# Feature Article Challenge of "reconstruction and revitalization tourism" in Tohoku region: Practice and future of regional collaborative PBL Atsutoshi Oshima (Utsunomiya University, Japan)

#### 1. Introduction

## 1.1 Research background

Natural disasters have been occurring frequently worldwide, and tourism is increasingly expected to play a significant role in regional recovery, economic reconstruction, and sustainable community revitalization in disaster-affected areas. Since the COVID-19 pandemic, tourism has become more active globally, with diversified purposes, including visits to disaster-stricken areas as sites for "tourism" and "learning."

Several tourism theories have been discussed regarding the utilization of tourism in disaster-affected areas, including dark tourism and disaster prevention tourism. Dark tourism refers to visiting sites associated with tragic events such as wars, disasters, and major accidents, providing visitors with educational and historical insights. <sup>(1)</sup> In contrast, Disaster Prevention Tourism aims to enhance disaster awareness and preparedness through tourism activities, where both local residents and tourists share disaster prevention knowledge, contributing to the development of resilient communities.

Since the Great East Japan Earthquake in 2011, Reconstruction Tourism has attracted attention in Japan as an approach to utilize disaster remembrance and disaster prevention initiatives as tourism resources. (2) However, as memories of the disaster fade, the deterioration of disaster remains, and the aging of storytellers have made the sustainable development of reconstruction tourism increasingly difficult. To address these challenges, a new tourism model has emerged that integrates the perspectives of both "reconstruction" and "revitalization"—the Reconstruction and Revitalization Tourism (RRT) model. (3)

Revitalization, in this context, refers to leveraging local history and culture while creating new tourism resources and regional brands to achieve sustainable regional revitalization. Specifically, it includes the revitalization of local industries, the development of new specialty products, and creative initiatives led by regional business leaders.

The RRT model aims to develop a sustainable tourism framework that not only preserves disaster experiences but also fosters economic and cultural sustainability beyond disaster dependence. By enhancing synergy with general tourism resources and facilitating interactions between local residents and tourists, RRT strengthens community relationships. Moreover, it redefines tourists as "co-creators" rather than mere "consumers," emphasizing a collaborative process of discovering, creating, and sharing the region's appeal.

One of the most promising approaches for promoting Reconstruction and Revitalization Tourism is Regional Collaboration Project-Based Learning (PBL), where universities play a central role. (4) PBL is an educational methodology in which students engage in real-world problem-solving through project-based activities. This approach has gained widespread adoption in higher education in recent years. (5)

Regional Collaboration PBL is a practical educational method that brings together students, universities, and regional stakeholders—including local governments, industries, and residents—to collaboratively address economic and social challenges. This initiative has drawn attention due to its potential to generate mutual benefits for students, universities, and regional stakeholders. Through these PBL activities, students gain hands-on learning experiences, the region benefits from fresh perspectives and the involvement of younger generations, and universities gain opportunities to contribute to the community while demonstrating the impact of their educational efforts. (6) However, despite the presence of various case studies, research that systematically examines Regional Collaboration PBL in theoretical frameworks remains limited.

## 1.2 Research objectives

This study aims to analyze practical case studies of Regional Collaboration PBL that have contributed to the promotion of Reconstruction and Revitalization Tourism through tourism-related activities in disaster-affected areas. By extracting insights from these cases, this study seeks to refine and conceptualize the RRT model. The research focuses on Regional Collaboration PBL initiatives that have been implemented in disaster-affected regions of Tohoku since 2016, particularly in Iwaki City, Fukushima Prefecture, and the Akiu area of Sendai

City, Miyagi Prefecture. These initiatives can be broadly classified into two approaches: the Real Approach, which involves physical product development and face-to-face engagement, such as the creation of regional specialty products and the organization of on-site tourism events, and the Digital Approach, which utilizes digital media to disseminate information and foster engagement through the production of tourism promotional videos, online tours, and social media marketing. By examining the relationships between these approaches and Reconstruction and Revitalization Tourism, this study explores how sustainable tourism, and regional revitalization can be effectively linked.

# 2. Theoretical background and previous research

# 2.1 Theories on the utilization of tourism in disaster-affected areas

#### 2.1.1 Dark tourism

Dark tourism refers to a form of tourism in which visitors travel to places associated with tragic events, such as wars, natural disasters, and major accidents, with the aim of gaining educational and historical insights. This model plays a significant role in preserving the collective memory of a region and providing visitors with opportunities to learn from past events. Representative cases in Japan include the Hiroshima Peace Memorial Park, the Nagasaki Atomic Bomb Museum, and the "Earthquake Heritage Centers" established in the disaster-affected areas of the Great East Japan Earthquake. These facilities offer guided tours led by local residents, allowing visitors to listen to firsthand accounts of disaster experiences, thereby fostering emotional connections between visitors and local communities.

However, dark tourism presents several challenges. One major concern is that it may reduce tragic events to mere tourist attractions, leading to criticisms of "commercializing tragedy." Additionally, if visitors do not have sufficient opportunities to understand the local history and culture in depth, it may be difficult for dark tourism to generate a positive impact on local communities.

## 2.1.2 Disaster prevention tourism

Disaster prevention tourism is a form of tourism designed to educate visitors about disaster preparedness by learning from past disasters. This type of tourism is particularly prominent in regions that have experienced major natural disasters, such as earthquakes and *tsunami*, where local residents and disaster prevention experts serve as guides to provide visitors with practical disaster education. A notable example in Japan is the "Disaster Prevention Learning Tour" in Minamisanriku, Miyagi Prefecture, which includes *tsunami* evacuation drills and visits to disaster prevention facilities, enabling visitors to learn about effective disaster response strategies.

Disaster prevention tourism creates a platform where both local residents and tourists can learn together, contributing to enhanced disaster resilience in communities. Additionally, it has the potential to raise awareness about disaster preparedness among visitors, who may apply what they learn in their own communities upon returning home.

However, disaster prevention tourism also faces limitations. One issue is that public interest tends to peak immediately after a disaster and gradually decline over time, reducing the tourism appeal of disaster-related content. Furthermore, maintaining the engagement of local residents in disaster prevention initiatives is challenging, making it difficult to sustain disaster tourism programs over the long term. Additionally, ensuring stable operational frameworks and securing sufficient human resources for guiding and program management remain ongoing challenges.

# 2.1.3 Reconstruction tourism

Reconstruction tourism is a tourism model that leverages the disaster recovery process itself, incorporating earthquake memorials, disaster prevention education, and post-disaster revitalization efforts as tourism resources. The Great East Japan Earthquake, which caused extensive damage across the Tohoku region, led to the development of many earthquake heritage sites, fostering the widespread adoption of reconstruction tourism

However, reconstruction tourism also faces challenges. More than a decade has passed since the disaster, and public interest in visiting disaster-affected areas for learning purposes has gradually declined. The natural process of fading memories among both tourists and local residents contributes to this trend. Additionally, the physical deterioration of disaster heritage sites and the aging of local storytellers pose further obstacles to the sustainability of reconstruction tourism.

Moreover, large-scale disasters continue to occur annually across Japan, shifting public attention to newly affected areas. This paradoxically leads to the emergence of new locations where disaster-related learning can take place, making it increasingly difficult for earlier disaster-affected regions to maintain long-term tourism appeal. Consequently, relying solely on "reconstruction tourism" centered on disaster heritage and disaster prevention efforts presents sustainability challenges. A new approach that integrates post-disaster revitalization efforts into tourism strategies is therefore required.

# 2.2 Novelty and development potential of reconstruction and revitalization tourism

The concept of Reconstruction and Revitalization Tourism (RRT) was first proposed by Oshima (RRT) was first proposed by Oshima an advanced tourism model that expands upon the existing framework of reconstruction tourism. While traditional reconstruction tourism has primarily focused on disaster heritage preservation, disaster prevention education, and post-disaster recovery efforts, RRT shifts the emphasis toward rediscovering regional attractions and creating new value. By integrating both "reconstruction" and "revitalization" perspectives, this model promotes a novel form of tourism that leverages regional narratives and co-

creative activities as tourism resources.

A key characteristic of the RRT model is its ability to sustain regional revitalization over time, even as memories of disasters fade. By continuously generating "revitalization content," the model helps maintain engagement with both local residents and external visitors. Moreover, RRT has the potential to create synergies with conventional tourism assets, such as local specialty products, natural landscapes, and cultural heritage. An essential factor in the sustainability of RRT is the cultivation of emotional engagement, both within the local community and among external supporters. This can be analyzed through the concept of internal and external empathy.

The RRT framework also facilitates the development of two types of empathy—internal empathy and external empathy—both of which contribute to the sustainability of tourism and community engagement. Internal empathy emerges when local leaders and businesses initiate revitalization efforts that inspire and motivate local residents, fostering a stronger sense of community cohesion and collaboration. External empathy, on the other hand, develops among individuals outside the region who connect emotionally with the narrative of disaster recovery and revitalization, leading them to support and advocate for the affected area. The interaction between these two forms of empathy transforms tourism from a passive act of consumption into a dynamic process of co-creation, ultimately fostering sustainable regional partnerships and collective engagement.

However, several challenges remain in implementing the RRT model effectively. The successful realization of the "revitalization" component requires leaders with the ability to foster innovation and facilitate co-creation among diverse stakeholders. Currently, there is a shortage of such leaders, and structured programs for their development are still underdeveloped. (9) Addressing this issue will be crucial for the long-term success and sustainability of RRT.

## 2.3 The role of regional collaborative project-based learning

Regional collaborative Project-Based Learning (PBL) is an educational method in which students, universities, and regional stakeholders —including local governments, industries, and residents—collaborate to solve real-world challenges and create new value. By extending beyond traditional classroom education and directly engaging with local communities, this approach enhances the practical applicability of learning while contributing to the sustainable development of the region.

Regional collaborative PBL is particularly valuable because it fosters a win-win-win relationship between students, universities, and local communities. It provides students with handson learning experiences, enables universities to contribute to regional revitalization through applied research, and offers local communities fresh perspectives and the engagement of young generations. (10) In disaster-affected regions such as Tohoku, PBL has been employed as a core mechanism for fostering co-creation, making it highly compatible with the objectives of RRT. There are two main approaches within regional

collaborative PBL: (1) the Real Approach, which focuses on tangible outcomes such as product development and in-person events, and (2) the Digital Approach, which emphasizes digital content creation, including tourism promotional videos, online tours, and social media marketing.

While these two approaches function independently, they complement each other to maximize their collective impact. In the Real Approach, local resources are leveraged to develop tourism-related products and experiences, allowing visitors to engage directly with the region. This process also fosters stronger cooperation among local stakeholders, enhancing cocreative efforts

Conversely, the Digital Approach involves disseminating the outcomes of local initiatives through online media, increasing regional visibility and facilitating virtual interactions with external audiences. This approach not only boosts awareness beyond the immediate locality but also serves as a tool for internal engagement, making local initiatives more transparent and encouraging further collaboration.

By integrating both approaches, the RRT framework enhances regional connectivity and transforms tourism into an interactive and participatory experience rather than a mere act of consumption. The iterative cycle of real-world engagement and digital amplification fosters an ecosystem where sustainable regional revitalization can thrive. (11)

# 3. Implementation of regional collaborative PBL for postdisaster reconstruction in Tohoku

In this chapter, case studies of regional collaborative Project-Based Learning (PBL) projects implemented to promote Reconstruction and Revitalization Tourism (RRT) are introduced. Specifically, this study examines initiatives undertaken in collaboration with government agencies, industry stakeholders, and academia in Fukushima (2016-2018) and Miyagi (2019-present), regions significantly affected by the Great East Japan Earthquake. These projects aimed to support regional recovery and economic revitalization through tourism.

## 3.1 Initiatives in Fukushima

The Great East Japan Earthquake in 2011 and the subsequent Fukushima Daiichi Nuclear Power Plant disaster severely impacted tourism in Iwaki City, Fukushima Prefecture. In particular, the region suffered from prolonged reputational damage, leading to a significant decline in visitor numbers. To address this issue, from 2016 to 2018, the author of this study engaged in a regional collaborative PBL initiative to support the recovery of Iwaki's tourism industry. (12)

This PBL project was conducted in close cooperation with local stakeholders, including the Iwaki Yumoto Hot Spring Association, Iwaki City Hall, and the Iwaki Chamber of Commerce. The initiative was integrated into university courses and seminar activities and was also expanded to involve students from Tokyo universities as part of their disaster recovery support efforts. This multi-institutional collaboration provided a

platform for interaction and co-creation among local students, visiting students, and community stakeholders. The primary activities within this project included the development of tourism plans, the production of tourism promotional videos, and the organization of real-world events.

#### 3.1.1 Development of Tourism plans

The tourism plan development project targeted young visitors from the Tokyo metropolitan area, aiming to design unique and engaging travel experiences that would attract this demographic. Tokyo university students, with guidance from industry professionals, worked on creating tourism packages that they themselves would find genuinely appealing. These plans were refined through presentations to local businesses and feedback sessions. Among the key initiatives developed through this project was the Hula Dance Experience, which capitalized on Iwaki Yumoto's reputation as a "Hula Town" by offering tourists the opportunity to participate in hula dance lessons taught by local instructors. Another initiative, Decorative Hina Doll Crafting, allowed visitors to create their own traditional hina dolls under the guidance of local artisans, thereby preserving and showcasing regional craft traditions. Additionally, the project included Original Sweets Development, in which students devised a specialty dessert using locally sourced ingredients, integrating it as an exclusive feature within the tourism package. This dessert was later commercialized by local businesses and contributed to boosting visitor engagement.

These tourism programs were designed not only to offer engaging activities for visitors but also to facilitate meaningful exchanges between tourists and local residents, while uncovering and enhancing the region's unique appeal.

# 3.1.2 Production of tourism promotional videos

To visually communicate the appeal of the developed tourism plans, students also created promotional tourism videos. Tokyo university students produced the short film "Hula Girls' Weekend Getaway to Yumoto," simulating a tourist experience within the region. Meanwhile, students from the local university focused on "A Tour of Iwaki Yumoto's Bronze Statues," highlighting the historical and cultural significance of the town's numerous sculptures.

These videos were produced in collaboration with local businesses and municipal authorities and were widely disseminated through platforms such as YouTube, social media, and local newspapers and radio broadcasts. Notably, "Hula Girls' Weekend Getaway to Yumoto" received an award at the 2nd Japan International Tourism Film Festival, further increasing its exposure. The promotional videos not only contributed to raising awareness among potential tourists but also fostered a sense of shared identity and local pride within the community. These materials were later exhibited at tourism expositions in Tokyo and abroad, serving as a strategic tool for expanding Iwaki's visibility beyond the local market.

#### 3.1.3 Real-world PR events

To communicate the status of Tohoku's post-disaster recovery efforts and introduce the students' tourism initiatives, promotional events were held at Fukushima Prefecture's antenna shop in Tokyo and at university festivals. During these events, students directly engaged with visitors, explaining their projects and gathering real-time feedback. Local university students also participated, further strengthening ties between the different groups involved.

These face-to-face PR events provided students with the opportunity to present their projects to actual potential tourists and receive direct feedback on their tourism plans and videos. Through this experience, participants developed critical skills in marketing, communication, and public engagement, deepening their understanding of how tourism strategies are perceived by end-users.

This hands-on, interactive learning process was a fundamental component of the PBL initiative, reinforcing the project's impact not only on regional revitalization but also on the development of students' business acumen and professional competencies.

## 3.2 Initiatives in Miyagi

Since 2019, a regional collaborative PBL initiative has been implemented in the Akiu district of Sendai City, Miyagi Prefecture, with the aim of strengthening the local brand. (13) Drawing on the experiences from Fukushima, this initiative introduced more practical product development activities and digital strategies.

Akiu is a historic hot spring resort area with convenient access from downtown Sendai. However, due to the lingering effects of the Great East Japan Earthquake and shifting tourism trends, the region faced challenges such as declining visitor numbers and decreasing brand recognition. In the years following the 2011 disaster, new business ventures led by entrepreneurs with a strong commitment to regional revitalization gained attention, and by the late 2010s, Akiu emerged as a focal point for Sendai's revitalization efforts. Within this context, beyond the PBL initiatives, the author of this study also served as an advisor to Sendai City's tourism department, contributing to regional branding initiatives. This effort involved close collaboration with local business leaders, government officials, and students, focusing on enhancing Akiu's attractiveness as a destination.

# 3.2.1 Real-world approach: Regional brand product development and on-site events

(1) "First-Time Experience" Project

In 2019, to support local apple farmers and develop a new regional specialty product, the First-Time Experience project was launched in collaboration with the president of Akiu Winery. Students from the Oshima Research Laboratory played a central role in the initiative, participating in all aspects—from apple harvesting and fermentation experience to label design

and public relations activities.

Through hands-on experiences, such as assisting with the cider production process, students gained firsthand knowledge of the challenges faced by local producers. Their interactions with local business operators deepened their understanding of the region's identity, which they incorporated into the cider's branding. As part of their graduation research, students conducted a survey of 400 respondents to assess recognition and market demand for cider. The findings revealed that cider was growing in popularity among young women but still had low overall awareness. To address this, the product was named "Hajimeteno Cider" (First-time Cider in English), emphasizing its appeal to first-time consumers.

To increase visibility, a label design contest was held at the university, generating additional publicity. Furthermore, the project ventured into crowd-funding, utilizing SNS and videobased promotions to expand its reach. As a result, "First-Time Experience" was successfully launched not merely as a product but as a story-driven initiative contributing to regional revitalization.

# (2) "Akiu Amber Sugar" Project

In 2020, students from the Oshima Research Laboratory initiated the "Akiu Amber Sugar" (Akiu Kohakuto in Japanese) project, aiming to develop a new regional souvenir product. While *ohagi*, a traditional Japanese sweet, was a well-known specialty of Akiu, market research indicated that younger visitors from metropolitan areas lacked interest in purchasing traditional souvenirs. Inspired by news of the growing popularity of "edible jewelry"—a term used in the U.S.A. to describe visually striking sweets—students conceived the idea of "Akiu Amber Sugar," a colorful, jewel-like confection.

The project was developed in collaboration with local business owners, including those at the Akiusha restaurant and Akiu Winery. The development process involved numerous trial-and-error attempts to refine the product. Although the COVID-19 pandemic delayed commercialization, the project was continued by succeeding student cohorts, leading to product improvements each year.

From Spring 2022, as the second phase of this project, the product was officially launched under the name "Akiu Amber Sugar" at a Reconstruction Marche event in Autumn, 2022. From Spring 2023, as the third phase, the project evolved further, integrating Akiu's most famous natural landmark, Akiu Otaki (Akiu Great Water Falls), into the branding. The result was "Akiu Otaki Amber Sugar: Drops of Akiu" (Akiu Otaki Kohakuto: *Akiu no Shizuku* in Japanese), a unique product inspired by the waterfall's image. This product was introduced at Akiu Marche and Sendai International Airport, alongside promotional tourism videos created through the PBL initiative, significantly enhancing Akiu's brand visibility. (14)

(3) Implementation and Participation in On-Site PR Events Real-world PR events were held at Reconstruction Marche, Akiu Marche, and Sendai International Airport, with the goal of using physical products as a gateway to showcase Akiu's broader appeal. These events were not solely about product sales but provided students with hands-on experience in communicating the region's unique value directly to customers.

Students explained the background and appeal of their products in their own words, gathering first-hand reactions from consumers. Through this direct engagement, students gained valuable practical skills in marketing, sales, and customer communication.

The PR event at Sendai International Airport proved particularly effective, reaching both domestic and international travelers. In addition to product displays, multilingual promotional materials were prepared to enhance appeal to overseas visitors. These strategic efforts positioned Akiu's brand on a broader, international scale.

# 3.2.2 Digital approach: Tourism promotional video production, online tours, and SNS marketing

# (1) Tourism Promotional Video Production

With the onset of the COVID-19 pandemic in 2020, restrictions on movement necessitated a shift in focus toward digital promotion. Consequently, PBL projects increased their emphasis on tourism promotional video production.

In 2020, students produced a bilingual tourism video titled Akiu Mini Kokeshi Adventure: A Complete Akiu Travel Plan, featuring a miniature kokeshi doll as the main character exploring Akiu's attractions. As travel restrictions eased in 2023, two new promotional videos were created to further promote the region. The first, Does the Queen Dislike Akiu?!, depicted a queen's decree to explore Akiu's highlights, showcasing various attractions in an engaging narrative. The second, Akiu Momotaro: The Peach Boy of Akiu, followed Momotaro and his companions on a journey to uncover the mysterious oni (demons) rumored to reside in Akiu. These videos not only highlighted Akiu's scenic beauty but also showcased local figures and entrepreneurs, thereby reinforcing community participation in tourism promotion. Furthermore, products developed through PBL projects, such as First-Time Experience and Akiu Amber Sugar, were seamlessly integrated into the content, effectively merging real-world initiatives with digital storytelling to enhance the region's visibility and appeal.

# (2) Online Tours and SNS Marketing

During 2021-2022, as travel restrictions continued, efforts were made to promote Akiu digitally through live-streamed online tours and interactive sessions. A comprehensive two-hour online tour was conducted, introducing Akiu's key attractions, local products, and behind-the-scenes insights into regional development efforts. This event incorporated quiz segments to maintain audience engagement, while local businesses actively participated in the live stream, interacting with online viewers in real-time.

All activities—including real-world product development,

tourism promotional videos, and online events—were consolidated within dedicated SNS channels. To ensure continuity, the project's official Instagram and YouTube accounts were managed and maintained by successive cohorts of students, allowing for sustained engagement beyond the initial academic term.

The official Instagram account became the most-followed Akiu-related tourism page, serving as a hub for visual story-telling and community interaction. Additionally, campaigns utilizing hashtags such as #AkiuAmberSugar and #FirstTime-Cider were launched, encouraging user-generated content and facilitating organic word-of-mouth marketing.

Through the synergistic integration of real-world and digital approaches, the project successfully established a sustainable framework for promoting Akiu's tourism and local brand, extending its reach to both domestic and international audiences.

#### 4. Discussion

# 4.1 Learning outcomes and regional impact of regional collaborative PBL

Through the regional collaborative PBL initiatives examined in this study, meaningful learning experiences were acquired by both students and local stakeholders, including government officials, industry representatives, and residents.

For students, actively participating in tourism promotion enabled them to develop practical business skills, including product development, tourism PR video production, and marketing strategy planning and execution. In particular, collaboration with local businesses enhanced their project management abilities, while engagement in real-world events and SNS campaigns provided hands-on experience in direct consumer communication. Furthermore, by working alongside local residents and businesses to conceptualize tourism initiatives leveraging regional assets, students gained an understanding of the value-creation process in regional tourism.

For local stakeholders, student-driven ideas and fresh perspectives facilitated a rediscovery of the value of regional assets. The tourism plans and products developed by students introduced innovative approaches that capitalized on regional characteristics, thereby contributing to sustainable place branding. Additionally, the utilization of tourism PR videos and SNS marketing amplified the transmission power of the regional brand, creating new opportunities for tourism promotion. Moreover, the collaboration between students and local stakeholders not only helped attract tourists but also encouraged local residents to reappreciate their own region, thereby fostering both internal and external engagement with the community.

# 4.2 Effectiveness of combining real and digital approaches for sustainable tourism development

This study demonstrated that integrating real-world and digital approaches plays a complementary role in tourism promotion and fostering engagement. Drawing from the insights gained through regional collaborative PBL in Fukushima, the

approach in Miyagi was enhanced by strategically integrating real and digital elements. This hybrid methodology proved to be an effective means of leveraging physical tourism assets while utilizing digital dissemination power, thereby promoting sustainable tourism.

The real-world approach involved tourism planning, product development, and on-site events, creating direct interactions between tourists and the local community. By offering regional brand products and hands-on programs, tourists were encouraged to actively engage with the region, facilitating a shift from passive consumption to co-creation. Furthermore, collaborations between students and local stakeholders deepened attachment to the regional brand, ensuring that initiatives led to ongoing, self-sustaining activities within the community.

The digital approach, on the other hand, utilized SNS platforms and tourism PR videos to expand the region's visibility to external audiences and enhance its information dissemination capacity. In particular, SNS marketing facilitated targeted out-reach to new demographics, including younger generations and inbound tourists, thereby stimulating new tourism demand. Additionally, the continued dissemination of tourism PR videos and SNS content helped sustain interest beyond one-time visits, thereby reinforcing long-term brand recognition and destination loyalty.

# 4.3 Potential of "RDX Model" for sustainable regional revitalization

This study suggests that the integration of real and digital approaches plays a critical role in expanding both internal and external engagement (internal × external empathy) within a region. In particular, the case in Miyagi demonstrated that effectively leveraging digital tools can enhance the value of real-world experiences, thereby contributing to the establishment of a sustainable tourism promotion framework. Moving forward, it is necessary to further systematize this approach by incorporating both real and digital elements to expand opportunities for co-creation while fostering active participation from local residents, tourists, and businesses.

To establish the RDX Model (Real × Digital × Transformation) as a sustainable framework for regional revitalization, three key elements must be systematically structured: First, the strategic integration of unique regional tourism assets with digital technologies; second, the establishment of mechanisms that facilitate co-creation among tourists, local residents, and businesses; and third, the design of a well-structured communication strategy that fosters both internal and external empathy.

# 5. Conclusion and future prospects

## 5.1 Conclusion

This study introduced the concept of Reconstruction and Revitalization Tourism (RRT) and demonstrated the effectiveness of regional collaborative PBL as a key implementation strategy. Through case studies in Fukushima and Miyagi, the findings highlight the significance of integrating real-world and digital

approaches in promoting regional tourism.

Regional collaborative PBL has proven to be an effective method for both learning and regional revitalization, fostering collaboration between students and local stakeholders. The combination of real and digital approaches successfully facilitated both internal and external engagement. Furthermore, the study confirmed the importance of co-creation in establishing a sustainable tourism promotion framework.

## 5.2 Future prospects

Two key challenges should be addressed in future research. The first challenge is the empirical validation of the applicability of the RDX model (Real × Digital × Transformation) in facilitating Reconstruction and Revitalization Tourism. This study demonstrated the potential of shifting from mere tourism consumption to co-creation, and ultimately, regional transformation, through the integration of real and digital approaches. However, further research is required to evaluate whether this model can be applied effectively to other regions and different types of tourism content. To establish RDX as a sustainable regional tourism framework, it is crucial to tailor optimal strategies to match the unique characteristics of each region. Additionally, further investigation is necessary to explore whether the RDX model can be applied beyond tourism, extending its impact to regional revitalization and other industries.

The second challenge is the development of leadership to drive RRT and RDX initiatives. Until now, regional revitalization has relied heavily on individual leaders with strong vision, experience, and leadership, who take the initiative in both recovery and innovation. However, such an approach is inherently dependent on individuals, lacking a systematic framework that ensures sustainable development and widespread regional impact. Therefore, a structured approach to leadership development and support is necessary—especially in fostering leaders who can plan and manage regional revitalization and new tourism industries.

In recent years, the corporate sector in Japan has rapidly adopted the "Corporate University" model as an organizational and systematic talent development platform to align with DX (Digital Transformation) and reskilling trends. (15) Corporate universities emphasize executive leadership, self-directed growth, digital transformation capabilities, and professional net-working opportunities as core elements of talent development. Applying such structured talent development methodologies to regional revitalization efforts may accelerate the cultivation of leaders capable of driving sustainable tourism and regional industries.

Beyond tourism business development, regions require leaders with the entrepreneurial and managerial capabilities to create new value—leaders who can integrate "reconstruction" and "revitalization" into their long-term vision. In this study, such individuals are referred to as Regional Revitalization Business Leaders (RBLs). By adapting knowledge from corporate universities, including self-directed talent development, practical

PBL approaches, and digital learning platforms, it becomes possible to systematically train Regional Revitalization Business Leaders (RBLs).

Thus, from the perspective of both regional collaborative PBL in RRT and RBL leadership development, future research should focus on how tourism can contribute not only to short-term economic benefits but also to long-term regional branding and social capital expansion.

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- Oshima Research Laboratory Official Website: Introduces regional collaborative PBL activities for Tohoku's reconstruction support and regional revitalization https://oshima-lab.wixsite.com/research
- Regional Revitalization DX Office: Includes a comprehensive list of tourism PR videos produced through the projects https://www.youtube.com/@xit7341

## Notes

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