Empowering Youth with Digital Media and Global Learning Collaboration

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Abstract

This paper describes and analyzes AGORAsia Youth, a cross-border collaborative learning activity designed to promote global education, collaboration and empowerment among the generation that will shoulder the society in the near future. Under the theme *Energy—what can I do?* and video production introduced as the main assignment, participants from Myanmar, South Korea and Japan gathered online and joined this new learning experience. They searched information and produced original material—presentation files and video messages—about the energy situation in their own countries, shared with peers and then got a general view of the energy scenario in Asia. The different approaches adopted by this curriculum were designed to achieve a better engagement for discussion among sites, and also more commitment and active participation in the whole content creation process. The results and findings described in this paper brought up important hints for future work in the following aspects: distance collaboration curriculum, digital media in the classroom and the role of teachers in the digital era.

Keywords: AGORAsia Youth; collaborative learning; distance workshop; digital media

1. INTRODUCTION

Believing that new media can boost new opportunities for education for sustainable development, this research aims to provide a different approach connecting young students from different countries, where they can teach to and learn from each other and have a real global learning experience in the academic context. This paper introduces and analyzes AGORAsia Youth—a videoconference-based workshop that aims to raise awareness of sustainable development, stimulate discussion among youth and empower participants with digital media technologies skills as a tool to enhance self-expression.

1.1. Why Education for Sustainable Development?

The spread of Information and Communication Technology (ICT) brought —and is still bringing—up a tremendous dynamism in the globe regarding the speed of changes caused by the globalization to the international society. This scenario of interconnectedness and interdependency makes distances become shorter for people, products and money, bringing a boom of social-economic and cultural development in many parts of the world. On the other hand, issues such as environment, food security, energy and others acquire global scale in a speed never seen before. Engaging and cooperating among communities, societies and nations are crucial to find practical and viable solutions for those issues. This situation shows us the important role of education to help all generations to develop a sense of global collaboration and cooperation in order to be able to live in this globalized era.

In order to meet those deep changes and fast dissemination of different sort of issues, the global society has been concerned about the relevance of the concept of sustainable developmentdescribed by the 1987 Brundtland Commission Report as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." [1] The UN Decade of Education for Sustainable Development (2005-2014) has been seeking to "mobilize the educational resources of the world to help create a more sustainable future" [2] with a focus on education.

In order to achieve those goals, UNESCO has a strong and powerful partner, the Associated Schools Program Network (ASPnet). ASPnet is a enormous global network of more than 9000 educational institutions present in 180 countries that aims to support international understanding, peace, intercultural dialogue, sustainable development and quality education in practice, in institutions ranging from pre-schools to secondary, vocational schools to teachers training institutions. [3] Although programs have been successfully spreading ideas of instructional design ideas, the use of digital media and ICT as the main tool in those programs is still lacking and/or not fully explored.

1.2. Technology in the classroom

ICT has been making information access universal, giving opportunity to students all over the globe to find, produce and share contents. Also, now it is possible to connect classrooms using distance communication tools that allows realtime video and audio communication with acceptable quality, depending on the rates of Internet connectivity.

School on Internet Asia Project, known as SOI Asia [4] has been providing educational contents and satellite-based Internet environment for more than 27 universities and educational institutes in 14 Asian countries aiming to promote access and enhance higher education quality in the region. The grand design blends traditional classes with multilateral distance communication tools and allows students in different location to interact with lecturers and other peers, even under a lower bandwidth internet connection.

The university, as an institution, can also play a important role bridging collaboration between schools, international organizations, local government and other stakeholders. [5]

1.3. Videoconferencing as an effective educational tool

Interactive Videoconferencing is an effective tool for opening up the classroom to new communities and the familiarization of students with new learning and cultural experiences and alternative-innovative learning approaches. [6]

In addition, the use of videoconferencing (VC) tools indicates other benefits such as the strengthening of social relations between VC participants in local and remote sites. [7][8]

There is a variety of tools available in the market, some of them are free for use, such as Skype and Google's Hangouts. A good technical design can integrate different protocols such as H.323, largely used for audio-visual communication and videoconferencing equipments, and VoIP (Voice over Internet Protocol), for example. This design will be able to attend different types of connectivity with flexibility, allowing inclusion of lower connectivity sites and higher ones.

2. METHODOLOGY

Based on related and also previous works, a designed workshop named "AGORAsia Youth" was held in March 2012. The name AGORAsia is a coined term that joints *Agora*—an ancient Greek word which means place of assembly [9] and *Asia*, the main stage of this activity. AGORAsia Youth aims to create a new Agora that accommodates borderless discussions and collaborations among high school students in Asia, and also it is aiming to empower young generations to build a compatible and sustainable society through intercultural discussions.

For that purpose, AGORAsia Youth have decided to utilize videoconferencing facilities and digital media for communication among all participant sites: Japan, South Korea and Myanmar. This distance workshop was part of *CONNECTivity* [10], an event organized by UNESCO Jakarta office and CONNECT-Asia Project. At the time, workshop organizers were facing mainly these three challenges below:

- 1) Distance workshop curriculum design
- 2) How to make best use of digital media
- 3) English communication support

Considering these challenges, this paper describes the details of AGORAsia Youth and evaluates how effectively the designed points addressed the challenges.

2.1. Choosing a discussion topic

To start a discussion on Sustainable Development, the topic 'energy' was chosen for this first workshop as it was familiar to young people. The title *Energy*—*What can I* *do*? shows the topic as deeply related to their daily life and one of the unavoidable issues of Sustainable Development.

2.2. Targeting participants

The main target of AGORAsia Youth is junior and high school students because they do not have much opportunities of meeting and learning with same age people who have different cultural background. To get awareness of diverse ways of thinking and accept differences earlier are expected to help growing people living together in the global society. In the same age, they are more likely to develop rational and abstract opinions on general subjects.

For the first edition of AGORAsia Youth, held in March, 2012, 35 high school and middle school students in total from three countries in Asia gathered online.

Time Zone	Venue	Number of Students	School
Japan GMT +9:00	Keio University (Hiyoshi Campus)	5	Ichigao High School
South Korea GMT +9:00	Chungbuk National University	10	Hankuk Academy of Foreign Studies et al.
Myanmar GMT +6:30	University of Computer Studies, Yangon (UCSY)	20	Basic Education High School No.2 Hlaing et al.

Table 1. Participants Information

2.3. Introducing the stakeholders

In AGORAsia Youth, there were mainly four involved parts as follows, yet there was no "traditional" lecturer. Although most of present workshop have a lecturer, and learners will work on tasks following lecturer's instructions, that style was not suitable for AGORAsia Youth. This research intends to bring a student-centered approach for online discussion and collaborative works in order to make students more involved and engaged in the learning process, rather than bringing the traditional model to the online environment. Instead of a lecturer, a moderator and facilitators shouldered important role for learning. Technical operators were as well required in order to design, operate and monitor the technical environment.

2.3.1. Learners

Students were expected to concentrate on the discussion with other peers, but in videoconferencing, sometimes people speak only with people at the local site. Also, communication in a second language (English) tends to be difficult for non-native speakers. Thus they need to have a communication support.

2.3.2. Moderator

In AGORAsia Youth, the workshop is conducted by the moderator, as there is no lecturer or "traditional" teachers. The moderator guide students on what to do next and encouraged them like a MC. In this frist edition, the moderator was based in Japan.

2.3.3. Technical Operators

This role is in charge of maintaining videoconferencing connection stability in the entire process. They were supposed to contact operators in other sites using text based communication tool such as Internet Relay Chat (IRC). If a site has any trouble, they would fix it and inform the current situation to other sites immediately.

2.3.4. Facilitators

Facilitators were in charge of supporting attendees and the moderator, helping mutual understanding, encouraging

participation and engagement. They were also expected to support communication during videoconferencing, off-line contacts, English comprehension and, in addition, usage of digital media in distance workshop.

2.4. Designing the Learning Environment

Learners' behavior will be influenced depending on the learning environment. For distance workshop, videoconferencing tools and other digital media are positioned as a significant factor. There were special concerns basically in three aspects.

2.4.1 Classroom Arrangement

The first factor is the layout of classroom. In order to stimulate discussion and to activate group work, table arrangement was preferably needed. Thus Japan site arranged tables as per Figure 1.

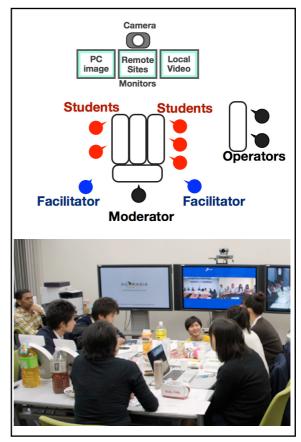


Figure 1. Classroom in Japan

Two student groups in Japan were sitting left and right side of the table. Although they were separated, they still fitted into the camera angle. One merit of this layout was that facilitators could walk around each group easily, and the moderator could be center for all sites.

2.4.2. Videoconference Configuration

Videoconferencing facilities and tools were the main point of the workshop environment. At the time, Japan and South Korea utilized Polycom equipments as connection tool. The equipment used enables sending and receiving video, audio, and contents such as PC image among multiple sites. Recently this kind of solution is utilized not only for business but also for higher education, then AGORAsia Youth organizers requested partner universities of CONNECT-Asia to lend their facilities.

However, UCSY did not have any Polycom equipments available. Myanmar site used VIC (Video Conferencing) application for video and Skype for audio, and one of Japan site Keio University Shonan Fujisawa Campus (SFC) mixed video and audio and relayed it through Polycom. The connection configuration is described as with Figure 2.

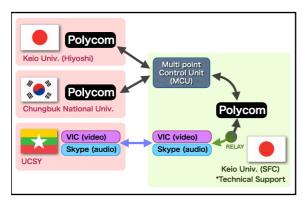


Figure 2. Videoconference Configuration

2.4.3 Website

Online tools have been largely used to support learning. At this time, a purposebuilt website was used as an online communication platform for students' offsession contact. The website was password protected, and only learners and organizers were given access permission. It enables learners to see each student's e-portfolio (Figure 3) and to know who is participating in AGORAsia Youth. One of the difficulties in videoconferencing is to know about other attendees, creating an invisible barrier. Eportfolio was useful for the purpose and was expected to ease communication among participants in remote sites.



Figure 3. e-portfolio

In addition, the website has an uploader function for material sharing and a BBS for free comments. These functions enabled off session communication.

2.5. Distance Workshop Curriculum

The program for the first series of AGORAsia Youth consisted of 2-day activities, and also a local pre-session. The workshop was conducted in English in order to communicate with all sites equally.

2.5.1. Pre-Session

The pre-session was held one week before the first day of activities and the main goal was to figure out learners' level of literacy for digital equipments and help students to get used and comfortable with English language communication. Also, to get to know not only other students but also facilitators and other staffs. Because of an incompatibility of schedule, this pre-session took place only in Japan.

2.5.2. Day 1 - Reflecting About Energy

For designing a distance workshop curriculum, this time ARCS model that proposed by John M. Keller was adopted. The model explains factors for keeping learners' motivation: Attention, Relevance, Confidence and Satisfaction, and curriculum design on that. [11][12] Since communication in videoconference is not same as physical communication, workshop designers had to be careful on how to keep learners' attention, not only in loco but also remote sites. Thus, this workshop featured group work learning style through video production process.

This part was expected to keep participants' attention through the process such as to search information, to create a message for audience, and to think how to deliver their message (video). They knew how energy is relevant for their own life and the society. Moreover, in order to make the process collaborative, each country made groups and cooperate among team mates, and also exchanged video production materials such as photos and scenes taken in their own region between foreign team. That could be efficient to avoid tediousness (Figure 4 and Table 2).

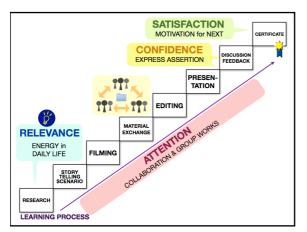


Figure 4. ARCS applied to AGORAsia Youth

	OBJECTIVES	ASSESSMENTS
ATTEN- TION	Students will be engaged to understand each other through group work, remote discussion and video production.	In a survey, students will be asked about what was the most impressive part in the workshop. Discussion or video production will be chosen if it attracted them.
RELE- VANCE	Students will know the importance of energy related to Sustainable Development in their own lives. Research activities will lead them to awareness.	Awareness of Sustainable Development and energy will appear in the output, discussions and the survey.
CONFI- DENCE	Students will accomplish: 1) Video production 2) Presentation of these efforts 3) Exchange of feedback	Students behavior (active or passive) will be observed during the workshop.
SATIS- FACTION	Students will show their enthusiasm after the workshop.	In a survey, students will be asked if they would recommend this workshop to others. If they are satisfied, positive response would appear.

2.5.3. Day 2 - Expressing through video

Two weeks later from Day 1, participants presented the video they produced and then had a discussion, giving feedback mutually. To make an output and feedback will bring confidence to the team. In Day 2, facilitators' role was especially important for making discussions smooth.

The presence of facilitators made learners more confident to participate into

the discussion in English. If facilitators conduction is well designed, discussion can be expected to be fruitful and learners' satisfaction may lead them to better learning results. In addition, at the end of the workshop, a certificate was given for each student. That was not just commemorative, but brings satisfaction to students. Table 3 describes the curriculum designed for this collaborative workshop.

Table 3. Workshop Program

Date *GMT +9:00	Contents (A) Attention, (R) Relevance, (C) Confidence, (S) Satisfaction
Pre-Session March 10, 2012 15:00-17:00 *Local session only in Japan	 Self Introduction (A) Distance Communication Trial (A) What is AGORAsia Youth? (A) Digital Tools Tutorial 1 (A) Research Project (A) (R) Digital Tools Tutorial 2 (A) (C) Group Homework (A) (R)
DAY 1 March 17, 2012 11:00-17:00	 Opening: About AGORAsia Youth (A) Introducing Each Sites (A) Remote Ice Breaking (A) Introduction to Energy (R) Homework Presentation (A) (R) (C) *from Japan Lecture and Quiz (A) (R) Remote Discussion (A) (C) (S)
DAY 2 March 31, 2012 15:00-18:00	 Greetings (A) Remote Ice Breaking (A) Video Presentation (A) (R) (C) Remote Discussion (A) (R) (C) Break / Local Discussion (R) Remote Discussion (A) (R) (C) Quick Review & Conclusion (R) Giving a Certificate (C) (S) Photo Session (A) (C) (S)

3. EVALUATION

The evaluation methods used for the first series of AGORAsia Youth was the observation during the sessions and offsession communication behavior, and also anonymous survey—consisted of five questions—answered by students on the last session, held on March 31, 2012. 26 of total 35 students answered the survey (Table 4), and there was no invalid reply. The main objective of survey was to hear students' opinions on the workshop design of AGORAsia Youth, that has as its main goals: (1) to contribute to make intercultural collaboration occasion for young age in Asia, (2) to raise awareness of sustainable development, and (3) to empower youth with video production and digital media skills as a way of expression.

Table 4. Number of Respondent			
Country	Total	al Response %	
Japan	5	5	100
S. Korea	10	1	10
Myanmar	20	20	100
Total	35	26	74

The result of Q1 (Table 5) indicates which factor attracted students. According to the result, "Communication with peers overseas" was the most attractive factor which was chosen by 65% of respondents. It seems that they are interested in having opportunities to communicate with peers from other countries, and AGORAsia Youth can be expected to offer them more occasions like that. In contrast, there were 5 students (19%) who chose "Video production" for what they liked most. In the workshop curriculum design process, video production was the core for attracting learners' attention, yet the result says it was not impressive for many of them. During the video production process, learners seemed to enjoy tinkering digital tools such as camera, laptop and video editing applications as per Figure 5, but the creation part was expected to be more collaborative. Students were asked to exchange material

for video production, so they should communicate and interact off-session with their peers abroad. However, the process of contacting each other off-session had been taken care by only one deputy person per group, which means facilitators and students were passive to use BBS on the website. Thus, reflecting on the results, for future activities, communication and collaboration off-session should be done directly by learners, instead of relying on text based communication and only one person.

Table 5. Participants' Interest

Q1. What did you like most about this AGORAsia Youth? (Multiple choices)

Choices	N	% (Parameter=26)
Communication with peers overseas	17	65
Chance to share my opinion with others	9	35
The topic "Sustainable Energy"	7	27
Video production	5	19
Others ()* *free description	0	0
N/A	0	0



Figure 5. Video Production in Japan

Question 2 was set in order to figure out the difficulties faced by attendees of AGORAsia Youth (Table 6).

Table 6. Participants' Difficulties

Q2. What was the most difficult or hardest challenge in doing the AGORAsia Youth activities? (Multiple choices)

Choices	Ν	% (Parameter=26)
To communicate in English	16	62
To talk in front of others	9	35
To understand the topic	1	4
To make the video	2	8
Others ()* *free description	3	12
N/A	0	0

The result says that 62% of respondents felt difficulties "to communicate in English", and 29% felt the strain of "talking in front of others". They liked to interact with foreign peers, and at the same time, they felt uneasiness of English communication. Most of students certainly seemed to be nervous whenever they were presenting or saving their own comments during the workshop. Although facilitators were supposed to ease language barriers, it was difficult to interrupt discussion and to enhance students' comprehension. That was because translating English was also hard for facilitators who are not bilingual nor interpreter due to their skills and regional English accent. To support and overcome this kind of language barriers, there are some solutions utilizing digital media for instance real-time shown English subtitles on a screen. One student also pointed out the poorness of Internet connection in Myanmar. Due to the unstableness, audio from Myanmar was sometimes cut and that made discussion incomprehensible.

On the other hand, most of them seemed to have no problem with the

discussion topic and video production. They managed to utilize camera and video editing applications.

However, as mentioned previously, material exchange has not gone as well as expected. Although there were some offsession communication, these contacts were almost taken care by local facilitators (university students volunteers). The process required students to keep paying attention for checking uploaded files and reply from others frequently. If they usually do not spend much time to use the Internet during their off campus life, that explain that behavior.

The result of the third question gives hints of what kind of media is the most used information resource for youth (Table 7).

Table 7. Familiar Research Media for Youth

Q3. What kind of media did you use to search about Sustainable Energy? (Multiple choices)

Choices	Ν	% (Parameter=26)
Material from the library	3	12
Books and magazines at home or other places	8	31
Asked teacher and/or other adults	4	15
Website and/or online media ()* *free description	12	46
N/A	0	0

The result says 46% of respondents were utilizing the Internet for researching about energy. This number also indicates that more than the half of the students relies on books and/or adults for their academic consults. Also surprisingly, there were only 3 students who utilized library, although 31% of respondents were taking a look at printed media. At the workshop, students were not requested to research in a specific source and it was expected a higher usage of Internet and online sources for academic usage among high school students. This data may lead us to different approaches or needs for future activities. Question 4 was an open question: "After

Question 4 was an open question: "After participating in AGORAsia Youth, what more did you learn about energy? What would you spread Sustainable Energy in your country and around the world?" The answers indicate impressions and awareness of energy or Sustainable Development they had learned. There was no blank answer, and 26 opinions could be categorized into two topics.

First topic is to raise awareness of Sustainable Energy, for instance "I learned that there are so many ways in which we can save energy. Although I was aware of them, I was not really practicing them so I decided to practice them from now on." The second topic is to spread the idea of Sustainable Energy for their close relatives or more broader such as the comment "I would like to let other people know the importance of energy in society by encouraging our neighbors and friends."

In addition, several students gave comments that they not only learned about energy, but also they became keen to share this knowledge to the society by digital media. A student wrote that "I think Sustainable Energy is very important for the world. I would present to the people around the world how the energy should be saved by using photos and videos in the Internet."

Finally, question 5 asked students if they would recommend AGORAsia Youth to others colleagues. According to the result, it indicates all respondents had good impression for the workshop (Table 8) and indicating satisfaction with the whole experience. Some of the respondents wrote that "It was a nice experience for me, and I got feelings of accomplishment." Another one said that "Communicating with overseas students, it made me nervous but was delightful" (both were translated from Japanese).

Table 8. Favorability of AGORAsia Youth

Q5. Would you recommend this kind of real time international workshop to your friends? (Chose between the two)

Choices	N	% (Parameter=26)
Yes ()* *free description	26	100
No ()* *free description	0	0
N/A	0	0

4. FINDINGS AND LESSONS LEARNED

Based on the entire results of the survey, the following challenges mentioned at the workshop design part were evaluated from following three points of view.

4.1. Curriculum Design

The curriculum of AGORAsia Youth was designed to create a new discussionbased learning experience for youth in Asia, and to raise awareness of Sustainable Development and—in this first edition—the energy issue. In order to motivate students, ARCS model was adopted, and this time it contributed.

On the survey, answers from students indicated that their interests in energy and willing to spread what they learned were all positive. They exchanged knowledge about the energy situation in three countries and realized how Sustainable Development is relevant for themselves through the researching process and so on.

For grabbing students' attention, group work, presentation and remote

discussions could address them (Figure 6). No one was bored, they seemed keen to figure out the message on the video presentations and what others said.



Figure 6. Discussion and Video Presentation

However, video production process and material exchange process parts were not much impressive for them. And the cause was not the difficulties to handle equipments, since they had shown no major problems when utilizing tools. The main reason may be the the lack of communication in the collaboration process. Regardless of they wanted to communicate to peers overseas, local video production tasks such as filming and editing, and also text based communication via facilitators could not deliver them enough opportunities to collaborate. For increasing learners' confidence and satisfaction, comments and feedback after video screening, as well as certificates of participation at the end of the programe, worked well. Some students left their impressions in the survey: "It's very good to discuss with each other. We bravely discussed with ourselves and improved knowledge" and "We could discuss with each other. It is very nice to express our ideas and opinions. It is very good to share our knowledge between countries." From these comments, it can be assumed that they were satisfied with the discussions in AGORAsia Youth. In short, although collaboration for the video production did not work well at this time, discussion based distance workshop on ARCS model was acceptable for students, and it was effective for achieving purposes of the workshop.

4.2. The Best Use of Digital Media

Digital media is the key of distance communication and spreading learning experiences like this. A purpose-built website was utilized in order to share participants' portfolio, to upload materials for collaborative video production, and to share comments on BBS, but this process seems not compatible with students' off campus behavior. In addition, according to the survey, the Internet was used by less than half of the respondents in their research. On the other hand, video production tools such as camera, laptop and editing software was smoothly utilized by students with fun. It means that they are familiar with those tools. For applying digital media into advanced distance workshop, they should be closer to attendees' lifestyle, and media literacy is supposed to be considered.

4.3. English Communication Support

To assist students during discussion was the hardest part for organizers. As the result of survey, majority of respondents felt difficulty of English communication, yet the language barrier from learners' skills and regional accent were not overcome by facilitators' interpreting efforts. However, this tough challenge did not rid their confidence off, on the contrary, inspired students to discuss foreign peers. On free description of the survey, students' will for the English discussion with peers stood out. Some of them felt stimulated to study English more.

5. CONCLUSION

The grand design of AGORAsia Youth aims to offer discussion and collaboration opportunities for young age students in Asia, and raise awareness of Sustainable Development, in order to contribute compatibly and create a living together feeling through distance collaborative activities. Based on the observation and survey, the three main designing points which are distance workshop curriculum design, usage of digital media, and English communication support were evaluated. The result of surveys from participants indicated that the workshop achieved some of the main goals.

Students learned about energy and were inspired from the discussion among foreign peers, moreover they were not only receivers, but they became keen to be a contributor for building a more sustainable society. Video production process in the curriculum oriented by ARCS model and presentation grabbed their attention, yet collaborative work did not happen as well as expected. Digital media as a off-session communication tool still demands a better design, considering the off campus behavior and digital literacy and environment in each participant site.

English communication assistance is still remaining on the way of smooth cross cultural communication, although students seemed to feel confidence and satisfaction even struggling during English discussion.

Finally, attendees responded that they will recommend this distance workshop to others on their survey, that means that they were very satisfied with the experience.

Although the feedback from respondents were mostly positive, there are parts that have to be improved. They were categorized into the following topics:

5.1. Language Barrier

Currently, English tends to be the main language for this sort of intercultural workshop. However, some students could not share their opinion enough because of the language barrier. There were facilitators who took care of interpretation, yet that role was tough for them, too. Thus, other ways of backup is necessary. For example, text based support such as easy understandable handout or tools that enables to display subtitles in real-time.

5.2. Digital Media for Peer Collaboration

At this time, students had utilized video production equipment and purposebuilt website through the workshop. Web platform based online communication and collaboration still requires more interaction design. For the future, more easy-to-use media such as smart phone application should be considered.

5.3. Target Audience

To spread this sort of collaborative learning experience more broader, the main target of AGORAsia Youth can be not only high school students, but also middle school students. In fact, in Myanmar, there were some attendees came from middle school. They were younger than the main target of the workshop, yet they were keen to participate the activities even though it was conducted in English. Therefore, a program designed for a wider range of age could be considered in the next edition.

All in all, the first series of AGORAsia Youth got worthy findings and lessons to be improved. Along with relevant themes and applying learner friendly digital media, this unique workshop will be carried on involving youth in Asia.

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Born in 1973, in São Paulo, Brazil. Graduated in Architecture and Urbanism at University of São Paulo (USP) and moved to Tokyo in 1996. In 2010, he finished his masters in Media Design at Keio University and now he is attending the third year of the doctoral program in the same institution. Member of the Global Education and Digital Kids projects, Marcos has been conducting his research on educational program design using ICT, focused on global education for children and youth.

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