The Effects of Disruptive Technology on Higher Education

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ABSTRACT

Many emerging effects of disruptive technology on higher education have been observed in the modern world with highly suspicious eyes. Disruptive technology means any enhanced or new technology can replaced and disrupts an existing technology in higher education. Many examples of the obvious disruptive technology in classroom such as smart phone, social networking, online learning, class block, podcasting, artificial intelligence, and etc. In other words, there is a new way of learning with the use of new technology that initially does not exist or meet the expectation of students and teachers. The main objectives of this study were to identify the emerging impacts of disruptive technology on higher education institution in Thailand as well as suggest ways to adapt to the situation of disruptive technology in higher education. By using a group of academic and experts to be in a focus group, a method of quantitative research techniques were utilized to a more understanding of effects of disruptive technology in today world and in the near future. A total of 30 sample group were selected from a variety of higher education organizations and policy maker in higher education field. The findings of this study revealed five important things. First, many academicians were still confused between disruptive technology and sustaining technology and its effects. Second, it is clear that there is an urgent need to train both students and teachers about the effects of disruptive technology. Third, it is vital to set up a plan to capitalize the benefits of new technology. Fourth, it is imperative to design curriculum to fit with disruptive technology. Finally, it is important to welcome the new technology with positive attitudes.

Keywords: Disruptive Technology, Higher Education, Emerging Effects
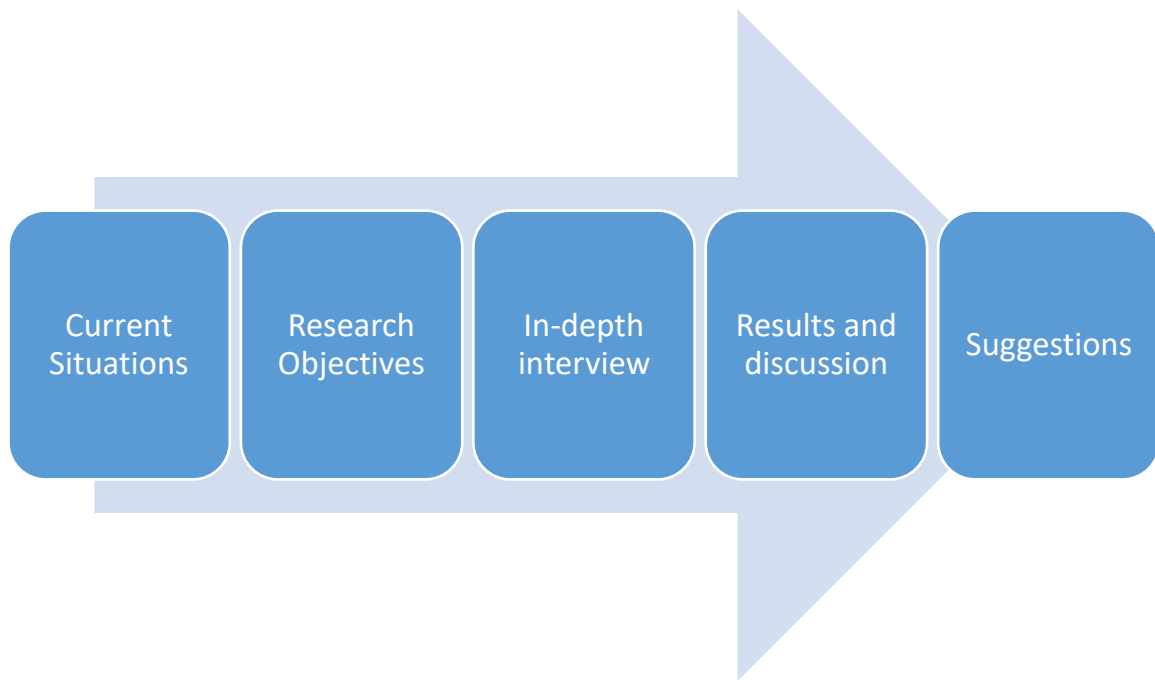
Introduction

In business and many industries including higher education, it is belief that there are high impacts of the phenomenal of disruptive innovation. What exactly is disruptive innovation? It is an innovation that can shake up the industry or a ground breaking products or services that may create a completely new market and new industry or it can creates a new market, or blue ocean as opposed to red ocean, and value network and it is belief that eventually disrupts an existing market and value network. However, there are many cases of sustaining technology and technology development that have been improved during the period of time and then suddenly it comes up with new technology that can change the industry and consumer preference. For instance, the development of the smart phone that slowly improvement and then at one point of time, smart phone change everything. There are no market for the old fashion phone any more. Hence, it is important to separate the definition of disruptive innovation more clearly. Disruptive innovation refers to a technology whose application significantly changes the market and industry from the old one to the new one completely. More importantly, it negatively affects the companies or organizations that were unwilling to change or slowly to adapt to the new ways of market and industry. They will lose all market share and being obsolete.

Nowadays, all higher education are faced with the need to find better ways to cope with disruptive innovation in learning and teaching environment. The concept of disruptive innovation has become popular and mainstream for not only higher education industry but most of industries that involved with technology. However, to date there are no models have been developed that can reliable predict any successful method to handle a potential disruptive innovation. However, it firmly belief that an organization that follow a disruptive innovation strategy have a much greater chance of dramatically improving and enhancing their market position and be able to dominate the market with commercial success. This is because disruptive innovation strategy allows an organization to trajectory within an industry and offers vastly superior solutions to needs and wants of market that may be not adequately met by existing organizations.

In fact, there were many disruptive innovations in the past such as from black and white television to many different stages of innovation to modern flat big screen, as well as a great number of many products, services, and activities. However, nowadays artificial intelligence is one the leading examples that create the most disruptive technologies in the world and in variety of industries. Netflix is also one the best examples in the movies and home entertainment business that have high impacts to the modern customers. It actually changes consumer behavior and change the market, as well as change the way to compete for customers. There are actually many other examples such as medical innovation, robotics, high speed travel, and etc. In higher education, the innovative learning method from online learning, self-learning from internet and online, learning and retrieving information from artificial intelligence, and many other related forms of new method of learning which may not have to be a traditional classroom learning in the campus.

Research Methodology

In order to obtain the findings from the investigation, there are five important and necessary steps of conducting this research: first is to define research problems and current situations, second is to propose research objectives, third is to utilize an in-depth interview with specific focus group or the use of the qualitative method, fourth is to obtain results and conduct important discussion, and finally offer valuable suggestions. Since we are living and working on the disruptive innovation era, it is imperative to learn to live and adjust our ways of life and working with the constant changing of new technology that initially does not exist or meet the expectation of students and teachers. Main objectives of this study were to identify the emerging impacts of disruptive technology on higher education institution in Thailand as well as to provide valuable suggestion from the focus group regarding ways to adapt to the situation of disruptive technology in higher education institutions. By employing a focus group of a randomly selected academic and experts in various departments, a method of quantitative research techniques were utilized to gain more understanding of effects of disruptive technology in today world and in the near future. A total of 30 sample group randomly selected from a variety of higher education organizations and policy maker in higher education field who had a higher position with long experience in education world to ensure the quality of focus group and its findings.

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Current
Situations → Research
Objectives → In-depth
interview → Results and
discussion → Suggestions
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Findings

By utilizing the method of in-depth interview with the selective focus group, the findings of this study revealed five important things. First, many academicians were still confused between disruptive technology and sustaining technology and its effects. Certainly, there are confusion that surrounds the concepts and the difficulty policy maker encounter. The model is unclear and not be able to define in many aspects in the field of higher education. Second, it is clear that there is an urgent need to train both students and teachers about the effects of disruptive technology. Since there is not sufficient knowledge about the causes and effects of disruptive technology, there are no solutions and suggestions from those who are directly involved in the situations.Third, it is vital to set up a plan to capitalize the benefits of new technology. The strategic plan is in urgent need from the top level of management who may be not synthesized the momentum of the situation. Therefore, there is a need for high level of management and policy maker to discuss and come up with the temporarily solutions. Fourth, it is imperative to design curriculum to fit with disruptive technology. Many online courses can be upgraded with modern technology and new updated application to ensure the continuous of the use of new technology. Finally, it is important to welcome the new technology with positive attitudes. Any resistance for change and any negative connotation and environment will be harmful to the promotion of adopting new innovative technology to mingle with higher education process.

Suggestions

The suggestions from this study to enhance the success of the strategy for disruptive innovation in higher education institutions. First, it is to promote a positive attitude to welcome any change from innovation technology in office, in class, and all over campus. It is imperative that the top management support the implement of new technology, new application, new system, and new ways of learning and teaching. The instructors need to be calm and realize that change is good for their career and future and they need to build positive rapport and accept new technology with group power and positive environment. Second, it is important to clear the misunderstanding of the concepts and model by providing regular and extra training sessions from top management and policy makers as well as to faculty members and staff to ensure that their understanding will help to accept the inevitable change. Third, it is important to have strategic plan tailors for the specific situation of Suan Sunandha Rajabhat University. Finally, top managers and supervisors should take effective ways to handle the difficult situation from difficult strategic innovative plan. It is vital to identify problem and solution together with consensus of faculty members and staff. The situation of disruptive innovation may continue and it is important to have to monitor and survey for direct feedback and discussion.

Acknowledgement

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