

Newsletter

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Innovation for Women and Economic Development

**Facilitating Women's Livelihood
Development and Resilience
with ICTs**

**APEC Multi-Year Project
Project No. M SCE 03 2013A**

A Message from the Editor

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Dear readers,

As we are in the last phase of this project, this issue is being published a bit late in order to include more information about the project's final meeting that was held in September in Taipei. The goal of this meeting was to disseminate the project results of the three phases' findings and exhibit the Innovative Business Packages. Materials from that meeting can be found at the website <http://www.globalgender.org/en-global/news/detail/232>, and concise meeting minutes are presented in the "Briefing" section.

Over the past three years, we have identified best practices of women entrepreneurs through ICTs in the APEC region and developed a "toolkit" that can assist in establishing policies and business models for women entrepreneurs. We also launched the game-based learning web/application "WE boss" to help women with start-up businesses. This web/app not only provides women with a learning channel but also help them develop business skills without being limited by time, space, or cost.

In this issue, concepts of the game-based learning app are introduced, and a "9 Minute" application is presented as a case study to demonstrate the benefits of this new learning material. Furthermore, to reinforce the final meeting's panel topic, "Investing in Women's Economic Empowerment through ICTs", two relevant reports are offered as the "Editor's Picks", in which you can find information on the best practices for integrating gender aspects into social entrepreneurship and the importance of gender equality in the industrial revolution. Last but not least, the "Case Study" will provide a brief template on how "WE boss" can be incorporated into existing entrepreneurship training programs, which can serve as a reference for program designers using it in the future.

I hope you enjoy reading this issue and, as always, welcome any feedback that you may have.

Editor

Lihuan Lee



Newsletter

The Last Phase of “Innovation for Women and Economic Development” – Promoting Entrepreneurship for Women

In APEC's 2012 Leaders' Declaration and the Joint Statement of SME and Women in 2013, both APEC Leaders and Ministers encouraged economies to promote initiatives that use ICTs to combat the constraints on women's time and mobility, as well as enhance access to markets, networks, and information for women-owned and operated SMEs. Subsequently, Chinese Taipei launched this three-year project (2013-2016) to identify key elements in promoting the economic involvement of women using technology and innovative ICT tools, as well as any possible barriers thereto.

For the last phase of this project, we held our final meeting on September 7-8th, 2016 in Taipei; the aim of this particular meeting was to facilitate a better understanding of how a desire for more inclusive economic growth and development can be transformed into practical internal strategies.

The primary conclusion is that ICT can develop an environment in which women can participate in community-based activities, their business, trade, and employment opportunities are improved, and business-enabling networks are established to address women's needs. Recommendations are provided to develop and/or enhance capacity-building policies using ICT learning tools for women entrepreneurs, as well as to encourage private-public partnerships to promote women's participation in business & trade using ICTs. As a result of these efforts, our tangible outcomes are the Toolkit and game-based learning tool “WE boss”, which can be found at <http://weboss.azurewebsites.net/>.



Recommendations:

- Since appropriate gender sensitivities are a vital design element for ICT learning toolkits and programs for women, we believe that learning quality and time flexibility will help women entrepreneurs achieve better outcomes without having to sacrifice their family or community responsibilities.
- The continuous adoption of new ICT technology is critical to knowledge-based economies so life-time learning and support for capacity building are both necessary; existing tele-center networks with accessible interfaces can also help increase women's digital literacy.
- Although the implementation of e-commerce platforms is not unusual, this form of trade's degree of uptake can differ from economy to economy. Furthermore, the cost of exploring international markets and maintaining an e-commerce platform continues to be an obstacle for women entrepreneurs looking to take full advantage of e-commerce. Women entrepreneurs are unfamiliar with searching for market information. Therefore, we recommend efforts to strengthen small, women-led business access to quality market information using ICT enabled tools and services.

Following previous suggestions and results, our next step is to enable the innovative tool for information sharing and implementation. A model for how to integrate "WE boss" into an existing program is proposed in the last part of this newsletter.



Women in the Fourth Industrial Revolution

While the First Industrial Revolution used water and steam power to mechanize production, the Second used electric power to develop mass production. Most recently, the Third Industrial Revolution used electronics and information technology to automate production, and now, the Fourth Industrial Revolution, also known as Industry 4.0, is continuing to build on the Third.

The term "Industry 4.0" originally came from a project of the German government's high-tech strategy, which features high expectations for upgrading computer-based, digital manufacturing and intellectualization. The aim is not to create new industrial technology, but rather integrate all industry-related technology into an adaptive and efficient Smart Factory based on the Cyber-Physical System (CPS) and Internet of Things (IoT). As industries continue to rapidly progress, new job categories and occupations are born. The rise of the Fourth Industrial Revolution will affect men and women in various ways, and many industries and occupations will have to go through a fundamental transformation.

Even today, women suffer from gender inequality. Currently, women are still unable to break through the proverbial glass ceiling, doing similar work but getting less pay than men, enduring stereotypes at work, etc. Many assume that women's strong performance at work is due to hard work rather than skill, that they are less committed to work, and that successful women are always single and unapproachable. Therefore, when dealing with recruitment, many industries still unconsciously prefer to hire men.

Women's participation in the workforce is not only a social issue but also an economic issue. Although all forms of inequality have economic consequences, the McKinsey Global Institute (MGI) report, *The power of parity: How advancing women's equality can add \$12 trillion to global growth*, focuses on the economic implications of the disparity between men and women. Emphasizing the enormous potential of narrowing the gender gap, this report found that if every

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Ya-Wen Yu

Fu Jen Catholic University



country did so at the same historical rate as the fastest-improving country in its regional peer group, the world's annual gross domestic product would increase \$12 trillion by 2025. If women, who account for more than half the world's population, do not reach their full economic potential, the entire global economy will suffer. Fortunately, many global industries are being influenced by major promoters of transformation and now have the potential to decrease the gender gap.

The Industry Gender Gap report took a survey of CHROs and other senior executives from leading global employers to study how respondents and industries view gender parity and the female talent pool. The questions included the following: Do you think gender parity is a part of your future workforce strategy? Why do you think gender parity is important? What barriers do industries encounter when they try to achieve gender parity, close the gender wage gap, promote women's participation, etc.? About 42% of industries responded that the reason that promoting female talent is important is completely due to fairness and equality and that an unconscious bias among managers and a lack of work-life balance are two main barriers for women's participation in the workplace. Across all industries, women make up only 33% of junior level staff, 24% of mid-level staff, 15% of senior level staff, and a mere 9% of CEOs. These results show that an increasing amount of industries have begun taking gender equality seriously and considering it when talking about company operations. Furthermore, according to the survey, we can all look forward to more women participating in the workforce and a decreased gender gap by 2020.

According to the survey, most people believe that promoting work-life balance, establishing targets, measuring progress, and developing leadership training for women can help close the gender gap. However, the supporting measures are more significant. All industries must cooperate with owners, employees, and government support in order to achieve gender equality and develop a gender-friendly work environment. The Fourth Industrial Revolution may bring significant changes to our society, but it also has the potential to raise global income levels and improve the quality of life for people around the world. Narrowing the global gender gap in the workplace would not only be justifiable in the broadest sense but can also double the contribution of women to global GDP growth between 2014 and 2025. However, achieving such growth will require tackling gender inequalities in society. The entire world, including the private sector, would benefit by focusing on the significant economic opportunity of ensuring parity between men and women.



Enhancing Entrepreneurial Solutions through Gender Integration in Social Entrepreneurships

The concept of establishing organizations to solve social problems began in the 19th century, when entrepreneurs would make efforts to eliminate social evils. Furthermore, some other organizations focus on children's rights, women's empowerment, poverty in urban and rural areas, and so on. However, social entrepreneurship is a relatively new term, coming into use just a few decades ago. As time passes and material needs are met in developed countries, enterprises started thinking about their social responsibility along with making profits.

Although some efforts have already been made in social enterprises, their efforts would not be complete without gender integration within this gender mainstreaming generation. According to the World Bank's recent World Development Report 2012, gender inequality in terms of access to education, health, formal sector employment, and income remains a significant obstacle to growth in many countries. Therefore, social enterprises should take gender factors into account.

One report, "Women and Social Enterprises: How Gender Integration Can Boost Entrepreneurial Solutions to Poverty," which was jointly published in 2015 by the social enterprise Acumen and the Cartier Charitable Foundation, focuses on gender integration in social entrepreneurship and aims to lead greater action and new partnerships to engage and empower women through the private sector. The following is a brief introduction to this report.

In this report, Acumen explains that gender integration is not the goal itself. The real purpose is to solve social problems like poverty through such integration. More and more investors have begun to notice the importance of gender equity and to see companies through the gender-lens, resulting in so-called "gender-lens investing". Therefore, more opportunities will be given to those who have already integrated gender or are trying to do so. Seven gender integrated company cases are evaluated in the report through the following five business model factors:

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and Development

Yi-Jing Chen

Fu Jen Catholic University



- 1). Design: To what degree do products consider the needs of women?
- 2). Production: How well do male and female employees work together?
- 3). Marketing: How do companies understand the difference between males and females using their products?
- 4). Sales: Do companies hire female sales agents? Do they sell their products in suitable places for women?
- 5). Equitable systems and structure: Do companies properly use both male and female employees to create a considerable platform for female consumers?

The seven cases examined in this report are examples that not only integrate gender well but also create opportunities. All these cases are assessed using the aforementioned factors. Below is one of the cases that meets Acumen's standards, performing especially well in the field of design and sales.

More than half of the people in India still defecate outdoors. The main reason for this is that not enough water resources or funds for sanitation are available. The Indian government invests 60 times more in creating job opportunities than in sanitation. This kind of inequity makes it difficult to improve India's environment. Due to this lack of water, sanitation, and hygiene (WASH), women are more disadvantaged because of the security of defecating outside at night. Guardian, a company in India, aims to create a healthy society and safe environment by offering six loan products aimed exclusively at creating access to clean drinking water and sanitation facilities. This company lends money to low-income households to give them the ability to build a better environment.

From the design aspect, their target audience is women since women are usually responsible for their households. Women are more willing to spend their money on sanitation, and some of them even consider health a priority in their life. Furthermore, the interest repayment rate of women has traditionally been higher than that of men. Therefore, Guardian has created a special loan scheme that targets female clients by considering the specific financial and sanitation needs of women. For example, Indian female clients prefer the group loan scheme because they find it less risky.

Regarding sales, Guardian reaches out to existing female groups, such as self-help groups, village committees, and community-based organizations, in order to bring their products closer to its target audience. Guardian also has equitable male and female engagements, so when a



female client is not comfortable with a salesman, the company will send her a saleswoman to give her sanitation and loan advice.

The case of Guardian exemplifies a business model that includes great gender integration and is a role model for those who plan to do the same. Moreover, Acumen has established four calls-to-action for social enterprises: 1). Develop social enterprises' knowledge and skills on how to integrate gender into their businesses; 2). Channel investment capital and philanthropic funding into enterprises committed to gender integration; 3). Focus on, measure, and enhance the social and economic impacts that products/services create for women customers; and 4). Measure and document the added value of gender integration at both the business and social performance levels. Through these four actions, Acumen aims to encourage greater action and new partnerships in order to engage and empower women through the private sector. The report also features a diagnostic tool to show companies how to assess their gender integration.

Overall, Acumen is a social enterprise that is looking to change the world through investing companies, leadership, and interesting ideas. For more information about Acumen or other case studies, please read the report "Women and Social Enterprises: How Gender Integration Can Boost Entrepreneurial Solutions to Poverty" or visit Acumen's official website at <http://acumen.org/>.



A New Approach to Education, Training, and Women's Empowerment

Game-based learning and M-Learning

As technology advances, it will not only change the way people live but can also prompt tremendous social change. Information and Communication Technology (ICT) plays a significant role for women accessing distant learning and can thus reduce poverty for women worldwide. For women who do not have the opportunity to use the resources of school or society, they can easily learn and gain knowledge using ICT tools.

1. Game-based learning

The original purpose of game-based learning is education. Students are now bored of traditional lecturing and are more interested in playing games, surfing the Internet, and checking Facebook on their smartphones. Traditional training approaches require students to memorize textbooks and other materials, and then teachers evaluate those students based solely on how much they were able to memorize. Such teaching methods will lead to bad exchange as students find they study just for testing, not for the joy of learning.

According to Jessica Trybus¹, the difference between traditional and game-based learning is:

- (1) Students are highly engaged when playing games;
- (2) Students can select their own appropriate level;
- (3) Game can quickly give students feedback by pointing out their mistakes ;
- (4) Students can easily transfer game learning to the real world;
- (5) Students are actively engaged and enjoy playing with friends or on a team.

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Szu-Min Yu

National Taiwan University

¹ Jessica Trybus. Game-Based Learning: What it is, Why it Works, and Where it's Going. New Media Institute. (<http://www.newmedia.org/game-based-learning-what-it-is-why-it-works-and-where-its-going.html>)



Therefore, game-based learning can help students easily focus on game-based educational apps and, more importantly, achieve the goal of learning. Rejecting traditional and passive training methods can also enhance students' ability to pay attention and enable them to join the game, complete the story, and ultimately gain new knowledge. Furthermore, games provide students with the opportunities to try to fix their mistakes. For example, for students who are not familiar with how frogs transform, they can try combining different stages of transformation, and then the game will show them their errors, which they can correct immediately. After gaining considerable experience through playing, students can apply the virtual to reality, using what they have learned through the games. Furthermore, some concepts can be hard to understand, or the knowledge available on the Internet is wrong or inappropriate. For example, sex education is hard for Chinese parents to teach their kids because Chinese are traditionally uncomfortable with talking openly about sex, so they are not able to build correct concepts or properly teach their children. Proper educational games for sex education, can teach children correct sex-related knowledge that they otherwise would not be able to easily access, thus accomplishing the necessary training.

In summary, game-based learning can encourage e-learning and successfully attract students and hold their interest. Compared to traditional training approaches, game-based learning has considerable merits and should be integrated into education and courses.

2.Mobile Learning

Like game-based learning, Mobile learning, also known as m-learning refers specifically to educational games on cellphones. It is defined as "learning across multiple contexts, through social and content interactions, using personal electronic devices."² M-Learning can be applied to various aspects of education, not only for students, but also minority groups and women. These game-based applications are accessed on mobile phones, making them available for the impoverished and disadvantaged in areas in which the government provides such devices to their needy citizens. Through m-learning, people can enjoy games while learning knowledge from the applications. For those people without the opportunity to learn in school or for some lessons not taught in formal education, gaming applications are vital for gaining correct and useful knowledge. Likewise, application to empower and educate women can help them

² Crompton, H. (2013). A historical overview of mobile learning: Toward learner-centered education. In Z. L. Berge & L. Y. Muilenburg (Eds.), *Handbook of mobile learning* (pp. 3114). Florence, KY:



to learn and gain knowledge by simply playing games. For women who cannot afford the increasing costs of education, m-learning can improve their problem-solving skills. Therefore, gaming apps for women's education can empower them and bring significant efforts in changing their unfavorable situations.

Case study—9 Minutes

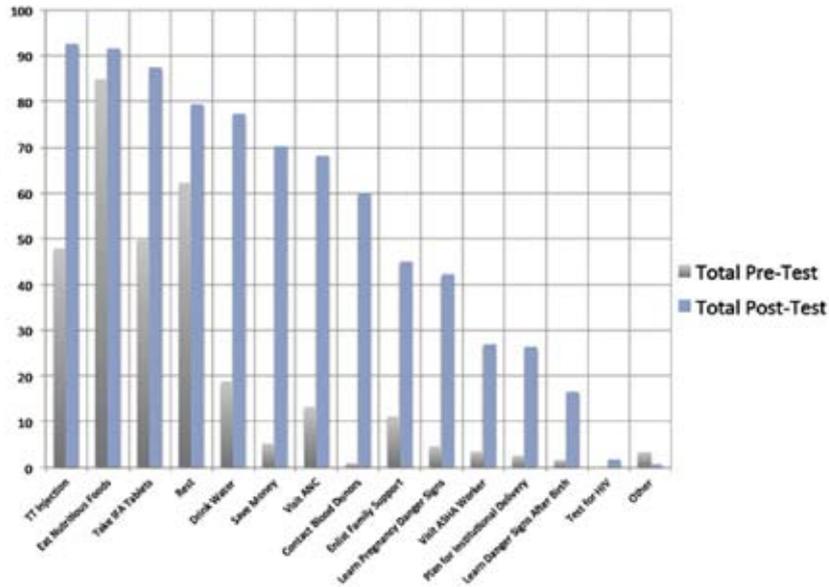
"9 Minutes" is a mobile game designed for pregnant women that was jointly launched by the United States Agency for International Development (USAID) and Half the Sky Movement. "9 Minutes" is one of the games that USAID developed in order to support gender and family, as well as encourage awareness of the importance of social change.

"9 Minutes" was originally developed for the commonly used JAVA phone in India and Africa ³, where people do not have smart phones and use JAVA phones to access the Internet. Women unable to obtain pregnancy-related knowledge can use these phone to play "9 Minutes" and learn. It provides three trimesters for players, which are 1-3, 4-6, and 7-9 months. Within each trimester, players can choose from the healthy or unhealthy button under various categories like diet, healthy activities, and behaviors. Through simple quizzes and fun games, pregnant women and their spouses are rewarded by keeping mommy and baby happy in the game.

For example, players will be asked about beneficial activities when they are pregnant. If they answer correctly, they can earn reward stickers. According to a report that USAID helped publish, a significant increase has been seen in the rate of completing these beneficial activities by pregnant women. For example, saving money is vital for spouses to nurture their children. However, according to the Pre-test, only about 5% of players save their money. After they play the "9 Minutes" game, the saving rate is up to 70%, 14 times more than the original number.

3 <http://www.gamesforchange.org/2011/10/half-the-sky-mobile-games-update-october-2011/>





(Comparison of Pre-Test and Post-test, resource: <http://www.gamesforchange.org/2013/03/9-minutes-mobile-game-evaluation-demonstrates-positive-change-for-pregnant-women/>)

Therefore, playing games can teach pregnant women and their spouses correct and vital knowledge, thus nurturing their baby more successfully throughout the pregnancy. Such m-learning tools are essential for disadvantaged people and can definitely bring about social change with regard to gender, health, economics, etc. If we can develop more such games that aim to bring about social change, the world could be much better.



Initiative for Applying WE boss – a Template

This template is designed for implementing experimental practice with the WE boss application in existing entrepreneurship training programs.

The following questions will aid program designers to determine their target partners and mechanisms and propose an evaluation plan before using these kind of tools. Our goal is to encourage both public and private sectors to set in the trend of using the WE boss app in their networks and existing projects.

1. Background

WE boss has a basic framework and then offers options to modify the portal page and home page withy permission, and the subject of the games is conditionally provided by a free source. WE boss offers the following four sections:

- **Simulation Game** – Players select a favorite stylized character with its own theme music and then start her journey as an entrepreneur.
- **Mindset & Quiz** - The entrepreneurial assessment will determine whether players are ready to have their own enterprise. In this part, the players take a quick quiz with random incidents to evaluate how knowledgeable they are about business.
- **Balance Sheet** – After taking all the quizzes, the players learn about the status of their own company and find out how much money they've earned.
- **Cheer Up** – Players can find inspirational phrases from renowned female leaders and entrepreneurs for encouragement to achieve their start-up dreams!



2. Who?

Existing training program/platform/partner that is expected to implement WE boss.

Platform title: E-college for SME Learning

The E-college for SME Learning is an online learning platform sponsored by the Small and Medium Enterprise Administration. This online learning platform aims to empower individuals and provides consulting services regarding selected topics. It is free of charge for both the public and individuals and/or organizations of small and medium enterprises once they become registered members. More than 580,000 people attend the E-college for SME Learning, which has been visited 20,430,000 times so far.

This platform has more than 500 free business learning courses designed for business starters that are mainly between the ages of 25 and 50 years old and have little or no previous knowledge of the conceptual framework for running micro & small businesses. However, others may have some exposure to it through experience. The course topics include how to establish a brand, hire a solid team, raise capital, create market buzz, attract new customers, and use business tools and various videos and e-books/e-magazines. Course levels are determined based on the topics studied in the curriculum. Quizzes are given after each video lecture to immediately evaluate students' learnings.

Since the length of each video lecture varies, the user acquires different numbers of points for reading an e-book, watching a video, etc. Members registered in the E-college for SME Learning can gain points by participating and demonstrating a step-by-step learning path. In the future, when a user applies for a start-up grant from the government, the points that the user acquired in the platform can be used to support her qualifications.



3. Why and How?

Please provide a work plan to describe how WE boss will benefit platform users and/or how it will create a more women-friendly e-learning environment for users.

The E-college for SME Learning offers various enterprise and business courses through an online learning platform. However, the majority of courses are still provided through video, and watching videos of teachers giving classes with traditional teaching methods may be boring for some users.

The users may also have problems choosing courses. For example, more than 100 video lectures have the same topic, and members probably do not know which one to choose. Furthermore, the videos are not arranged in order based on the lectures' level of difficulty. By combining WE boss and the platform's resources, WE boss can provide different levels of learning, recommend the most appropriate courses, enhance learning interest, and build self-confidence.

WE boss aims to provide users with the attitudes and knowledge to act in an entrepreneurial way. Such knowledge includes the ability to identify available opportunities for personal and economic activities, such as understanding how to start a business, as well as its opportunities and risks. Continuous and easily accessible training can provide women with an innovative, friendly, and time-saving learning method and achieve at least four of its basic goals: building self-confidence, providing flexible learning, reducing costs, and achieving a better work-life balance. Furthermore, WE boss can be used as a marketing tool that fills the user's entire day with opportunities to connect, engage, and share information about the E-college for SME Learning.

The E-college for SME Learning resources are organized into the following categories:

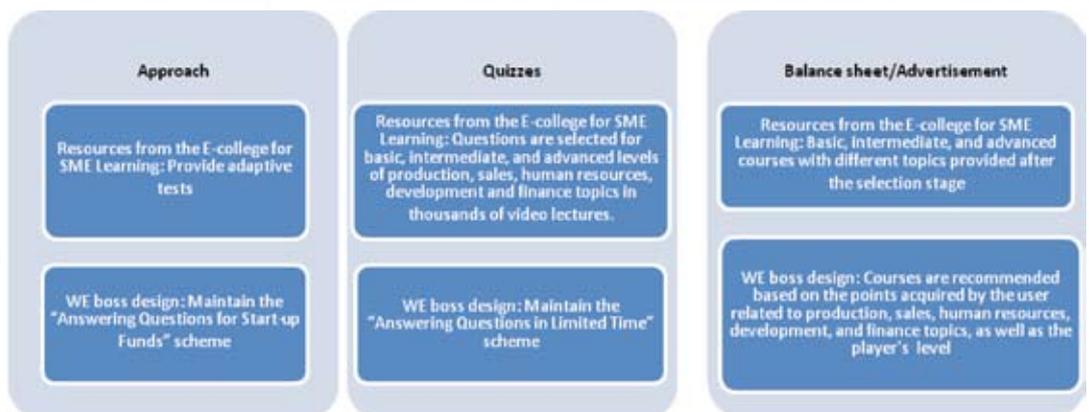
- 1). Personal characteristic assessment: Gives users an idea of their strengths and weaknesses with regard to starting a business (these responses will not affect the business's success).
- 2). Question bank: Questions are arranged by subject matter. Users at a higher level can have a better understanding of the overall business model.



3).Tips and stories: Examples of certain problems that arise in running a business.

4).Links to various information channels: Including technical support and training materials through videos, e-books/e-magazines, advertisements, platforms, etc. to enhance the app's impacts.

Combined WE boss framework:



4.What?

Please describe the expected outcome after integrating WE boss into the platform, as well as resources and/or institutional support that would be needed to create synergy and replicate it in other training programs.

WE boss can be appropriate for existing courses of the E-college for SME Learning. It can provide services combined with educational information based on conducting assessments that determine the most suitable courses and modules for the users.

Some key roles in promoting WE boss combined with the E-college for SME Learning are:

- 1).The organizer: The e-learning program planned and designed by the Small and Medium Enterprise Administration.
- 2).Project implementation unit: An NGO responsible for advisory services and providing guidance and advice on various small business matters.
- 3).Technical assurance group: Local computer associations that provide continuous platform maintenance and support.



5.Feedback?

Please describe the difficulties and benefits faced in designing the framework and promoting WE boss in your economy.

- The benefit of WE boss is making the learning and assessment of the E-college for SME Learning more interesting while offering users help to find courses that best suit their levels and weaknesses. Users can take advantage in just a short time by switching learning patterns and can enhance their interest in learning when bored of video lectures. WE boss also gives users a list of courses from which they may benefit, thus enhancing their time efficiency.
- The E-college for SME Learning is a well-established system so negotiating and considering how to combine the advantages of both systems takes time. Furthermore, selecting questions suitable for the WE boss quizzes from the extensive contents of each course is challenging.

WE boss combined with the E-college for SME Learning could be promoted by:

- 1).Users who can share it with friends, family, and associates across popular social networks.
- 2).Establishing a forum for potential users in order to retain customer base and gain popularity through consistent and stable customer support.
- 3).Through blogs that target mobile apps or business startup communities.





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Editor : Li-Hsuan Lee

Administrative office : Foundation for Women's Rights
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Helen.lee@wrp.org.tw

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