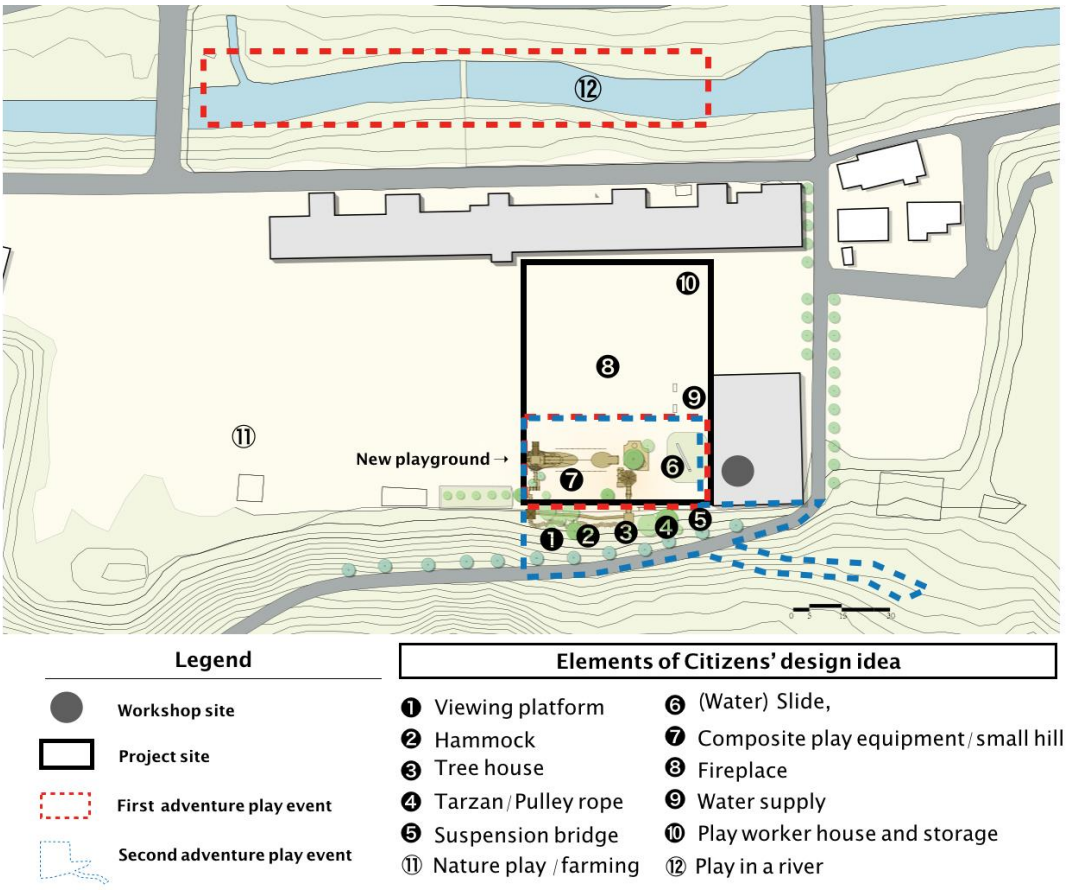
Phase Three: Experiencing the New Playground

Third One-Day Adventure Play Event

On the new playground, children started their play without any encouragement from the play worker (Figure 8). They climbed the slope and initiated the creation of the rope swing by themselves. One child came to make a fire. He had participated in previous events and learned from older children that fire play could only be done during event time. Children were empowered and expanded their creativity through participation in decision-making and the freedom to play at the event. This event was a memorable moment, since were able to see in children's increased independence the results of the work undertaken with children through the process.

Figure 8. Some examples from the third adventure play event; note that children are initiating the play by themselves. Clockwise from top: play on slope, secret base, children set rope swing.

Figure 9. Location of the new playground, the series of workshops, and citizens' design ideas from workshop 2 (black numbers)



Indoor Workshop: Finalizing the Plan

After the workshops and questionnaires, we finalized the plan for the playground (Figure 10) and contacted a play equipment company with the request to address the following components:

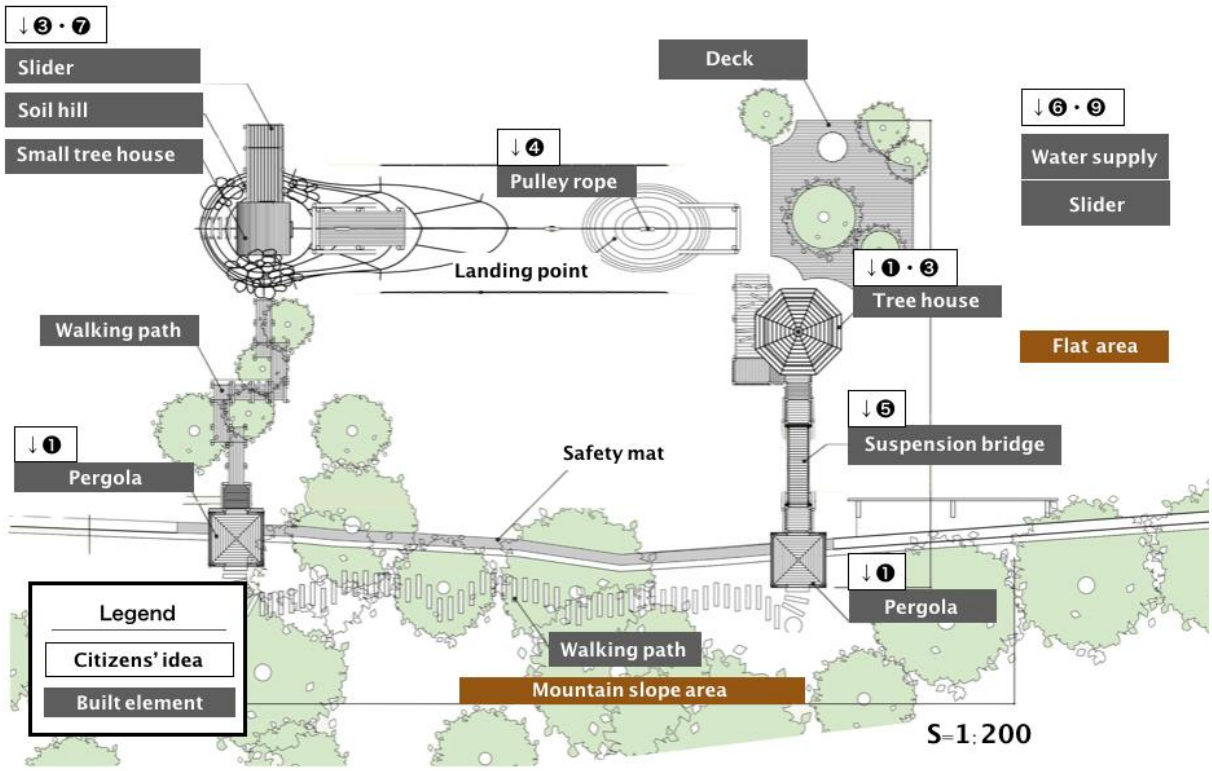
- opportunities to gather and play together
- composite playground equipment combined with slope topography and nature
- using characteristics of the former Ishikawa elementary school
- using play equipment that would make a suitable base for the development of an adventure playground.

Just before the installation of the playground equipment, setting elements on the slope became a big discussion again. If someone fell 120 centimeters from the slope and was injured, it would be an issue for the department in charge who expressed worry about "putting the equipment on the mountain after all." Here, our work as consultants was necessary. We brought the personnel in charge to visit facilities with playground equipment installed by the same company in neighboring cities in order to

show injury-prevention solutions, such as safety mats and fences, and to discuss accident prevention measures and compliance with Japanese safety standards.

Later, they visited again with the town mayor. After about a month of dialogue, the department chief-in-charge decided to go ahead with installation because: "Everyone in the town decided it in the workshop." Even though the department members participated in the design process from the beginning, they did not share it sufficiently with others. We recognized that a greater number of town office staff should have been involved in the workshops and been provided with a thorough explanation of the adventure playground concept.

Figure 10. The ground plan of the new playground and elements originated from citizens' workshops



During construction, the children in the after-school club kept coming to the site, believing and not believing the playground would really be built, their teacher told us. "I didn't expect the pulley rope for real!" said one child. "It's fun to play tag in here!" said another. At the same time, others realized that their wish had come true and started to name more and more elements they wanted to add in the future.

After the playground was built, we reflected on the completion of this project and planned for the future, walking around the site. Children and adults were glad to try new equipment, actively discovering the features of the playground. Even the person who complained about risk during the workshop seemed satisfied and another person added: "I have not seen such a large number of children playing together at the same

time for a long time.” They also added that before this, many parents would go out of town to visit playgrounds, but now were happy to have their own. However, to have adventure play activities in the future, local citizen self-organization is needed.

Figure 11. The former playground

Figure 12. The new playground

The Effect of the Workshops: Change of Consciousness

Through the series of outdoor and indoor workshops, we observed the change in people's attitudes towards risky play and injury, which led to acceptance of the adventure playground project by both citizens and town officers. Some people continued to ask, "what if?" questions about safety, but the majority realized that small injuries are necessary, and we need to go ahead and create the playground, which will respond to the needs of children.

Conclusion and Recommendations

As a result of this process, we can answer the research questions stated above:

1. The current situation of children's play in rural areas is characterized by depletion in children's play experiences, especially decreasing numbers of friends, nature play, and use of outdoor play space.

2. During the adventure play events, we observed that children's behavior confirmed the various benefits of adventure playgrounds: children learn from other children and adults, encounter challenging and adventurous play in a group, and gradually grow their independence in play.

3. To organize an adventure playground in a rural area, this study used a tactical combination of methods in the project. First, we awakened the senses of adults and their children with a series of outdoor workshops (Kinoshita, 2007), where they came to understand the value of adventurous play in nature through their own five senses' experience. Second, we created an opportunity for stakeholders to act through the series of workshops, where participants realized the current situation of children's play by sharing hopes, concerns, information, and design for its improvement. To sustain the play, we will need a community of supporters, but encouraging citizens to organize the group in a rural area remains a challenging, time-consuming process.

Recommendations Regarding the Process and Outcomes of Organizing Adventure Playgrounds

Respond to the Situation in the Area

In Japanese rural depopulating areas, an adventure playground not only creates opportunities for making friends and experiencing adventurous, risky play in nature, but makes the area a more attractive place for young parents in general. Therefore, such a playground can legitimately be integrated into rural revitalization policy.

Prepare for a Long-Term Process

If adults are not ready to take the responsibility for children's risky play, or to give that responsibility to children themselves, it can take a long time to change the adults' opinions.

Hands-on Experience Is Necessary

To change the attitudes of people we need to expose them to diverse experiences, which respond to a diversity of their needs and perceptions. Following the

recommendation of Kinoshita, we used workshops that engaged participants' five senses.

Involve Various Stakeholders in a Participatory Process

Japanese adventure playgrounds developed as a citizens' movement, but to improve children's play situation official institutions can also take the initiative to implement them. However, if the town office just builds the adventure playground, people may not accept it and criticize the decision. A multi-stakeholder participatory process ensures that risks to the process are avoided, and critics are included in the design process. The participatory process itself is a learning process (Lave & Wenger, 1991), which builds not only a playground, but understanding of its meaning.

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