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Master's Thesis
Academic Year 2017

A Playful Workshop to Trigger Global Economy
Awareness among Youth

Keio University Graduate School of Media Design

Marcel Ferragi

A Master's Thesis
submitted to Keio University Graduate School of Media Design
in partial fulfillment of the requirements for the degree of
MASTER of Media Design

Marcel Ferragi

Thesis Committee:

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Abstract of Master's Thesis of Academic Year 2017

A Playful Workshop to Trigger Global Economy Awareness among Youth

Category: Design

Summary

If we study the global finance market, we can notice that Japanese financial system represents one of the most intricate and paradox economical and financial systems on the globe. Japan is known for its high savings rate and a very low interest rate. As the Japanese economy is in stagnation for almost three decades, the Japanese government introduced new guidelines and economical stimulus. Most of these projects and changes can be accomplished, only if everyone embrace the causes and be educated about them. To have all the commitment of the stakeholders, education is one of the most significant instrument to involve people.

Education can change lives and, more importantly, improve them. Therefore, this research is based on economic behavior and economic education. It aims to design a new way and flow to educate people about economy and finance, with the goal to enhance their financial lives. This thesis addresses the following questions: how to teach economy for the young generation in a playful way? How to make economy become fun and interesting? How to keep students attention and make the recall higher?

So on, this research designed a playful Global Economy Workshop, with 4 sessions from November 12th 2016 to February 18th 2017, each session had a main goal, teaching an important economic element. The workshop started from a small approach showing economic integration from the products' perspective and getting bigger and bigger, to trade, economic agreements and finally a regional economic alliances. It was a continues learning process, becoming more macroeconomics after ever each session.

Global Economy Workshop was based on Super Global High School project which was designed according to the 21st Century Competencies methodology for Youth in Fujimigaoka High School, having as a target persona, 100 high school

students. Based on surveys in the end of each session, students were able to trigger their global economy awareness and learn some important economic elements in a playful way. Even, students that knew about economy, but seemed to have a negative impression of a hard to learn subject, showed enjoy the session and aroused a will to learn more about the subject.

Keywords:

Global Economy Awareness, Economic Education, Economic Integration, International Trade, Playful Workshop

Keio University Graduate School of Media Design

Marcel Ferragi

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Cheers

Marcel Ferragi

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Chapter 1

Introduction

If we study the global finance market, we can notice that Japanese financial system represents one of the most intricate and paradox economical and financial systems on the globe. Japan is known for its high savings rate and a very low interest rate(Trading Economics 2016).

Although it has one of the lowest real interest rates in the world, the Japanese population presents a strong tendency to save money. Even with the negative interest rates, the Japanese investors are used to buy fixed income, such as Japanese sovereign and corporate bonds ¹.

As the Japanese economy is in stagnation for almost three decades, the Japanese government introduced new guidelines and economical stimulus. Most of these projects can be accomplished, just if all the stakeholders embrace the causes and be educated about them. And to have all the commitment of the market players, education is one of the most significant instruments to involve people. Therefore my master project is based in economic behavior and economy education.

In this chapter author will discuss When, Why, Who, What and How; explaining the reason why they were chosen for the research study. In the second chapter author will give a detailed description of related works, their strong points and directions that o havent been covered yet; and why the proposed concept will be better at tackling the existing problem. The description of the concept design and its stages will be given in the third chapter. The 4th and 5th chapter will cover the proof of concept and evaluation, as well as its further development based on the results.

1 Sovereign bond is a debt security issued by a national government within a given country and usually denominated in a foreign currency. The foreign currency used will most likely be a hard currency, and may represent significantly more risk to the bondholder. The risk of the bond is related to the country risk of default and the interest rate paid by it will be higher as the risk of default is higher.

Before start, lets define important aspects that the author need to considerate:

When - Context / Overview . The current situation and context of Global Economy in Japan and how it is affect Japanese daily lives.

Why - Problem Statement. The economic education in Japan and the importance of it in people's lives.

Who - Target audience. It is important to understand a selected target group, to know their behavior patterns and economic knowledge, so the author can tailor a unique effective solution to them, instead of trying to concur the whole world.

What Content / Methodology. The main idea of design that is hidden behind the concept is something that we want to deliver to our target group through innovate approach and methodology.

How - Proposal and approach. Taking into account the uniqueness of the selected group, it is necessary to create a system that can deliver the message to the target in the most efficient way.

1.1 When - Overview

Japan is known for its high savings rate and a very low interest rate, save money is not the same as invest money.

Although the country has one of the lowest real interest rates in the world, the Japanese population presents a strong tendency to park their money in saving accounts, having zero return from it. In addition, the Japanese Central Bank even implemented the negative interest rate last year, with this new monetary policy, the Japanese savers will have prejudice if the 2% of inflation goal is reached in the economy, because with time their money will loose purchasing power².

Most of Japanese Government projects and reforms can be accomplished, just if all the population embrace the causes and be educated about them. The easiest way to change population mindset is starting to educate the young generation, which is more open and can adapt easier to changes.

If you learn about economy and investments during young ages, before start the adult life, you can be able to learn how to save and invest money, and so on have a healthier financial life. Economy is part of everyone daily life, learn more about Economy is as important as learn more about health care and nutrition, because

2 Purchasing power is the number and quality or value of goods and services that can be purchased with a unit of currency.

have a healthier financial life, without economic problems, is have a healthier life.

1.2 Why - Problem Statement

Japanese economy has been in stagnation for about 30 years. To avoid an economic crisis, the Government needs the support of the young generation to understand and embrace their monetary and fiscal policies.

Today Japans families wealthy has more than 16 trillion yen, but only approximately 8% of this amount is exposed to stocks, while in United States 30% is invested into shares, in the stock-market. According to the Bank of Japan, cash and deposits account represents about 55% of an estimated 1,500 trillion yen worth of Japanese household financial assets. When this money is just parked in saving accounts, it doesnt help to promote a healthy financial system, because big part of this money is not circulating in the capital market, helping to finance big corporations, investing in their private bonds³

Although Japanese government is taking measures to improve the economic life of the people, it becomes obvious that the issues of economy can not be targeted from only one direction. Thus, in 2001 The Central Council for Financial Services Information, Public Relationship Department, of Bank Japan, started to conducted survey to understand the Economic behavior and economic education of Japanese people.

In 2016, this institution conducted a Financial Literacy Survey, and from the people who answer the survey 62.4% (15,611 people) said that financial education should be offered during school ages, but at the same time, only 8.3% of this group (1,298 people) received some financial and economical education during high school ages. At the same time, to show that economic education is efficient, the ones that have had some economic educations got 56.4% of the questions right (56.4 over 100), while the ones that did not have any economic education had just 38.2% (38.2 over 100) of right answers.

Compared with other peers, the United States and United Kingdom, the percentage of correct answers given to common true/false questions was 7% lower in Japan; and compared with Germany, the percentage of correct answers given

3 Private bond or corporate bond is a debt security issued by a corporation and sold to investors. They are a form of debt financing, and can be a major source of capital for many businesses.

to common true/false questions was 9% lower in Japan. What shows that the problem of Economic Education does exist in Japan and need to be targeted.

1.3 Who - Understanding the target

When designing a Global Economy Workshop it is necessary to define the target persona of the artifact and what user experience it provides to this group of people. As we are talking about economic and financial education, to provide a financial independence, this workshop will be focus on the young generation. Young people are more open to learn new fields of knowledge, and if they are still young, they have more time and disposition to study before start their adult life. In chapter 4th, for user text, we will clarified the target persona, sharpening it and bringing more specific aspects.

1.4 What - Research question

As the author will show in the preliminary survey during chapter 3, young people hardly learn about economy, because they find it difficult and boring. So, the challenge will be to find ways to make young people more interested in Economy.

The author research question will be: How to teach important economic elements and trigger Global Economy awareness among young people in a playful way?

This author will bring this question again during chapter 5 to evaluated the results.

1.5 How - Proposal

As the main intention is to create global economy awareness the author proposed a playful learning approach, more related to the target persona's daily lives, with story-telling and playful activities and artifacts for a higher recall.

My design thesis is oriented toward design a Global Economy Workshop (artifact) which has a goal to trigger economic global awareness among young people (from 15 to 25 years old), and help them to learn some important economic elements in a playful way. Important to say, that the definition of Global Economy and some important economic elements will be clarified in the next chapter.

During the last year I designed and conducted a Global Economy Workshop, with 4 sessions from November 12th 2016 to February 18th 2017, being one session per month.

Before realize overall how global economy works, you have to start to understand how single market function. So, the author started from a small approach showing from the products' perspective and getting bigger and bigger, to trade, economic agreements to finally a regional economic alliances. It was a continues learning process, becoming more macroeconomics after ever each session.

Chapter 2

Related Works

2.1 The Central Council for Financial Services Information in Japan

Financial Literacy Map

The Central Council for Financial Services Information in Japan ¹, created a Committee for the Promotion of Financial Education, responsible to defined the standard learning goals designated for high school students and younger students in the Financial Literacy Map². The learning goals for each age of school students reflect the contents of the subjects to be learned in the respective school grades as indicated in the MEXT³ curriculum guidelines, they are consistent with the financial education goals for the same age groups designated in the Financial Education Program. It is important to notice that some of the learning goals from MEXT are not included in the guidelines, but in overall, they cover the contents addressed in activities for advanced learning, comprehensive learning, or

-
- 1 The Central Council for Financial Services Information is the organization which is conducting financial services information activities in Japan. With the primary purpose of enlightening the public regarding the importance of basic financial and economic knowledge related to daily life, the Central Council for Financial Services Information has been engaged in nationwide promotion, mainly public relations activities. Since the establishment of the Central Council for Savings Promotion in April 1952, the Bank of Japan has been working as its secretariat. Presently, the secretariat is located in the Public Relations Department of the Bank.
 - 2 The "Standard Learning Goals for Different Age Groups" from the "Minimum Level of Financial Literacy That Should Be Attained" prepared by the Committee for the Promotion of Financial Education
 - 3 Ministry of Education, Culture, Sports, Science and Technology

other special activities

Accordingly to the financial literacy map, to promote an appropriated economic education from elementary school to high school, the education should be based on the Financial Education Goals by Age Group". The Financial Literacy map will be one of the main resources to choose the important Economic Elements which will be taught during the Global Economy Workshop. These elements will be described better during this chapter.

The Financial Literacy map will be one of the main resources to choose the important Economic Elements which will be taught during the Global Economy Workshop. These elements will be described better during this chapter.

Financial Literacy Survey

The Financial Literacy Survey 2016 (Shiruporuto 2016) Japan's first large-scale questionnaire survey conducted with the aim of understanding the current state of financial and economical literacy in Japan. Even though the Interviewed are older than high school students, this survey will evaluate their financial and economic education background, checking the knowledge learned during the past years, even in high school periods.

This online survey was conducted by Bank of Japan on 25,000 individuals aged 18 to 79 who have been chosen in proportion to Japan's demographic structure. Evaluating their economic and financial education background. As a result, the 2016 survey is Japan's first large-scale survey in this area, covering all categories of the Financial Literacy Map.

As outcomes from the Financial Literacy Survey (Figure 2.1), from the people who answer the survey 62.4% (15,611 people) said that financial education should be offered during school ages, but at the same time, only 8.3% of this group (1,298 people) received some financial and economical education during high school ages.

The gap between needs for financial and economical education and the actual situation and effects of it, shows that while many respondents indicated that financial education should be offered, only a limited number of them had actually participated in such education.

And when they were tested by their economic knowledge, the ones that have had some economic education got 56.4% of the questions right (56.4 over 100), while the ones that didn't have any economic education got only 38.2% (38.2 over 100) of right answers, showing that Economic Education is efficient.

Furthermore, when we compare the Japanese performance with their overseas

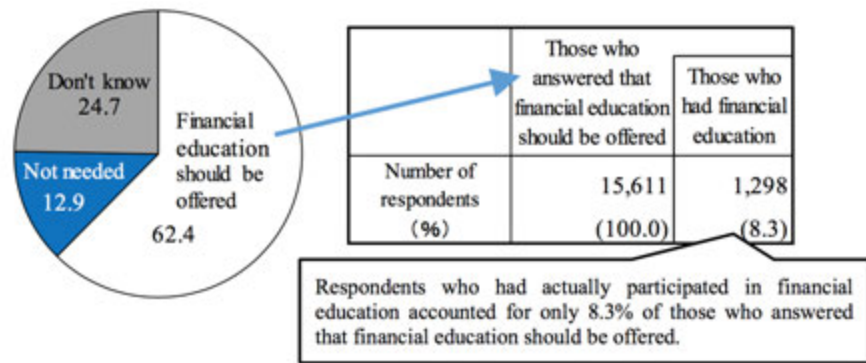


Figure 2.1: Financial Literacy Survey

peers⁴, compared with the United States and United Kingdom, the percentage of correct answers given to common true/false questions was 7% lower in Japan; and compared with Germany, the percentage of correct answers given to common true/false questions was 9% lower in Japan. Also, the percentage of those with desirable behavior such as, before buying something, carefully considering whether they could afford it or not, was 7 to 17% lower in Japan.

As Yoshino Naoyuki ⁵ said in his book *Promoting Better Lifetime Planning Through Financial Education*, the best way to have a healthier financial life is through education. Financial education curricula in schools and training for teachers of financial education were topics discussed in his book (Yoshino et al. 2016), as well as the evaluation of the effectiveness of financial education programs.

Individuals will increasingly have to make complex financial decisions to plan their retirement, taking in consideration expenditures that sometimes are even

4 When comparing with overseas, some leeway should be allowed since there are differences in financial products and services, tax systems, educational systems, etc

5 Dr. Naoyuki Yoshino is Dean of the Asian Development Bank Institute (ADBI) and Professor Emeritus at Keio University. His professional career includes membership in numerous government committees. He was named Director of the Japan Financial Services Agency's (FSA) Financial Research Center (FSA Institute) in 2004 and is now Chief Advisor. He was appointed as Chair of the Financial Planning Standards Board in 2007. He has served as Chairperson of the Japanese Ministry of Finance's Council on Foreign Exchange as well as its Fiscal System Council (Fiscal Investment and Loan Program Section). Additionally, he has been a Board Member of the Deposit Insurance Corporation of Japan and President of the Financial System Council of the Government of Japan.

unforeseen. Despite the increasing access to financial services and the winding financial risks borne by households in many countries, surveys show that financial literacy levels are typically low around the world (Yoshino et al. 2016)⁶.

All this research suggests that financial and economic education should be part of a lifetime process that begins at an early age at school and is pursued throughout adulthood.

2.2 Global Economy & Economic Elements

My thesis is oriented toward design a Global Economy Workshop (artifact) which has a goal to be able to trigger economic global awareness among young people (from 15 to 25 years old), learning some important economic elements in a playful way. Therefore, it is important during the next subsections, define the concept of Global Economy and the important Economic Elements, that were selected.

Defining Global Economy

Economics may seem like a theoretical subject, but it actually has many practical applications in daily life. Economics studies the way people, countries and companies interact with each other, and covers such diverse fields as education, finance, business, law, government policy and more.

Global Economy has so many definitions, but World Bank⁷ defined it as the international spread of capitalism, mainly in the last decades, what increased the interaction and interdependence between countries.

The truth is that everyday, tons of goods travel oceans across continents to reach remote parts of the world, world-wide economic activity between various

6 The contributions of Promoting Better Lifetime Planning Through Financial Education Book came from a symposium entitled, Promoting Better Lifetime Planning through Financial Education, organized by the Asian Development Bank Institute, the Bank of Japan, the Japan Financial Services Agency, and the Organization for Economic Co-operation and Development, held in January 2015 in Tokyo

7 The World Bank is an international financial institution that provides loans to countries of the world for capital programs. It comprises two institutions: the International Bank for Reconstruction and Development (IBRD), and the International Development Association (IDA). The World Bank is a component of the World Bank Group, which is part of the United Nations system.

countries are done every single second. This makes us globally connected to one another by purchasing and using goods from all over the world.

For example, very rarely though, in our everyday life, do we stop and think about the journey of the food that we are eating right now, and how it contributes to world economy, as well as the domestic economic growth which export it.

The fact is that very rarely, goods are made locally. There are good reasons for it: Economic reasons explaining that the production of some goods is much more expensive locally, or domestically.

Economies of scale suggests that transporting goods in large volume makes it cheaper, with new technologies the costs of production and transportation decreased and the interaction between countries increased, boosting the Global Economy. In the end, with globalization our lives are intertwined which can affect negatively or positively everyone.

When people are purchasing a product and using goods they should stop and think about the journey and the background of these goods. Because, buying products with specific source is a way to support a ideology and local economy.

The circulation of all these global goods has huge impact in the international economy, politics and history. But apart from those big scale impacts, for each and every individual the choosing products is associated with more than support the trade behind it, it is associated to support their process and beliefs. When people come across something that they know has traveled far distances to be at their service, rest assured that they are contributing to another nation sustaining its own economy and helping other people to be a part of global economy.

Understanding the global economic situation in Japan

Japanese economy has been in stagnation for about 30 years. From many policies of Japanese government to avoid an economic crisis and break the economic stagnation, they believe that Trans-Pacific Partnership may eventually benefit Japan as the likely accompanying trade expansion would provide a boost to Japan's economic growth.

The Trans-Pacific Partnership (TPP) is a trade agreement between twelve countries⁸ in Pacific Ocean, finalized on 4 February 2016 after seven years of negotiations. It currently cannot be ratified due to U.S. withdrawal from the

8 Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, the United States (until 23 January 2017) and Vietnam

agreement on 23 January 2017.

The TPP contains measures to lower both non-tariff and tariff barriers to trade, it would create a free-trade zone among 12 nations around the Pacific, making it the worlds largest, as the countries within its scope account for 40 per cent of the worlds economic output.

The former North American Administration claimed that the agreement aimed to:

...promote economic growth; support the creation and retention of jobs; enhance innovation, productivity and competitiveness; raise living standards; reduce poverty in the signatories' countries; and promote transparency, good governance, and enhanced labor and environmental protections

Obama former American Administration

By addressing sectoral barriers to trade, the Japanese government would be wise to focus on a combination of domestic reform and rededication to plurilateral economic agreements. By doing so, it can advance the goals of shaping an integrated Asia-Pacific economy in which Japanese firms are confident and robust players. This is a current subject in Japan, being in the news almost every week and very related to global economy awareness.

Important Economic Elements

So, among all the Economic Elements, which ones should the author choose. Based on a research made by World Bank, which has a traditional approach by education, this international institution define economic integration as one of the most important elements of economy. Because economic integration improved competitiveness and boosted economic growth, countries that are able to integrate into the world economy may be able to achieve higher economic growth and improve the quality of life of their citizens.

It is also a current subject in Japan. The economic role of Japan in the Asia-Pacific region is of particular interest and relevance. Japan has concluded several bilateral partnerships such FTA⁹ or EPA¹⁰, particularly with countries in

9 Free Trade Agreements

10 Economic Partnership Agreements

the Pan-Pacific and in Southeast Asia. It can be said that Japan contributes quite significantly to the economic development of the Asia-Pacific area through fostering economic integration.

Japan is a founding member of the Trans Pacific Partnership, mentioned above, which could bring the share of FTA/EPA-covered trade of Japan to about 40%, which would deepen Japan's integration within the Asia-Pacific region even further. While TPP negotiations were successfully concluded in early 2016, the recent US presidential elections have led to doubts about its ratification. Still, other mechanisms to foster free trade in the Asia-Pacific area might fill such a void.

On the other hand, we can notice that some countries are following actions opposed to economic integration, with protectionism elections. As, for example, the Donald J. Trump election in United States and Brexit in United Kingdom.

Protectionism refers to government actions and policies that restrict or restrain international trade, often done with the intent of protecting local businesses and jobs from foreign competition. Typical methods of protectionism are tariffs and quotas on imports and subsidies or tax cuts granted to local businesses. The primary objective of protectionism is to make local businesses or industries more competitive by increasing the price or restricting the quantity of imports entering the country.

(Investopedia 2016)

The International Monetary Fund renewed its warnings against protectionism as nationalist political trends threaten trade integration on both sides of the Atlantic. The expected conclusion of a EU-Japan EPA in the near future and further arrangements with other countries in Asia-Pacific will bring a new dynamism to Europe-Japan and Europe-Asia-Pacific trade and investment relations.

Continuing in Europe, another important event was the French elections, with the election of Emmanuel Macron, France shows that they believe in less nationalism and more economic integration as an option for economic development. It is hard to say which path the world will take in the future, but economic integration will be on the track as one of the most debated subjects.

As a second aspect to choose the important economic elements, the author checked the Financial Literacy Map, developed by Central Council for Financial Services Information in Japan. And as part of the skills required to be developed among high school students is: **gaining a better understanding of contracts**

and responsibilities accompanying contracts, and acquiring the skills for gathering information and using it in one's everyone consumption. The author decided to use documents and economic agreements during the Global Economy Workshop, concentrating in Economic Integration Elements.

The approach will have the following strategy, before realize overall how global economic integration works, the author will try to show the students how the single market function from a product perspective. So, the author started from a small approach showing from the products' perspective and getting bigger and bigger, to trade, economic agreements to finally a regional economic alliances. It was a continues learning process, becoming more macroeconomics after ever each session, with the following economic elements:

- Production
- International Trade
- Economic Agreements
- Alliances

2.3 Methodology

Playful Learning

Based on the article Playful learning and Montessori education, (Lillard 2013), there are many differences between the normal structured classes and playful learning. One of them is **peer interactions**, in conventional style, students just follows teachers' instruction, but in a playful learning more peer interaction is expected, learning from each other perspectives, children work together and communicate together, usually in Japanese schools, students just follow what teachers say and students themselves do not communicate much. High communication level was reported not as a method but as an outcome of playful learning style.

Another element is **rewards**, instead of rewards for their works, such as gold stickers to count points , in the playful learning occasions, students are not given any rewards, because the activity itself should be the reward. The activity should be attractive enough to not force to use rewards to motivate the students.

And the third element is artifacts. Using tangible objects during leaning occasions is suggested to gain participants engagement. The word "tangibles" was

defined as "physical artifacts" that sometimes illustrate the activities and increase the recall. In the research "Using tangibles to promote novel forms of playful learning" (Price et al. 2003), shows that by having tangibles in the game, participants did not have to be coaxed to do the game, they were keen to use them and were able to be engaged by themselves.

For the Global Economy Workshop, as the author will explain during chapter 3, an artifact was defined for each session, with the goal to increase the interaction and help the students to learn the economic elements involved in the session.

Culture and self-identification

The importance of understanding one's own culture for self-identity is undeniable. As young people move from searching for their identity to identifying it, their levels of self-confidence, self-concept and meaning will increase. According to "The Effects of Ethnic Identify, Ethnicity, and Gender on Adolescent Well-Being" familiarity with their culture is necessary for adolescents to come to know and to accept their identity. (Martinez and Dukes 1997).

Having a sense of self as well as a strong cultural understanding enhances the character of individuals, and when properly instilled, it broadens the understanding of a society. Western society is facing problems resulting from a lack of identifiable culture.

It is failing to meet the basic requirements of culture, which include giving people a sense of meaning and self-identity, a measure of confidence about what the future holds for them, and a framework of moral values to guide their actions (Martinez and Dukes 1997). Thus, promoting cultural involvement in young people s beneficial to individuals and society as a whole.

Culture is often compared to an iceberg. Like the tip an iceberg, visible aspects of culture such as behavior, eating habits or clothing are easy to see. Under the surface, however, hides a huge and potentially fatal portion made up of beliefs, values, customs, experiences and assumptions. Knowledge of the deeper parts of the iceberg help us understand the "why" behind the behavior. It enables us to make more informed evaluations of global counterparts and avoid misunderstanding that can waste time and damage relationships.(Peterson 2011)

Multicultural learning is learning that integrates and explores the rich tapestry of perspectives reflected in our diverse world.

(Alexander and Chomsky 2008)

Before students can begin to understand other cultures, they must first have familiarity with their own. Perpetuating a legacy of multiculturalism and creating an environment of cultural tolerance, we became not a melting pot but a beautiful mosaic. Once students are aware of their own self, it is imperative that they are instilled with a greater acceptance for diversity and when they are surrounded by diversity, it broadens their tolerance for differences, paving the way for a brighter tomorrow.

Understanding Japanese situation in the Global Economy and how it is related to the international trade, explaining economic agreements to overseas students, is step of self-identification, that the author used during the Global Economy Workshop.

Storytelling

Storytelling can become an effective method for design knowledge transfer (Erickson, 1996). While there are no universal standards for implementation of storytelling, there are a variety of documented procedures for using storytelling for different purposes within a teaching system. Because stories are engaging, memorable and easily passed on, they are powerful communication tools.

Storytelling remains a powerful element of communication, with the narrative being equally as compelling as essays and textbooks. They humanize learning. Stories touch our emotions and make us laugh, cry, fear, and get angry, what is a sharp contrast to a plain old presentation.

It gives us the opportunity to connect to like-minded characters, or see the world literally from within someone else's perspective. Adding to the fact, that no matter how organized or detailed a textbook might be, there's something about the shape of a narrative that increases the recall and that resonates with our mental makeup.

Collaborative Learning

The ability to collaborate is becoming more important than ever in today's world, mainly because tasks are getting more interdisciplinary and complicated to accomplish. Therefore it is essential to prepare students on collaborative tasks while they are in school so that they can become competent team workers when they enter the workforce.

In the book *Collaborative learning in teaching: a trajectory to expertise in pedagogical reasoning* (DiMarco and Luzzatto 2010) a model of the cognitive processes involved in collaborative learning was done associated with theories of discourse comprehension and production, reasoning, planning and problem solving. This study is part of a program investigating the role and development of expertise in decision-making, as well as the similarities and differences between individual and collaborative performance in complex domains.

To attract students with diverse talents into our fields we need to rethink the paradigm of teaching and learning science. Teachers have access to various pedagogical tools that can facilitate greater interactions among students and engage them with the material in a meaningful way. When students get involved in their own learning, the extent of student and faculty engagement with the material increases significantly.

Collaborative work environment inside and outside the classroom helps to increase the quality of work produced by the students involved. When classroom learning is coupled with dissemination of information to the community, it enhances students motivation and commitment for the work.

Collaborative learning has the promise of active construction of knowledge, enhanced problem articulation and promotion for social interaction and has also been demonstrated to provide better outcomes than individual work in different studies.

Student-centered learning

Student-centered approach, or learner-centered education, broadly encompasses methods of teaching that shift the focus of instruction from the teacher to the student. Student-centered learning aims to develop learner autonomy and independence, students are involved in the learning process and become committed to improving their skills. (Jones 2007)

Different learning styles can be accommodated, and students can help each other to develop their own skills. Hearing different points of view, sharing experiences, brainstorming ideas, explaining things, reacting to other people, and expressing your feelings can be fun.

Student-centered instruction focuses on skills and practices that enable lifelong learning and independent problem-solving, its learning theory and practice

are based on the constructivist learning theory¹¹ that emphasizes the learner's critical role in constructing meaning from new information and prior experience, it is an educational mindsets or instructional methods that recognizes individual differences in learners. Student-centered activities are enjoyable and stimulating, and probably will help to developed a more playful way to teach economic elements and trigged global economy awareness.

11 Constructivism is a learning theory found in psychology which explains how people might acquire knowledge and learn. It therefore has direct application to education. The theory suggests that humans construct knowledge and meaning from their experiences. Constructivism is not a specific pedagogy. Piaget's theory of Constructivist learning has had wide ranging impact on learning theories and teaching methods in education and is an underlying theme of many education reform movements. Research support for constructivist teaching techniques has been mixed, with some research supporting these techniques and other research contradicting those results.

Chapter 3

Design Process

The concept of this program is a Global Economy Workshop, offering the opportunity to high school students to learn some economic elements in a playful way; and triggering their Global Economy awareness.

In this chapter, the design process of the concept and method will be discussed.

3.1 Preliminary Fieldwork - EBA Malaysia

Malaysian Economy

If we analyze the Asian economies, we can notice that Malaysian Economy highlight itself, being a newly industrialized market economy, relatively open and state-oriented. It is also one of the most competitive in the world, ranking 14th in 2015 by World Economic Forum (World Economic Forum 2016). And by World Bank (World Bank 2016), it is ranking as the 3rd biggest GDP in South East Asia; and also the 3rd in GDP per capita, losing just for very small countries. Malaysia can offer diversity and at the same time, it keeps the strong characteristics of the 3 main races that have been in the island for more than 3 generations; Malay, Chinese and Indians.

USM Workshop Design

As a previous fieldwork the author applied a preliminary Economic Behavior Workshop during an EBA¹ Independent Fieldwork in Penang, Malaysia. The main goals of the workshop during EBA Fieldwork were the following:

1 EBA Consortium is the abbreviation for University Consortium for Evidence Based Approach (EBA), and it is a collaboration among ASEANs top universities to develop human resources capable to identify and solve issues based on the evidence and analysis

- Understand the mind set of young investors and their relationship with finance and economy
- Identify the current situation and statements about Economic Education

The author would like to understand the strategies and motivations that drive the investors decision. Most of these decisions are emotional and not rational, and understanding the investors mind set is the best way to engage them to embrace the government's economic reforms. As the education is based on human connections, understand different people and their perspectives can bring new ways to analyze knowledge and how this information is shared.

The workshop developed was based in guide outlines the global competence learning targets. The attitudes, skills and knowledge are indicated across learning spirals developed by VIF ² as part of its Global Gateway system: Understanding, Investigating, Connecting, and Integrating.

The author is using global competences to gauge students growth and progress in their global learning (Global Competence 2015). There are three global competence outcomes. The first one is knowledge, participants develop awareness of cultural diversity and global issues, it is important to understand how much do they know about investments and their economy. Second is skills, participants improve their critical thinking, problem solving, perspective-taking and research skills. Because they have to understand how to do it, how to apply the knowledge. And at last but not least, is the attitude, participants explore their own culture, make comparisons with other cultures and investigate global issues and challenges, a workshop with success will change participants attitude and they will be able to start to invest their money. These global competence indicators were created by VIF International Education (InternationalEducation 2017) in order to provide grade-level frameworks for integrating global awareness.

Workshop STEPS

The workshop was done in the Conference Room in the School of Computer and Science of University of Science Malaysia and it had 4 sessions. The first session

2 VIF is a partnership with schools and districts to provide leading-edge technology, comprehensive frameworks and support services. It builds global education programs that prepare students for success in an interconnected world.

was a short presentation about economy, sharing some basic and important knowledge. After this session, the author had another three activities to understand how students learn about Economy in Malaysia and how much do they really know about investments.

The first activity was a Mind Map (Figure 3.1), where started from the word "investment" students had to do diagram used to visually organize information, the major ideas are connected directly to the central concept of investments, and other ideas branch out from those. Mind maps can be used to generate, visualize, structure and classify ideas. During the first activity, the author could be able to identify the knowledge and feelings of the students about investment (Figure 3.2). Many of them talked about the instability and how difficult is to trust in banks to invest their money, maybe because Muslim community has specific economic laws, so in the bank transactions there are a lot of documents to sign what make the process more confused for someone that is not from this field.



Figure 3.1: Mind Map / Penang - Malaysia

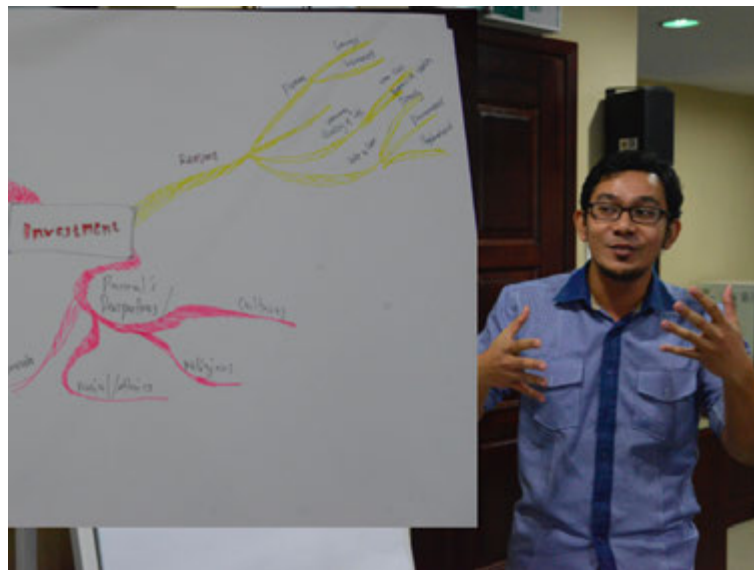


Figure 3.2: Mind Map / Penang - Malaysia

The second activity was a brainstorm (Figure 3.3), where the students had to write down their feelings about investment and what come to their minds. After the brainstorm, they had to do a classification of each element, as a long-term investment, short-term investment or expenses (Figure 3.4). There were many nice insights in this activity, such as the factor that they see tourism as a short-term investment. And the feelings that investment can increase your social level and it is necessary to keep security in the future. The important part is that most of them put education as one of the most important investments in long-term, on the other hand, people still believe that gemstones and gold are one of the best kind of investments, but in fact in some market these assets do not have so much liquidity.

And the third activity was a questionnaire (Appendix A.1), where the author could realize that the students do not have any knowledge about Capital Market, such as fixed income, funds or equities. When the author asked about investments the answer were based in tangible assets, as gold or real estates. And when the question were about important aspects before buy specific assets, the answers show a lack of knowledge about them. Another important conclusion is that 86% of the students in the workshop have made debts. All this data shows that this specific group of graduate university students did not have a financial education, and probably this aspect will also repeat in other similar groups.



Figure 3.3: Brainstorm / Penang - Malaysia



Figure 3.4: Classification- Malaysia / Penang

EBA Fieldwork: Results and Outcomes

Results

The data produced in the workshop will help the author to understand the socio-cultural aspects that motivate the Asian young investor in different economic situations hence the author will be able to develop an exploratory research of their decision, nowadays. On parallel the author evolved a qualitative research, because it helps to overcome initial conceptions and provide the basis for descriptions and explanations in specific contexts, reviewing theoretical frameworks. From the workshop, the author was able to have many insights which help to understand knowledge, skills and attitude of this group of Asian students.

It shows that the lack of economical and financial education is not only a problem from Japan. During the questionnaire (Appendix A.1) in the end of the workshop session, 100% of the students showed interest in learn more about investments, they believe that to keep a high quality of life, it is important to have a healthy financial life. But at the same 87% of them have made debts during their young life (Figure 3.5). They said that economy is far from their reality and hard to understand.



Figure 3.5: Have you ever made debts? / Penang - Malaysia

Based on the author's experience working for almost 10 years in the financial

market, working with Wealth Management³ with investors and their economic behavior, although investments should be rational, most of the time, investors take decision based on their emotion. Many of these decisions are based on cultural backgrounds that people carry with them and are influenced by the environments. So to understand economic behavior, first is necessary to understand the reality of life of these investors.

The workshop can be tailored based on what needs to be done to connected this global competence to a economic behavior engaged with the government actions. It shows that their lack of economical and financial knowledge comes more from a lack of opportunities and information about the subject than a lack of interest.

Outcomes

The workshop helped to test the students knowledge and skills about investment and government policies, even if in a few hours workshop is not possible to share all the knowledge about investments, the workshop succeeded to create a reflexion between the participants about how important is to save money and make it works for you.

From this workshop, as outcome, the author realized that the content must be more related to their daily lives and with story-telling and visualization for a higher recall, therefore the main outcomes were:

- Culture and self-identification
- Playful Learning
- Story-telling

3 Wealth management as an investment-advisory discipline which incorporates financial planning, investment portfolio management and a number of aggregated financial services. High-net-worth individuals (HNWIs), small-business owners and families who desire the assistance of a credentialed financial advisory specialist call upon wealth managers to coordinate retail banking, estate planning, legal resources, tax professionals and investment management.

3.2 Global Economy Workshop - Design Process

Preliminary internal surveys

Understanding Economic Knowledge

Before start to design the workshop, the author applied two preliminary survey. The first one was with the main goal to understand the economic behavior of the young generation, the author conducted a preliminary survey with 133 people living in Japan, almost everyone were younger than 25 years old (Figure 3.6). Some of the outcomes from this private survey are that 80% of them are interested in Economy and would like to learn more about Economics.

But even young people in Japan want to learn more about economy, the biggest problem is that young people in Japan hardly learn economy, because they find it difficult or boring. Almost half of the interviews (48 percent) think that economy is too difficult, and other 36 percent said that they don't have time to learn about economy. Some of them even said that it might not be related to their daily lives. (Appendix B.1)

The second preliminary survey was just with economist who are working with economy. The idea is to have more insights and try to understand better how to solve this problem. The author asked these economists about more efficient way to teach economy to general public and the reasons that they believe that people don't learn about economy.

The author also approached subjects such as how could we make the learning process more enjoyable and playful. This survey was also used for another project done by the author, inside Global Education Lab, Ecoome. One of the questions was about **What would be an effective way to popularize economic knowledge for the general public?**

From the survey we got interesting insights, such as the following quotes:

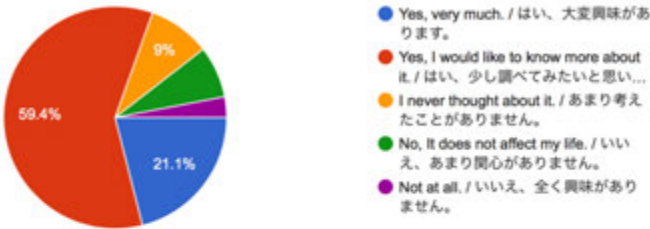
... with games and online lectures, very short, to keep the attention of young people.

Alessandra Paschoalini Borges⁴

...children could start learning basic concepts in school.

4 Manager in listed Companies Development in BMF BOVESPA, Brazilian stock-market

Are you interested in the Economy? あなたは経済に興味がありますか？
133 responses



What are the challenges with learning about the economy? / 経済について学ぶ際の課題は何ですか？
129 responses

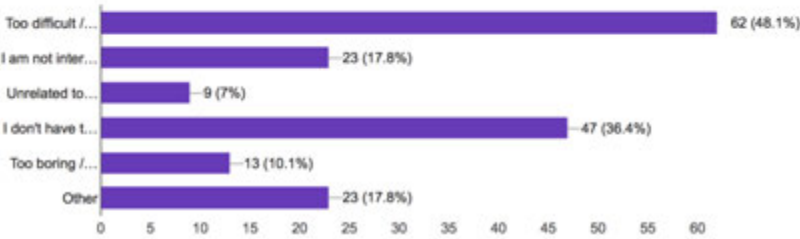


Figure 3.6: Preliminary Survey

Gabriel Vanzella⁵

The results from this survey helped the author to design the Global Economy Workshop for high school students.

About the Field

Global Economy Workshop is part of Global Workshop started based on Super Global High School project (GlobalHS 2016), which was designed according to the 21st Century Competencies methodology for Youth in Fujimigaoka High School.

Super Global High School

Super Global High School project (GlobalHS 2016) is a project supervisory and financially supported by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) since 2014. It aims to develop unique Japanese global leaders who have their own attributes to offer within a global context for 21st century society.

Of the 246 high schools that applied to take part in the program in 2014, 56 were selected – four national (central government-run), 34 public and 18 private representing 32 prefectures; Tokyo boasts the largest number, with 10.

The program has a goal to develop a deeper knowledge of global social issues, communication ability and problem-solving skills in high school students. The program also mandates that students go overseas to learn by doing.

Approved schools conduct a research topic as a part of their learning in consideration of their regional characteristics and features of the schools. Also, they need to collaborate with domestic and overseas universities, besides of international organizations that promote globalization.

The deputy director of the International Education Division of MEXT's Elementary and Secondary Education Bureau, says that the program is about developing unique Japanese global human resources.

"Japans positive attributes should remain, but the thinking should be on a global level, she says. You need to know what being Japanese means, what Japan has to offer, and know what your local region can offer within a global context."

⁵ for almost 7 years Financial Analyst of Banco do Brasil

Hiromi Kawamura⁶

Therefore, The Global Economy Workshop will be applied in this environment.

Fujimigaoka High School for Girls

Fujimigaoka High School (Figure 3.7) for Girls is a girls junior and high school in Tokyo, Japan. This school has a vision to cultivate leaders for the global society by integrating global study and environmental class into an educational program. It is also one of the certified schools for SGH program mentioned earlier.

Therefore, as a part of mentioned course and program, Fujimigaoka High School for Girls was inviting the Global Education Project in Keio University Graduate School of Media Design (KMD) to collaboratively design and implement a sustainability program as a credited compulsory subject for the first-year high school students since 2015 - Global Workshop.

According to this, the author worked together with their Social Studies teachers, to create a link from their regular study classes to the context of the Global Economy Workshop.

Global Workshop

The Global Education Project in partnership with Fujimigaoka High School for Girls, has been designing and implementing a sustainability program as a compulsory subject for first-year high school students since 2015, Global Workshop. Using this environment we designed and implemented the Global Economy Workshop in 2016 and 2017.

Global Economy Workshop, was designed taking in consideration its 3 main stack-holders 3.8, the first one was the Fujimigaoka High School administration and professors, who are expecting a new learning methodology with a student-centered workshop. The second stack-holders is the Global Education team, as designers and facilitators, we have the responsibility to develop, implement and evaluate the workshop for future upgrades. And at last but no least, the third one is the high school students whose we expect collaboration and empowerment. (Figure 3.8)

6 Deputy director of the International Education Division of MEXTs Elementary and Secondary Education Bureau

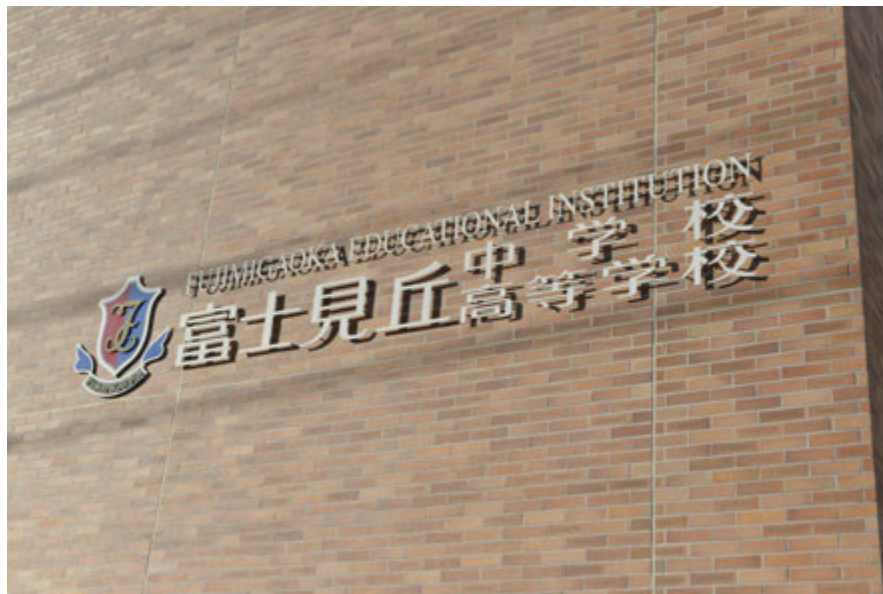


Figure 3.7: Fujimigaoka High School



Figure 3.8: Stakeholders / Global Economy Workshop

3.3 Global Economy Workshop

Fieldwork

For the program the author had to design and implement 4 sessions of Global Economy Workshop.

So during the last years, the author conducted a Global Economy Workshop, with 4 sessions (Figure 3.9) from November 12th 2016 to February 18th 2017, being one session per month.



Figure 3.9: Workflow - Global Economy Workshop

It was a continuous learning process, starting from a product's perspective and becoming more macroeconomics after each session. Before shows to the students how global economy works overall, the author started an approach from their daily lives, showing how one single product is connected to the global economy. Getting bigger to the international trade characteristics, and after economic integrations, so to finally reach regional economic alliances.

- SESSION 1- PRODUCT - November 12th, 2016
Understanding / Introducing Economic Globalization
- SESSION 2 - TRADE December 17th, 2016

Playing / Researching through economic game

- SESSION 3 - AGREEMENT January 28th, 2017

Connecting / Creating new alliance relationship

- SESSION 4 - ALLIANCE February 18th, 2017

Integrating / Sharing the Output and Evaluating Each Other

Session 1 - Product

The first session took place on November 12th 2016, in Fujimigaoka High School. During the design process of the first session, the main goal defined by the author was to show to the students that the world is connected by products.

Products that they use in their daily lives are a result of Global Economy. Using tangible objects from the concepts of Playful Learning (Lillard 2013), the idea is to show how a coffee can that in the beginning seems to be a Japanese product, from Suntory Brand (Figure 3.10) is in fact related to many countries, during its production stages.



Figure 3.10: Slides - Products from Global Economy

The Economic Element that the author used in this session is global products, which are connected to the global international trade. The author intends to help them to realize the influence of Global Economy in our daily lives. By using

storytelling concepts, they can see how the products have different raw materials and production stages, before finally reach them.

The author expected by culture and self-identification (Martinez and Dukes 1997), that the Japanese students can understand better how the Japanese Economy is related to other countries, and the main resources of their country, realizing what Japan needs to export and import in an internal trade.

So, as a first activity, the students had to research the products around them, and see how they are related to a global economy.

The students have to pick up and choose one products nearby them, a tangible artifact (Lillard 2013), it can be from their personal belongings or from the school. The first step is to analysis the components of the product and draw them in the paper sheet that the facilitators will give to them. (Figure 3.11)

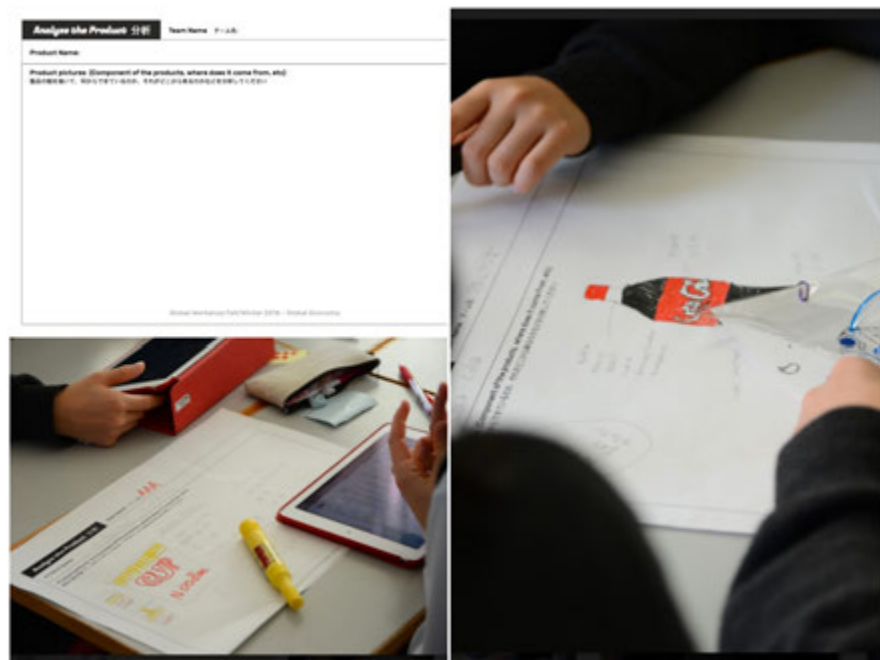


Figure 3.11: Analysis the product

Using iPads and always researching in trustful sources, they have to discuss and research in groups to find the countries that are related to this product. (Figure 3.12)

At the same time, every group will receive a blank world map with a tracing paper on it, in which they have to put stickers and identify the countries related



Figure 3.12: Researching products nearby

to the products that they chose.

The goal is to create an economic trade flow, that can be visualized easily by the students. Each group will create their own trade flow and using the tracing paper on it, the facilitators will put all the trade flows together in the end of the class, to show how the international trade connects the world and creating a visualization for a higher recall.

As the idea is also to increase student's communication and presentation skills, they will have to present the result of their international trade flow in front of the class.

In the end of each session, the author prepared a facilitators evaluation (Appendix D.2), so the facilitators can give to the author feedbacks to improve for the next session. Always looking for ways to increase the facilitator interaction and participation. The author will also the facilitators feedbacks to evaluate the results of the workshop, during chapter 5 of this thesis.

The author will also conduct a survey with the high school students, to check if the main goals of the workshop were accomplished, the author will talk more about it in the next chapter.

User Test

As a preparation for the real session and to keep all the main facilitators synced in the 4 different rooms, the author had several rehearsal sessions in Keio University, where the author explain the steps of the session and the main facilitators practice their presentations.

Usually the author had a preliminary explanation during Global Education monthly meeting and some special rehearsal sessions, working as user tests, before the real session.

For session 1, the first explanation was in the monthly meeting on November 6th 2016, after the author had an official rehearsal on November 10th 2016 (Figure 3.13) and an extra one on November 11th 2016. Session 1 occurred on Saturday, November 12th 2016.

Some of the outcomes of the rehearsal sessions:

- The author realized that the products must be more connected to their daily lives, so Japanese brands will produce a better impact as they seem to be from Japan, but they are in fact a result of international trade in Global Economy.



Figure 3.13: Rehearsal - Session 1 (November 10th 2016)

- The author created an extra stage during the activity, the students will have time to analyse the products before find out the countries that are related to it, because the facilitators believe that it will help the students to create the trade flow. (Figure 3.11)
- Facilitators want to improve their interactions with students. So the author decided that every facilitator should research about their own country to know what they export and import and help the students in their research.

Outcome Program - Session 1

From the design process, the author came with the following Workshop Program - Session 1. (Figure 3.14)

Session 2 - International Trade

Introduction - Game

The author designed a international trade game, based on the World Trade Game developed by the Third World development charity ActionAid (ActionAid 2016). Each group is going to play as a country, which has unique resources and technologies. The goal is to earn as much money as possible through trading and

| TIME | PROGRAM – SESSION 1 | MATERIALS |
|---|---|----------------------|
| PREPARATION | | |
| 9.00 - 10.35 | <ul style="list-style-type: none"> • Program brief • Arrange seats | |
| 10.35 | SESSION STARTS | |
| PART I : Introduction | | |
| 10.35 - 10.50 | INTRODUCTION <ul style="list-style-type: none"> • Reflect about First half session • Explain about program ICE-BREAK <ul style="list-style-type: none"> • Come up with group name • Greetings within groups and with facilitators EXPLAIN <ul style="list-style-type: none"> • Explain about today's session | Slides 15 min |
| PART II : Research international trade products | | |
| 10.50 - 11.10 | RESEARCH <ul style="list-style-type: none"> • Online research and put stickers on map iPad - Analyze sheet – Stickers - World map | 20 min |
| 11.10 - 11.25 | STICKERS COMPETITION – world map <ul style="list-style-type: none"> • Each group presents the map | 15 min |
| PART III : Flow map | | |
| 11.25 - 11.30 | Explain - trace paper <ul style="list-style-type: none"> • How to make a flow map | 5 min |
| 11.30 - 11.45 | Flow map – stickers – world map <ul style="list-style-type: none"> • Create a flow and search more | 15 min |
| 11.45 - 12.00 | Flow map competition <ul style="list-style-type: none"> • Each group presents the map | 15 min |
| PART IV : Summary | | |
| 12.00 - 12.05 | Summary - Slides <ul style="list-style-type: none"> • Facilitator summarize the first session | 5 min |
| 12.05 - 12.15 | Survey | Survey sheet |
| 12.15 | Finish | |

Figure 3.14: Program - Session 1

manufacturing of specific paper shapes.

Economic Element

The main economic element of this sections is international trade. During the first session, the author wants them to realize that trade is done with different resources and inequalities. Therefore the high school students will start the game with different materials, so they can taste how is to trade when you don't have the same resources. They will start as different countries and therefore different materials to play and compete in the international trade.

Concepts

As a methodology, the author used a country role playing game developed by a NGO and adapted to their reality.

- World Trade Game by The Third World Development Charity Action Aid.
- Playful Learning

The biggest goals of this session is to help them to understand the international trade and develop the ability of negotiation and trade. The program is student-centered (Jones 2007), where they can interact and negotiate with each other by themselves. The Central Bank role is played by a main facilitator who doesn't interfere in the negotiation played by the groups.

Also having tangibles in learning occasions are effective to have students engaged in the activity (Lillard 2013), the author decided to include fake money to make the trade more realistic and keeps the students engagement for long-term program but also in a very playful way.

Structure and Procedure - How was the Game?

How was the game? Each group is going to play as a country with unique resources and technologies. One of the goals is to show to them the world inequalities. Students are divided into teams, each of which acts as a separate 'country', with between 4 and 5 students in each team. There are four or five countries in a game. A game thus can be played with between 16 and 25 students. More than one game was played simultaneously, in different rooms. (Figure 3.17)

Countries compete against each other to 'manufacture' paper shapes (circles, triangles, rectangles, etc.) and sell them to an international commodity market trader at posted prices. The goal for each country is to make as much money as possible. (Figure 3.15)

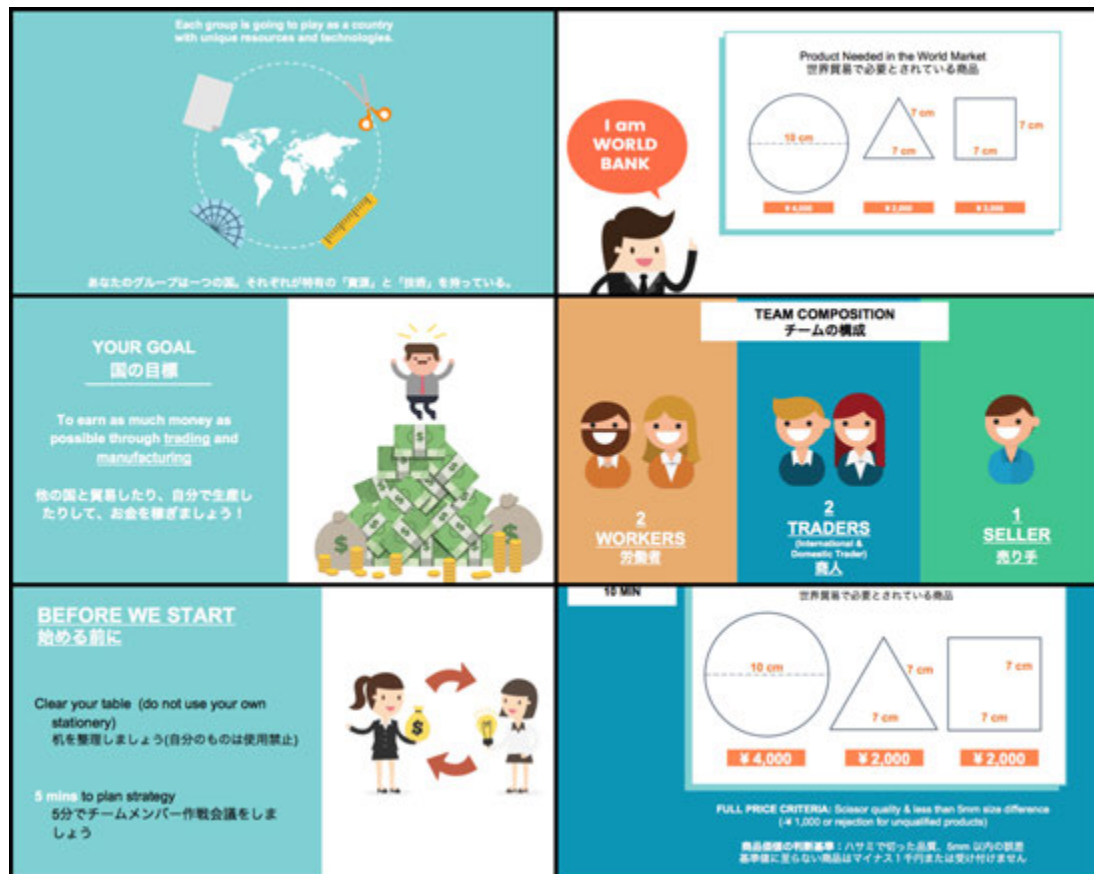


Figure 3.15: Slides - Game Rules

There are three types of country in a game:

- One rich industrialized countries;
- One or two middle-income countries;
- Two low-income countries.

Students are not told this; they find out as they play the game. The countries do not start with the same resources, the idea is to project the world trade reality,

where high income country have machines, in this case as rulers and scissors, but not so many natural resources, in the game, as paper sheets. While a low income country has a lot o natural resources (paper sheets) but not machines. (Figure 3.16)



Figure 3.16: Inequality Income

One economic element that we want to show in this session is the specialization and division of labor (Figure 3.18). The group has to nominated each member for different positions. As each group has 4 to 5 members, they have to be separated in 3 categories:

- 1 to 2 Workers
- 2 Traders (International and Domestic Trader)
- 1 Seller

It is interesting to notice how did teams divide up the tasks. They have to decide if it is it more efficient to have some students cutting out the shapes, while others queued to sell the shapes. How to negotiate, while others scouted around to see what other teams are doing and whether there are opportunities that they can have benefits.

International Trade / Materials and Layout

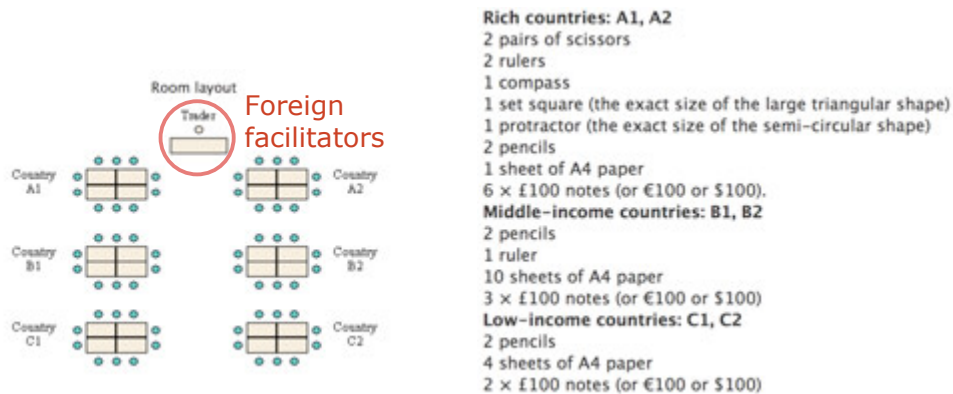


Figure 3.17: Game Materials & Layout

Instructions for starting the game

As students come into the room, the main facilitator of the room should do the following.

- Tell the students to leave all bags and any equipment (e.g. paper or pens) at the front and then to sit themselves around the clusters of tables
- Distribute the envelopes to each of the countries.
- Give the following instructions about the game:

Each of the groups is a team and represents a country. The objective for each country is to make as much money for itself as possible by using the materials in the envelope. No other materials can be used. Use the materials to manufacture paper shapes. You can choose to make any of the shapes shown on the diagrams on the wall. 3.19

All shapes must be cut with clean sharp edges using scissors and must be of the exact size specified on the diagrams. The shapes can then be sold to the trader in batches, who will check them for accuracy and exchange them for cash. Inaccurate shapes will be rejected. You can manufacture as many shapes as you like - the more you make, the richer you will become. You must not cut up your envelope!

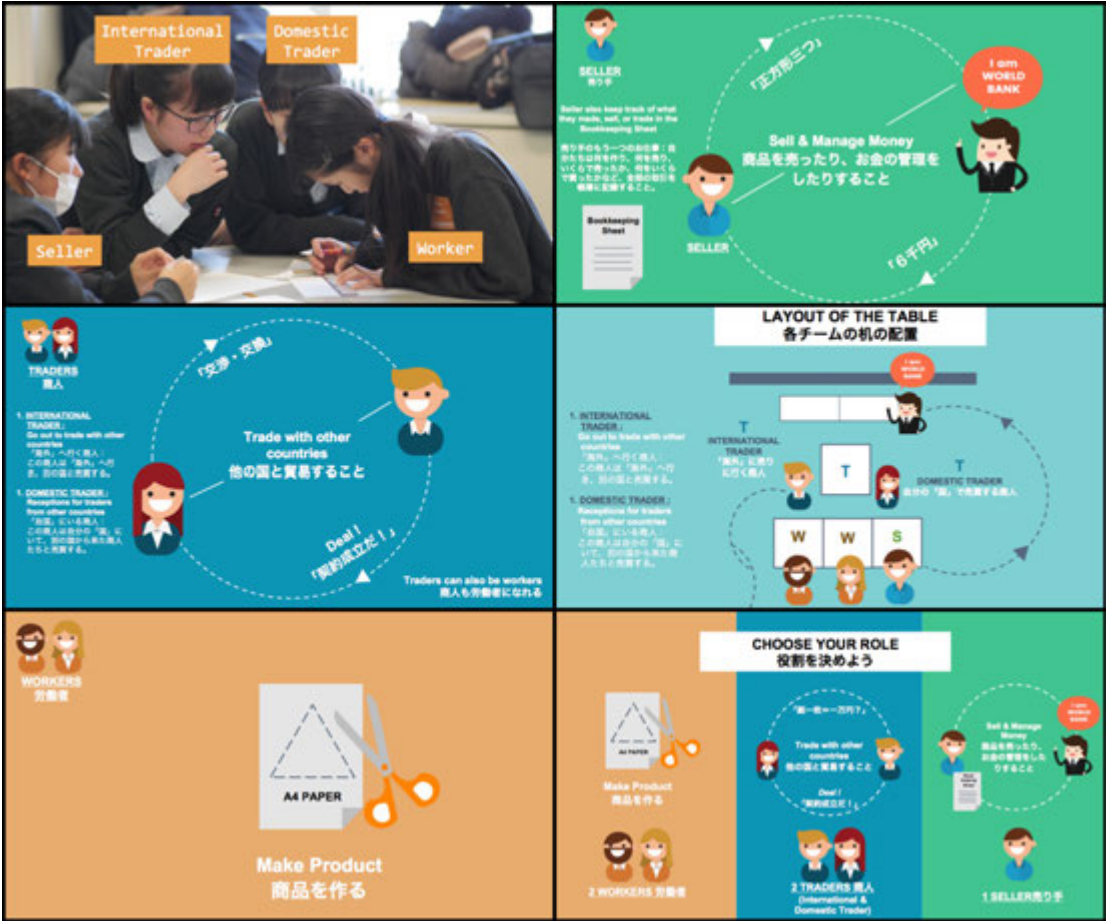


Figure 3.18: Specialization and Division of Labor Force

You can move around the room, but must not cross into the neighbouring world(s), who are playing a parallel game.

If you hear the Central Bank whistle, you must immediately stop what you are doing and pay attention. If there is any dispute, the Central Bank will settle it. The central bank word is final!.

Three Rounds

The game have three different rounds with new elements in the second and third round. During the second round to show the importance of international organizations in international trade, United Nations gets in the game and helps the low income and middle income country. Giving more machines (scissors) for the low income country and natural resources (paper) for the middle income country. (Figure 3.19)

The author also created combo prices, where if the groups sells different products at the same time, they can have a bonus and earn more money. (Figure 3.19) It is important to say that after each round, we have a session break when you check how much money each country has, so the countries are re-classified for the next round as low, middle or high income based on the current situation.

The author intent to show in the second round the importance of international organizations in international trade. Bringing the ideas of what is the role of international organizations such as United Nations, and how they help to create balance in the market.

In the third round the author presents a new material, a kind of natural resource or technology, which was discovered in the low income country. The material is represented by colorful red papers, and products (paper shapes) that are made with this material will double its price. The idea is to increase the trade and negotiation in the last round, as just one country has the special material and see how they reacted as they have the monopoly of the resource.

User Test

The international trade game had many rehearsal and user test sessions, in fact in each session the author realized a new aspect that was able to be improved for the real session on December 17th 2016.

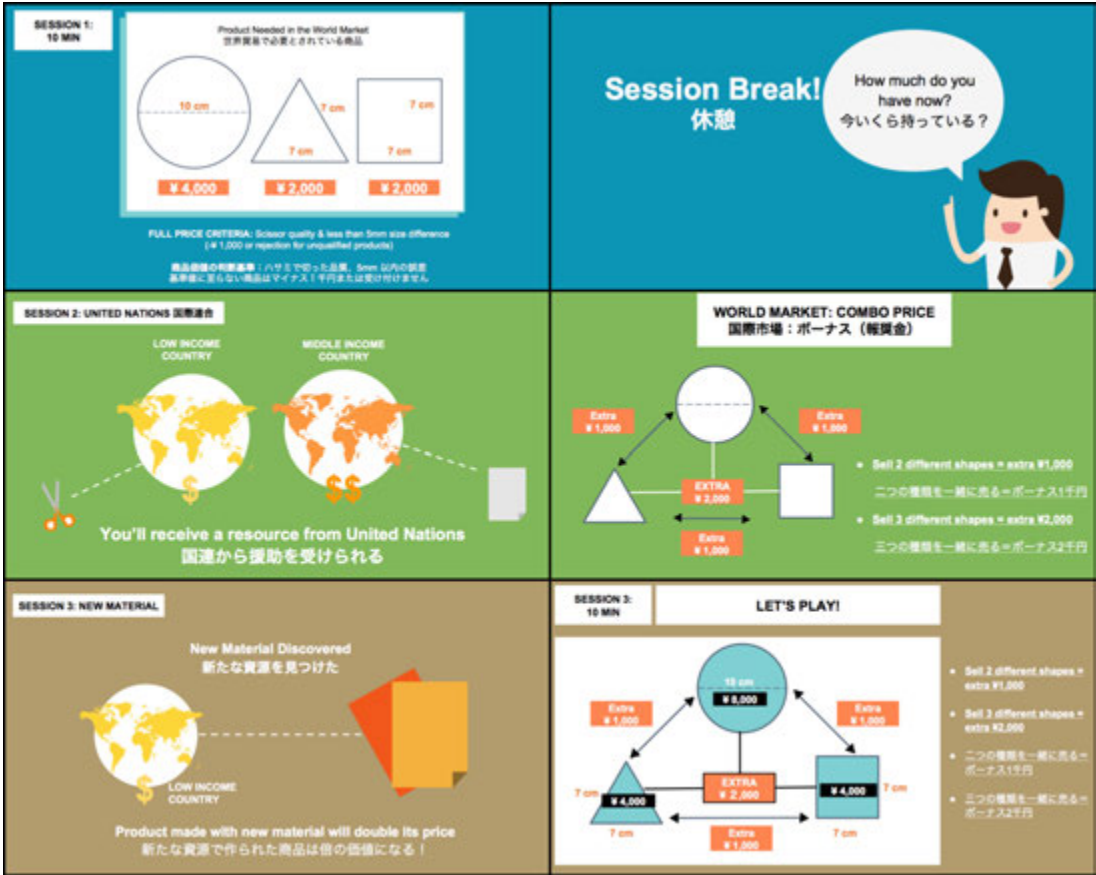


Figure 3.19: Rounds -International Trade Game

Many students from the Bluelight project⁷, in Global Education, embraced this second session and helped the author a lot to improve the game. Bluelight team is inspired by games, they aim to support learning through, concerning about engagement, immersion and achievements.

For this session besides the main facilitators, the author needed that all facilitators know the rules of the game and be prepared for the real session. So the author had several rehearsals and user tests. The first user test was on December 10th 2016 during monthly meeting, a second on December 15th during weekly meeting (Figure 3.20) and a final rehearsal on December 16th, one day before the real session on December 17th.



Figure 3.20: Rehearsal - International Trade Game (December 15th 2016)

⁷ Bluelight us a category of projects under Global Education that aims to create learning experiences, utilizing new technology and focusing on learning through fun and motivation.

Some of the outcomes from the user test were:

- In the begging the author thought each group will represent an specific country, and play the game under this country's name, but after the author realized that it may make the game more complicate and will not influence. Besides this aspect, the author did not want to classified the countries in low, middle and high income.
- After the first rehearsal session, as the inequality between the countries was too huge, the author decided to create 3 rounds in the game, putting the participation of United Nations and a new technology. Making the game funnier and more dynamic.(Figure 3.19)
- The author had some outcomes from the second user test regards to the full price criteria. The author defined that the shapes which have more than 5mm size difference would have a discount or rejection for unqualified products. Full price products will be give only for the ones with scissor quality.
- The author also defined that the traders in the beginning of the game will be without activities, so they can play other roles, they can also be workers and help to manufacturing the products.

Outcome Program - Session 2

From the design process, the author came with the following Workshop Program - Session 2. (Figure 3.21)

Session 3 - Agreements

The third session was about economic agreements. As they will learn in the previous session about international trade, the next step is understand that with many international trade agreements, some countries create economic agreements. The Economic Agreements are intensive international trade, signed by two or more countries, that provide reciprocal economic integration and participation. They can create opportunities for countries and help to grow their domestic economy.

The main goal of this session is to help the students to understand that economic agreements are positive for both countries. It is a win-win contract. So, as examples connected to student's reality, the author brought two cases related

| TIME | PROGRAM – SESSION 2 | MATERIALS |
|--------------------------|---|-----------|
| PREPARATION | | |
| 9:00 – 10:35 | <ul style="list-style-type: none"> • Program brief • Arrange seats | |
| 10:35 | SESSION STARTS | |
| PART I : Introduction | | |
| 10:35 – 10:50 | INTRODUCTION <ul style="list-style-type: none"> • Game rules | 15 min |
| Game : Part 1 and Part 2 | | |
| 10:50 – 11:00 | Session 1 – Let's Play <ul style="list-style-type: none"> • Online Game | 10 min. |
| 11:00 - 11:10 | Presentation 2 – United Nations | 10 min |
| 11:10 – 11:20 | Session 2 – Let's Play <ul style="list-style-type: none"> • United Nations in the Game | 10 min |
| Game: Part 3 | | |
| 11:20 – 11:30 | Presentation 3 - New Material discovered | 10 min |
| 11:30 – 11:40 | Session 3 – Let's Play <ul style="list-style-type: none"> • New Material discovered | 10 min |
| 11:40 – 11:50 | - Final calculation | 10 min |
| 11:50 - 12:00 | - Presentation - International Trading in real life | 10 min |
| 12.00 - 12.15 | Survey - Questionnaire | 15 min |
| 12.15 | Finish | |

Figure 3.21: Program - Session 2

to Japan. One is the tax over oranges imported from USA, that is imposed by Japanese government to protect local farmers, helping to visualize how taxes can protect domestic industry in a Global Economy.

The second example, is the tax benefits from Indonesia to Japanese car production, if the production moves to inside the country, Japanese cars pay less taxes. Both cases are just examples and do not reflect the pure reality, but they are a good way to help students to understand and visualize the economic agreements. (Figure 3.22) As a third step the author brought a real example of Economic Partnership Agreement between Japan and Australia, which started in July 2014. (Figure 3.23)

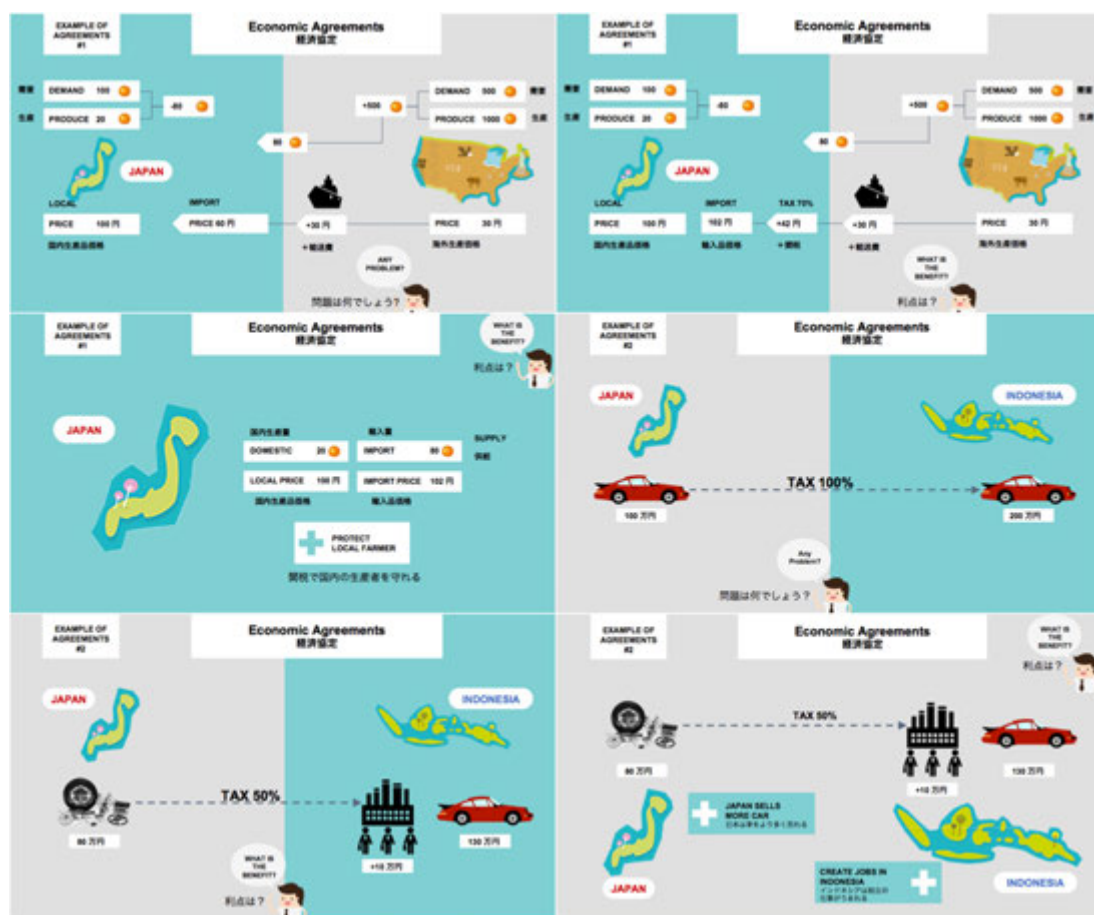


Figure 3.22: Examples Japanese Economic Agreements

For economic agreements the author used the concepts of Collaboration Learning (DiMarco and Luzzatto 2010) to create understanding and empathy. And the

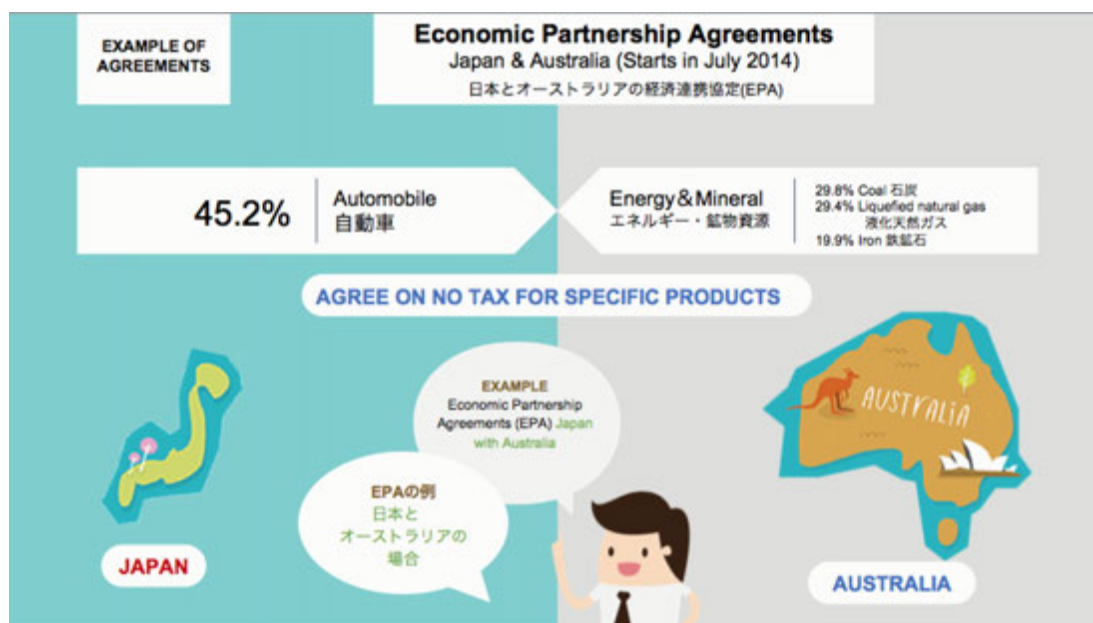


Figure 3.23: Economic Partnership Agreement - Japan & Australia

power of storytelling for compassion-building. (Erickson 1996)

The author need to bring the playful concept to this session, so the author created a "tangible" artifact, it was a Agreement Document, printed in A4 paper sheets,(Figure 3.24) that they will have to create with the different countries in the classroom, literally signing the agreements. To help them to understand the activity, the author prepared an agreement example printed, which will be given to each group in the classroom.

So, to start the activity, the author draft different countries for each group. They will play the role of Prime Minister and each member of the group has to create Economic Agreements to other countries in the room. Choosing products that can be imported or exported, taxes and conditions. The storytelling can help them to create the agreements, being funnier and increasing the comprehension.

As the groups will receive different agreement proposes, they have to select the best economic agreements that they received and create a video about it, explaining to their population about the advantages of the agreement chose by them.

This explanation must be done by a video, created in Adobe Video. As an outcome from this session, students will have to delivery a video, with the charac-

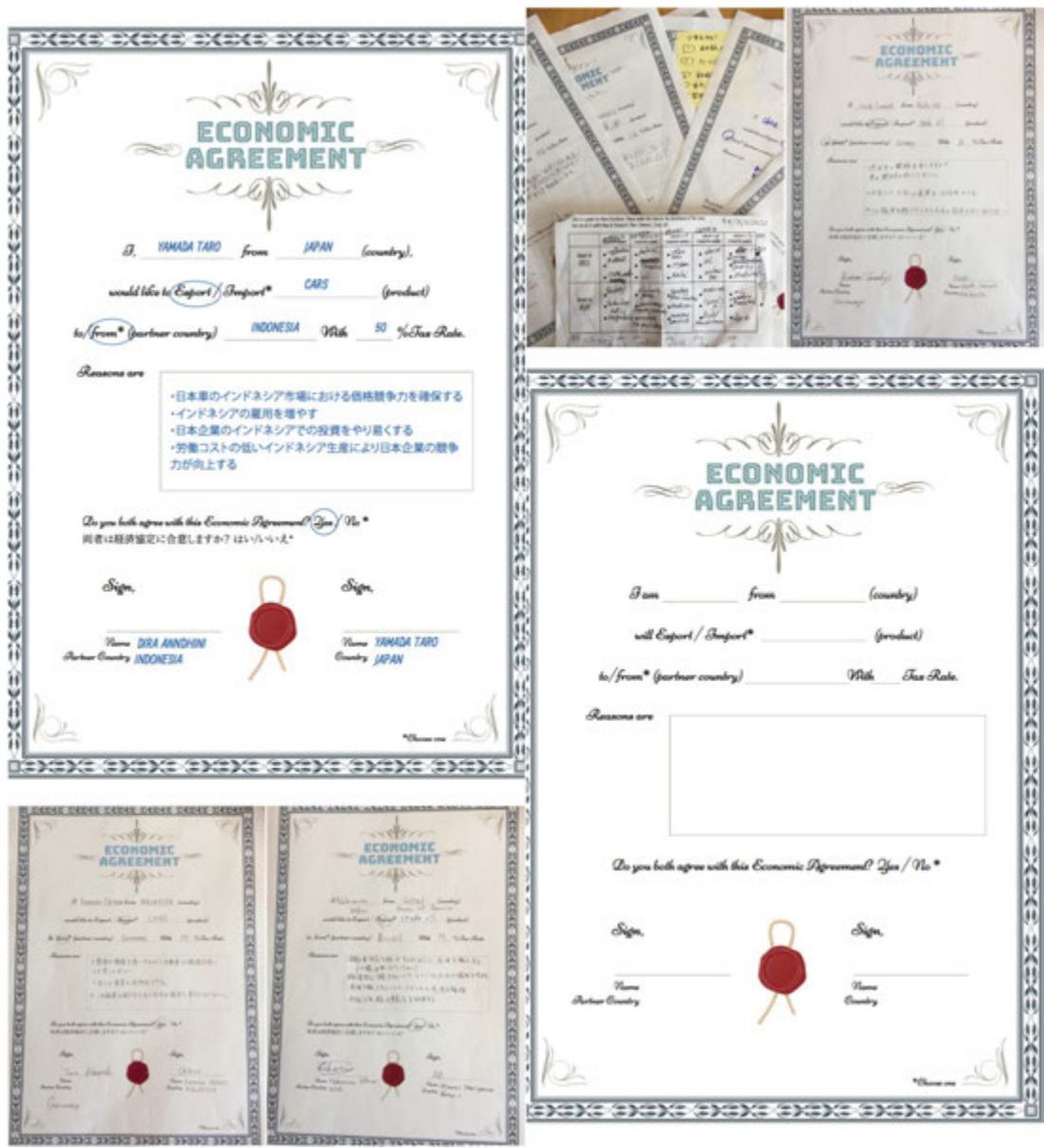


Figure 3.24: Economic Agreement Document

teristics of the agreement chose. These videos will be evaluated by the facilitators, based on storytelling concepts and the best ones will be revealed in session 4.(Figure 3.29)

User Test

Session January 28th 2017 Rehearsal meeting - January 25th 2017 - from 13:50 to 15:50 Final rehearsal January 26th 2017 - From 15:00 to 16:00.

During the rehearsals, the author explained to Global Education team, about Economic Agreements, and the author played session 3 among the facilitator, to try to identify gaps and improvements.

Some of the outcomes were:

- Even the work-flow was good, the author realized that rather than telling them about economic agreements, it was necessary to evolve them in an activities, so the author came out with the agreement contract, because in the end, in a playful way, the agreement between countries is equal to a relationship between friends.
- One idea was to create an economic agreement closer to their daily lives, for example: show 2 friends (Australia and Japan) doing a partnership agreement to exchange things. So after this rehearsal session, the author decided to start third session with examples of economic agreement.
- Create a "tangible" document where they can put the details of the agreements, connected to the playful goals. Also create an example of economic agreement to give to the students, to help them to understand what the facilitators are expecting. (Figure 3.24)
- With a storytelling, let's illustrate an example of economic agreement between Japan and another country. The author came out with the example of Japan importing oranges from USA and exporting cars for Indonesia. 3.22
- One of the insights from the User Test, is to increase the engagement of the students during the video creation, the video will be create for the population of their country, in order to make their life better. So, during the video students will have to convince their countries' population why this agreement will increase their life quality.

Outcome Program - Session 3

From the design process, the author came with the following Workshop Program - Session 3. (Figure 3.25)

| TIME | PROGRAM – SESSION 3 | MATERIALS |
|--|--|--|
| PREPARATION | | |
| 9.00 - 10.35 | <ul style="list-style-type: none"> - Program brief - Arrange classes - Last explanation | |
| 10.35 | SESSION STARTS | |
| PART I : FIRST ACTIVITY | | |
| 10.35 - 10.55 | MAIN FACILITATORS PRESENTATION <ul style="list-style-type: none"> - Presentation of Economic Integration | 20 minutes |
| 10.55 – 11.05 11.05 – 11.15 11.15 – 11.20 11.20 - 11.35 | FIRST ACTIVITY <ul style="list-style-type: none"> - Students have to create their agreement - Search and fill in the list - Create economical agreements - Present the best agreement | ★ 10 minutes ★ 10 minutes ★ 5 minutes ★ 15 minute |
| PART II : SECOND ACTIVITY | | |
| 11.35 - 11.40 | MAIN FACILITATORS PRESENTATION 2 <ul style="list-style-type: none"> - Presentation TPP and explain about the video | 5 minutes |
| 11.40 - 12.15 | SECOND ACTIVITY <ul style="list-style-type: none"> - Students have to prepare their video about the best agreement | ★ 35 minutes |
| | STUDENTS will not present in this session, they will present their video in session 4 | ★ Please, remind the students to save their videos. |
| 12.15 | SESSION ENDS and Survey | |

Figure 3.25: Program - Session 3

Overseas Sessions

Meanwhile the author was executing the sessions 1, 2 and 3 in Fujimigaoka High School, Global Education team also applied Global Workshop Session 1 and 3 in the Latino high school 4.24 with Brazilian students and Malaysian high school students in Methodist Girls School of Penang. (Figure 4.23).

We had to adapt this workshop for the short-time in this both schools. The Global Economy workshop program for Latino high School with Brazilian students and the high school in Malaysia, was design to be done in 2 hours and 30 minutes. This was the time that we had for apply session 1 and 3, and as an outcome we were expecting a world map with a international trade flow and a Economic Agreement video with Japan. (Figure 3.26)



Figure 3.26: Overseas Flow

For the last session, session 4 - integration, the author intent to connect the Japanese students with their peers with a big screen in the 6th floor of Fujimigaoka High School. The idea is that Malaysian and Brazilian students should present their videos with economic agreements to the Japanese students, who

will selected the best proposes from each country, one from Brazil and one from Malaysia.

Outcome Program - Overseas

From the design process, we came with the following Workshop Program for overseas it is important to say that the program shrinking since we had just 2h30min

GLOBAL WORKSHOP 2017 Remote Parts

Pre-session Feb 2017

PROGRAM (Total 2 hours and 30 minutes)

| TIME | PROGRAM | MATERIALS |
|------------------------------------|--|-----------|
| First session - Economic Trade | | |
| 15 minutes | Presentation - International trade | |
| | | |
| First Session : FIRST ACTIVITY | | |
| 15 min | FIRST ACTIVITY Template - Composition (materials) | |
| 15 min | Build the map - trade flow | |
| 15 min | Present to the class | |
| Third Session - Economic Agreement | | |
| 20 min | Explain about economic agreements | |
| 10 min | SECOND ACTIVITY <ul style="list-style-type: none"> Things your country want to buy and sell to Japan | |
| 10 min | <ul style="list-style-type: none"> Analysing Economic Agreements in the class | |
| 15 min | <ul style="list-style-type: none"> Present the best agreements | |
| 35 min | THIRD ACTIVITY <ul style="list-style-type: none"> Create a video with the best propose | |

Figure 3.27: Program Overseas

Session 4 - Economic Alliances

Session 4 is the last session of Global Economy Workshop. This session is an extra step to the economic integration process that the students will start in the first session with global products, going after to international trade, and showing the economic agreements. During this session, the author will talk about Economic Alliances.

Economic Alliance is a relationship among countries or states that have joined together for mutual benefit or to achieve some common purpose. Usually the mission of an Economic Alliance is furthering global trade, economic development, and advancing business relations between the countries that formed them.

There are several stages in the process of economic integration, from a very loose association of countries in a preferential trade area, to complete economic integration, where the economies of member countries are completely integrated.

Nowadays we have many international trade blocs, they are a result of these economic alliances. A trade bloc is a type of intergovernmental agreement, often part of a regional intergovernmental organization, where regional barriers to trade, (tariffs and non-tariff barriers) are reduced or eliminated among the participating states. Usually, this group of countries, has a main goal as a geographical region. They want to protect themselves from imports from non-members from other geographical regions, and increase the trade with each other.

Regional trading blocs increasingly shape the pattern of world trade - a phenomenon often referred to as regionalism. The main goal of this session is help the students to understand that economic alliances can help to develop a economic region. And is one step further in the economic integration process. The author expected that the students will get more inspiration out of global economy and economic integration, seeing economic alliances as win-win contracts.(Figure 3.28)

This session has two parts, for the first part of the session, the students will continue to be divided in the 4 different classrooms as the sessions before. In each class the students will have to put all their favorite agreements together, the ones that were chose by them in the session 3, and created a Economic Alliance. Basically their class represents an economic region and the students are creating an economic alliance for their region.

The second part of this session is based on integration, the author expected that the Japanese students will learn global economy from their foreigner peers by collaborative learning done in the integration part.

As a second part, we connected in real time the Japanese students with the

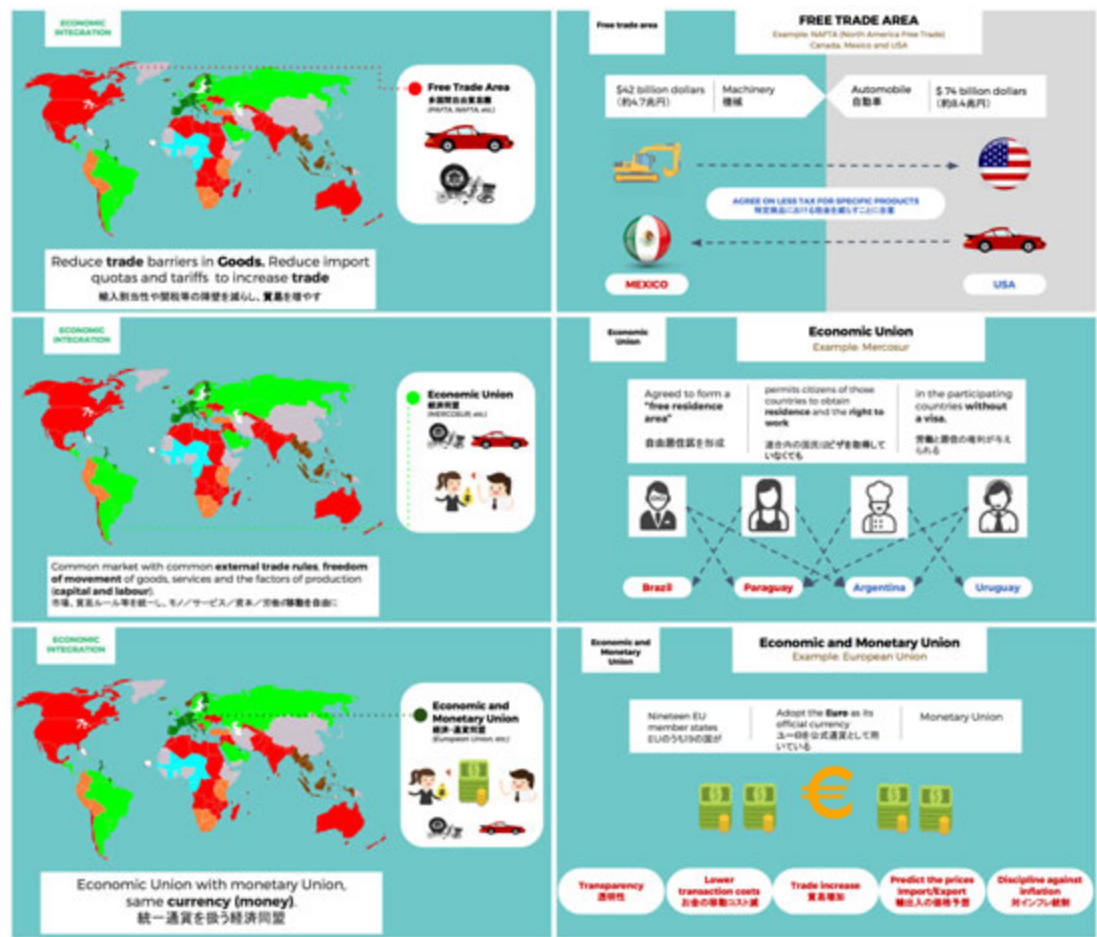


Figure 3.28: Economic Integration

students from Brazil and Malaysia, they will present the agreements done for each other, and they will choose the best agreements from each country. The process that the author used is the power of storytelling for compassion-building, students will show the videos that they created during the third session and they will explain them to their peers. Collaborating Learning methodology will help students to gain empathy with other countries, and understand their perspectives better.

During the end of the session 4, the facilitators will present the best agreement videos chose by them among the videos from the Japanese students in Fujimigaoka and following the criteria of Storytelling evaluation methodology. (Figure 3.29)

User Test

For the last session of the Global Economy Workshop, the author had user test sessions, where Economic Alliances where explained and the presentation was developed.

Session February 18th 2017 Rehearsal February 5th Rehearsal February 13th from 18h15 to 20h15.

Some of the outcomes were:

- The first design plan for session 4 was with less interaction. The author was struggling to find an activity which they will realize by themselves, to increase the playful activity, we need more hands-on.
- Create a big "tangible" document, that the author called, Economic Alliance. This document should be printed in a A3 paper, as it represents a bigger alliance than economic agreements, printed in A4 paper.(Figure 3.30)
- We have to use the iPads from the high school, to help students to research about Economic Alliances.
- One of the outcomes from user test is about their integration with overseas students, during their presentation, they may present the strategy behind their videos, more than just show the video, the overseas students have also to explain their videos.
- To increase the interaction between the students, the Japanese students will choose the best video, from Malaysian and Brazilian students. They

| Please evaluate your group's video. Group's country: _____ Sell to /Buy from: _____ | | | | | |
|---|---|---|--|--|-------|
| Product: _____ | | | | | |
| | 4 | 3 | 2 | 1 | Total |
| 1. Purpose of Story ストーリーの意図 | Establishes a purpose early on and maintains a clear focus throughout. 早い段階で意図が明確になっており、最後までそれが一貫している。 | Establishes a purpose early on and maintains focus for most of the presentation. 早い段階で意図が明確になっており、内容の大半がそれを意識できている。 | There are a few lapses in focus, but the purpose is fairly clear. 意図は理解ができるが、それに対し内容に多少の矛盾・ずれが感じられる。 | It is difficult to figure out the purpose of the presentation. ストーリーの意図が明確でなく、理解しづらい。 | |
| 2. Choice of Content コンテンツの扱い方 | Contents create a distinct atmosphere or tone that matches different parts of the story. The images may communicate symbolism and/or metaphors. 用いたコンテンツが、ストーリー全体の世界観を的確に表現できている。象徴やメタファーとしての画像の扱い方も適切である。 | Contents create an atmosphere or tone that matches some parts of the story. The images may communicate symbolism and/or metaphors. 用いたコンテンツが、ストーリーの大半で適した世界観を表現できている。象徴やメタファーとしての画像の扱い方も適切である。 | An attempt was made to use contents to create an atmosphere /tone but it needed more work. Image choice is logical. 画像やコンテンツの使い方に世界観を伝えるための工夫は感じられるが、あと一歩が足りていない。 | Little or no attempt to use contents to create an appropriate atmosphere/ tone. 内容を通して世界観をつくる・つたえるための工夫がほとんど感じられない。 | |
| 3. Creativity クリエイティビティ | Complete originality in composition and delivery, strong evidence of critical thinking skills 表現・構成ともに完全にオリジナルであり、内容と通しクリエイティブ・シンキングスキルを感じられる。 | 1 element is not original in composition and delivery, some evidence of critical thinking skills 表現・構成にオリジナルでない要素が1つあるが、クリエイティブ・シンキングスキルは感じられる。 | 2 elements are not original in composition and delivery, little evidence of critical thinking skills 表現・構成にオリジナルでない要素が2つあり、クリエイティブ・シンキング力も低い。 | 3 or more elements are not original in composition and delivery, no evidence of critical thinking skills 表現・構成に3つ以上オリジナルでない要素があり、クリエイティブ・シンキングスキルも無い。 | |
| 4. Economy of Story Detail ストーリーの詳細 | The story is told with exactly the right amount of detail throughout. It does not seem too short nor does it seem too long 適切な長さであり、情報量も適切である。 | The story composition is typically good, though it seems to drag somewhat OR need slightly more detail in one or two sections. 概ね良いが、一部情報量が多い、または少ない。 | The story seems to need more editing. It is noticeably too long or too short in more than one section. 一部内容の情報量が適切でなく、よりしっかりとした編集が必要である。 | The story needs extensive editing. It is too long or too short to be interesting. 内容を伝えるには長さが適切でなく、大幅な変更が必要。 | |
| Total | | | | | |

Figure 3.29: Storytelling evaluation methodology by facilitators

will vote with letters A, B, C according to the other that the videos were showed.

- The presentations must be in English.
- The author also decided during the user test, that Japanese students need to start to create their videos in the third session, because the video would be the tangible outcome from session four. And that they will use Adobe Voice to create their videos.

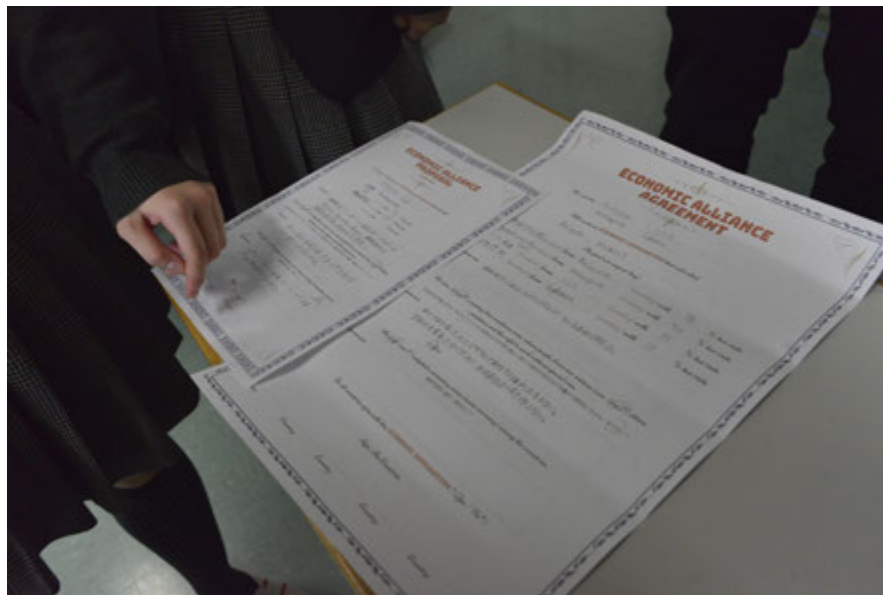


Figure 3.30: A3 - Economic Alliance

Outcome Program - Session 4

From the design process, the author came with the following Workshop Program - Session 4. (Figure 3.31)

3.4 Evaluation and results

During every session the author collected data to analyse the results and goals.

| TIME | PROGRAM – SESSION 4 | MATERIALS |
|--|---|--|
| PREPARATION | | |
| 9.10 - 9.50 9.50 - 10.20 10.20 | 1st Brief: <ul style="list-style-type: none"> Plan, Show video, materials Layout setting and camera setting Gather in 312 Connecting : SKYPE https://join.skype.com/IMNfMM6YEemA Google Hangouts https://hangouts.google.com/call/aj6gkd7ftbfwzbmuckfl2tx7mie | 3rd floor team: Keiko-sensei, Dice, Negi, Hirayan, Bier, Silmi, Marcel, Mana Camera: Sergio, Alex 6th floor team: Marcos-san, Felipe, Dira, Kom, Stefani, Helen, Kino, |
| 10.35 | | |
| Slot I : FIRST ACTIVITY (3rd Floor) | | |
| 10.35 - 10.40 10.40 - 10.45 | Introduction Activity explanation | 5 minutes 5 minutes |
| 10.45 – 10.50 10.50 - 11.00 11.00 - 11.05 11.10 | Activity 1 : Alliance Agreement <ul style="list-style-type: none"> Group discussion Room discussion Writing agreement GO TO 6TH FLOOR!!!! With video camera | 5 minutes 10 minutes 5 minutes |
| Slot II : SECOND ACTIVITY (6th Floor) | | |
| 11.20 - 11.32 11.32 - 11.41 11.41 - 11.50 11.50 - 11.55 | Part A : Presentation <ul style="list-style-type: none"> Japanese Malaysia Brazil Japanese choose the best one | 12 minutes 9 minutes 9 minutes 5 minutes |
| 11.55 - 12.10 | Part B : Video exhibition + results | 15 minutes |
| 12.10 - 12.15 | Wrap up and survey | 5 minutes |
| 12.15 | SESSION ENDS | |

Figure 3.31: Program - Session 4

The author had individual surveys for each facilitators. The surveys were in Japanese or English, it is up to the facilitator to answer the one in the language that he or she feels more comfortable.

The author had survey for the Japanese students, to receive their feedback and know their opinion about the Workshop. The students survey was simple, because the author had just 5 minutes after each session to fill it, the author basically want to know if they enjoyed the workshop and what they learned. (Appendix C.1)

During session 4, before the session started all the facilitators voted for the best videos, from the agreements chose by the students. To evaluated the videos, the author used storytelling concepts. 3.29

In the next chapter, the author will demonstrate the proof of concept. And during chapter 5, evaluate if the goal of this thesis was accomplished.

Chapter 4

Providing concepts and results

4.1 Global Economy Workshop

Target Persona

As target persona, the workshop had a 100 high school students, from Fujimigaoka in Tokyo. Fujimigaoka is a high school of girls, so all the Japanese students were high school girls from first and second year.

In the overseas' workshop, we also worked with only high school girls in the Methodist Girls School in Penang. In the Latino High School, we worked with Brazilian high school students from both genders.

The author also worked together with their Social Studies teachers, to create a link from their regular study classes to the context of the Global Economy Workshop. (Figure 4.1)

In Fujimigaoka, students were separated in 4 classrooms in the third floor of the high school. In each classroom, students were divided into 4-5 teams with 4-5 team members.

In each class (Figure 4.2), the author allocated a facilitator for each group and a supporter who can speak Japanese. Besides the facilitator and supportes, every classroom had a main facilitator, who was responsible for the session and was also a Japanese speaker. ¹

¹ Appendix D



Figure 4.1: Target Persona - high school students

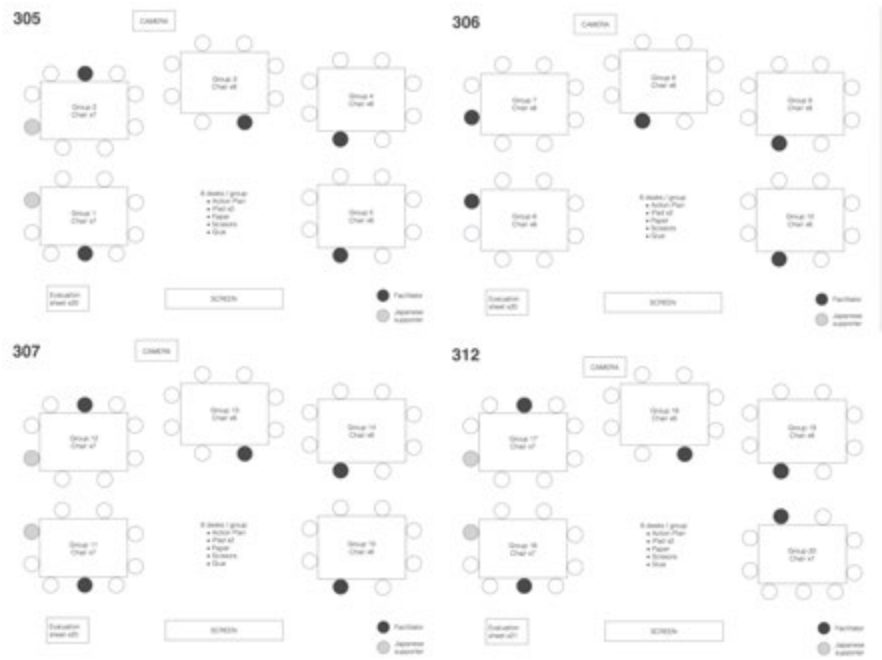


Figure 4.2: Layout 4 Classroom

4.2 Proof of concept - Global Economy Workshop

SESSION 1 - PRODUCT

Understanding Introducing Economic Globalization

Program

- Date : November 12th, 2016
- Time : 10:35 - 12:15 JST
- Table: 3.14
- Number of groups : 5 groups per room, 5-6 students each
- Number of rooms: 4 room
- Number of facilitators: 23

Aim

The main goal of this section was to help the students to realize the influence of global economy on our daily life through a product.

This section kept subgoals, which were steps to the main goal.

1. To understand the arise of Global Economy
2. To understand the necessity of collaboration.
3. To acquire the basic concept of Economic Globalization
4. To realize the influence of Global Economy to our daily life (structure)

Economic Element

During the first session, the author intended to help them them to realize that the world is connected by global products, which are in their daily lives.

They might didn't know, but products that they consume in a daily basis are result of a Global Economy **production**, where countries trade resources and technology.

Concepts

As concepts the author brought elements from their daily lives, for more identification and for a bigger recall.

Reminding that the concepts used in the design process for this session were:

- Culture and self-identification
- Storytelling
- Visualization

Structure

Students were separated in 4 classrooms. In each classroom, students were divided into 5 teams with 4-5 team members. Each team had one world map, one piece of tracing paper, one color of stickers, and one color pen.

Procedure

1. Tutors explained the basic concept of Economic Globalization by Power Point. (Figure 4.3)
2. Each team was asked to analyze the goods around them and find out how it is related to the global economy, to find as many countries involved as possible. (Figure 4.4)
3. Groups had to choose one product and analysis its characteristics. (Figure 4.5)
4. Each group put color stickers to the tracing paper in the world map, on countries that are related to this product. These countries must be connected to the production process, offering natural resources or labor force. (Figure 4.6)
5. Each team drew the trade flow based on the stickers and implemented the method of analysis. (Figure 4.7)
6. Each team went to the blackboard to present their trade flow and after piled their tracing paper, each classroom had only one world map. (Figure 4.8)

7. The main tutor discussed with all students about the classroom world map with all the trade flows.



Figure 4.3: STEP 1 - Tutor explanation

Outcome - World Map

As an outcome, each classroom created a final World Map, with the international trade flow from the 4-5 groups.

Each group created their own trade flow, they used the tracing paper on their maps, to trace the trade routes, the facilitators put all the trade flows together on a unique map, in the end of the class, to show how the international trade connects the world. This map creates a visualization of the international trade, promoting a higher recall. (Figure 4.9)



Figure 4.4: STEP 2 - Analyzing goods

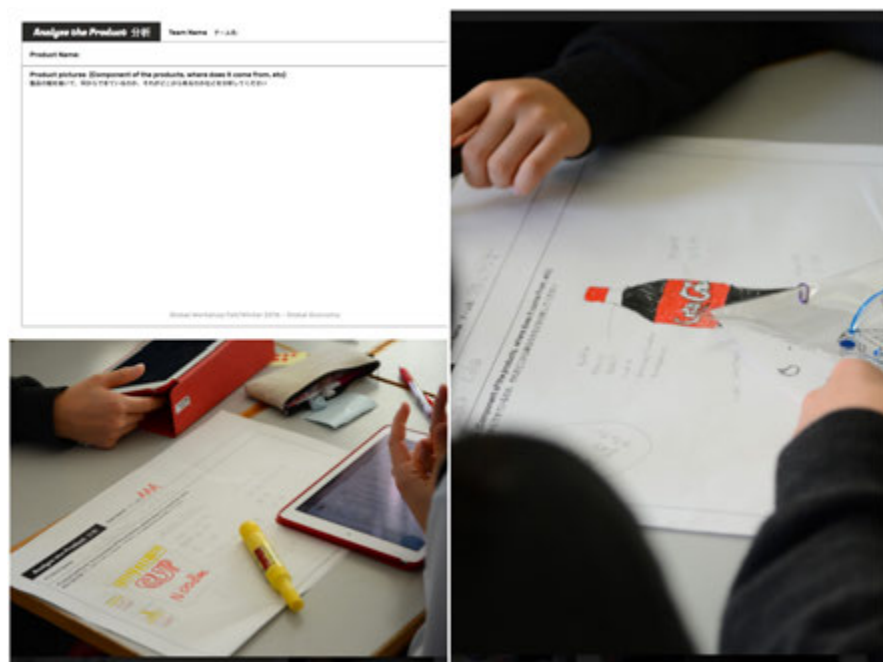


Figure 4.5: STEP 3 - Analyzing characteristics



Figure 4.6: STEP 4 - Production process



Figure 4.7: STEP 5 - Trade Flow



Figure 4.8: STEP 6 - Presentation



Figure 4.9: OUTCOME: World Map - Trade Flow

Feedback Session

After session 1, we had a feedback session with facilitators, the idea was to try to find out the gaps of the session and improve it for session 2, 3 and 4.

We received important feedbacks that the author tried to implement in the next sessions.

Facilitator 1 - We had a main facilitator and 5 extra facilitators. We should seat each extra facilitator with a specific group. This is your facilitator. We had a gap of communication in the first session regard to this aspect, not every facilitator knew that they should seat with an specific group in their classroom.

Facilitator 2 - Last workshop, the facilitators had an specific role, so to follow this standard the author should design better what each facilitator should do in each session, explaining and talking directly with each facilitator.

Facilitator 3 We may increase the level confidence of the facilitators, they may be confident to interact with the students. The author need also to send to the facilitators the next user tests and rehearsals, as we have many, so the facilitators can save the dates.

Facilitator 4 Give specific functions and tasks for each facilitator, so people can be prepared.

As the author could noticed, all the feedbacks were related to the facilitator's role and how to maximize their participation.

SESSION 2 - TRADE

Playing Researching through economic game

Program

- Date : December 17th, 2016
- Time : 10:35 - 12:15 JST
- Table: 3.21
- Number of groups : 5 groups per room, 5-6 students each
- Number of rooms: 4 room
- Number of facilitators: 29

Aim

As for the second session, the goal was to help them to understand more about **international trade**, as well as to improve their negotiation and trade skills. This section kept subgoals, which were steps to the main goal.

1. To further the concept of Global Economy learning some economic elements
2. To realize the economic relationship in the world (agreements)
3. To develop the ability of Negotiation and Trade
4. To learn in a easier way about some economic elements

Economic Element

This session had 3 rounds. During the first round, the author wanted them to realize that trade is done with different resources and inequalities. For session 2 and 3 round, the author created new elements to make the game more playful.

During the second round to show the importance of international organizations in international trade, United Nations gets in the game. And in the third round, a new material, a kind of natural resource or technology, was discovered, unbalancing the international trade system.

Concepts

As concepts, the author brought more interaction between students, always in a playful way.

Reminding that the concepts used in the design process for this session were:

- Playful Learning
- Student-centered Learning
- Collaborative Learning

Structure

Students were divided into teams, each of which acts as a separate 'country', with between 4 and 5 students in each team. There were four or five countries in a game. A game thus can be played with between 16 and 25 students. More than one game was played simultaneously, in different rooms.

Procedure

1. The International Trade Game was a very dynamic and playful way to teach Economic Elements. For these session we needed more facilitators than usual, so, we had 29 facilitators, when usually we have less than 20. (Figure 4.10)
2. Students were competing against each other to 'manufacture' paper shapes (circles, triangles, rectangles, etc.) and sold them to an international commodity market trader at posted prices. (Figure 4.11)
3. Second and third round of the game, facilitators put new elements, the students were completely engaged during all the 3 sessions and became more and more competitive as the sessions continue. (Figure 4.12)
4. While the students were playing the game, the facilitators controlled the game performance in the blackboard. (Figure 4.13)



Figure 4.10: STEP 1 - 29 Facilitators in this session



Figure 4.11: STEP 2 - First round of the Game



Figure 4.12: STEP 3 - Second and Third round of the Game



Figure 4.13: STEP 4 - Game Performance

Outcome - Game Performance

The International Trade Game was very dynamic and playful, the students really enjoyed this session. As a outcome each room had a game performance in the blackboard. (Figure 4.14)

| | S1 | S2 | S3 |
|------------|--------|---------|---------|
| Group (16) | 6,000 | 37,000 | 42,000 |
| Group (17) | 49,000 | 85,000 | 108,000 |
| Group (18) | 13,000 | 42,000 | 77,000 |
| Group (19) | 3,000 | 115,000 | 171,000 |
| Group (20) | 19,000 | 58,000 | 103,000 |

Figure 4.14: Game Performance

SESSION 3 - ECONOMIC AGREEMENT

Connecting Creating new alliance relationship

Program

- Date : January 28th , 2016
- Time : 10:35 - 12:15 JST
- Table: 3.25
- Number of groups : 5 groups per room, 5-6 students each
- Number of rooms: 4 room
- Number of facilitators: 17

Aim

The main goal of this section was to show that Economic Agreements are positive for both countries, they are win-win contracts.

This section kept subgoals, which were steps to the main goal.

- To identify the role of economic agreements
- To learn cooperation among nations
- To develop storytelling method

Economic Element

During the third session, the students understood how **economic agreements** are win-win contracts for both countries involved.

Concepts

In this session the author used the following concepts:

- Collaborative Learning
- The Power of Storytelling for Compassion-building
- Playful Learning

Structure

As the author had 5 groups in each room, each group had to propose economic agreements to other groups (countries) in the room. Choosing the products that they would buy or sell, taxes and conditions.

The countries chose the best economic agreements that they received and created a video about it, explaining to their population about the advantages of the agreement.

Procedure

1. Main facilitators reviewed the last session, re-emphasize the role of economic agreements, and gave task to students. (Figure 4.15)
2. The facilitators drafted countries to each student's group. Using the iPads, the students had to research which products these countries used to import and export. (Figure 4.16)
3. To help each other to write their economic agreements, sharing the information, each group had to put in the blackboard the main products traded by their countries. (Figure 4.17)
4. Students played the role of foreign affair prime minister from the countries that they represented and came up with a new economic agreement with other countries in the room. (Figure 4.18)
5. Among the economic agreements that they received, students chose the best agreement to their countries. (Figure 4.19)
6. The students signed the economic agreements' document, consolidating the deal with other countries. (Figure 4.20)
7. Students developed a brief introduction of the new economic agreement by creating a short video in use of Adobe Voice. (Figure 4.21)



Figure 4.15: STEP 1 - Explanation Economic Agreement



Figure 4.16: STEP 2 - Research

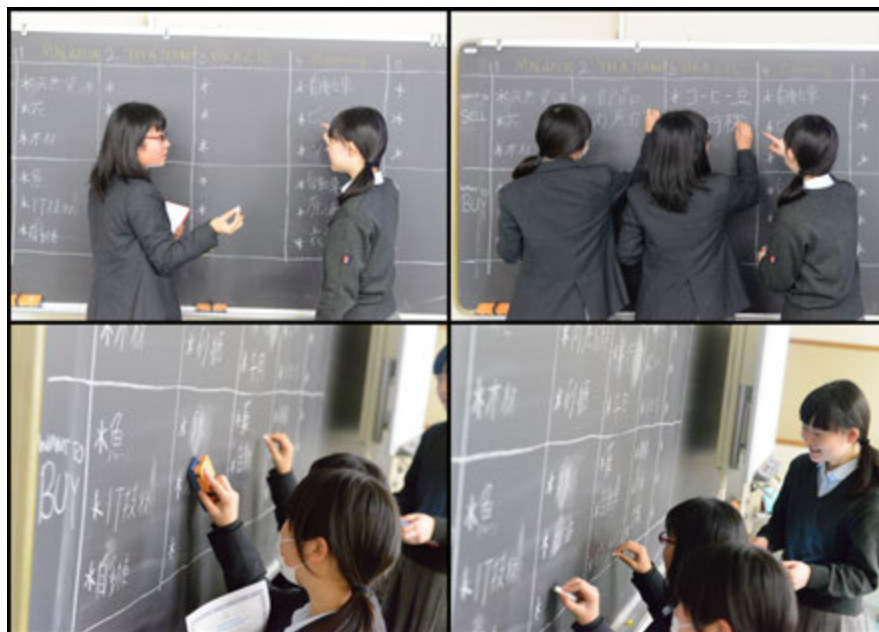


Figure 4.17: STEP 3 - Sharing information

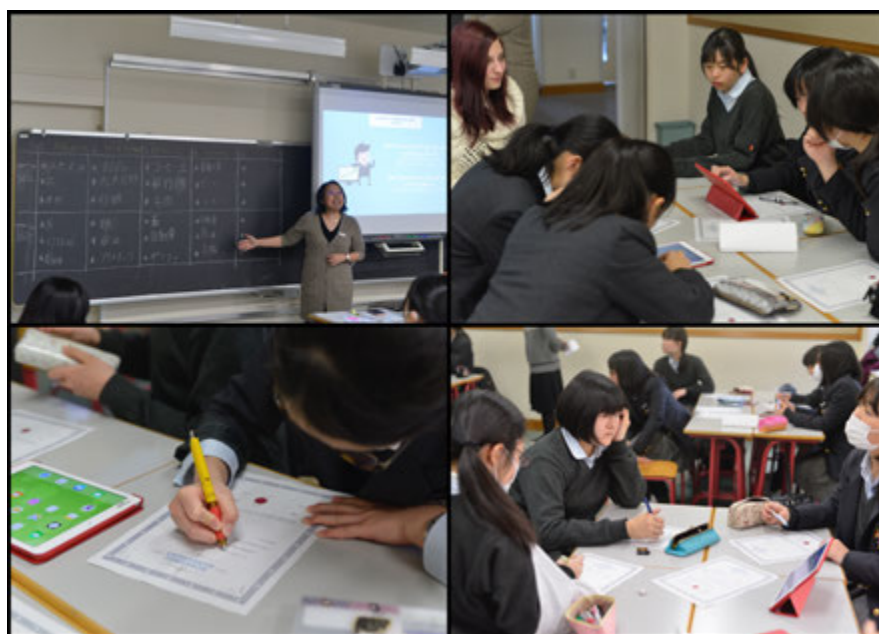


Figure 4.18: STEP 4 - Preparing Economic Agreements



Figure 4.19: STEP 5 - Best Economic Agreements



Figure 4.20: STEP 6 - Signing Agreements



Figure 4.21: STEP 7 - Creating videos

Outcome - Economic Agreements

From the playful concept of this session, as a outcome the students created a "tangible" artifact, it was the Economic Agreement Document, literally signed by the students.(Figure 4.22)



Figure 4.22: Economic Agreement Documents

Overseas Session

We also applied Global Workshop Session 1 and 3 in the Latino High School (Figure 4.24) with Brazilian students and in the Methodist Girls School Penang (MGS 2017), with Malaysian high school students (Figure 4.23). They prepared economic agreements with Japan, which they will present for Japanese students during this session.



Figure 4.23: Workshop Methodist Girls School Penang



Figure 4.24: Workshop Latino High School

SESSION 4 - ALLIANCES

Integrating Sharing the Output and Evaluating Each Other Program

- Date : February 18th , 2016
- Time : 10:35 - 12:15 JST
- Table: 3.31
- Number of groups : 20 groups / 5-6 students per group
- Number of rooms (first part): 5 rooms / 4 groups per room
- Number of rooms (second part) : 1 room (big meeting room)
- Number of facilitators: 16

Aim

During the last session, 4th session, the author intended to help them to understand that economic alliances can help to develop a economic region. And it is one step further in the economic integration process.

This section kept subgoals, which were steps to the main goal.

1. To get more inspiration out of global economy and economic integration
2. To compare and learn global economy from their foreign peers by integration session

Economic Element

During this session, the main economic element was the **economic alliances**, which can help to develop and increase the quality of life of the countries involved.

Concepts

In this session the author used the following concepts explained in session 2 and 3.

- Collaborative Learning
- The Power of Storytelling for Compassion-building
- Culture and self-identification

Structure

This session had two parts. During first part, students were in 4 different classrooms, to create a final economic alliance from their classroom and finish their videos. In the second part of the session, all students gathered in one big classroom in the 6th floor. Each group had one specific table. The peers abroad (Brazilian and Malaysian students) presented their videos of economic agreements with Japan using Skype, projected in the main screen. And Japanese students voted for the best agreement with Brazil and Malaysia.

Procedure

So, the 5 groups in each room, needed to come together with one single Document (Alliance) in each the room, connecting their best agreements. As a second part, the author connected in real time the Japanese students with the students from Brazil and Malaysia, they presented the agreements done for each other, and the Japanese students chose the best agreements from each country.

1. Before the session starts, facilitators watched all the videos from Economic Agreements and voted the best video among Japanese students.
2. Before the session started, the author developed a new layout, based on United Nations standards, the room was in the layout of a Congress Room. (Figure 4.25)
3. Main facilitators presented the slides about Economic Integration and Alliances. (Figure 4.25)
4. Students created one Alliance in each room connecting all the best agreements in a single document. To increase the importance of the Economic Alliance, the author printed the document in a A3 paper, bigger than the conventional A4 for Economic Agreements. (Figure 4.26)
5. Students moved for the 6th floor (one big room). In each group table, the author printed the economic agreements from the overseas students, so Japanese students could analysis them while they were watching the Malaysian and Brazilian students' presentation. (Figure 4.27)
6. Japanese students were connected with the foreign students (Malaysian and Brazilian) and watched their economic agreements presentations. (Figure 4.28)
7. Japanese students chose the best agreement with Brazil and Malaysia. (Figure 4.29) (Appendix D.6 D.7 D.8 D.9)
8. Japanese students voted and elected the best agreement with overseas high school students. (Figure 4.30) (Figure 4.31)
9. Facilitators nominated the best video among Japanese students. (Figure 4.32)



Figure 4.25: STEP 1 - New Layout - Congress Room



Figure 4.26: STEP 2 - Economic Alliance



Figure 4.27: STEP 3 - Overseas Documents



Figure 4.28: STEP 4 - Overseas Presentations



Figure 4.29: STEP 5 - Choosing best Agreements



Figure 4.30: STEP 6 - Voting best Agreements



Figure 4.31: STEP 7 - Electing best Agreements



Figure 4.32: STEP 8 - Best video among Japanese Students

Outcome - Videos

A **memory card** is attached to the end of this thesis. Inside the memory card the author uploaded all the Economic Agreements Videos produced by Japanese, Brazilian and Malaysian students. As well as a video of Global Economy Workshop, presented during KMD Forum and Show Case in KMD. (Figure4.33)

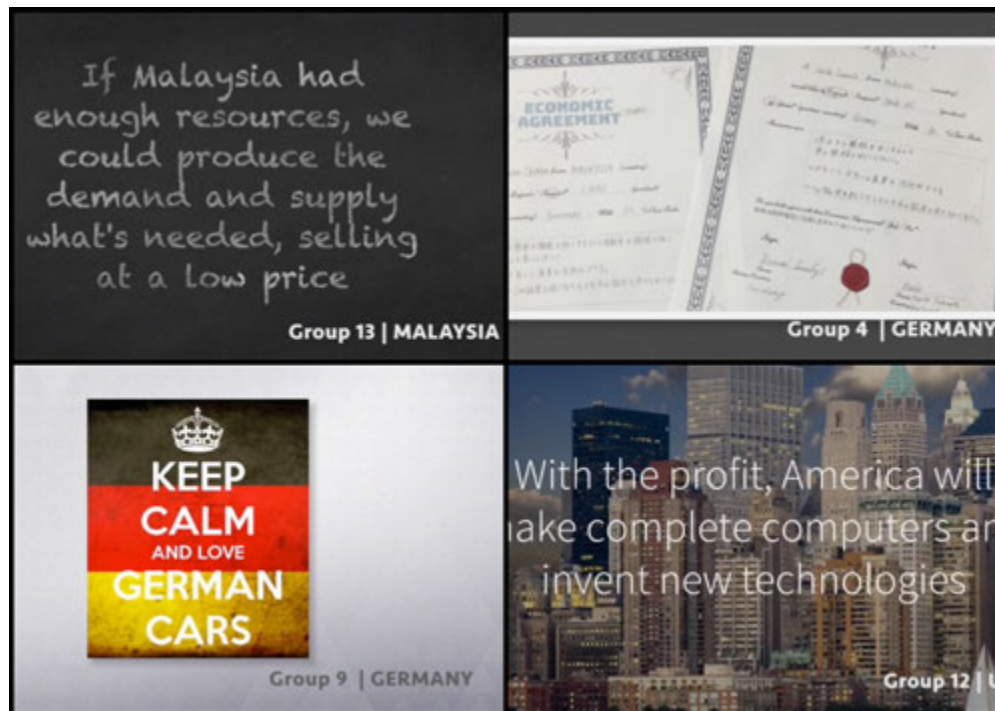


Figure 4.33: Adobe Videos

Chapter 5

Discussion and Evaluation

5.1 Evaluation

Evaluation - Global Economy Empowerment

As presented during chapter 1, this thesis was oriented with the following research question.

How to teach important economic elements and trigger Global Economy awareness among young people in a playful way?

For evaluate if this goal was accomplished the author applied surveys in the end of each session, evaluating and receiving feedback from the high school students about their experience during the Global Economy Workshop.

This analysis will be split in 2 parts. The first one is to understand if the workshop was able to create global economy awareness. And the second one is to check if the important economic elements, defined during chapter 2, were learned.

1. PART The Global Economy Awareness
2. PART Learning important Economic Elements

The Global Economy Awareness

So, to evaluate if the high schools students from Fujimigaoka got a global economy awareness, the author applied surveys in the end of each session (AppendixC.1), asking them what they learned during the session, if the enjoyed it and extra feedbacks.

The students' answers is the best instrument to check if the global economy awareness was reached, since they reflect their direct opinion about the subject. As a evaluation, the author will put quotes from the survey, which reflect the students opinions.

One of the first aspects that the author noticed based on students' comments is that most of them, after Global Economy Workshop, showed to be interested in learn more about economy, saying that it seems to be a interesting subject.

Here is an example of quotes, where the students clearly say that would like to learn more about economy.

"I enjoyed this activity. If I will have the chance, I learn more about economy."

"I want to learn more about economy. Before I took the class, I was not interested in economy. But now I changed my mind."

"I understand more about economy. I learned economic system between Japan to other country. Transport game is interesting for me to learn economic system. So I become more interested in economic system. I want to study more about economic system."

An student even said that her opinion about economy changed after the Global Economy Workshop.

"I heard economy a lot in 2016. I thought that I wanted to know about the economy...I could know and learn a lot of situation of the world economy. So, it is very good for me. And I learned it is serious to make a good world economy. I want to listen about economy from now on."

Or in the next case, the student says that she was struggling to understand about economy, but after the workshop session she became interested in the subject.

"I understand more about economy. I learned economic system between Japan to other country. Transport game is interesting for me to learn economic system. So I become more interested in economic system. I want to study more about economic system."

More important than only understand about global economy, some students shows that they believe that economic integration has positive aspects for both sides.

"I learned about the system of economy. I learned how to ally with other countries."

"I think that cooperation with each other is very important."

Another concerned from the author is if the learning process was reached in a playful way. Here is a feedback, where the student showed to enjoy and had fun during the session.

"I learn tax and some other economic union because it is easy to understand and also it is fun to do in the sessions."

"...because I think it was very easy to understand about global economy. The most excited thing was create the things (paper square and triangle) (Trade Game). I want do that again."

"It was good time to think about economy- friendly. Because, through the game, enjoy learning. It is fun. Thank you for your activity."

And Global Education Real Project Team received many thanks after the session. some students had very polite way to demonstrate that they enjoyed the workshop.

"I thought it is important to negotiate. I enjoyed and interested every time. Everyone from Okawa-sensei office room, thank you very much."

From these quotes, the author can say that in average the first goal was reached. Students that didn't know anything about global economy, triggered their awareness. Even, students that knew about economy, but seemed to have a negative impression of a hard to learn subject, showed enjoy the session and aroused a will to learn more about the subject.

Learning important Economic Elements

As defined and debated during session 2 and 3, the important economic elements chosen by the author to be taught are related to economic integration in the global economy, starting from a small approach showing from the products' perspective and getting bigger and bigger, to trade, economic agreements to finally a regional economic alliances.

- Production
- International Trade
- Economic Agreements
- Alliances

Again, the best way to check if the students absorb information and learned new concepts is asking them directly during the surveys. So, basically, avoiding to be biased, the author asked what they learned in the session and their opinion about the workshop, with improvements and favorite aspects. (AppendixC.1) Here are some feedbacks:

Production / Economic Agreements

From a Malaysian student from the Methodist Girls School Penang:

"I learned that there are many global connections in just making one product! There are also many benefits in making economic agreements. It was also very fun. The method of teaching is very fun and interesting."

International Trade

From a Brazilian student from Latino High School:

"It helped me a lot. Although we have learned about this trading system at school, the dynamic form which Professor Sadao explained was very edifying."

From a Japanese students from Fujimigaoka High School:

"...I think that this session helped us learn more about how countries trade work, and I felt like I would like to know more about economy. I also had fun talking in the group trade, what to sell and buy, and what our video will be like to present to students in another countries."

"I understood trade system, I did not know tax before but now I know. Also, I can come into contact with different culture."

Economic Agreements

From a Brazilian student from Latino High School:

"I learned that in the economy you need agreements, agreements that normally benefit both sides, there have to be alliances between countries. And that all products were made with materials, not just from one country, but from several, then linking countries economy. They also create benefits for those who produce the product in the country."

From a Japanese students from Fujimigaoka High School:

"Japan makes a treaty with many countries. So we can buy and sell very easy. If Japan dont make treaty, we cant buy other country things easy. I learn reality. Thank you for teaching about Economy."

Alliances

From a Japanese students from Fujimigaoka High School:

"I learned that each country has each features and they can get something that they dont have by giving something they have. And also cooperation is important for us to develop."

"I think that cooperation with each other is very important."

Final Evaluation

Besides the global economy awareness and the important economic elements, there are more aspects that the author can evaluate from the workshop and see them as outcomes.

For example, the international trade game, in session 2, may also be used to illustrate a number of more general development issues, such as the powerlessness of poor countries. Because, it gives participants the opportunity to experience various emotions related to production and trade in an unequal world. In so doing, it can help students to gain a greater empathy with development and trading issues. To that extent it encourages students to move away from a typical textbook account of the embedded ideas and prompts them to consider alternative motives that might prompt economic behavior.

Another aspect that can be analyzed is that a changing environment such as inviting foreigners and activities which requires a different perspective also give to the students an opportunities to be able to think in a more complex situation and flexible towards a challenge. This also shown through their creative

works with a consideration towards other countries. According to comments, there were changes of how students think towards broader society and economy. They realized the importance of communication, as well as collaboration.

The students showed will to communicate more with foreigners, having a curiosity towards other cultures and even improve their English language skills for do it, as the author can see in the following quote extracted from the survey.

"Foreign students really tried hard to communicate with us, I wanted to improve my communication with them...since I had the opportunity to talk with international students, I would like to talk with foreigners again from now on."

Facilitators & Collaborators Feedbacks

Besides the survey with high school students, the author also applied a facilitator evaluation in the end of each session. This evaluation is a way to understand what can be improved for the next sessions, as much as for future works. The evaluation questions were done in English and Japanese, so the facilitators could choose the one that they feel more comfortable. (Appendix D.2)

We also applied an qualitative survey with some facilitators, asking them the following questions:

- Through the experience of Global Economy Workshop, what did you find interesting? tell us some examples.
- What is your personal benefit in be involved in this kind of collaboration?
- Any idea to improve our collaboration for maximizing the benefit?
- Do you recommend this kind of collaboration for other schools?
- What do you think the key to the success of this kind of collaboration?

Here is the feedback from one of the main facilitators:

"The most interesting part of this workshop is how you can clearly see the transformation of each students mindsets. They all start off each session feeling lousy and tired, but when we start to introduce to them about the real situation that the world is in (be it economically

or market wise) and let them discuss on their own original ideas or interventions, they start realizing that what were dealing with are not problems for school but are problems that they are facing for themselves and will be facing in the future.”

Dice Yukita¹

From the main facilitator’s feedback the author can notice that the content of the workshop was related to students daily lives, and probably this aspect increased the engagement of the students in each session.

In the next comment, one of the facilitators reports how the playful way from session 2, increased the communication flows and the stimulus between students and facilitators.

”The Global Workshop at Fujimigaoka is an interesting experience for both parties involved, as we are able to experiment and express what we feel is important, and they get a different kind of learning experience from what they are used to....the trading game, I feel, was a relevant and engaging experience for the students, and stimulated communication between students and (foreign) facilitators.”

Sergio Robles de Medina²

The following quote, comes from a Indonesian designer who cannot speak Japanese.

”Personally I think this experience is very fascinating because it provides opportunities for two groups of people who do not usually have chances to connect with each other. As a designer, putting together a working module is also a valuable experience. Since I was involved in the game mechanics design and rehearsal sessions in KMD, it was wonderful to see and to participate in the whole development of a workshop, and finally putting it into action with high school girls. Being able to see reactions and results from student is very valuable to me as a game designer.”

1 Japanese member of Global Education Team - participated in all sessions as a facilitator and main facilitator

2 Dutch member of Global Education Team - participated in all sessions as a facilitator.

"I think in general playful workshop such as this game session can effectively bridge the language and cultural barrier. As we observed, in this session students participated more, and facilitators were also more actively engaged, comparing with other traditional sessions. While students were engaging in the game, the educational message also get emphasized through the design, and in many ways this is a win-win situation. I believe the idea of playing games contributed a great deal in this success, and I hope to see more sessions with educational game."

Fathima Assilmia³

She shows how the playful workshop can effectively bridge the language and cultural barrier, even more in the case of someone who cannot speak Japanese.

The next facilitator from Brazil, agreed that the workshop presents theoretical concepts in a practical way. He highlight how the rehearsals in Hiyoshi Campus helped to engage the facilitators from beforehand, delivering the goals.

"One session that I believe the experience was really engaging for both parts was the session with the Global Trading game. The students were able to experience the aspects of trading through an engaging experience, allowing them to connect with theoretical concepts in a practical way. The collaborators were able to participate in the creation of the game from its conception and interactions, finally seeing its application and results. In my perspective, the experience was beneficial in different ways to both parties. For this success, engaging the facilitators from beforehand was also part of what went right, as we were able to see how the session was created, applied and its impact. I also believe the different perspectives from university and high school can be beneficial and an enhancement to creative process and collaboration. I look forward to see workshops with different technologies and possibilities and their outcomes in the near future."

Leandro Navarro⁴

3 Indonesian member of Global Education Team - participated in the second session International Trade Game.

4 Brazilian member of Global Education Team - participated in the second session International Trade Game.

Another opinion is from a Canadian facilitator, who says that the global economy workshop helps to think out of the box. Giving to the students new perspectives to analyze problems.

"I think Global Workshop is a rare chance for students in several ways...to break out of the box in terms of their usual lesson format...to really think about how different countries and cultures meet and interact. Most 'intercultural' education that students have typically just involves hearing or seeing things about other cultures"

Alexander Taylor⁵

At last but not least, this facilitators talks about the relationship between students and facilitators during the course of the 4 sessions, which creates stronger ties, boosting the results of the activities and generating deeper inputs.

"The Fujimigaoka Workshop breaks the monotony of a regular school routine - which can be boring all over the world, not only in Japan. Many school curriculums are stiff for a series of bureaucratic issues. So it is great to have the opportunity of participating in activities that are fresh and new for those students....I think the success of the Fujimigaoka Workshop relies on the facilitators developing somehow a relationship with the students (as they have with teachers). Such stronger ties would boost the results of the activities, generate deeper inputs, and then...could replicate it in other schools."

Felipe Pontes⁶

5.2 Future Plans and Direction

Future Plans and Direction

While increasing participation is an obvious goal in a workshops, this would be one of the main goals in this program. Increasing participation is not to have

5 Canadian member of Global Education Team - participated in session 1, 2 and 4 of Global Economy Workshop.

6 Brazilian member of Global Education Team - participated in session 2 and 3 of Global Economy Workshop.

every student participate in the same way or at the same rate. Instead, it is to create conditions in which all participants have the opportunity to learn and in which the class explores issues and ideas in depth, from a variety of viewpoints.

Some students will raise their voices more often than others; this variation is a result of differences in personalities as well as differences in learning preferences. The main facilitators goal is to create an environment that enable students of various personalities and learning preferences to contribute. To reach this goal, the facilitators will need to take extra steps to encourage quiet students to speak up and, occasionally, ask the more verbose students to hold back from commenting in order to give others a chance. Of course that this steps need to be defined and listed during the next workshop design process.

Create a guideline

Based on the methodology, the author would like to create a guideline how to do it, basically the steps of the process. One idea is to extend the concepts of Global Workshop for other age groups. Always using the Literacy Map from the Central Council for Finance Service Information in Japan, for example, extending the workshop concepts for University Students.

The design guidelines would be a set of concepts and rules that can help to apply the same workshop for different target persona, with different age groups. This would define how to layout the activities as well as quickly informing how to choose their next action. Similar to design guidelines, interaction patterns will define how to implement interactivity to maximize its efficiency. Of course, adapting the content to different target persona.

The main benefits of creating and following design guidelines and common interaction patterns will be the clarity towards which data is most important and usable; reduced students confusion and frustration, leading to improved increase the interaction of students.

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Appendix

A EBA Fieldwork Questionnaire



EBA
 EUROPEAN BANKING ASSOCIATION
 CHAIRMAN AND MEMBERS OF THE EUROPEAN BANKING ASSOCIATION



QUESTIONNAIRE

| | |
|---|---|
| <ol style="list-style-type: none"> 1. What is your gender? <input type="checkbox"/> Masculine <input type="checkbox"/> Feminine 2. What is your age? <input type="checkbox"/> 18 to 24 <input type="checkbox"/> 25 to 34 <input type="checkbox"/> 35+ 3. Where are you from? <input type="checkbox"/> Malaysia <input type="checkbox"/> China <input type="checkbox"/> Others in Asia _____ <input type="checkbox"/> Others outside Asia _____ 4. What is your family race? <input type="checkbox"/> Malay <input type="checkbox"/> Chinese <input type="checkbox"/> Indian <input type="checkbox"/> Mixed-race <input type="checkbox"/> Others _____ 5. Do you have income? Part-time Job / scholarship. <input type="checkbox"/> Yes <input type="checkbox"/> No 6. How much do you save from your income? <input type="checkbox"/> Non-saver <input type="checkbox"/> Less than 30% <input type="checkbox"/> More than 30% 7. Do you invest? <input type="checkbox"/> Yes <input type="checkbox"/> No 8. If yes. Where do you invest your money? <input type="checkbox"/> Gold <input type="checkbox"/> Gold Certification <input type="checkbox"/> Jewelry <input type="checkbox"/> Equities <input type="checkbox"/> Funds <input type="checkbox"/> Assurance <input type="checkbox"/> Government Bonds <input type="checkbox"/> Private Bonds <input type="checkbox"/> Private Pension Funds <input type="checkbox"/> Employment Provident Fund <input type="checkbox"/> Real Estate – Houses <input type="checkbox"/> Saving Accounts <input type="checkbox"/> Gambling <input type="checkbox"/> EFEX <input type="checkbox"/> Education <input type="checkbox"/> Car <input type="checkbox"/> Travel <input type="checkbox"/> Goods 9. What do you considered an investment? <input type="checkbox"/> Gold <input type="checkbox"/> Gold Certification <input type="checkbox"/> Jewelry <input type="checkbox"/> Equities <input type="checkbox"/> Funds <input type="checkbox"/> Assurance <input type="checkbox"/> Government Bonds <input type="checkbox"/> Private Bonds <input type="checkbox"/> Private Pension Funds <input type="checkbox"/> Employment Provident Fund <input type="checkbox"/> Real Estate – Houses <input type="checkbox"/> Saving Accounts <input type="checkbox"/> Gambling <input type="checkbox"/> EFEX <input type="checkbox"/> Education <input type="checkbox"/> Car <input type="checkbox"/> Travel <input type="checkbox"/> Goods | <ol style="list-style-type: none"> 10. What is important to check before buy Equities? <input type="checkbox"/> Macroeconomic <input type="checkbox"/> Microeconomic <input type="checkbox"/> Government Expending <input type="checkbox"/> Balance Sheet <input type="checkbox"/> Administration Fee <input type="checkbox"/> Transaction Fee <input type="checkbox"/> Custody Fee <input type="checkbox"/> I don't Know 11. What is important to check before buy Funds? <input type="checkbox"/> Macroeconomic <input type="checkbox"/> Microeconomic <input type="checkbox"/> Government Expending <input type="checkbox"/> Balance Sheet <input type="checkbox"/> Administration Fee <input type="checkbox"/> Transaction Fee <input type="checkbox"/> Custody Fee <input type="checkbox"/> I don't Know 12. What is important to check before buy Government Bonds? <input type="checkbox"/> Macroeconomic <input type="checkbox"/> Microeconomic <input type="checkbox"/> Government Expending <input type="checkbox"/> Balance Sheet <input type="checkbox"/> Administration Fee <input type="checkbox"/> Transaction Fee <input type="checkbox"/> Custody Fee <input type="checkbox"/> I don't Know 13. What is important to check before buy Private Bonds? <input type="checkbox"/> Macroeconomic <input type="checkbox"/> Microeconomic <input type="checkbox"/> Government Expending <input type="checkbox"/> Balance Sheet <input type="checkbox"/> Administration Fee <input type="checkbox"/> Transaction Fee <input type="checkbox"/> Custody Fee <input type="checkbox"/> I don't Know 14. What is important to check before buy Real Estate? <input type="checkbox"/> Macroeconomic <input type="checkbox"/> Microeconomic <input type="checkbox"/> Government Expending <input type="checkbox"/> Balance Sheet <input type="checkbox"/> Administration Fee <input type="checkbox"/> Transaction Fee <input type="checkbox"/> Custody Fee <input type="checkbox"/> I don't Know 15. Have you ever made debt? <input type="checkbox"/> Yes <input type="checkbox"/> No 16. If, you have ever had debts, what is the reason <input type="checkbox"/> Education fees <input type="checkbox"/> Car <input type="checkbox"/> Travel <input type="checkbox"/> House/Apartment <input type="checkbox"/> Other goods and services 17. Do you believe that is important to learn about investments? <input type="checkbox"/> Yes <input type="checkbox"/> No |
|---|---|

Figure A.1: EBA Fieldwork Questionnaire

B Preliminary internal survey

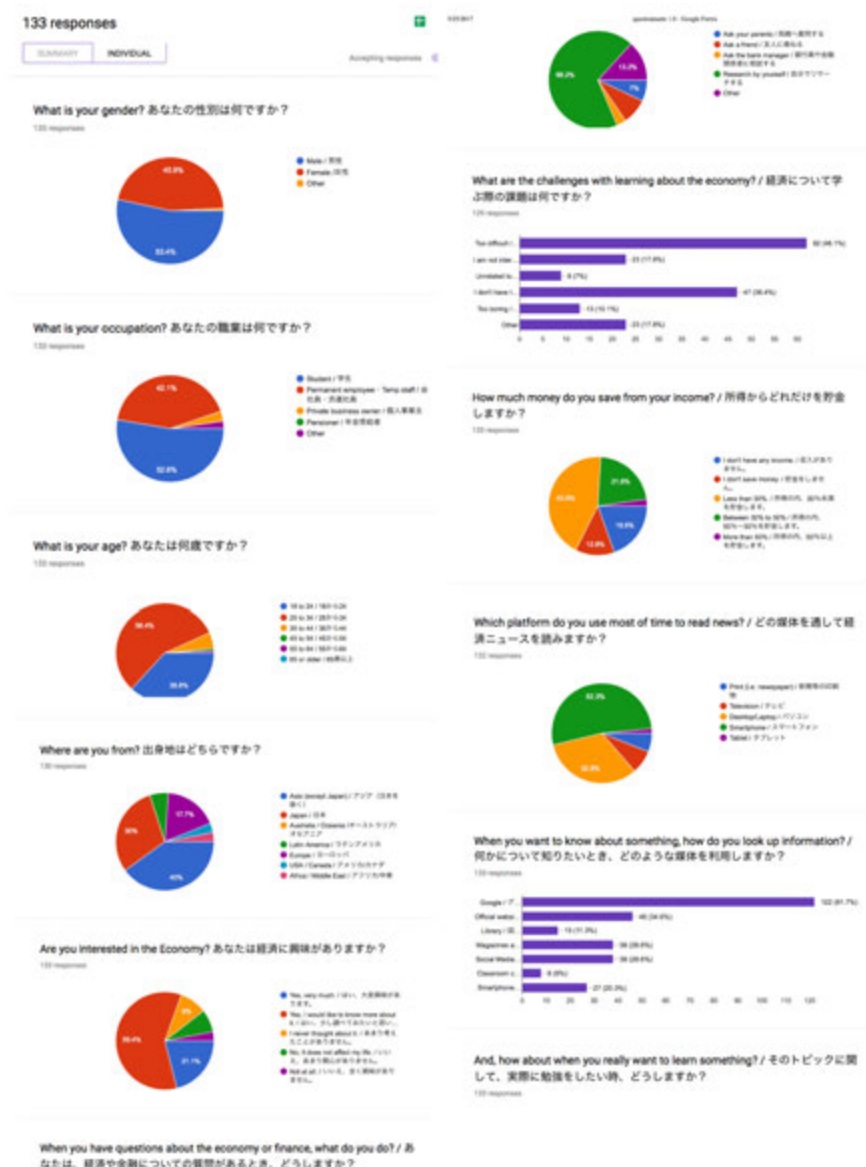


Figure B.1: Preliminary internal surveys

C Questionnaire Students

Questionnaire



Asia

Europe

Africa

North America and Oceania

1. Did you understand the session?

☐ Yes, I understood all of it.

☐ Yes, I understood most of it.

☐ No, I only understood a little.

☐ No, I did not understand it at all.

2. Did you enjoy it?

☐ Yes, it was very interesting.

☐ It was just so-so.

☐ No, I don't think it was fun.

3. Do you think it helps you to understand more about economy? If so, what did you learn, if not, what was your opinion?

☐ Yes ☐ No

英語で書いて、ください。



What did you learn?

Figure C.1: Questionnaire Students - End of each session

| | NAME | Fujimigaoka | Meeting | Fujimigaoka | Fujimigaoka | Fujimigaoka | Fujimigaoka |
|-------------|----------------------------|-------------|---------|-------------|-------------|-------------|-------------|
| | | 11月12日 | 12月1日 | 12月17日 | 1月28日 | 1月31日 | 2月18日 |
| Ph.D. | Goki Miyakita | ○ | | ○ | ○ | | |
| | Eiiko Akashi | ○ | | ○ | | | |
| M2 (4月) | Rinrada Khansuwan | ○ | ○ | ○ | ○ | ○ | ○ |
| | Akinori Takanobu (高信 彰徳) | ○ | | | | | ○ |
| | Komkid Topoklang | ○ | | | ○ | | ○ |
| | Mana Yamamoto (山本 真愛) | | | | | | ○ |
| | Daisuke Yukita (油木田 大祐) | ○ | | ○ | ○ | | ○ |
| | | | | | | | |
| M2 (9月) | Nadira Anndhini | ○ | ○ | ○ | ○ | | ○ |
| | Leandro Navarro Hundzinski | | | ○ | | | |
| | Marcel Alves Ferragi | ○ | ○ | ○ | ○ | ○ | ○ |
| | Shiyuan He | | | ○ | | | |
| | Fathima Assilmia | ○ | | ○ | ○ | | ○ |
| | Heng Xin | ○ | ○ | ○ | | | ○ |
| M1 (4月) | Shimpei Hirata (平田 信平) | | | | ○ | | ○ |
| | Hu Xinyu (胡心語) | ○ | | ○ | | | |
| | Gotoh Yuta (後藤 佑太) | ○ | | ○ | ○ | | ○ |
| | Zhou Tenye | ○ | | ○ | | | |
| | Yuchen Zhu | | | ○ | | | |
| | | | | | | | |
| M1 (9月) | Diandra Adhani | ○ | | ○ | | | |
| | Athanasia Tsatsara | ○ | | ○ | | | |
| | Stefanie Gertrud Schaack | ○ | | ○ | ○ | | ○ |
| | Massino B. | | | ○ | | | |
| Researchers | Fadhila Zahra Humaira | | | | | | |
| | Alexander Taylor | ○ | | ○ | | | ○ |
| | Sergio Robles de Medina | ○ | | ○ | ○ | | ○ |
| TOTAL | | | | | | | |

Figure D.1: Facilitator Attendance

D Prove of Concept - Lists - Class division & Main Facilitators

| Facilitator Evaluation | | | | | |
|---|------------------------|---|--|---|--|
| Global Workshop 2016 - Global Economy DAY1 (November 12th, 2016) | | | | | |
| Name | Group | | Role : Main MC Facilitator | | |
| TOPIC | POINTS | | | | |
| | 4 | 3 | 2 | 1 | |
| GROUP WORK | | | | | |
| 1 | Role Allocation | The group worked well together with good task delegation. Each member did her own role well, and helped each other when needed. | The group generally worked well together and had a good task delegation. Most members did their own role well, and they sometimes helped each other. | The group worked fairly well together with allocated roles. But rarely help each other. | The group often did not work well together. Some members did not do their work or help others. |
| 2 | Time Management | They managed the time well. | They managed to finish in time. | They were slow but managed to finish it in time. | They did not finish it in time. |
| 3 | Attitude | Never is publicly critical of other cultures. Always has a positive attitude about other countries. | Rarely is publicly critical of other cultures. Often has a positive attitude about other countries. | Occasionally is publicly critical of other cultures. Usually has a positive attitude about other countries. | Often is publicly critical of other cultures. Often has a negative attitude about other countries. |
| 4 | Enthusiasm | Facial expression and body language show a strong interest and enthusiasm about the task. | Facial expression and body language show an interest and enthusiasm about the task. | Facial expression and body language show some interest and enthusiasm about the task. | Facial expression and body language depict apathy or boredom with the topic. |
| PROGRAM | | | | | |
| 5 | Appropriateness | There was enough lecture. Participants seemed to understand the lecture and apply the concept to their task well. | Lecture was simple but need more explanation in some parts. Participants seemed to understand the lecture and apply the concept to their task. | Lecture is not enough and hard to understand. Participants took sometimes to get starting on the hands-on. | There should be more explanation. Participants did not apply anything in the lecture to their task and did not finish on time. |
| Comments : Please describe in details. (Program, groupwork, layout, preparation ...) | | | | | |

Figure D.2: Facilitators Evaluation

| Group | Room | Class | Number | Name | Main Facilitator |
|-------|------|-------|-------------------|-------------------|------------------|
| 1 | 305 | A | A103 | OSHIBA MOMO | |
| | | B | B111 | SAWAFUJI KURUMI | |
| | | C | C121 | HATADA CHIKA | |
| | | D | D126 | YOKOYAMA MAKIKO | |
| 2 | | A | A105 | KAWANAKA SAKURA | |
| | | A | A123 | YAMAZAKI ARISA | |
| | | B | B115 | NAGAYOSHI MIRI | |
| | | C | C125 | MURAKAMI RINA | |
| 3 | | D | D122 | FUJIMOTO KOKO | |
| | | A | A109 | KOBAYASHI TOMO | |
| | | B | B109 | KOMINE KARIN | |
| | | B | B119 | MIYASAKO ERIKA | |
| 4 | | C | C102 | ANDO YUKI | |
| | | D | D117 | NAKAKOSHI CHISAKI | |
| | | A | A115 | NAOI HINA | |
| | | B | B123 | YODA KAHORI | |
| 5 | | C | C106 | OKU YOSHINO | |
| | | C | C116 | TAKAMOTO YUI | |
| | | D | D113 | TATEISHI RINA | |
| | | A | A119 | HASEGAWA RISA | |
| 6 | | B | B104 | IWAMOTO KAEDE | |
| | | C | C110 | SATOU YUNA | |
| | | C | C120 | TOMITA REI | |
| | | D | D109 | KATAOKA CHIIHIRO | |
| 7 | | A | A102 | OKI MIKU | |
| | | B | B102 | ICHIKAWA MOE | |
| | | C | C122 | MATSUJIRA MIOKA | |
| | | D | D125 | MIYAZAKI HIROMI | |
| 8 | | A | A106 | KITAZAWA NATSUMI | |
| | | A | A124 | YAMADA SAKI | |
| | | B | B116 | NUMATA MISAHI | |
| | | C | C126 | YAMAMOTO YURI | |
| 9 | D | D121 | FUKANO MINAGI | | |
| | A | A110 | SUGIMOTO REI | | |
| | B | B110 | SAITOU AYA | | |
| | B | B120 | MIYAMOTO IZUMI | | |
| 10 | C | C103 | ISHIDA NAGISA | | |
| | D | D116 | TOMONAGA MAHIRO | | |
| | A | A116 | NAKAMURA AKARI | | |
| | B | B101 | AOTA MIYU | | |
| 11 | C | C107 | KANEKO MIZUKI | | |
| | C | C117 | TSUCHIYA MOEKA | | |
| | D | D112 | KINBARA MIHO | | |
| | A | A120 | MURAKAMI MANA | | |
| 12 | B | B105 | KAWASAKI NANAMI | | |
| | C | C111 | SAWAKAMI MOMONA | | |
| | D | D105 | UMEZAWA HINA | | |
| | D | D108 | ODAWARA YUKI | | |
| 13 | 307 | A | A101 | AOKI RIKI | |
| | | B | B113 | SUZUKI YUI | |
| | | C | C123 | MATSUTOMO MISATO | |
| | | D | D124 | MITANI SATSUKI | |
| 14 | | A | A117 | NAKAMURA HIKARI | |
| | | A | A130 | AMELIA HALL | |
| | | B | B117 | MASUDA KYOLKO | |
| | | C | C127 | YOSHIOKA CHIIHIRO | |
| 15 | | D | D119 | NAKAMURA MIZUKI | |
| | | A | A112 | STIMSON MIKA | |
| | | B | B121 | YAMAMURA YUKA | |
| | | C | C104 | USHIJIMA MONE | |
| 16 | | C | C114 | TAIRA SHOUKO | |
| | | D | D115 | CHUGO KANA | |
| | | A | A107 | KURODA TOUKO | |
| | | B | B112 | SUKEGAWA HITOMI | |
| 17 | | C | C108 | KAMIYAMA MIYU | |
| | | C | C118 | TSUNAKAWA SHIORI | |
| | | D | D111 | KANBARA SUZUKA | |
| | | A | A121 | MORIYAMA MINAMI | |
| 18 | B | B106 | KITAKAMI EMARI | | |
| | C | C112 | SUGANUMA MITSUKI | | |
| | D | D104 | UENISHI ANNA | | |
| | D | D107 | OGURA ANJU | | |
| 19 | A | A104 | OKADA RINO | | |
| | B | B114 | TAKANO MINAMI | | |
| | C | C124 | MIHARA CHIHIO | | |
| | D | D123 | MATSUSHIMA FUTABA | | |
| 20 | D | D101 | ABE MAKOTO | | |
| | A | A108 | KEZUKA HARUNA | | |
| | B | B108 | KOBAYASHI REISA | | |
| | B | B118 | MATSUDA MIU | | |
| 21 | C | C101 | AKIYAMA MIU | | |
| | D | D118 | NAGATSUKA SHINO | | |
| | A | A114 | TOKUYAMA SOFI | | |
| | B | B122 | YOKOUCHI RISA | | |
| 22 | C | C105 | OGATA SHIORI | | |
| | C | C115 | TAKAI RIKAKO | | |
| | D | D114 | CHIKARAISHI AKANE | | |
| | A | A118 | NISHIKAWA MAYU | | |
| 23 | B | B103 | ITOU AYANA | | |
| | C | C109 | SAITOU HARUKA | | |
| | C | C119 | DOI SAKURA | | |
| | D | D110 | KAWASHIMA MIZUKI | | |
| 24 | A | A122 | YASUMOTO TAMAKI | | |
| | B | B107 | KIMURA MISAHI | | |
| | C | C113 | SETO MAYA | | |
| | D | D102 | ARIHARA CHISE | | |
| 25 | D | D106 | OTA KANAMI | | |

Figure D.3: Students Group

| Class | Number | First name | GROUP | Class | Number | First name | GROUP | Class | Number | First name | GROUP | Class | Number | First name | GROUP |
|-------|--------|------------------|-------|-------|--------|-----------------|-------|-------|--------|------------------|-------|-------|--------|-------------------|-------|
| A | A101 | AOKI RIKI | 11 | B | B101 | AOTA MIYU | 9 | C | C101 | AKIYAMA MIU | 17 | D | D101 | ABE MAKOTO | 16 |
| A | A102 | OKI MIKU | 6 | B | B102 | ICHIKAWA MOE | 6 | C | C102 | ANDO YUKI | 3 | D | D102 | ARIHARA CHISE | 20 |
| A | A103 | OSHIBA MOMO | 1 | B | B103 | ITOU AYANA | 19 | C | C103 | ISHIDA NAGISA | 8 | D | D103 | I. RUIE | |
| A | A104 | OKADA RINO | 16 | B | B104 | IWAMOTO KAEDE | 5 | C | C104 | USHIJIMA MONE | 13 | D | D104 | UENISHI ANNA | 15 |
| A | A105 | KAWANAKA SAKURA | 2 | B | B105 | KAWASAKI NANAMI | 10 | C | C105 | OGATA SHIORI | 18 | D | D105 | UMEZAWA HINA | 10 |
| A | A106 | KITAZAWA NATSUMI | 7 | B | B106 | KITAKAMI EMARI | 15 | C | C106 | OKU YOSHINO | 4 | D | D106 | OTA KANAMI | 20 |
| A | A107 | KURODA TOLGO | 14 | B | B107 | KIMURA MISAKI | 20 | C | C107 | KANEKO MIZUKI | 9 | D | D107 | OGURA ANJU | 15 |
| A | A108 | KEZUKA HARUNA | 17 | B | B108 | KOBAYASHI REISA | 17 | C | C108 | KARIYAMA MIYU | 14 | D | D108 | ODAWARA YUKI | 10 |
| A | A109 | KOBAYASHI TOMO | 3 | B | B109 | KOMINE KARIN | 3 | C | C109 | SAITOU HARUKA | 19 | D | D109 | KATAOKA CHIHIRO | 5 |
| A | A110 | SUGIMOTO REI | 8 | B | B110 | SAITOU AYA | 8 | C | C110 | SATOU YUNA | 5 | D | D110 | KAWASHIMA MIZUKI | 19 |
| A | A111 | SUZUKI HAZUKI | | B | B111 | SAWAFUJI KURUMI | 1 | C | C111 | SAWAKAMI MOMONA | 10 | D | D111 | KANBARA SUZUKA | 14 |
| A | A112 | STIMSON MIKA | 13 | B | B112 | SUEGAWA HITOMI | 14 | C | C112 | SUZAHARA MITSUKI | 15 | D | D112 | KINBARA MIHO | 9 |
| A | A113 | CHON INYON | | B | B113 | SUZUKI YUI | 11 | C | C113 | SETO MAYA | 20 | D | D113 | TATEISHI RINA | 4 |
| A | A114 | TOKUYAMA SOFI | 18 | B | B114 | TAKANO MINAMI | 16 | C | C114 | TAIRA SHOUKO | 13 | D | D114 | CHIKARAISHI AKANE | 18 |
| A | A115 | NAOI HINA | 4 | B | B115 | NAGAYOSHI MIRI | 2 | C | C115 | TAKAII RIKAKO | 18 | D | D115 | CHUGO KANA | 13 |
| A | A116 | NAKAMURA AKARI | 9 | B | B116 | NUMATA MISAKI | 7 | C | C116 | TAKAMOTO YUI | 4 | D | D116 | TOMONAGA MAHIRO | 8 |
| A | A117 | NAKAMURA HIKARI | 12 | B | B117 | MASUDA KYOUKO | 12 | C | C117 | TSUCHIYA MOKA | 9 | D | D117 | NAKAKOSHI CHISAKI | 3 |
| A | A118 | NISHIKAWA MAYU | 19 | B | B118 | MATSUDA MIU | 17 | C | C118 | TSUNAKAWA SHIORI | 14 | D | D118 | NAGATSUKA SHINO | 17 |
| A | A119 | HASEGAWA RISA | 5 | B | B119 | MIYASAKO ERIKA | 3 | C | C119 | DOI SAKURA | 19 | D | D119 | NAKAMURA MIZUKI | 12 |
| A | A120 | MURAKAMI MANA | 10 | B | B120 | MIYAMOTO IZUMI | 8 | C | C120 | TOMITA REI | 5 | D | D120 | HASEGAWA YUKA | |
| A | A121 | MORIYAMA MINAMI | 15 | B | B121 | YAMAMURA YUKA | 13 | C | C121 | HAYADA CHIKA | 1 | D | D121 | FUKANO MINAKI | 7 |
| A | A122 | YASUMOTO TAMAKI | 20 | B | B122 | YOKOICHI RISA | 18 | C | C122 | MATSUMURA MIKA | 6 | D | D122 | FUJIMOTO KOKO | 2 |
| A | A123 | YAMAZAKI ARISA | 2 | B | B123 | YODA KAHORI | 4 | C | C123 | MATSUMOTO MISATO | 11 | D | D123 | MATSUSHIMA FUTABA | 16 |
| A | A124 | YAMADA SAKI | 7 | | | | | C | C124 | MIHARA CHIHO | 16 | D | D124 | MITANI SATSUKI | 11 |
| A | A130 | AMELIA HALL | 12 | | | | | C | C125 | MURAKAMI RINA | 2 | D | D125 | MIYAZAKI HIROMI | 6 |
| | | | | | | | | C | C126 | YAMAMOTO YURI | 7 | D | D126 | YOKOYAMA MAKIKO | 1 |
| | | | | | | | | C | C127 | YOSHIOKA CHIHIRO | 12 | D | D127 | WATANUKI MEGUMI | |

Figure D.4: Students Class

| Room | Group | Main Facilitator | Supporting Facilitators |
|--------------|-------|------------------|-------------------------|
| Room 1 | 1 | Hu Xinyu | Keiko Okawa |
| | 2 | | Marcel Ferragi |
| | 3 | | Zhao Lei |
| | 4 | | Stefani |
| | 5 | | Chrysa |
| Room 2 | 6 | Daisuke Yukita | Nadira Anndhini |
| | 7 | | Yuta Gotoh |
| | 8 | | Felipe Pontes |
| | 9 | | Zhou Tenye |
| | 10 | | Nancy |
| Room 3 | 11 | Marcos Maekawa | Hen Xing |
| | 12 | | Kutuxi Ayisunu |
| | 13 | | Komkid Topoklang |
| | 14 | | Alexander Taylor |
| | 15 | | Fathima Assilmia |
| Room 4 | 16 | Shimpei Hirata | Rinrada Khansuwan |
| | 17 | | Elitha Akashi |
| | 18 | | Diandra Adhani |
| | 19 | | Phoenix Spaulding |
| | 20 | | |
| Photographer | | Miyakita Goki | |

Figure D.5: Distribution Facilitators



Figure D.6: Economic Agreement Brazil 1



Figure D.7: Economic Agreement Brazil 2

ECONOMIC AGREEMENT

I, Emily you from Malaysia (country),
would like to Export Import some many some (product)
to from (partner country) Japan With 100 % Tax Rate.

Reasons are

- Can only be found in Malaysia
- Must be big and new

Do you both agree with this Economic Agreement? Yes / No
両者は経済協定に同意しますか? はい/いいえ

Sign _____ Sign _____
Name _____ Name _____
Partner Country _____ Country _____

Figure D.8: Economic Agreement Malaysia 1

ECONOMIC AGREEMENT

I, mye emario from malaysia (country),
would like to Export Import some (product)
to from (partner country) Thailand With 0 % Tax Rate.

Reasons are

- 1) To make income equal and demand reduction.
- 2) It is better to give to houses you are participate about rather than pay more taxes to the government who ends up wasting your money.
- 3) Malaysia need more be plastic.

Do you both agree with this Economic Agreement? Yes / No
両者は経済協定に同意しますか? はい/いいえ

Sign _____ Sign _____
Name _____ Name mye emario
Partner Country _____ Country malaysia

Figure D.9: Economic Agreement Malaysia 2