



China announces university disciplines reform plan to strengthen foundation subjects

(Information as at 22 June 2020)

On 15 January 2020, the Chinese Ministry of Education (MoE) announced an intention to pilot a foundational Disciplines Reform Plan in selected universities from 2020, known as the “Strong Foundation Program (SFP)” (unofficial translation of “**强基计划**”, Pin Yin: Qiáng jī jì huà).¹

The program will offer top high school graduates tailor-made education programs in top universities, using not just Gaokao (Chinese College Entrance Exam) scores, but a combination of Gaokao scores and a University’s independent assessment of a student’s overall ability and special talents. For some outstanding students who do not attain top Gaokao scores, it is a pathway to top universities should they have other talents that make them stand out from others.

What is the Program?

The SFP allows certain higher education institutions (HEIs) to admit outstanding high school graduates into foundation disciplines such as mathematics, physics, chemistry, biology, history, philosophy and palaeography (study of ancient and medieval handwriting) in order to produce top talents in fields that are of strategic need to China, such as **high-end chip and software development, intelligent technology, new materials and advanced manufacturing**. The pilot kicked off in March of this year, and was open to China’s 36 top universities, the same 36 universities that are in the national [Double First Class Initiative](#) Type A university development scheme. [See list of

¹ People’s Republic of China, Ministry of Education, “**教育部关于在部分高校开展基础学科招生改革试点工作的意见**” (unofficial translation: Opinions of the Ministry of Education on the pilot work of enrolment reform of foundational subjects in some universities) , 28 May 2020, http://www.moe.gov.cn/srcsite/A15/moe_776/s3258/202001/t20200115_415589.html

universities in the pilot plan, including disciplines and enrolment quota for 2020 intake, at appendix A]

The relevant HEIs were requested to produce an admissions plan based on the institution's specialisation and the Gaokao reform status of the province in which the institution is located.² To date, all 36 pilot HEIs have published admission plans for the 2020 intake. Students were to apply online directly to their desired HEI and program ahead of sitting this year's Gaokao. The HEIs will shortlist a group of students after Gaokao scores are released. The HEI will then make a final decision on applicants taking into account both their Gaokao score and the results of an independent assessment conducted by the HEI. The Gaokao score will make up no less than 85% of the decision weighting.

The SFP requires a physical test to be a key component of the independent assessment undertaken by HEIs. Based on some of the recently released SFP admission schemes, the physical test can consider attributes such as an individual's height, body mass index (BMI), lung capacity, and abilities to do sit-ups, run and long jump.³

Special consideration for outstanding students

HEIs are, however, able to make special exceptions for a limited number of students who do not achieve top Gaokao scores but demonstrate "outstanding ability in relevant fields". These students are able to be shortlisted for the independent assessment without the need to score as high as regular students. The plan indicates that these students should score a minimum of "no less than the tier-one cut off score"⁴. In addition, HEIs are required to justify and make public of the reason for making the special consideration. Tsinghua University, for example, sets the standard at - "the student demonstrates outstanding ability in the relevant field and has received second place or above in National Olympiad in Maths, Physics, Chemistry, Biology or informatics."⁵

² Currently, reform of the Gaokao is being gradually rolled out across all provinces, with 14 provinces having initiated the reform and 17 yet to initiate.

³ Example: Shanghai Jiao Tong University's physical test includes BMI, lung capacity, sit-ups, long jump and jumping rope for 1 minute.

Shanghai Jiao Tong University, Undergraduate Admissions, "上海交通大学 2020 年强基计划招生简章" (Shanghai Jiao Tong University Admission scheme for Strong Foundation Program 2020 Intake), 7 May 2020, <https://zsb.sjtu.edu.cn/Web/jdzsb/3810134-3810000002658.htm>

⁴ "Tier-one cut off line" (unofficial translation of 一本录取线) is the score that students need to get in the Gaokao in order to be admitted to a Tier One level university in China. There are three levels of universities – Tier One, Two and Three. Tier One universities are the key universities, Tier Two are regular universities and Tier Three are usually private universities or secondary colleges. Some provinces have combined the cut-off score for Tiers One and Two, or for Tiers Two and Three. The cut-off score is different in each province and is determined together by the national authority, provincial authorities and institutions, based on the outcome of Gaokao scores each year. In order to get into a top university in China like Tsinghua University or Peking University, students must achieve significantly higher than the Tier One cut off. For example, in 2019, the cut off score for Beijing (literacy based) was [480](#), but in order to get into [Tsinghua](#) University, the student must achieve 680 or above.

⁵ Tsinghua University, Undergraduate Admissions, "清华大学 2020 年强基计划招生简章" (Tsinghua University Admission scheme for Strong Foundation Program 2020 Intake), 7 May 2020, <https://www.join-tsinghua.edu.cn/publish/bzw2019/12147/2020/20200507152403225904197/20200507152403225904197 .html>

How will the plan roll out?

As part of the pilot, HEIs will tailor an education program and incentive mechanism for students in the SFP. This may include creating separate classes for these students, matching them with top professors and educational resources. SFP students will be given priority in areas such as admission into postgraduate studies, scholarships and government-funded study abroad programs. National level research laboratories and research centres are also encouraged to open their doors to these students for research and joint education programs.⁶

Similar to the regular admissions process (i.e. process based on Gaokao scores alone), HEIs will set a specific quota for students from each province for their SFP. This decision will be made in consultation with the relevant local education authority.

The Gaokao reform status of the province also appears to have an impact on the admissions process for the SFP. Some HEIs have set different admissions requirements for students from provinces that have initiated Gaokao reform to those that have not. For example, South China University of Technology⁷ has indicated it will not admit students that sit the reformed Gaokao in chemistry under the SFP, but students that sit the pre-reformed Gaokao and are studying science-based subjects can apply. Provinces that will see students sit the reformed Gaokao in 2020 are: Zhejiang, Shanghai, Beijing, Tianjin, Shandong and Hainan.

The original timeline for the SFP was as follows:

Late March 2020 - HEIs to receive approval from the MoE to make public its admissions scheme for the year

April - Students submit applications online

Early June - Students sit Gaokao

Before 25 June - Provincial Gaokao authority provides students' Gaokao scores to the relevant HEI

Before 26 June - HEIs confirm and make public shortlisted candidates based on Gaokao score

Before 27 June - Provincial education authority or the relevant high school provides file of the shortlisted candidates to the HEI

Before 4 July - HEIs conduct independent written tests and interviews, as well as sport/physical ability tests for the shortlisted candidates.

Before 5 July - HEIs confirm admissions decisions and make public the admissions standard.

⁶ People's Republic of China, Ministry of Education, “教育部关于在部分高校开展基础学科招生改革试点工作的意见” (Opinions of the Ministry of Education on the pilot work of enrolment reform of foundational subjects in some universities) , 28 May

2020, http://www.moe.gov.cn/srcsite/A15/moe_776/s3258/202001/t20200115_415589.html

⁷ Admissions Office of South China University of Technology, “华南理工大学 2020 年强基计划招生简章” (South China University of Technology Admission scheme for Strong Foundation Program 2020 Intake), 6 May 2020, <https://admission.scut.edu.cn/2020/0506/c17748a375662/page.htm>

However, given the Gaokao has been postponed in 2020 by one month due to the COVID-19 pandemic, the timeline for the SFP in 2020 has been pushed back by approximately one month.⁸

How does the SFP differ from the Independent Freshman Admission Program (IFAP)?

It was also announced in the Disciplines Reform Plan that commencing in 2020, universities in China will no longer admit students through the Independent Freshman Admission Program (IFAP, “自主招生” Pin Yin: Zìzhǔ zhāoshēng).

The IFAP, initiated in the early 2000s, allowed China’s top universities to admit outstanding students by lowering the required Gaokao score or giving priority to students in selected majors. Under the IFAP, institutions were able to make independent decisions on what disciplines to develop, and on the standards for accepting students, which has sparked controversy over the years for its enrolment inequality. The MoE requested increased management of the program and ordered universities to reduce quotas for IFAP.⁹ In 2019, the IFAP was used by around 90 top HEIs across China, allocating 5% of enrolment slots to the program and admitting 20,000 students in total.¹⁰

The most significant distinction between the SFP and IFAP is that the purpose of SFP is to select “students that demonstrate a high level of mixed-ability or outstanding ability in a particular foundational area, who are willing to serve the nation in areas of strategic need”, whereas the IFAP was designed to simply select “students with outstanding ability and potential to innovate”. The SFP specifies that the disciplines to be developed must be linked to areas of strategic need to China, and these could change in the future depending on those needs. The IFAP does not have a disciplinary focus, and usually allows students to choose disciplines of their desire.

The SFP emphasises Gaokao in the enrolment process by setting a strict threshold of an 85% weighting of the Gaokao score in making the admissions decision. This is aimed at making it a more transparent and “fair” process compared to the IFAP, which permitted decisions based on merits such as awards or competition outcomes.

What makes the SFP particularly attractive to many students is that it allows HEIs to develop tailored and targeted education programs for students and offers significant incentives. The IFAP by contrast was simply a means of admission.

Going forward

It is expected that the SFP will eventually extend to Type B universities and then to universities in the discipline development scheme under the Double First-Class initiative.

⁸ Sunshine Gaokao Information Platform (established by the MoE affiliated China Higher Education Student Information and Career Center) “2020 年强基计划报考指南” (Application guide for Strong Foundation Program 2020 intake), <https://gaokao.chsi.com.cn/gkzt/jcxkzs>

⁹ People’s Republic of China, Ministry of Education, “教育部办公厅关于做好 2019 年高校自主招生工作的通知” (unofficial translation: Notice of the General Office of the Ministry of Education on well conducting the Independent Freshman Admission Program in higher education institutions in 2019), 29 December 2018, http://www.moe.gov.cn/srcsite/A15/s7063/201901/t20190104_365994.html

¹⁰ Zou, Shuo. “Colleges Lower Independent Enrolments” China Daily, 3 Apr. 2019, www.chinadaily.com.cn/a/201904/03/WS5ca3f2a2a3104842260b40eb.html

On 15 May, Tsinghua University's School of Journalism and Communication announced that the school will expand capacity for postgraduate students and focus on postgraduate education in the future.¹¹ Media reports suggest the university's School of Journalism and Communication will cease admissions of undergraduate students starting from the 2020 intake, and that this is due to the need to free up spots for the SFP.¹² If accurate, this suggests a strong commitment to the SFP.

For further enquiries, please contact the [Education and Research Section](#) of the Australian Embassy in Beijing.

¹¹ Official Wechat account of School of Journalism and Communication, Tsinghua University, “清华大学副校长彭刚参加新闻学院全体教职工会议”(Peng Gang, Vice President of Tsinghua University, attended all faculty meeting of the School of Journalism and communication), 15 May 2020, https://mp.weixin.qq.com/s/iUgf9DDlpE_zQ5qf2HUZZA

¹² Wang, Yiwen, and Huizhao Huang. “清华大学新闻学院停招本科生，强基计划是直接推力。” (Tsinghua University's School of Journalism and Communication cease offering bachelor's degree program, Strong Foundation Program is the main push factor) Caixin, 15 May 2020, www.caixin.com/2020-05-15/101554664.html

Appendix A

List of universities in the Strong Foundation Program pilot plan, including disciplines and admissions quota for 2020 intake (sort by province)

Province	University	Admissions quota 2020	Disciplines for 2020
Anhui	University of Science and Technology of China	210	mathematics and applied mathematics, information and computer science, physics, applied physics, chemistry, bioscience, biotechnology, theoretical and applied mechanics, nuclear engineering and nuclear technology
Beijing	Peking University	N/A	mathematics, physics, chemistry, mechanics, bioscience, history, archaeology, philosophy, Chinese language and literature (paleography), preclinical medicine (eight years)
Beijing	Tsinghua University	N/A	mathematics and applied mathematics, physics, chemistry, bioscience, information and computer science, science of mathematical theory, chemical biology, theory and applied mechanics, Chinese language and literature (paleography), history, philosophy
Beijing	Renmin University of China	90	Chinese language and literature (paleography), history, philosophy
Beijing	Beijing Normal University	120	history, philosophy, mathematics and applied mathematics, physics, chemistry, bioscience
Beijing	Beihang University	150	mathematics and applied mathematics, information and computer science, applied physics, chemistry, engineering mechanics
Beijing	Beijing Institute of Technology	150	mathematics and applied mathematics, applied physics, chemistry, engineering mechanics
Beijing	China Agricultural University	30	bioscience
Beijing	Minzu University of China	30	Chinese minority language and literature (paleography), history, philosophy
Chongqing	Chongqing University	90	mathematics and applied mathematics, physics
Fujian	Xiamen University	120	mathematics, physics, chemistry, bioscience, history, philosophy

Gansu	Lanzhou University	120	mathematics and applied mathematics, physics, chemistry, bioscience, Chinese language and literature (paleography), history
Guangdong	Sun Yat-sen University	150	mathematics and applied mathematics, physics, chemistry, bioscience, ecology, Chinese language and literature (paleography), history, philosophy, preclinical medicine
Guangdong	South China University of Technology	90	mathematics, chemistry, biotechnology
Heilongjiang	Harbin Institute of Technology	180	mathematics and applied mathematics, information and computer science, applied physics, nuclear engineering and nuclear technology
Hubei	Wuhan University	150	philosophy, Chinese language and literature (paleography), history, mathematics and applied mathematics, physics, chemistry, bioscience, preclinical medicine
Hubei	Huazhong University of Science and Technology	120	mathematics and applied mathematics, physics, chemistry, bioscience, preclinical medicine, Chinese language and literature (paleography), philosophy
Hunan	Central South University	120	mathematics and applied mathematics, applied physics, applied chemistry, bioscience
Hunan	National University of Defense Technology	60	mathematics and applied mathematics, physics
Jiangsu	Nanjing University	210	mathematics and applied mathematics, information and computer science, physics, chemistry, bioscience, Chinese language and literature (paleography), philosophy, history
Jiangsu	Southeast University	90	mathematics, physics, chemistry, philosophy,
Jilin	Jilin University	60	mathematics and applied mathematics, physics, chemistry
Liaoning	Dalian University of Technology	90	mathematics and applied mathematics, applied physics, engineering mechanics, applied chemistry
Shaanxi	Xi'an Jiaotong University	210	mathematics, physics, nuclear engineering and nuclear technology, biotechnology, philosophy

Shaanxi	Northwestern Polytechnical University	90	mathematics and applied mathematics, information and computer science, applied physics, chemistry
Shandong	Shandong University	180	mathematics and applied mathematics, physics, chemistry, bioscience, Chinese language and literature (paleography), history, philosophy
Shandong	Ocean University of China	30	bioscience
Shanghai	Fudan University	N/A	Chinese language and literature (paleography), history, philosophy, mathematics and applied mathematics, physics, chemistry, bioscience, preclinical medicine
Shanghai	Shanghai Jiao Tong University	210	mathematics and applied mathematics, physics, chemistry, bioscience, biomedicine, engineering mechanics
Shanghai	Tongji University	N/A	mathematics and applied mathematics, applied physics, applied chemistry, biotechnology
Shanghai	East China Normal University	90	mathematics and applied mathematics, physics, bioscience, philosophy, Chinese language and literature (paleography)
Sichuan	Sichuan University	180	Chinese language and literature (paleography), history, philosophy, mathematics and applied mathematics, physics, chemistry, bioscience, engineering mechanics, preclinical medicine
Sichuan	University of Electronic Science and Technology of China	30	applied physics
Tianjin	Tianjin University	150	mathematics and applied mathematics, applied physics, applied chemistry, bioscience, engineering mechanics
Tianjin	Nankai University	150	mathematics and applied mathematics, physics, chemistry, bioscience, history, philosophy
Zhejiang	Zhejiang University	N/A	mathematics and applied mathematics, physics, engineering mechanics, chemistry, bioscience, ecology, preclinical medicine, history, philosophy, Chinese language and literature (paleography)