

# Extreme Learning Process

## Objective

XLP aims to become a “crowd learning” operating system that enables the creation of rich learning ecosystems. Ultimately, as the number of participants in “crowd learning” ecosystems increases, we envision each such ecosystem increasingly approximating the “real world”.

## Student Perspective

1. XLP engages students by forcing them to make financial, legal, cultural and technical decisions, so they can achieve goals set by the student groups themselves.
2. XLP is pragmatic. The XLP-method induces realistic human dynamics, utilizes modern technologies, encourages students to create social norms, and establishes executable regulations based on the design principles of the fast evolving Internet.
3. XLP drives students to realize their un-tapped potentials and emerging powers of collaboration through having them stretch the educational envelop by shifting focus from teaching (top-down) to learning (bottom up).

## Teaching Perspective

1. XLP encourages an evolutionary process, which creates a digitally enabled learning context that delivers rich social-interactions and leaves no-one behind.
2. By placing students in control of learning, XLP redefines teachers’ roles as curators of learning resources and as evaluators of students’ learning-potentials.

3. XLP provides network-enabled learning data management technology that enables stakeholders to record, analyze and identify learning trajectories to define new directions for progress.

## **Approach**

XLP re-structures a learning environment into an interactive learning/publishing workflow. Utilizing open source technologies, XLP provides a digital-based bottom-up operating environment, orchestrates inter-disciplinary students and teachers into Crowd Learning participation, and creates a concurrent learning process integrated with a compilation process to yield digitally publishable learning summaries.

## **Operating Environment**

XLP provides digital and physical infrastructures enabling learners to practice their four basic rights, which correlate with constitutional scholar Lawrence Lessig's "Four Modalities/Forces":

- *Architecture*: Technologies, industry protocols, or natural laws that enable certain interactive behaviors of the crowd.
- *Law*: Conflict resolution mechanisms that regulates certain crowd behavior.
- *Market*: An asset exchange platform encourages, pulls out, and integrates certain actions.
- *Norm*: Cultural norms encouraging peers to act mutually.

XLP informs students about their rights to learn, to resolve conflicts and to defend their rights during the evolution of the learning program (litigation). Students can also exchange their assets, especially digitally transferrable and electronically exchangeable assets with other participants. In an XLP-based activity, they are required to present and record their opinions and ideas in public via digital means (such as blog posts and wiki-based websites). XLP utilizes open sourced, multi-platform digital content distribution systems, such as Git, to replicate and digitally track any digitally recordable content, from source code, design plans

(technology), conflict resolution records (law), asset exchange records (market), and students' learning reflections on blog entries (media). The schools that adopt XLP must also provide the physical learning environment to allow in-person interactive learning activities.

### **Participants**

XLP assigns 3 different role-types to force interdisciplinary collaboration. Teachers and school administrators called "Learning Event Organizers", provide resources and decide the main theme of the learning program. Students and content providers (can be teachers or domain experts) divide into two roles, "Challenge Designers" and "Mission Executors". Challenge Designers (activity designers), collaboratively create tailor-made learning "games" to fit the resource constraints and contextual requirements. Challenge Designers also function as seed Mission Executors. They test and refine game designs before the Mission Executors arrive.

XLP provides the tools to create and evolve a dynamic syllabus-like structure from the raw materials offered by the challenge designers. Mission Executors play the "games" designed and orchestrated by Challenge Designers. Game scores are categorized according to the "four forces" mentioned earlier. Mission Executors provide either digital or face-to-face feedbacks to "Challenge Designers", during and after the learning games.

### **Impact/Results**

Since June 2012, XLP-based orientation programs and semester-long courses have been conducted at Tsinghua University in Beijing, National Taiwan University of Science and Technology, Taylors' University in Malaysia, Singapore University of Technology and Design, Eurasia University in Xi'An, Tianjin Vocational College of Mechanics and Electricity, and many leading high schools in China. Due to XLP's experimental success, the Ministry of Education in China has invited the founder of XLP to serve on the Design Committee of National Curriculum Standards on Technology Education. The goal is to use XLP as a learning architecture and a learning activity design methodology for over 300 million registered students in the Chinese education system.

XLP is scalable and applicable to a broad range of students. A teacher from Tianjin Vocational College of Mechanics and Electricity stated his observation:

*“In the past, I can only judge students’ quality by their test scores. However, after seeing the students with low test scores can sometimes be the most productive contributors in XLP-enabled learning process, I realized XLP presents many opportunities for students to demonstrate their natural talents.”*

Mr. Wang Hong Yu, the General Manager of China’s Open Course Resource Center, stated how XLP might affect his business:

*“With shock and awe, I personally witnessed the transformative effect of a few XLP events on students. I realized that a radical transformation in education has already taken place here in China. The traditional textbook-oriented industry could no longer be lasting. We have to re-position ourselves in the future ecology of education.”*

## **Engagement**

XLP forces every learning team to be a focused goal-oriented microscopic society in a digital publishing / learning workflow environment. XLP divides most learning programs into four sequential stages:

- I. *Early Success*: provides resources and knowledge that enables students to kickoff their learning journey with excitement.
- II. *Fail Early, Fail Safe*: Insures that the student learning assignments are challenging enough, so students can observe their short-comings and correct their course of actions in the early stage of the “game”.
- III. *Convergence*: Guide students to re-combine their team structures to create a synergistic product/service with other teams.
- IV. *Demonstration*: Every learning program should end with a ceremonial event that allows students to summarize their learning experience and present it to other people who might be future participants of XLP.

Within the above-mentioned four stages of an XLP-based learning program, the entire organization shall leverage the “Four Forces” mechanisms to digitally engage participants in the practice of crowd learning.