Embedded Selforganizing Systems

Face to-Face and Online Learning:

Some Reflections on Learner-Centered Learning

Jaitip Na-Songkhla
Excellence Center of Disruptive Innovation Technology in Education, Faculty of Education
Chulalongkorn University
Bangkok, Thailand
ORCID: 0000-0001-5306-7688

Juvy Lizette M. Gervacio
Faculty of Management and Development Studies
University of the Philippines Open University
Quezon City, Philippines
ORCID: 0000-0001-6074-3496

Abstract—— **This paper aims to present the reflections of the authors on how they design and manage courses for face-to-face and online programs for graduate students. Using the principles of learning-centered design, they revisited how they organized and managed their courses. Designing and managing courses consider various aspects such as: the flexibility of the content of the course; the use of technology; the learner support and environment; and the design of assessments. They concluded that although the approach and strategies between face-to-face and online courses may be different, it is always important to consider the profile of the learners and cater to their needs. Moreover, they also recognize that technology plays an important role in designing learner-centered courses. They recommend that digital skills of educators should be further developed to enable them to design and manage learner-centered courses.**

Keywords— learner-centered learning, face-to-face learning, online learning

I. INTRODUCTION

Recent technological trends have challenged the traditional model of teacher-centered learning into a more innovative approach such as learner-centered learning (LCL). The students are most important in the learning experience and courses are designed to meet their needs and preferences. The end-goal is for learners to have a clearer understanding of the subject matter as well as develop their critical thinking skills. However, it is also important to understand how LCL is manifested in different approaches to learning such as face-to-face and online courses.

Chulalongkorn University (CU) and the University of the Philippines Open University (UPOU) are two prominent higher education institutions in the Southeast Asia region. Although they have a distinct approach to higher education, they are both exemplary institutions that have made significant contributions to higher education in the region. While CU is renowned for its traditional on-campus programs and research excellence [1], UPOU is a leader in open and distance learning, providing accessible education to diverse populations [2]. Both universities share a commitment to lifelong learning, social responsibility, and national development.

Thus, this paper attempts to document personal experiences of the authors who serve as full-time faculty members of these institutions to determine who how they design and manage their courses to ensure that learners gain relevant knowledge as well as apply them based on their own needs.

Their experiences can provide a comparison on the innovative design and strategies that are employed to make face-to-face and online learning more learner-centered.

II. OBJECTIVES

This paper aims to present the reflections of the authors in designing and managing higher education courses delivered face-to-face as well as online. Specifically, the paper aims to:

(1) define the concept and principles of learner centered-learning;

(2) discuss the strategies in designing and delivering LCL courses;

(3) present the approaches/strategies of the authors in designing their face-to-face and online courses; and

(4.) identify lessons and suggestions on face-to-face and online courses to make them more learner centered.

III. METHODOLOGY

This paper is a qualitative study based on the practices of the authors who design the traditional mode of learning and online. It utilized secondary materials by reviewing online articles on the various concepts of learner-centered learning including the principles and practical elements of learning design.

For the primary sources, the authors wrote down their reflections on how they design and manage their respective

courses at the graduate level. One author designs and teaches face-face courses for more than 20 years. In contrast, the other author has experienced designing and delivering courses completely online for almost 20 years.

Their reflections include the review of their existing strategies as well as their syllabus on how their graduate course are designed and managed. They listed them down, compared and contrasted to show similarities and differences in the design strategies.

Learner-centered learning is an educational approach that shifts the focus from the teacher to the student. LCL promotes an environment where students are responsible for their learning making them gain knowledge through experiences and interactions. There are five principles in LCL and they include. (1) balance of power; (2) learning content and resources; (3) the role of the teacher; (4) the responsibility for learning; and (5) assessment [3]. These five principles define the relationship between the teachers and the students and how learning is designed.

Designing and managing LCL for both face-to-face and online education involves not only exploring more flexible approaches but also the use of technology. Technology has a major impact on education and it can be utilized to make relevant reforms in the learning process. Aside from using technology as a tool, there are several strategies that can be explored in the areas of context, learning environment and assessment that could make learning more focused on the needs of the learners.

One of the major conceptual frameworks of the learner-centered philosophy is the Complex Adaptive Blended Learning System approach. It highlights the learner as the center, while other variables on the satellite are the content/subjects, teachers, technology, institution and learner support [4].

For purposes of this paper, the authors selected four learning design strategies that are relevant for face-to-face and online courses. They were selected by the authors as they were deemed applicable to both approaches. Each of them is discussed below.

A. Designing Flexible Curriculum and Content

Adult learners tend to apply what they learn in the real world. As such, it is important to allow them to make choices to be able to apply readily what they are learning. Designing a flexible curriculum allows the educators to respond to the various needs of the learners. Personalized instruction recognizes that each student has unique interests and pace [5]. One of the approaches could be the use of Project-based learning (PBL) which promotes deeper learning and higher student engagement [6]. In face-to-face learning, this could be in the form of a special project and field work within a research-based learning approach. This enables more collaboration from peers. Meanwhile, in online courses, this could be in the form of activities that could enable learners to choose what they can work on. In the online set-up, various learning materials are provided for students to work on. They come in various formats such videos, podcasts, journal articles, animations, etc. This makes them follow their own learning path and learn at their own pace and time.

B. Utilizing Technology

Technology plays a vital role in designing learner-centered learning environments. The effective use of technology can support self-directed learning and lifelong learning skills [7]. Due to the COVID-19 pandemic, most educational institutions have adopted the use of technology in teaching and learning. Hence, they have realized the potential and advantages that technology can bring to be able to make learning more learner-centered.

Even in the traditional mode of learning, technology is used not only as a learning platform but also a tool to communicate as well as to show other relevant and readily available online resources to learners. Blended and hyflex learning approaches are employed to accommodate individual limitation in space and time constraints. It is also used to supplement instruction through the use of digital resources and individual online formative feedback. Cloud-based collaboration tools are also used to support an environment for co-creation especially in assignments.

In online courses, Learning Management Systems (LMS) allow teachers to customize learning experiences and provide timely feedback. The LMS serves as a virtual classroom for learners where they can study and interact with their teacher as well as with their peers. Assessments are also conducted online.

The emergence of the use of virtual and augmented reality can also lead to immersive learning experiences that enhance student understanding.

C. Providing a Supportive Learning Environment

A good learning environment promotes motivation among students [8]. This includes physical spaces that promote collaboration and flexibility which enables a safe environment for learners to interact. Teachers play an important role in their learning experience by clarifying expectations and create a conducive environment for all learners. Online activities such as group projects, peer review systems, and virtual study groups can facilitate collaboration and allow students to learn from and with their peers [9]. These interactions help build a supportive learning environment.

In face-to-face classrooms, this is possible by providing a conducive physical space to the learners in order to facilitate learning and interaction. Teachers play a very important role not only in providing support in terms of the content of the course but also in the overall social-emotional learning of the learners.

In online courses, a good learning environment refers to the support that comes primarily with the use of LMS. Learners are assured that they can interact freely without risks of any form of harassment. Providing technical assistance in the online classroom; establishing clear communication rules, providing timely feedback, and encouraging peer support are also some of the practical strategies that could be adopted. A good online learning environment sustains interest and motivates learners.

D. Designing Assessments with Timely Feedback

Giving feedback to learners on their activities is crucial for supporting learner-centered learning. Hence, formative assessments are important for learners to determine how they are coping with the course. It can be noted that this could

help identify gaps and guide instruction [10]. Summative assignments can also be designed to fit the respective needs of the learners.

In face-to-face learning, assessments can come in the form of quizzes, class discussions peer reviews, apprenticeship or on-the-job trainings, among others.

In online courses, they are in the form of interactive quizzes, collaborative work, peer feedback in the discussion forum and tutor's feedback that can provide valuable insights into student progress.

With all these design strategies, it is important to note that learning design still depends on the context such as the political, socio-economic, and technological conditions of the country. For example, the use of technology depends on the internet infrastructure including access to gadgets, cost of connectivity etc.

IV.   RESULTS AND DISCUSSION

The paper discusses the experiences of the authors who come from two institutions from Southeast Asia, namely: Chulalongkorn University in Thailand and the University of the Philippines Open University. Although Thailand and Philippines maybe geographically close to each other and share the same values, love for festivals, etc., they are quite different in so many ways from language, religion, form of government, among others. Hence, they have their own context that affects education in these two countries.

A.   The Case Studies

1)   Chulalongkorn University. Thailand's first institution of higher learning, was founded in 1917 under the king patronage of King Vajiravudh (Rama VI), and was named in honor of his father, King Chulalongkorn (Rama V). It has developed a reputation for academic excellence and leadership in research, contributing significantly to the nation's development. Chulalongkorn University's success can be gleaned in the THE Impact Rankings 2023 placing 17th in the world and 1st in Thailand that places significance in terms of SDGs impact and contributing to societal innovations and sustainable development [11].

The Faculty of Education was established in 1957 and offers a wide range of undergraduate and graduate programs designed to prepare students for careers in K-12 teacher preparation programs, Educational Administration, Arts and Music Instruction, and Research & Psychology, as well as Educational Technology & Communications. It is dedicated to the advancement of educational practices and the preparation of skilled educators.

CU also plays a crucial role in the educational policy and reform in Thailand and is committed to community engagement and service. Faculty members and students actively participate in projects that aim to improve educational opportunities and outcomes for underserved populations. This includes initiatives to support rural schools, programs for disadvantaged youth, and efforts to promote inclusive education for students with disabilities.

2)   The University of the Philippines Open University. The University of the Philippines (UP) was founded in 1908 through Act No. 1870 of the Philippine Assembly. It leads the country's higher education institutions in the Quacquarelli Symonds (QS) World University Rankings 2025.

The University Open University (UPOU) became the fifth autonomous campus of the UP System in 1995. It is envisioned as a leader in teaching and learning in the digital age, with the mission to provide Filipinos everywhere access to quality higher education through innovative methods of teaching and learning [12]. It is also expected to respond not only to their needs but also to contribute to national development priorities.

The UPOU offers Programs through Open and Distance eLearning (ODeL). It refers to the delivery of courses to learners who are physically separated from one another and utilizes contemporary technologies to deliver course.

It utilizes a Learning Management System (LMS) which serves as its virtual classroom where teachers and learners can interact with each other.

B.   The Learning Design and Management of Face-to-Face and Online Courses

Based on the experiences and reflections of the authors, although the learning approaches may be different, there are many similarities in the learning design and management of face-to-face and online courses.

1)   On designing flexible curriculum and content. Table 1 shows a comparison on the design of flexible curriculum in both cases. The authors claimed that they use project-based learning to make learning more personalized. For the face-to-face learning, there is a very close collaboration with the industry and stakeholders which is relevant for future employment. On the other hand, flexible content is important to UPOU by providing content in various formats and enable learners to learn at their own pave and time. Both institutions plan to embark on micro-credentialing to recognize prior learning of learners. Recognizing the existing knowledge and skills of learners makes the curriculum personalized for learners.

TABLE I.   DESIGNING FLEXIBLE CURRICULUM AND CONTENT

Face-to-Face (Chulalongkorn University)	Online (University of the Philippines Open University)
Research-based learning, industry- stakeholders involvement, including research and development	Use of various formats of learning materials (online journals, videos, podcasts, animation, news, etc.
Students complete their profiles for future employment in leading industrial companies.	Learn at own pace and time and use of discussion forum
	Learners choose the project/topic that they want to work on.
Uses micro-credentialing for Lifelong Learning starting 2024.	Development of micro-credential courses

2) Utilizing Technology. Table 2 reveals that the use of technology is also common in both cases. For Chulalongkorn University, even if it uses the mainstream approach of face-to-face session, it has its own LMS, and portal for Artificial Intelligence (AI) applications. It has also acquired various software tools needed by learners including statistical software, chatGPT, set of leading productivity software, metaverse equipment, etc.

In contrast, UPOU uses the LMS known as "MyPortal" as its virtual classroom to be able to reach the learners wherever they are located and be able to interact with one another.

Online digital communication tools are utilized in both instances in order to communicate with the learners more effectively.

TABLE 2. UTILIZING TECHNOLOGY

Face-to-Face *(Chulalongkorn University)*	*Online* *(University of the Philippines Open University)*
Use of Learning Management Systems (Blackboard, Courseville, Moodle, and portal of AI applications) Digital communication tools are used (e.g., line applications; msn, facebook; Zoom, webEx, etc.) Other software tools (e.g.: adobe suites; Mplus, SPSS; ChatGPT, Google suites; Canva institutions, Co-pilot; Google suite, Microsoft 365, Adobe creative suite; Metaverse equipment; Chula-verse; ERP system, etc.)	Use of a Learning Management System (LMS) that serves as its virtual classroom and where learning materials are uploaded All activities are done on the LMS, including quizzes, discussion forum, including submission of assignments/tasks. Synchronous activities are done using available tools for "live" sessions.

3) Providing a supportive learning environment. The authors noted that learners should be supported with a conducive learning environment. Table 3 shows that at Chulalongkorn University, learners are coached and mentored primarily through face-to-face. They are supported by instructors and external stakeholders. For their learning outcomes, they are aimed to co-create innovative products funded by the university, and turn into a copyright asset under the University enterprise or known as a holding company.

For UPOU, learners are supported by providing asynchronous and synchronous opportunities for learners to interact no only to their teachers but also to their co-learners. Collaborative tasks are designed for peer support and feedback.

TABLE 3. PROVIDING A SUPPORTIVE LEARNING ENVIRONMENT

Face-to-Face *(Chulalongkorn University)*	*Online* *(University of the Philippines Open University)*
Learners are provided support by instructors, co-instructors, and external stakeholders. Learners are coached and mentored based on the progress of their own plans. Innovation is a key outcome of learning, full support including award, scholarship, and publication.	Use of synchronous and asynchronous communication tools with learners. Feedback is provided to individual assignments. Collaborative tasks are also designed to enable peer discussion.

4) Designing assessments with timely feedback. Both authors claimed that they use the typical modes of assessment like formative, summative and authentic assessments. Table 4 shows that in the case Chulalongkorn University, apprenticeship is employed and during the assessment

process. A third-party with significant financing stakes contribute their part as external examiners, resulting in the pre-selection of future employees.

For UPOU, the learners can choose the topics that they want to work on. They are also given the option to design how their output can be presented. Collaborative tasks are also given to encourage immediate feedback from peers. Finally, immediate feedback is also provided to the students since learners are online and feedback can serve as a motivation for them to keep learning.

TABLE 4. DESIGNING ASSESSMENTS WITH TIMELY FEEDBACK

Face-to-Face *(Chulalongkorn University)*	*Online* *(University of the Philippines Open University)*
Learners are given various modes of assessments; formative, summative and authentic assessments. External reviewers contribute to keep students up-to-date on the current demand outside the university School-based apprenticeship; coaching; and mentoring are also used.	Learners are provided different types of assignments. Choice of topic and design of own assignment based on specific instructions. Collaborative tasks are assigned to enable immediate feedback from groupmates. Learners are provided feedback on how they can improve their assignments.

VI. CONCLUSIONS AND RECOMMENDATIONS

The authors conclude that no matter whether the learning approach is face-to-face or online, courses are designed to be learner-centered to enable learners to make choices as well as motivate them to be more active learners. Learners follow their passions, which may stem mostly from some factors such as themselves or the leading companies that may shape the future.

Using the four practical design approaches of learner-centered learning, it can be surmised that the experiences of the authors are similar even if the approaches are different. They both aim to provide flexibility in terms of curriculum and content to be able to meet the needs of individual learners. They will also embark on the use of micro-credentialing as a tool to personalize learning and recognize knowledge and skills that have been acquired by learners in their lifetime.

It is important to note that technology also plays a very important role in the way courses are designed and managed. Both institutions have their own LMS. However, for Chulalongkorn University as a research university, the LMS is one of the tools to facilitate learning and to function as a platform as well for MOOCs (Massive Open Online Courses). Other utilities, state of the Arts technology, AI and several license productivity tools are available to support innovative learning climate in face-to-face classroom. On the other hand, UPOU utilizes an LMS to serve as the virtual classroom for the learners. The authors use digital communication tools in their courses to be able to connect with their learners. Further, they are also expected to utilize AI and immersive technologies to be able to enhance the learning experiences of learners.

In terms of providing a supportive learning environment, the support in face-to-face learning scenario is augmented with real-world experiences, fully equipped with ubiquitous technologies, learning from anywhere at any time on their personal devices, collaborate with peers, and receive academic coaching. In addition, learners complete meaningful projects with the expectation that they will produce a tangible product for their portfolio to be impressive and for possible financial gain.

This is similar with online learning. Learners are supported not only by their teachers and tutors but also by their peers in collaborative learning. The LMS also provides the venue for learning and interaction to enable them to learn at their own pace and time. Through the LMS, then can actively exchange ideas through the forum. They are also assured that the LMS provide a safe environment for them to interact and voice their own ideas and opinions. Discussions are well facilitated to ensure that everyone can contribute to the topic. They are also encouraged to work on the topics which are relevant in their own jobs.

With regard to assessments and feedback, it can be said that they are present in both learning scenarios. Assessments are similar but formulated differently. The authors also recognize that feedback can provide a good motivation for learners. Hence, in the face-to-face learning, other stakeholders take part in the assessment to ensure that mentoring is meaningful.

In the case of online courses, learners are given online assessment and feedback is also sent to them by the teacher. Collaborative work is also utilized to enable peer feedback.

It is important to note that the results of this paper are very context-specific and the experiences of the authors are based on their years of experiences in designing and managing face-to-face and online courses. Chulalongkorn University and the University of the Philippines Open University are both recognized as leading institutions of higher learning in Thailand and the Philippines. Hence, it can be surmised that there is enough support in terms of technology and in capacity development of teachers in teaching and learning.

The design and management of learner-centered learning may vary depending on the context as well as digital skills of the teachers. Hence, it is suggested that more studies and good practices on learner-centered learning approaches can be documented for both face-to-face and online courses.

Moreover, the authors also recognize that using LCL strategies may pose more challenges to those who need to learn more about the use of technology. Hence, it is recommended that there is a need to upgrade the skills of teachers on the use of digital tools and AI to enable them to design and manage learner-centered learning. This requires funding which may not be readily available. This can also be supported by relevant policies that would support LCL.

REFERENCES

[1] Chulalongkorn University, About Chulalongkorn University. Retrieved from https://www.chula.ac.th/en/about/, 2021.

[2] University of the Philippines Open University, About UPOU. Retrieved from https://www.upou.edu.ph/about-us/, 2021.

[3] M. Weimer, Learner-Centered Teaching: Five Key Changes to Practice, 2nd ed., Jossey-Bass, 2013

[4] Y. Wang, X. Han, and J. Yang, Revisiting the blended learning literature: using a complex adaptive systems framework. J. Educ. Technol. Soc. 18, 380–393, 2015.

[5] C. Tomlinson, The Differentiated Classroom: Responding to the Needs of All Learners (2nd ed.), ASCD, 2014.

[6] J. Larmer, J. R. Mergendoller, and S. Boss, Setting the Standard for Project Based Learning: A Proven Approach to Rigorous Classroom Instruction. ASCD, 2015.

[7] P. C. Candy, Self-Direction for Lifelong Learning: A Comprehensive Guide to Theory and Practice. Jossey-Bass, 1991.

[8] T. R. Guskey, Professional Development and Teacher Change. Teachers College Press, 2002.

[9] L. S. Vygotsky, Mind in Society: The Development of Higher Psychological Processes, Harvard University Press, 1978

[10] P. Black, & D. Wiliam, Assessment and Classroom Learning. Assessment in Education: Principles, Policy & Practice, 5(1), 7-74.J, 1998.

[11] Chulalongkorn University, Faculty of Education. Retrieved from Chulalongkorn University, 2023.

[12] University of the Philippines Open University, UPOU Visitors Kit. Laguna, PH: UP Open University, n.d.

[13] Handbook. Mill Valley, CA: University Science, 1989.