

Research and Development of Sustainability Education in China

Project Report 2019

Prepared for the Tencent Foundation

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The “Research and Development of Sustainability Education in China” project intends to develop a series of sustainability education modules for Chinese secondary school students and Tencent Charity Platform users. The research project started at the beginning of 2019. This report summarizes the work conducted by the research team on the project during 2019, and outlines the major objectives for the second year of the project, 2020. An interim financial report is attached in the end to review the expenditures associated with the project in 2019.

Overall, the research team devoted considerable amount of time in the first year of the project on preliminary research related to sustainability education. This included a comprehensive literature review of the development of environmental and sustainability education worldwide, and intensive interviews and site visits to understand the best practices of effective sustainability education program. Through this process, the team has established sufficient knowledge to begin curriculum development which will continue through the second year.

1. Project Progress and Key Deliverables

1.1 Objective 1: Literature Review

For the first three months of the project, the team’s work focused on identifying and reviewing literature on sustainability education and its current development throughout the world. The goal of this review was to understand the current state of learning standards, objectives and outcomes in sustainability and environmental education, and to identify the educational leaders in this field. Considering the scope of the topic, the team conducted an extensive review of regional, national, and state sustainability and environmental education learning standards, curriculum frameworks published by non-governmental organizations, books and journal articles that contain

case studies, and website descriptions on various sustainability education programs.

In March, as the review process was underway, the research team visited Shenzhen and met with partners at Tencent Foundation. During the meeting, the team presented the outline of the literature review and received feedback on conducting a more in-depth review of sustainability education via games. The team did additional research on sustainability games and marked relevant questions to be asked in subsequent interviews.

The literature review was completed and shared with Tencent Foundation in April. The literature review summarizes the findings on sustainability in formal and informal education settings, compares the sustainability education in China and in other countries, and provides a preliminary list of topics for later curriculum development.

The dichotomous classification of formal vs. informal sustainability education, rather than middle school students vs. adults, is based on our finding that the major distinction in sustainability curriculum and its delivery mode lies in the educational setting, rather than learners' age group. For formal sustainability education, the literature review summarizes education programs and learning standards in China and in countries or regions with outperforming education systems, including Hong Kong, Chinese Taipei, Singapore, Norway, Finland, Canada, and the United States.

For informal sustainability education, the literature review covers short-term in-person training, online courses and educational materials for self-learning, and experience-based education such as field trips, public campaigns, competitions, television documentaries, simulations, and games.

All the educational programs identified in the literature review, along with their governing agencies and developers, served as the basis for subsequent in-depth interviews.

1.2 Interviews with Leaders in Sustainability Education

Immediately following the completion of the literature review, the team began preparation for conducting interviews with leaders in sustainability education. The purpose of the interviews was to learn from the experience of these leaders and gain insights on the key features or the best practices of delivering an effective sustainability education program.

The preparation for interviews was carried out in May, and involved identifying interview candidates from the literature review, categorizing candidates based on their respective educational services, collecting contact information, creating interview protocol templates, and drafting invitation emails.

The first interview was conducted on June 25, and the last interview was completed on October 23. During this period, the research team interviewed leaders from 15 sustainability education programs located in China, Hong Kong SAR, Indonesia, and the United States. These programs are run by intergovernmental organizations, state educational authorities, schools, and environmental NGOs. The types of educational services they provide range from formal sustainability curriculum in schools, in-person training, and online sustainability courses, to field trips and other experience-based sustainability education including games.

The research team compiled a summary report and shared with Tencent in November. The report synthesized findings from interviews into case studies, and concluded with common features highlighted across all cases as to what contributes to the design, delivery, and implementation of effective sustainability education programs.

At the end of the summary report, the team discussed potential strategies to customize content for learners on the Tencent Charity Platform, and the major decisions to be made regarding the secondary school module before curriculum development. Specifically, the research team and Tencent Foundation will determine if the secondary school curriculum is to be implemented in a

formal education setting, with school staff teaching the contents to students in person, or as online educational modules for students to conduct self-learning.

2. Objectives of the Second Year (Calendar Year 2020)

The work of second year is focused on creating three sustainability education modules. The research team will consult Tencent Foundation's preference on whether the modules will be intended for secondary school students or adults, and in the former case, whether the modules will be implemented in classrooms or online.

Once the decision regarding secondary school modules is made, the research team will compile a list of module topics, along with their respective concepts, learning objectives, and tentative case studies and student activities, which will be shared with Tencent Foundation for feedback. Based on Tencent's decision on school modules implementation, and if the modules will be implemented in a chosen school, the research team will work with Tencent and the school to determine the sequence of module development for each semester. The above processes will be completed in the first eight months of 2020, and the remainder of the year will be devoted to content development of the initial modules. The research team expects the initial modules will be created by the end of the year. With further input from Tencent Foundation, the modules will be ready for implementation in early spring of 2021.

The current timeline outlined in the Project Proposal may be adjusted and updated to prioritize deliverables based on feedback from Tencent and a number of variables, including: whether the school modules will be implemented in a specific school, and how the school plans for the modules to roll out. Further communication will be conducted between the research team and Tencent Foundation to update the project timeline onwards.