

Room Escape: A New Way for Visual Science Outreach

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A six-day room escape event was held in parallel of 2017 Asian-Pacific Conference on Vision (APCV), in Tainan, Taiwan between July 13 and July 18, 2017 to promote Vision and Shitsukan science to general public. It attracted 740 participants, aged from 4 to 64 years old. The responses were overwhelmingly positive. The event attracted over 40 media coverage from traditional newspaper, TV, and new media (e.g., internet news forum and social media). This novel science outreach approach was also presented in the symposium titled “Visual Science and Its Outreach to General Public” at 2017 APCV, of which one of the symposium speakers (Tseng) was supported by the travel grant from the vision society of Japan.

Here we briefly introduce what Room Escape is, its advantage as a tool in scientific outreach to the general public, and our first-hand experience in implementing it.

What is Room Escape?

Room Escape (RE) is live-action team-based games where players discover clues, solve puzzles, and accomplish tasks in order to accomplish a specific goal (usually escaping from the room) in a limited amount of time. RE requires teamwork, communication, and delegation as well as critical thinking, attention to detail, and lateral thinking. It becomes

popular in Asia since early 2010s, and the permanent fixtures are set in a variety of scenarios such as hospital, bar, prison cells, and etc. Each game will evolve around the scene setup, and players may be invited to do a role-play (e.g., prisoner who needs to escape from the jail). It is most popular among young professionals and students as recreational activities.

Room Escape at 2017 APCV

In our RE establishment at 2017 APCV, the scenario occurs at Tanabata (七夕) when people celebrate the annual date between Hikoboshi (彦星) and Orihime (織姫). In our RE, mysteriously, Orihime missed it without an explanation this year, and players are commissioned to find out why. The game is set up in Orihime’s home with 3 separate sections: living room (I), bedroom (II), and working studio (III) (Fig. 1).

As Tanabata (七夕) usually occurs in mid-summer, one week before the 2017 APCV this year, the story choice was timely. As Tanabata is a festival shared in many Asian cultures (e.g., Japan, Taiwan, and Hong Kong), the theme became an easy access for all partakers. Moreover, the host city (Tainan, Taiwan) is an international sister city with Sendai, the most famous Japanese city for its Tanabata festival.



Fig. 1. The conceptual design of 3 separate spaces in our Room Escape (from left to right): Orihime’s living room, bedroom, and working studio.

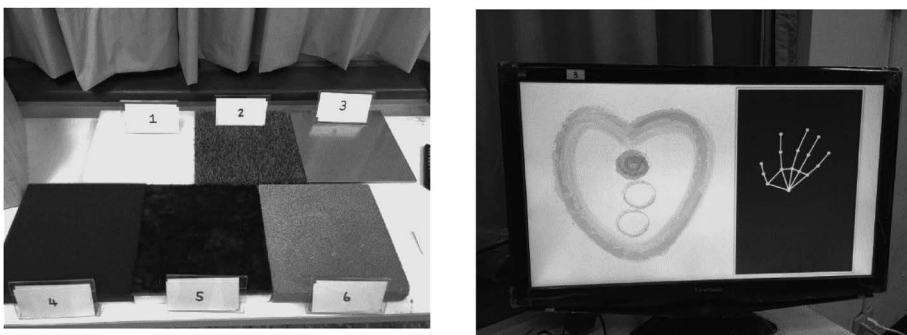


Fig. 2. Sample puzzles from “Shitsukan theme room.”

The scientific, cultural, and city-exchange combinations have provided multiple media coverage focuses.

Room Escape meets Vision Science Education

RE is an emerging and powerful outreach approach for scientific education. The players have to solve puzzles in order to reawaken the magic power of the Tanabata festival. Under this storyline, participants entered a well-planned educational environment and were given immediate feedback for the selected educational contents.

In our 2017 RE, we selected “touch sensitivity”, “face perception”, and “Shitsukan” (Fig. 2) as the main scientific themes for each of the three sections. There were 3-4 learning

objectives to be accomplished under each main theme, and participants as a group needed to complete one theme successfully before moving onto the next theme (i.e., a continuous escape of rooms). A student facilitator was assigned to accompany each group and provided scientific briefings at the end of each theme. The student facilitators were recruited from both Taiwanese and Japanese universities, and both English and Mandarin languages were offered.

A focus group interview was conducted with the student facilitators at the end of the public event. They also provided writing feedback on their reflections. Over 95% of participating students highly appreciated this experience to transform from a passive learner (as a university student) into an active educator (to the public). Interestingly, almost every participating student



Fig. 3. Within 6 days, more than 740 participants joined the Room Escape and felt they have learned with tremendous fun.

recognized their needs to further improve on their scientific communication abilities and English competence. In addition, they all positively rated the experience to work with frontline visual scientists in design and implement this activity.

Room Escape in Visual Science Outreach

We designed evaluation forms to the audience from the public to assess the educational goals of this event. We received 659 valid returned forms in the following analysis.

75% of participants indicated that they came to this event because of “Room Escape” while 25% of participants came to learn about science. Among them, nearly half of them (47%) rarely have exposure to Psychology, and 25% are psychology major university students (18.8%) or workers in related field (7.7%). It is encouraging to find out that by introducing “Room Escape” as a new format, we successfully attract audience who may not regularly attend scientific lectures and those who rarely expose to the field.

Our goal to clarify the common misunderstanding about the scope of psychological sciences was met. Before the game,

only few participants thought Shitsukan (33%), Face Perception (46%), and Touch Sensitivity (52.5%) were research topics in Psychology. After the RE game, these numbers rose up to 97% or above. In addition, 95.5% of participants felt they were satisfied or very satisfied with this learning as it was fun (**Fig. 3**).

As the public awareness increases the visibility and possible funding opportunities for a research field, RE was successful in terms of education goals and a positive first impression formation.

Challenges we encountered

The organization of this event is challenging as the partakers were from Japan, Taiwan, and Hong Kong. To make this event available bilingually (English and Mandarin), participating members had the first-hand experience of how to work in an international team. These cultural exchanges were in addition to the scientific exchanges, which were very valuable for participating scholars and students.

The co-chairs (Tseng, Ho, Watanabe) designed the scientific contents and sketched out the game (in English). To make it appropriate within the local context of the city of Tainan, a local

team consisted of over 20 university students (mainly psychology-majors who have taken Perception) was critical for its final implementation. We are grateful for our local organizer, Dr. Pi-Chung Huang from Psychology Department at National Cheng-Kung University, Tainan, Taiwan and the support from her department. There were also 6 Japanese students (2 from Japan Psychonomic Society, and 4 from Tohoku University Shioiri Vision Lab) who involved in design and event operation in hopes to bring a similar event back to Japan in the near future.

Conclusion

This new type of outreach activity that took

the form of “Room Escape,” created a unique interactive adventure using puzzles largely based on vision and Shitsukan science. The positive responses from the attendees demonstrated that science can be fun, relevant, and accessible to all was successfully met. We hope this will be the beginning of joint efforts to generate more impact as a vision science community.

Acknowledgements

We thank Dr. Shu-Lan Hsieh, for her tremendous support throughout the preparatory and operational stages. We also thank Ms. Fan-Ting Guo and Ms. Yu-Shan Hsu for their administrative assistance.

Appendix

Event in conjunction with 2017 Asia Pacific Conference on Vision

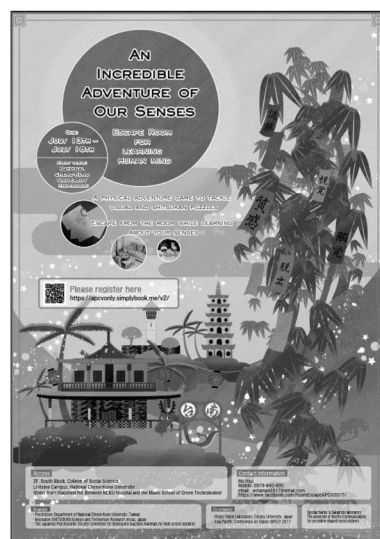
- Date: 2017/07/13–18 (6 days)
- Time: 10 a.m.–9 p.m.
- Location: National Cheng-Kung University, Tainan, Taiwan
- Language: English (for conference attendants) & Mandarin (for general public)
- No. of sessions: 148 (42 English, 106 Mandarin)
- No. of participants: 743

Organizers

- Psychology Department of National Cheng-Kung University, Taiwan
- Innovative “Shitsukan” Science and Technology research group, Japan
- The Japanese Psychonomic Society committee for developing teaching materials for high school students

Co-organizer

- Shioiri Vision Laboratory, Tohoku University, Japan
- Asia Pacific Conference on Vision (APCV) 2017



2017 Room Escape Event Poster (English)

Organizing committee

- Chia-huei Tseng, Associate Professor, Research Institute of Electrical Communication, Tohoku University
- Hsin-Ni Ho, Senior Research Scientist, NTT Communication Science Laboratories
- Junji Watanabe, Senior Research Scientist, NTT Communication Science Laboratories

Special thanks to Sakamoto laboratory, The university of Electro-Communications, for providing display materials of Tanabata Tanzaku.