Design Innovation Practice School: The Experiential Learning Platform

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Abstract
This article describes the ongoing study of designing and developing the undergraduate program in Design Innovation of King Mongkut's University of Technology Thonburi. The design-based research methodology has been applied to investigate the attempt in curricular transformation in addition to routinized curriculum revision practices. The concerns related to career readiness of graduates or competency gap are widely addressed from employers' perspectives in various business sectors with their expectations toward academia. Meanwhile, several national higher-education policies are likely to react to this qualitative dilemma as for instance by introducing the outcome-based education rationale into action. Correspondingly, Design Innovation Program has aimed for transforming not only theoretical aspect but also to the new paradigm of the curricular ecosystem, then carried out design-based research with a series of approaches including stakeholder's feedback collection for program analysis, pedagogical prototype testing, and formative evaluation to design curriculum structure including program learning outcomes, teaching and learning approach, student assessment. In conjunction with professional and academic partners internationally, work-integrated learning with cross-cultural learning could play major roles to create efficient learning experiences. As a result, the program has launched Design Innovation Practice School, the experiential learning platform, in which partner's workplace shall be arranged more academic than typical internship or apprenticeship approach to bridge the gaps of industry's demands, and to challenge the status quo in higher education administration. However, the academia-industry consortium model is to be created to sustain long-term relationships with mutual benefits.

Keywords: Design Innovation, Experiential Learning, Practice School, Work-Integrated Learning

Introduction

Industrial Design Program (IDP) was established in 1999 during the period of recovery after the outbreak of the crisis in Thailand especially in the industrial production and manufacturing sectors. The program emphasized developing students' competencies more toward designing products with the human-centric design philosophy. Afterward, the evolution of UI/UX design has become the driving factor that brought curriculum into the era of digital transformation with the trend of the design industry which significantly diversified to the digital platform and service design. Until 2020, IDP's journey had arrived at its crucial turning point for the transformation to be "Design Innovation Practice School: The Experiential Learning Platform"

Methodology

The design-based research methodology (Amiel & Reeves, 2008) has been applied in addition to the routinized curriculum revision practices due to nowadays disruptive moments realized by the program revision task force. The program's minor change may not be able to serve the business sectors and social needs or even the upcoming generation of learners. The task force decided to align the design-based research by combining the backward curriculum design process (Wiggins & McTighe, 2006) with the program's experiment to develop its key teaching and learning strategy by academic-industry collaboration as a series of approaches to allow for the flexibility along with the curriculum development (Barab & Squire, 2004). The backward curriculum design is part of the outcome-based education's approach which is primarily concerned with students' culminating capabilities at graduation time and centers curriculum and assessment design around higher-order exit outcomes (Spady & Marshall, 1991). Starting with the program's self-review, the stakeholders' needs and feedbacks towards the current curriculum or graduates are acquired as the inputs for designing the program learning outcomes. Several forms of research included the satisfaction surveys to students and graduates, the focus-group interviewing workshops to academic staff, alumni, employers, and program's design business partners, and the academic & professional experts' suggestions. Correspondingly, the program development task force brainstormed for the new program and course structures likewise the program learning outcomes, the assessment approaches, and the teaching and learning strategies.

To elaborate on the program's self-assessment, the key teaching and learning strategy had been continuously developed from an internship, the intended-learning opportunities as the students' outreach activities, to more collaborative partnerships with the design industry and business sectors. The opportunity became the strength of the program to let students involve with real-condition design projects since the basic knowledge and skills were instilled in the foundation years. In other words, the program attempted to prototype the work-integrated learning in association with the design academic and industry partners throughout the semester by integrating several courses into workplaces. Nevertheless, the supervision of academic staff was arranged and coordinated with workplace supervisors, and recently, the experiential learning model (Kolb and Kolb, 2017) has been set as the new paradigm for the program to prepare the graduates' readiness in design innovation businesses.

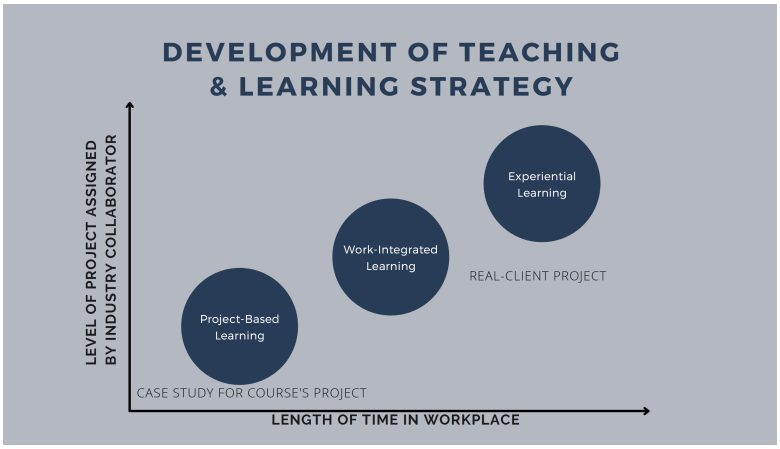

Figure 1: Development of Teaching and Learning Strategies from Industrial Design to Design Innovation Program

Results

The program has launched Design Innovation Practice School, the experiential learning platform, in which partner's workplace shall be arranged more academic than typical internship or apprenticeship approach to bridge the gaps of industry's demands. The learning process whereby knowledge is created through the transformation of experience (Kolb and Kolb, 2017) has been planned to be mainly in industry partner workplaces with assigned full-time academic staff supervision to achieve the key program learning outcome – professionalism. Meanwhile, the knowledge and skills of the curriculum are evolved from the single discipline in design and are currently characterized to be more multidisciplinary comprised of art & design, business & entrepreneurship, technology & innovation with a core philosophy in human-centric design in order to let students develop their design entrepreneurial mindset. And for another key program learning outcome – global citizen mindset, the program strategically aims to manage international collaboration with academic networks internationally for multicultural outlook enhancement. The learning assessment approaches also need to be aligned with different learning scenarios. The academic staff's supervision as site director will be responsible for peer assessment with partner supervisor while co-facilitating student learning with professional context and environment. The learning modules could potentially be designed and built in either online or physical platforms to serve more learners' diversity with their particular assessment criteria for each module learning outcome. And to assess students' global citizen mindset within the international activities and workshops, the program expectation is to be aware of and understand the wider world in similarity or difference of cultural contexts through hands-on experience.

The concept of the experiential learning platform was derived by consolidating the program's strengths and key findings from stakeholders' feedbacks. In clarification, networking with industries and design business has been one of the significant resources for the program to continuously improve the project-based learning approach which is quite similar in general design study programs, then considerably evolve into the best practice regarding the opportunities provided for students to be parts of the real business contexts in research and design. Some design projects have been commercialized in domestic and some even in international markets. In addition, another kind of learning opportunity with high satisfaction from students is the international inbound-outbound seminar and workshop. The intensive week is always co-organized with the academic institution abroad several times a year.

Students and academic staff among these collaborative activities can learn and share their cross-cultural experiences together with also the chance to experience worldwide. The benefits of the international activities are not only the fruitful learning in cultural diversity and communication, but also the soft skills including the higher-order thinking skills with leadership and teamwork in which the graduates' characteristics are enhanced.

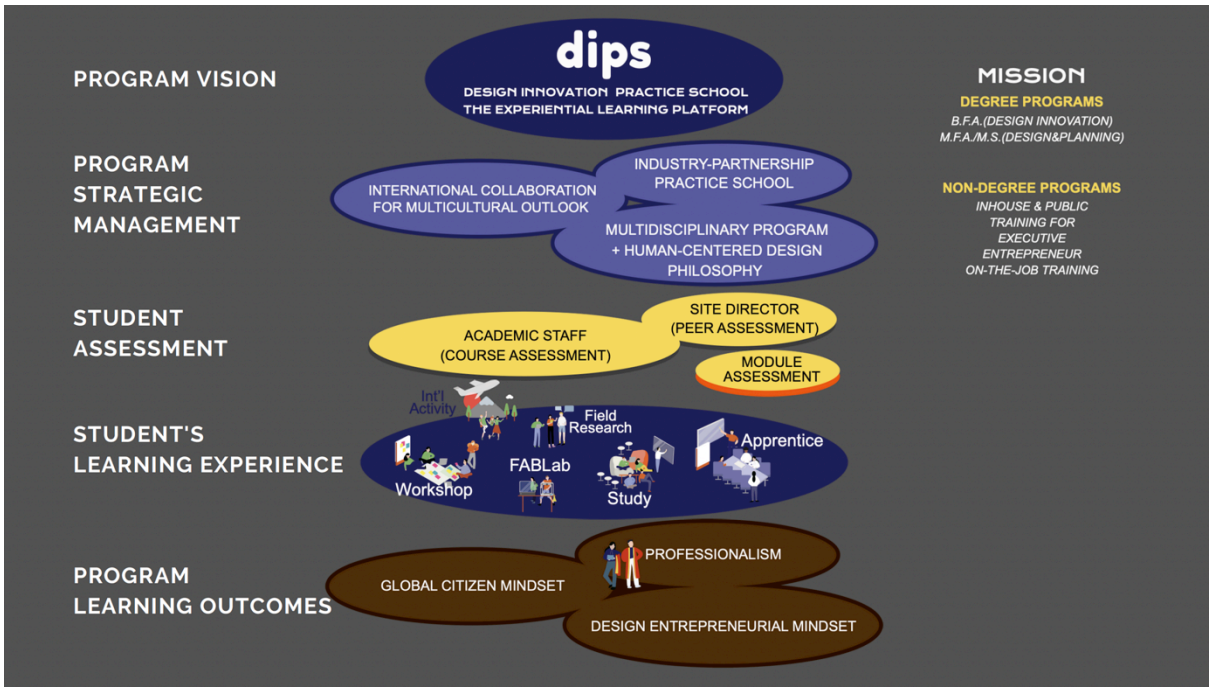

Figure 2: The framework of Design Innovation Practice School – The Experiential Learning Platform.

Conclusion

The integration of the program's missions among education, research, and academic service seems to be the direction that will lead the program to success, but in fact, the implications with several factors are still required to be administrated by not only within the program's level. Further research is expected to focus on two main areas. First, the students' assessment methods should be adopted and be congruent with the expected learning outcomes. The practicality in assessing learners' competencies within the different learning environments is needed to be scrutinized and designed. And as importantly, the clarification in the academia-industry relationship models should be carefully figured out to find their mutual benefits along with this collaborative platform. Several issues are still waiting to be fulfilled such problem of why the business sectors need to contribute their resources for the student's learning, and/or how the program could manage the learning activities within the workplace in compliance with its curriculum.

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