



Moonshot Academy

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Moonshot Academy is a private high school in Beijing, China. We have 38 students aged from 13-16 and 2018 is the first year of Beijing Campus. Collaborating with ELP, we built the assessment system that supports competency-based education.

School Mission and Competency Model

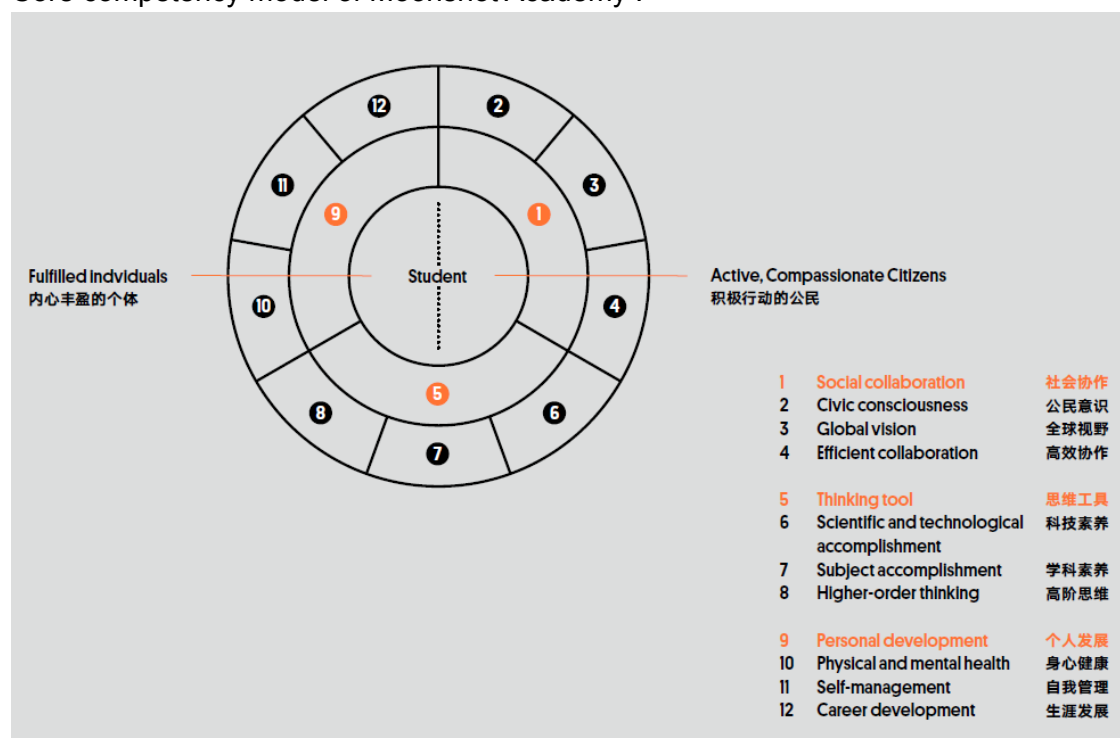
We kept two critical questions in mind while developing Moonshot's innovative educational model: 1.) "What will Moonshot graduates be like when they graduate?" This question has driven us to develop our learners' profile that details our graduates competencies. 2.) "How to set up an educational objective that not only contains the most essential missions of education but also establishes a system with a unifying logic."

We adopted Sir Ken Robinson's stated aim for education as our objective to help learners better understand their intrinsic talents and the outside world, and assist them in becoming fulfilled, compassionate and active citizens.

As for the second question, with "fulfilled, compassionate and active citizens" as our objective, Moonshot Academy has constructed a pedagogical model based upon the core competencies of the 21st century. This model has nine core competencies which are then extended and subdivided into 18 sub-competencies which are all based around three main dimensions of Thinking Tools, Personal Development, and Social Collaboration.

All modules within Moonshot, including the educational system, student activities, community culture, and mentoring system, are designed to achieve full coverage of all 18 sub-competencies.

Core competency model of Moonshot Academy :



Picture1: Competency Model of Moonshot Academy

Project-Based Learning is at the Center of MSA

To acquire core competences needed for the future through real projects, learning outcomes, such as interdisciplinary knowledge transfer, creativity, collaboration and communication, problem dismantling and global civic awareness, can hardly be cultivated through memorization and understanding, but can only be acquired through problem solving in real-world projects. Project-Based Learning is indeed a series of scenarios that strongly support the learning of competencies.

Project-Based Learning in Moonshot Academy can be divided into three parts: academic projects, interdisciplinary research projects, and personal development projects.

1. “Academic projects”: consolidation and transfer of knowledge

The core objective of academic projects lies both in the development of learners’ core competencies, and the consolidation and deepening of their understanding toward subject concepts. Therefore, the R&D team of the Moonshot Academy will design and develop projects with different knowledge points in the “Knowledge Tree” as the academic basis.

2. Interdisciplinary research projects: Question of the Year

Based on the teaching objectives of Moonshot Academy, we hope that graduates from here are all self-driven citizens, who will contribute to a better world through their own actions while pursuing self-value. Therefore, a “Question of the Year” will be posed each year, based on which learners and teachers will put forward more focused questions. After grouping, they’ll create solutions with design and thinking tools of various kinds by using interdisciplinary knowledge such as mathematics, art design, linguistics, environmental science and religion.

Moonshot Academy 2018-2019 Question of the Year

The world in 2049

- What will you be like in 2049? What will be the differences from today’s you?
- What role will you play if you shape the 2049 society with your values?
- How can we solve the challenges and ethical dilemmas that might occur in 2049?
- How will global communities mitigate the effects of climate change?
- How will we cope with synthetic human beings using genetic technology, nanotechnology and software?
- What will be China's relationship with the world in 2049?

LGBT population

- How will we help traditional communities to recognize LGBT culture with a more tolerant attitude?
- How will we help LGBT population better safeguard their rights and interests?

Disabled population

- To design a technology product that can realize the humanistic care of the disabled.
- To establish a feasible model that can really improve the career development of the disabled.

Artificial Intelligence

- Is it our enemy or friend? How can we alleviate social anxieties caused by AI?
- Art ethics in the age of AI, starting from Walter Benjamin's era of mechanical reproduction.

Large-scale infectious diseases

- Conflicts between human pathology experiments and social ethics

- How should we treat a community that is being encroached on by highly contagious viruses?

Education for women

- Similarities and differences in gender education under different religious backgrounds
- From Simone de Beauvoir's "The Second Sex" as the center point, study on the effect of cognitive education for women

Gender equality

- Feminism and political inequality
- Women's leadership in business society

3. Personal development projects help students explore and develop personal interests

Moonshot Academy encourages and supports any projects students initiate based on their interests or personal future development, and will arrange funds and tutors to meet the needs of individual development projects for academic resources, industry experts, community practice and surveys. They could be unsolved problems based on a field of physics, an internship on big data research in Baidu¹, or a documentary created with professors from Beijing Film Academy.



Picture2: Projects Exhibition of Boost Weeks

¹ Baidu is the main search engine company in China (similar to Google in the U.S.)

Assessment System Supporting Competency-based Education

To support assessment practice of Moonshot Academy Competency Model in PBL, we find performance assessment (PA) to be a powerful tool that can fulfill our expectation. ELP and SCALE worked together to help Moonshot Academy on assessment system consulting, professional development and performance task review and coaching.

Assessment System Consulting

At the very beginning, we spent most of our time on finding rubrics that cover different competencies. We thought teachers can assess students in a rigorous way only if they could find the right rubrics. With the help of Ruth Wei and Ray Pecheone, we switch our focus on building a system with rubrics, teachers' assessment literacy, performance task resource and IT platform to support PA realize.

The most important thing I learnt from Ruth and Ray is not just copy what others do. They provided many practices from their past projects, and mentioned that Moonshot Academy should evaluate those practice based on our own situations.



Picture3: Competency Development Visualization in Moonshot Academy IT system

Professional Development

I sent Ruth my expectation on learning outcomes of PD in May 2018. Ruth and Abby Benedetto (ELP) developed two sessions of training for teachers in the form of PBL plus PA. Those two sessions cover designing performance tasks, designing and refining rubrics and scoring student products.

The first training session was completed in July 2018 and teachers had a chance to design and implement their projects and performance tasks in fall semester. The second training session was held in Jan 2019, focused on learning from student work. Ruth and Lauren Stoll (SCALE) provided models for scoring, calibrating on, and learning from student work. Our teachers then applied those processes to their own student work to generate lessons learned for planning their next projects for spring 2019.

Reviewing Performance task and Coaching

ELP with SCALE provided coaching time for teachers in Moonshot Academy on their performance task design, as well as rubric refinement. Teachers sent their design in advance followed by video coaching with two experts from ELP and SCALE. I chatted with every teacher after their coaching meeting and found that this individualized

support really addressed their questions on PA and they often got more than expected.

To conclude, it's very lucky for Moonshot Academy to collaborate with ELP and SCALE. We can't make those improvements on PA without their help.



Picture4: Students Gathering Around Competency Model Visualization

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