

THE INNOVATION OF NEW BUSINESS GAME DEVELOPMENT FOR BUSINESS PROSPERITY, STABILITY AND SUSTAINABILITY

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ABSTRACT

The use of business game in university is not only in the West but also in the East. They are using business games to enhance business decision making skills. However, they currently use business game developed from the west with having different business environment. In the development of business games to be applicable and accomplished the learning goals for Asian business sustainability, it is necessary to understand the needs of Asian learners and the stakeholders. The innovative model of co-development of business games for prosperity, stability and sustainability is proposed then tested by 430 samples in a well-known business school of Thailand. The results guide comprehensive features that could satisfy and be beneficial to Thai learners suitably. The samples suggested that the business game should be simple or user-friendly and easy-to-play. Furthermore, the results of this research can be used as a guide for developing business games for other universities in Asia. The strategic factors for successful in the business game development are the users and stakeholders participation in “Stakeholder Co-creation”, especially in the new game concept generation,” Stakeholder Co-innovation”, which covers the development of new features mix and users testing, and “Stakeholder Co-marketing” including new product launches and marketing.

Keywords: 1) Business Game Development 2) Stakeholder Co-Creation 3) Co-Innovation 4) Sustainability 5) Thailand

1. Introduction

Currently, entrepreneurs and business executives need to make careful and quick decisions, since business environments change immensely and rapidly. The people who wish to run a successful and sustainable business must have a good information and well understanding of the business situation as well as be able to analyze and make decisions correctly, appropriately and quickly especially in the digital economy, also in the near future, that the Thai economy and society will step in Real-Time Economy (Yodprasit, 2017). Therefore, knowledge of modern business management and adaptive skills in the use of technology plays a suggestively fundamental role for entrepreneurs and business executives to effectively manage for their business goals. Also institutions and organizations that involved in enhancing current business management skills need to adapt their methods to fit the changing environmental contexts.

Although, the Graduate School of Commerce (GSC), Burapha University, Thailand which has been teaching business management for more than 23 years, has continuously

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improved the curriculum every 5 years, there is also some improvement of the teaching method for transferring modern business management knowledge by using both domestic and international business case studies for analyzing, in order to educate the graduate students to understand more on the critical situations of real business circumstance. The Executive MBA program of GSC also utilizes the application of business games to practice students to make the right decisions in a variety of conditions (The Graduate School of Commerce, 2017). However, the current economic situations in Thailand and abroad have changed due to the impact of the application of technology to increase the efficiency of economic activities. Also, the innovation and technology have some impacts on social and political activities, or even environmental management. However business games that have developed in the past may have some limited of the features and capabilities to enrich or train the learners through the business games, and it could not encompass the changing business, economic and environment conditions. Although some business game developed by Thai people has been used in Thailand over the past ten years, the business game did not cover the sustainability issues. Moreover, the GSC has used the business game developed from other educational institutions by paying the fee every semester or every time we utilized the game, which is quite costly. Therefore, the GSC needs to develop its own business game to use for teaching in the MBA class and to apply for enhancing management and leadership skills with integrity of business executives in the GSC training course, with the purpose of strengthening them to be able to manage the business successfully gains prosperity, stability and sustainability (The GSC Board meeting report No. 8, 2017). Thus, the GSC has to develop the modern business games, covering current business environment in the digital economy and serving the needs of learners.

However, in the development of business games to be applicable and accomplished the GSC goals, it is necessary to study the current situation of using business games for developing business management skills of those who learn through the past and present business games. Also, to be updated in line with the future business situation in the real-time economy, we also need to study the needs of learners and also stakeholders in order to get their involved in the development of business games to have a comprehensive feature that could satisfy and be beneficial to the learners completely. Therefore, the research team conducted research to create a business games that could support and create prosperity, stability and sustainability of the learners' business. Furthermore, the results of this research can be used as a guide for developing business games by having both customers and stakeholders' participation in the developing process which is a very useful and effective one. The GSC business game which is developed from the research project can benefit the GSC students and other agencies or educational institutions that bring GSC games to use for accomplishment their learning goals.

The research objectives are as follows.

1. To analyze the situation of using business games for developing the business management skills of learners through business games.
2. To study needs of learners and stakeholders in the use of business games for developing business management capabilities.
3. To develop the business games model of the GSC that could support and create prosperity, stability and sustainability of the learners' business.

2. Literature review

The situations of using business games for developing the business management skills

Business games or business simulation game has been used in many countries around the world for training business executives in a variety of forms, both board games and online games using the computer or mobile. Business simulation game have been used in education institutions in both the undergraduate and graduate level, especially for teaching in the master of business administration (M.B.A.) in famous universities of the United States such as Harvard University, UCLA and Carnegie Mellon University (Cohen et al., 1960). The main reason why the use of business games widely in educational institutions of the US, is the research of Harvard University found that the application of business games in teaching business management more effectiveness than using only the case studies (McKenney, 1962). Currently, there are educational institutions around the world have utilized business games or business simulation game for teaching in the master of business administration for executives (Executive M.B.A.) even in the United Kingdom, business games have been used in the Salford Business School, Salford University, and Management school of the University of Lancaster has been utilized its own business simulation games. Massachusetts Institute of Technology (MIT) have developed business simulation game called "Platform Wars" that lets people learn through this game by being the role of business executives in the gaming industry. While at Wharton School of The University of Pennsylvania the has developed a business simulation game (role-play simulations game: RPG), not an online game called "the Game Start Up" to encourage students in M.B.A. to practice in various roles ranging from the founders, investors, and employees to practice their decision making and negotiation and effective communication in business scenarios (Graham, 2014).

In Thailand, the prestige university had utilized its own business simulation game since 2005 to encourage high school students to join in the national business simulation game competitions of students that were interested in becoming an entrepreneur and intended to prepare themselves before entering in a Bachelor's degree of business administration (Manager online, 2005).

However, many universities in Thailand have utilized business simulation games from abroad both board games and business simulation games, a computer system online especially the business simulation game developed by the United States called "The Business Strategy Game (BSG)". The BSG-Online has been used in the competition of international business that produces athletic shoes in the shoe industry (Footwear Industry) to distribute to various continents worldwide. Currently, there are several universities in Thailand have adopted The BSG-Online in MBA courses such as strategic management, since the company markets this business simulation games by holding global competition every year in order to stimulate the application of this game extensively around the world. Thus, there have been many universities in Thailand jointed the world competitions and some university can win the world class award (UTCC News, 2015).

There is also a company who has served the game "MonsoonSim" in Thailand to various universities in the country by promoting with over 20 universities through holding a national competition annually to use this game for teaching and learning in MBA. Furthermore, there is also competition in the regional ASEAN too. Thailand currently has universities both public and private, have applied "MonsoonSim" in their teaching courses such as Kasetsart University, King Mongkut's University of Technology North Bangkok, Prachinburi Campus, and University Rangsit (MonsoonSim Thailand, 2017).

However, only few universities in Thailand have developed their own business simulation game to use for teaching and training their students. For example, Chulalongkorn University, who has developed a business simulation game, and promoted the game to various educational institutions in Thailand by holding national competitions between undergraduate students of various institutions of more than 3,000 people. This business simulation game called "One.sim", an online game in the restaurant business, had been developed since 2005 (Manager online, 2005). However, the business environment changed dramatically, business games must be modern business simulation, virtual reality scenarios that are currently, especially in the era of innovation and technology. Therefore, the educational institutions of Thailand in the era of Thailand 4.0 should give priority to develop a business simulation game for use in business management and career development in the public and private organizations. According to process of new product development (NPD), university that aims to develop its own business games is needed to review and understand NPD clearly, especially GSC who wish to develop a notable business game that reflects the philosophy of business management for prosperity, stability and sustainability, and meets modern digital economy and economy with real-time possibility in the near future as well.

New Product Development (NPD) and the business games development process

There is a wide variety of processes of new product development, depending on the concept or strategy for the development and the characteristics of the product development. However, the new product development process that has been used for more than 20 years, is 1) to seek opportunities, or a new concept in new product development called "Opportunity Identification" 2) "concept development" 3) design new product called "Product design", 4) the design process to produce the new product called "Design Process" 5) production new products for sale called "Commercial Production". This new product development process can continue to be effective if carried out in parallel, each step or made simultaneously in some steps, such as in the process of concept development, product and process design and manufacturing stages (Schilling and Hill, 1998).

However, a step in the process of developing new products, is so important particularly, details of the marketing and presentation of new products into the market. Thus, the current NPD focus on the 6-step as follows: 1) Idea Discovery and Idea Screening, 2) Establish product concept and test, 3) Profitability analysis, 4) Mix Development of Product and Marketing, 5) Market Test, 6) Product Launch or Commercialization. This new product development process, which has been revised, in a first step, and the emphasis on the process of marketing for success in new product acceptance in the marketplace. (Kim, et al., 2016)

Currently, businesses that are developing new products start to give priority to listening to the information from customers, especially for consumer products with technological innovation. However, using only the basic information from clients may not be enough to make the company succeed for innovative products to the market. Empirical results from Taiwan shown that the response of the company's operating to general requirement of customers in a new product development isn't very good, however if the customer is given an opportunity to participate as a joint product development (Co-developer) in the greater reforms could successfully bring innovative products to be accepted in the marketplace (Lin et al., 2013).

Although, customers have the opportunity to participate in the early state of NPD (Customer Co-Creation), it is essential to aware of communications both contents and patterns of communication. The research in Europe found that both product manufacturers and service providers should give priority to communicate with clients during the NPD process to improve product quality. Also, companies must stressed that the content of

communications, the frequency and direction of communication with their customers is significant since these communication factors affect the success in new product development. However, to develop innovative new products, the frequency of communication with the customer, is the significant success factor of innovative products launching into the market (Gustafsson, et al., 2012.). Thus, the GSC researchers should consider that good communication, both in the frequency, content and direction of communication with students and users of business games is one of the significant factors of the business games development.

Although, current research found that during NPD process is always faced challenges, period of new product development strategy will be faster if the business or organization having policy of decentralized (Kiss and Barr, 2017). One example in Thailand, the Board of management the GSC, Burapha University, encouraged the faculty to conduct research to develop new business games, thus a new product development can be made more quickly.

A well designed research should consider providing students and those who have the opportunity to use business games of the GSC to participate in the development of products (Customer Co-Creation) rather than as just a provider of information to develop business games only to achieve acceptable among them. Particularly in product design stage, the concept of business simulation games, because from research in Europe found that in the process of developing a new product, it should give priority to the customers to participate aggressively in the conceptual design of new products called “Idea Generation” by listening their ideas and knowledge in the process of developing the concept, or even in the process of testing a new product concept (Witell, et al., 2011.)

Furthermore, in the new product development process should provide opportunities for faculty who is a guidance and supervision of the student learning performance after learning through games to participate in the NPD of business simulation games. Also the GSC’s representative who providing the financial support should have the opportunity to participate in the NPD in order to create the unique business games, in accordance with the vision of the GSC and the country too.

Other stakeholders such as the business executives, entrepreneurs, and game developers should have opportunity to participate in the development of business games, this is consistent with some findings in European that the manufacturer has received a variety of ideas, knowledge and perspective from stakeholders however the company must have a carefully selected group of stakeholders with the related knowledge (Kazadi, et al., 2016).

The Success Factors in NPD

For factors that affect success in developing new products, there is a lot of research in foreign countries, especially the developed countries, found that the factors that influence success are as follows: the strategy for new product development, the vision and the commitment to new product development of the executives and resources in an organization that supports the development of new products, corporate culture that promotes the new product development (Ernst, 2002). However, previous research in the western regions, found the success factors of new product development, some research of NPD in the Asian region, found that if it is an innovative technology product, the monitoring and evaluation of the NPD process that any procedure causing a failure during the process and the fixes will help increase efficiency in the development of new products and reduce the time to develop a new product with them (Kim, et al., 2016). Some research of the neighboring countries in the ASEAN region found the factors that promote successful development of new products of banks in Malaysia are as follows: enterprise image of the reputation or the strength of an organization’s brand, characteristics of product innovations that are developed as well as new features and quality of the new products (Fong et al., 2014).

The innovative model of co-development of business games for prosperity, stability and sustainability

The literature review reflects that in the development of business games of the GSC, Burapha University need to consider new product development (NPD) concept. However, the most important factor for successful in the development currently is the customers and stakeholders participation in Stakeholder Co-creation, especially in the new product concept generation (Idea Discovery & Idea Screening) . However, to innovate effectively the business game, the GSC research team needs to select a group of stakeholders who are willing to participate in the development of business games and also having both of knowledge and experience in playing some business game. Therefore, the conceptual framework of the innovation in the development of business games for prosperity, stability and sustainability is shown in Figure 1 starting with the first important step that strengthen the development of business games called “ Stakeholder Co-creation” covers from conceptual acquisition and selection of new product ideas as well as the design of new product (Product design). The second step is “Stakeholder Co-innovation”, which covers the development of new product mix and market testing. The last step is “ Stakeholder Co-marketing” includes new product launches and marketing. However, the innovation of new business game development for business prosperity, stability and sustainability is not just one way step but it should be the circle step as shown as follows:

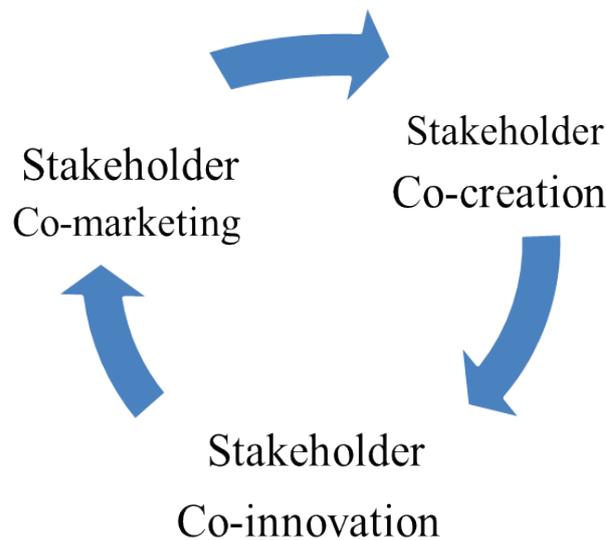


Figure 1: The innovation of new business game development for business prosperity, stability and sustainability proposed by the authors.

3. Research Methodology

Research methods were classified into 4 activities, documentary research, survey research, and the 1st focus group with potential learners through business game and stakeholders to confirm the survey results of significant features of business game, and the 2nd focus group to identify new product mix and market testing of the business game. We started with documentary research by gathering and analyzing information on the situation of using business games to develop business management capabilities both domestically and internationally, also analyzing the features of the business simulation

game, both outstanding business features and some features that need to be improved. Then, we collected data through questionnaire developed from the significant features shown in documentary research. The survey samples of 430 stakeholders are classified into 7 groups. 1) GSC students who have experience with business game 2) the potential students of GSC 3) GSC faculty members 4) GSC administrators 5) group of business executives and entrepreneurs 6) Representatives of public and private agencies involved in the development of business management skills 7) business game developers. We also conducted the 1st focus group to confirm the needs of 4 learners and 4 stakeholders in the use of business games for the development of business management capabilities and the 2nd focus group with the learners and the stakeholders to clarify new business game features mix and to identify market strategy of the business game.

4. Results

The documentary research finding on the situation of using business games to develop business management capabilities shown and discussed earlier in the literature review section, for the results of analyzing the outstanding business game features found that the business game should be simple or user-friendly and easy-to-play also should be fun to play with a distinctive, beautiful, virtual, three-dimensional appearance, as well as this simulation game should be both board game for social interaction among the players and online game that can play anywhere and anytime. For the significant features that needed to be improved, we found that business games should create awareness of social responsibilities and create good moral in the competition. The survey findings of 430 samples and the 1st focus group with 4 potential learners through business game and 4 stakeholders were consistency found that significant features of business game should be as follows: simple or user-friendly, easy-to-play, distinctive, beautiful, virtual, three-dimensional, stimulating or motivating nature to learn business, virtual look at how to practice business decision making with responsibility on both an online business simulation game and board game. The distinguish findings from the first focus group revealed that in order to practice the learners through business game to gain business management skills with prosperity, stability and sustainability spirit the business game should identify firstly the concept and theme that creating sustainable competitiveness in the digital economy by using innovative knowledge and technology to run a business and especially should apply the sufficiency economy philosophy in conducting business.

Although the survey results identified the industry that an innovative business game for prosperity should be in the industry as follows: 1) Wellness Tourism, 2) Digital industry, and 3) Next – Generation Automotive consecutively, the samples of the first focus group suggested GSC to develop the first business game in the Next – Generation Automotive industry since this industry can illustrate the holistic views of business practices from downstream to upstream and also both manufacturing and service marketing. Furthermore, the findings from both quantitative and qualitative research shown that business simulation game should focus on human resources and intellectual property issues for security of the business. Also business game should promote corporate governance in business administration and should motivate entrepreneurs to create business sustainability by applying the philosophy of sufficiency economy.

The 2nd focus group with the learners and the stakeholders shown that new business game features mix should promote the game players to practice on business management in a virtual situation at anywhere and anytime and to practice on applying the philosophy of sufficiency economy in conducting business. Results of this focus group also suggested that the marketing strategy for keeping relationship with game players, the GSC business

game should have a system for memorizing information of the players for their convenience when they login again in the future and it should have a reward system for promoting the improvement of the game players, as well as should have a system for receiving regular business users' feedback and suggestions, then using them to improve the features of new version of GSC's business game in the future. The samples of the qualitative research also recommended that GSC's business game should have an automated system that provides advice for the players at any time and they can always consult with the business game experts all the times.

Finally, the integrative results of both quantitative and qualitative research suggested the new business games model that could support and create prosperity, stability and sustainability for business of the learners through GSC business simulation game.

5. Conclusion

The strategic factors of successfully in the innovative NPD process for the business game are not only the participation of potential game players but also its stakeholders in the circular process of "Stakeholder Co-creation", especially in the new business game concept generation, and "Stakeholder Co-innovation", which covers the development of new features mix and game player's evaluation of the proposed game features, as well as "Stakeholder Co-marketing" including new product launches and marketing strategy. The research significantly suggested that the new business game features should be identified from the needs of potential game players and the requirements of the stakeholders such as business school policy, business professors who supervise the course that applied the business game, as well as from the ability of game developers. The concepts of business game also should aim to implant the game players with business management skills to run business for gaining prosperity, stability and sustainability in the aging society and in the digital economy, thus human resources and intellectual property issues for security of the business is significant theme for the new business game to be considered when designing the game. However, one the most import objective for developing the new business game for sustainability is to create awareness of social responsibilities and create good moral in the competition for the business game players. Therefore, the new business game concepts, theme and features should also focus on embedding the philosophy of sufficiency economy in running business. Although, the marketing strategy for launching the new business game is important for promoting the acceptance among the new business game players, this research suggested that the post marketing strategy for creating stakeholders relationship management is more significant than the pre marketing strategy. However, we would recommend developing both marketing strategies to successfully sustain the use of the new business game in the markets.

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