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Special Issue

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Innovation for Women and Economic Development: Facilitating Women's Livelihood Development and Resilience with ICT

The Second Phase Study on E-learning Program

1. Background

To promote awareness of the need among women in the APEC region to embrace new ICT devices and related services for livelihood development, Chinese Taipei initiated a multi-year project (MYP) entitled "Innovation for Women and Economic Development: Facilitating Women's Livelihood Development and Resilience with ICT" in June 2012 in the Women and Economy Forum (WEF) in St. Petersburg. This project was later endorsed by 14 member economies, PPWE, and SMEWG, and funding was approved by the APEC in May 2013.

This project consists of three phases. The first phase aims to study the effectiveness of ICT-related projects in facilitating women's economic empowerment. The second phase is to prepare possible tools and supporting measures targeted at women-owned businesses and to exchange good/new



models. The third phase will combine the findings into a toolkit to promote women's economic empowerment through ICT. It serves to promote the awareness of potential productivity of women entrepreneurs and to discover policy guidelines and powerful ICT tools to economically empower more women in this region.

The first-year report of the MYP consists of a preliminary inventory and a comparative case study that examines, among the four partner economies (Chile, Republic of Korea, the Philippines, and Chinese Taipei), past and ongoing projects seeking to facilitate women's economic empowerment by harnessing ICT-enabled tools. We found that ICT-related projects positive influenced female entrepreneurs in many respects, such as access to market, building networks, and access to capital. We also identified the difficulties women entrepreneurs faced when acquiring knowledge and access to capital were considered to be the root causes behind all difficulties.

In the second-year study, we conducted an experimental study on the effectiveness of deploying ICT-enabled tools to raise women's business potentials using an e-learning program specifically designed for women business. We also explored lessons drawn from recent experiences in crowdfunding as a new innovative ICT platform for startups run by women. We expect the results of these two pilot studies will help us identify the future direction for empowering women through ICT-related tools.

2. Study on E-Learning Program

In this experimental study, we used a focus-group approach by selecting 20 women entrepreneurs participating in a BPW Business Incubator ONLINE Training and Mentoring APEC Project. We conducted two surveys, before and after their e-learning courses, to evaluate the effectiveness of the program, in particular how it is used to connect women to new and wider markets, broaden their social networks and provide them with information that

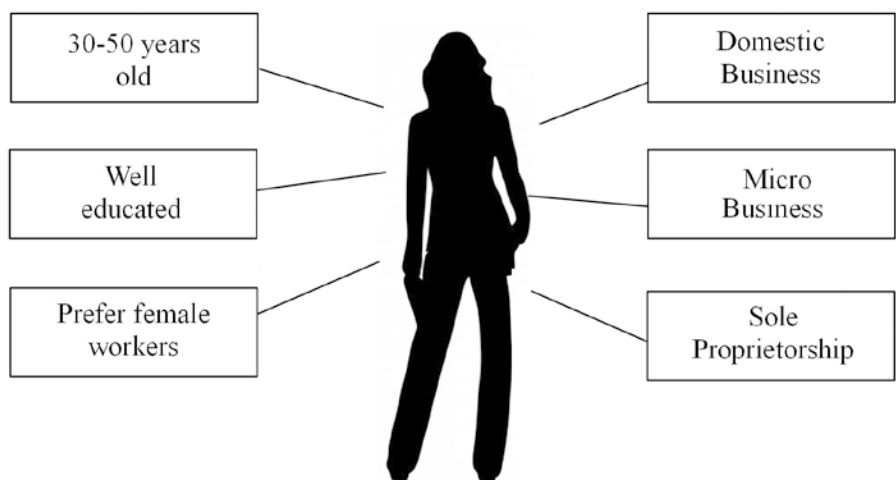


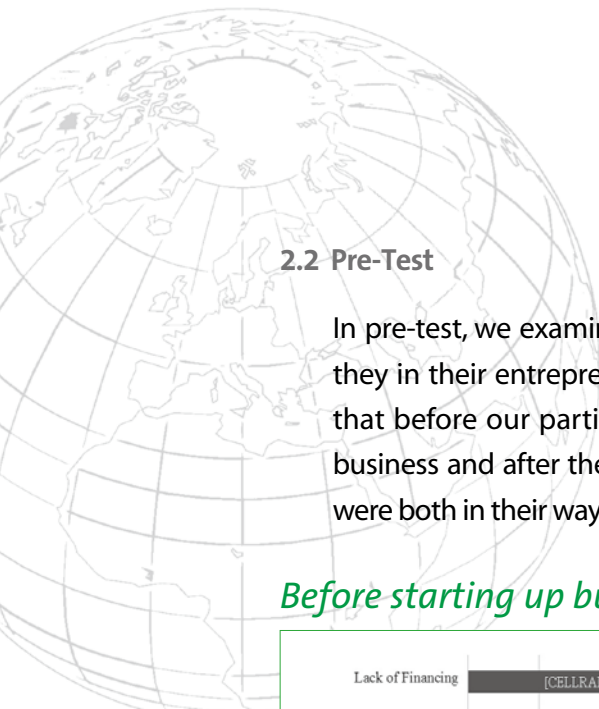
opens up important economic opportunities. These findings will become an important knowledge base and reference that will help in developing e-learning related approaches and tools in the third phase.

2.1 Sampling

Women entrepreneurs who have English skill, strong motivation and active attitude on business learning would be the proper participant to join our e-learning pilot program. Thus, we adopt the non-probability sampling to select our participants as the focus group. The consultants from Australia, Chile, Republic of Korea, the Philippines and Chinese Taipei were asked to invite volunteers, women entrepreneurs who are interested in this online training program, to join this project. To echo the learning gap of women's needs from phase 1 study, some of the participants are interviewees in previous case studies. Totally 20 women entrepreneurs from different economics participate in this pilot program from August 2014 to January 2015.

The general portrait of our participants could be described as the picture bellow:





2.2 Pre-Test

In pre-test, we examine the background of participants and obstacles they in their entrepreneurship process. In the research, we discovered that before our participants, women entrepreneurs, started up their business and after they fulfilled entrepreneurship, similar impediments were both in their way.

Before starting up business

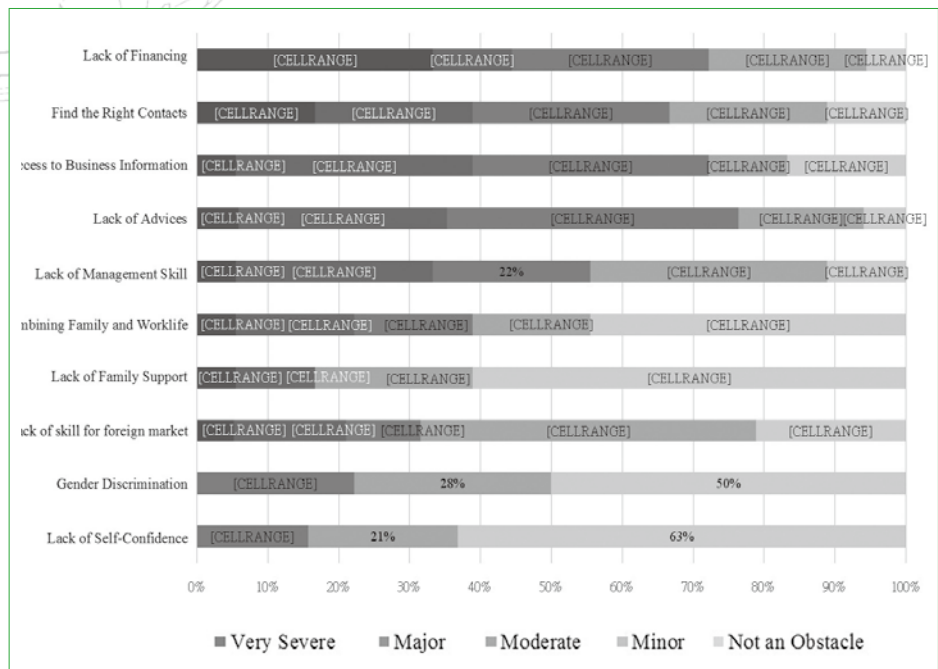


Figure 1: Obstacles before starting up business

From the survey of challenges to participants' entrepreneurship, we found them facing various obstacles when they endeavor to set up business. Our participants usually face the problems of lacking access of financing, lacking contacts and access to information, lacking advices, and having no management skill. Furthermore, from the result we discerned that these obstacles could just echo four barriers for women entrepreneurs



which claimed by San Francisco Declaration: access to capital, access to markets, capacity and skills building, and women’s leadership. The relations could be shown below:

- Financing problem echoes the barrier of access to capital
- Lacking contacts and access of information indicates the impediments of access to markets,
- Lacking advices pertains to the barrier of capacity and skills building.
- Lack of management skill refers to the barriers of women’s leadership.

Thus, it is obvious that the obstacles in their entrepreneurship were not variant form the impediments concluded by the Declaration. The list of challenges and how our participants consider about different obstacles are presented in figure 1.

After starting up business

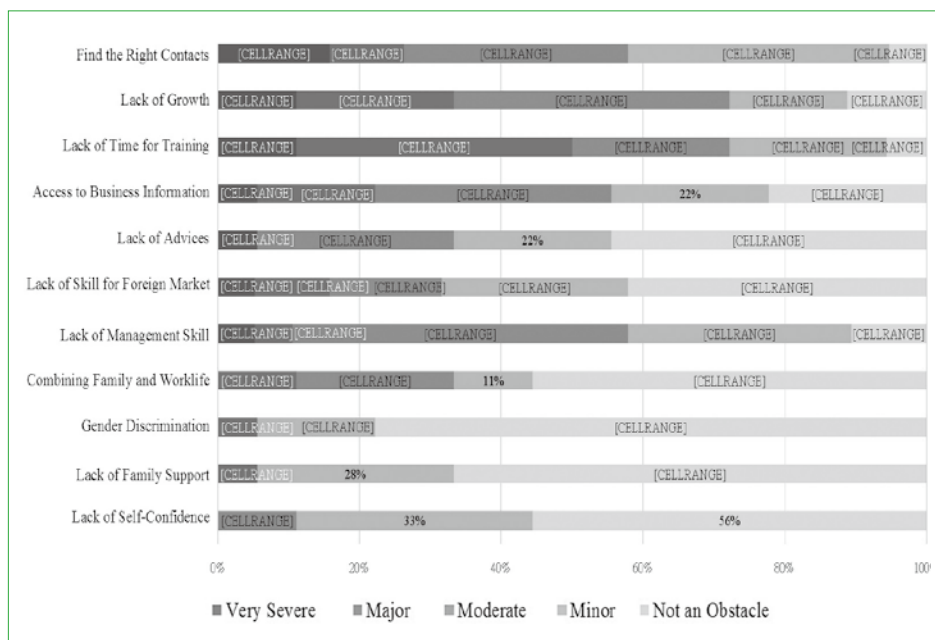


Figure 2: Obstacles after starting up business



On the other hand, after women entrepreneurs started up their business, we also found them having similar obstacles. From figure 2, the major obstructions they had after building up business could be concluded into five issues: "find the right contacts," "lack of growth," "lack of time for training," "access to business information," and "lack of management skill". Accordingly, these five obstacles could still be categorized into four aspects defined in the San Francisco Declaration:

- Lack of capital is financing problem.
- Lack of contacts and access to information refers to lack of access to market.
- Lack of time for training pertains to the challenge about training
- The need for management skill is related to the problem of lack of management skill.

Consequently, we could come to conclusion that most of our participants have similar problems before and after they start up business. They would have financing problem, lacking access to market and information, lacking skills and training. However, these obstacles had already been strengthened by San Francisco Declaration in four aspects: access to capital, access to markets, capacity and skills building, and women's leadership. Therefore, we could understand how difficult for women to become entrepreneurs and fulfill their entrepreneurship.



2.3 Post-test

Post-test Design

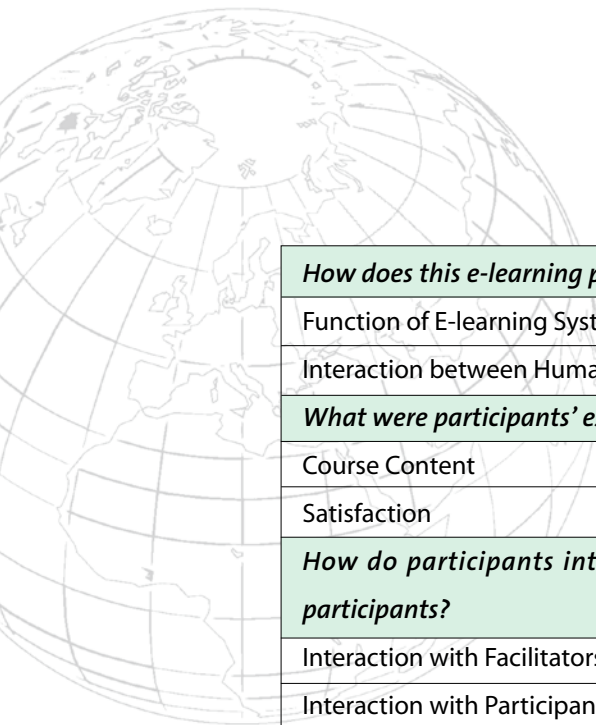
The post-learning survey conducted after our participants finished their e-learning courses, focused on the three core questions we wanted to study:

- How does this e-learning platform function?
- What were participants' expectation and how effectively have they been met?
- How do participants interact with their mentors, facilitators, and other participants?

From three questions, we hope understand our participants' attitudes, requests, and satisfaction about using experience of e-learning program in this research.

To answer the three questions, the post-test was designed in several sectors for different questions. These sectors were designed to survey their experience of interaction with ICT devices, attitudes toward interaction with other participants and mentors, learning result, and their satisfaction and expectation about e-learning. Furthermore, the sub-questions in these sections serve to answer the main three questions in different aspects. The two different aspects for each core questions are categorized in table 1.

Besides, to better understand their needs, suggestions, and expectation to e-learning, the post-test was composed of qualitative and quantitative questions.



<i>How does this e-learning platform function?</i>
Function of E-learning System
Interaction between Human and ICT
<i>What were participants' expectation and how effectively have they been met?</i>
Course Content
Satisfaction
<i>How do participants interact with their mentors, facilitators, and other participants?</i>
Interaction with Facilitators/Mentors
Interaction with Participants

Post-test Result

From the results, we could answer the main question that the basic function of the e-learning platform exercising well, and the participants face less barriers to access and facilitate the e-learning platform. However, compare with the averagely high percentage of (80%) positive feedback on basic function of the platform itself, some participants still face ICT barriers: 40% of participants reflect the need of technical support. Some of our participants may face ICT barriers for their internet environment and may need more time to adapt to the interaction with ICTs: about 40% of them report to have problems with linkage.

While the platform almost set no ICT barriers for our participants, few aspects are suggested to be revised. For instance, some participants suggest that the platform interface should be refined. Besides, because of the importance of time flexibility, some participants also suggest that for those seriously busy women, the program should be arranged in more flexible pattern.

About participants' expectation and satisfaction, most of our participants



have high satisfaction to the e-learning experience after reviewing two aspects of the issue. It shows that most of participants agreed that they had got their expectation met. We could also discover that most of our participants report generally high satisfaction of the course materials and the topics. Many of our participants agree that they will be willing to recommend e-learning to other women entrepreneurs and use the e-learning program for their further learning.

Our participants also valued the interaction with mentors/facilitators. Participants hold positive attitudes toward the interaction in e-learning program. They may have different opinions about how much time should they spend on the interaction, but most of them appreciate the interaction in e-learning system. About human interaction, most of participants agree the necessity of interaction with others and they both agree that they get useful advices from mentors.

Finally, we also received suggestions from participants. Although these suggestions highly varied because of different ICT environment, these suggestions still provide useful advices for building a better e-learning program in the future.

3. Study on Crowdfunding Platform

From the first phase research, we could find the rapid deployment of ICTs in formal banking and financing sectors has not yet become a successful tool to solve the problem of formal financial access to women. Besides, angel investors and venture capital also have little investment to pour on women entrepreneurs. Thus, we want to find some novel funding access to support women. We finally find the nascent “crowdfunding” platform, came from the concept of “raising fund from the public” and gradually lead the craze in the West, may serve as a new access for women to raise fund.

For studying the potential of crowdfunding platform, we conducted case



study to investigate the experience of women entrepreneurs who successfully propose project on the platform. From the case study, we discovered each case had different successful models. But we also find that some features of crowdfunding indeed make crowdfunding platform a more possible and effective way to economically empower women entrepreneurs than angel investors or venture capital.

4. Findings

In the second phase, we conducted a quasi-experiment, two surveys, and interviews in a selected sample in five partner APEC member economies to discover possibilities for e-learning and crowdfunding to empower women entrepreneurs. Due to time and budget limitations, we focused on the needs of women entrepreneurs who already had sufficient ICT literacy, own a small business, and were ready to explore wider markets or were interested in international trade. The main findings can be summarized as follows:

1). Skills and Capacity Building: Using ICT to search for market information is unfamiliar to women entrepreneurs. Even though many women entrepreneurs have a high level of ICT literacy, this is not the same as being able to access market information or convert information into benefit. Therefore, effort should be made to strengthen small women-led businesses' access to quality market information using ICT-enabled tools and services.

2). Access to Market: Domestic business is preferred by small-scale women entrepreneurs because of the high transaction costs to reach international customers. However, they still show a high level of interest in approaching the international market. E-learning could serve as a learning tool to help them build the knowledge base for doing transnational business.

3). Access to Capital: Crowdfunding offers a new channel for access



to capital, and its open, flexible nature also makes “less profit-oriented” fundraising possible for start-ups. However, the main difficulty that women face in exploring crowdfunding is the high technical barriers to constructing the promotional material. For marginalized women, NGOs can play a very important role assisting them to form and propose the projects.

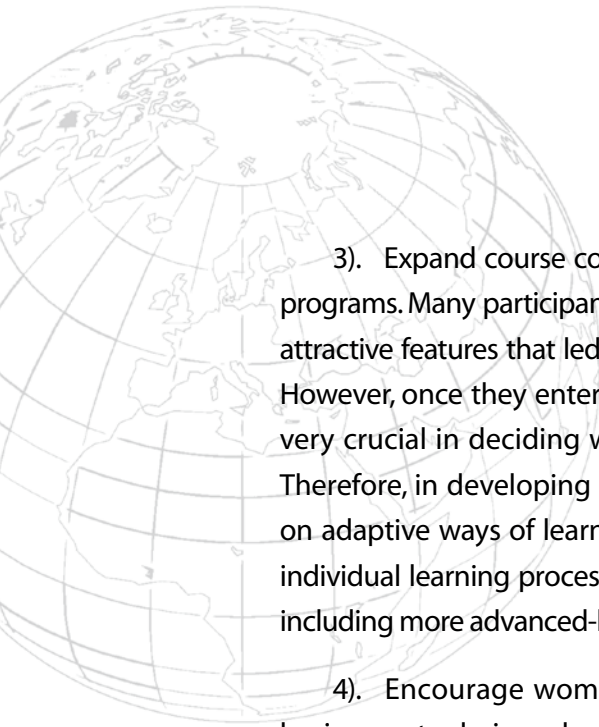
4). **Women’s Leadership:** Women entrepreneurs often face the challenges of effective communication and relationship-building. A combination of virtual and face-to-face interactions during the e-learning process can facilitate this relationship-building and motivate learners to use ICT in managing their business.

5. Recommendations

Based on these findings, we provide a few policy recommendations as follows:

1). Create more affordable and sustainable e-learning systems. Although many existing e-learning programs have pursued various strategies to bring practical benefits to women entrepreneurs, most of them face limitations in scaling up to match the diversified needs of women for their business development. Collective actions and institutional supports are needed to realign resources to make these existing programs more tangible and effective.

2). Design e-learning programs that also encourage person-to-person interaction. Women entrepreneurs generally benefited from interactions with mentors and consider interaction with others as vital not only for learning but also for networking. Higher rates of participation and satisfaction will be expected if e-learning programs can be designed to address the face-to-face networking needs of women entrepreneurs.



3). Expand course content while retaining time flexibility in e-learning programs. Many participants agreed that time flexibility was one of the most attractive features that led to their decision to enter the e-learning program. However, once they entered the program, their differing priorities became very crucial in deciding whether they completed the e-learning process. Therefore, in developing e-learning programs, emphasis should be given on adaptive ways of learning, in terms of learning objectives, courses, and individual learning processes, as well as a broad diversity of course options, including more advanced-level course options as skill levels develop.

4). Encourage women specializing in ICT or women in ICT-related businesses to design e-learning programs tailored for women entrepreneurs' real needs. Work-life balance and gender discrimination are no longer the main obstacles for women entrepreneurs. Our case study showed that women entrepreneurs perceived access to capital and access to market to be their major challenges in business survival and/or expansion. Since e-learning provides opportunities that might not be otherwise available, we recommend greater involvement of women specializing in ICT or women in ICT-related businesses to design e-learning programs that will help women entrepreneurs overcome those challenges.



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