

gaokao: reform and reality clash

25 January 2019



students exit historic exam hall in Hangzhou

gaokao reform pilots aim to shake up 'exam-oriented education' and overemphasis on grades

A new college examination and admission system is emerging from potentially the most radical education reform since 1977.

In September 2014, State Council authorised Zhejiang and Shanghai to shake up 'exam-oriented education', eliminating performance-based streaming, overemphasis on grades and obsession with *gaokao* scores in college admission. Pilots expanded to Beijing, Tianjin, Shandong and Hainan in 2017, with another 18 provinces initially scheduled to join September 2018 before the remaining seven catch up in 2019.

two initial pilots

national guidelines

- destreaming: educational path no longer prescribed by academic performance
- '3+X' scheme
 - 3 compulsory tests (Chinese, maths and a foreign language) take place every June
 - 3 elective tests picked from 6 subjects (ideology and politics, history, geography, physics, chemistry, biology) take place in year 12, just before compulsory tests
- nationally standardised test and scoring system for compulsory subjects
 - provinces allowed to organise and grade other tests locally

Zhejiang: the 'radical' path

- 3 compulsory tests: 150 points per subject; two attempts for foreign language test
- elective tests: choose 3 of 7 subjects (the 6 in national guidelines plus general technology); 100 points per subject, two attempts for each test
- qualification tests: 11 subjects, including all compulsory and elective subjects, plus information technology and general technology; two attempts for each test

Shanghai: the 'modest' path

- compulsory tests: same as Zhejiang
- elective tests: choose 3 of 6 subjects; 70 points per subject; one attempt only
- qualification tests: 12 subjects, including all compulsory and elective subjects, plus sports, art, and 'work' class, in which students help with classroom chores; one attempt only

reforms slow

less than half of '3+3' *gaokao* reform pilots on schedule as obstacles emerge

Problems have emerged. Of the 18 provinces designated to pilot the new '3+3' *gaokao* scheme in 2018, **less than half are on schedule**. According to Han Ning 韩宁 National Education Examinations Authority Office of Evaluation director, the delay is 'inevitable' because over-ambitious reforms exceed available resources, asking too much of students, teachers, parents, schools and examination authorities alike.

practical difficulties

- timetabling
 - the '3 + X' scheme entails over 35 potential course combinations. Even the best high schools can barely meet requirements with existing teaching staff and classrooms; most schools can only afford an 'abridged combination menu' of courses; free course selection is not currently feasible
- burden of learning
 - pilot practices show that being able to take the tests multiple times actually increased exam prep workloads for students, teachers and parents
- teaching order
 - customised courses require greater supply of teachers and investment in educational infrastructure; both are unaffordable in many areas
- capacity of test designers
 - local examination authorities' efforts to revise tests lag behind teaching experiments in high schools
- learning outcomes
 - electives disadvantage some difficult subjects (especially physics)
 - higher education sector adapting poorly to new high school pedagogy

de-emphasising grades

Gaokao reforms are meant to reduce academic competition by grading on a curve, allowing multiple attempts for tests, and using letter rather than number grades. However, early implementation attempts have been troubled. Zhejiang Educational Examination Authority's (Zhejiang EEA) decision to

fairness scandal in Zhejiang undermines *gaokao* credibility, potentially further slowing reforms elsewhere

curve grades on the reading and essay sections of an English test in its 2019 *gaokao* provoked a **fairness scandal**.

Mishandled, the crisis undermined *gaokao* credibility, says People's Daily. It also revealed a major **equity-efficiency dilemma** in Zhejiang's radical *gaokao* reform plan. Contrary to their intention, the Zhejiang reforms increased burdens and reduced both equity and resource efficiency. For example, test designers could not ensure two students taking an exam in the same cycle would be evaluated the same way regardless of where or when it was taken. And in spite of score curves, students always prefer to take both tests to maximise their chances, which increases burden of preparation and exam costs. But there are no easy solutions. Zheng Fangxian 郑方贤 Shanghai Municipal EEA director worries that severe penalties on Zhejiang regulators would lead self-interested and risk-averse officials to avoid taking initiative to fix the problem, jeopardising **much-delayed reforms in other provinces**.

equality of opportunity

Policymakers diverge between

- an 'efficiency' camp calling for more well-rounded exams with less emphasis on rote learning

- a 'fairness' camp worried that introducing non-standardised testing may compromise exam integrity and cause rent-seeking

consensus of *gaokao* fostering upward social mobility called into question

Independent university admission programs, the much-criticised alternative to *gaokao*, have been plagued by **corruption scandals**. MoE recently issued an **unprecedentedly stringent 30-point measure** to curb backdoor dealings. The long-held consensus that *gaokao* promotes upward social mobility has also been called into question. Recent college enrolment data suggests students are increasingly drawn from a fixed pool of secondary schools in large cities, says Li Chunling 李春玲 Chinese Academy of Social Sciences Institute of Sociology researcher. In recent debates over **empowering rural schools with distance learning**, Tang Min 汤敏 state councillor argued that rural schools are ill-equipped to provide enough offline teacher-student interaction and face-to-face tutoring. Inequality is more a function of primary and secondary education than *gaokao* itself, says Liang Cheng 梁晨 education expert, adding that top students and teaching staff flow continuously from less developed regions to big cities and provincial capitals. Substandard facilities and teachers in rural areas prevent many rural students from even reaching high school, let alone passing the *gaokao*.

altering the culture of learning

new plan calls for fundamental shift away from rote learning

Because *gaokao* drives K-12 education in China, the new scheme goes far beyond college entrance exams: it mandates a fundamental shift away from rote learning. However, none of the pilot results suggest *gaokao* reforms have reduced memorisation or **over-burdening** in schools. Chu Chaohui 储朝晖 National Institute of Educational Science considers culture a primary factor. In his view, the pilots failed due to a deeply-rooted socio-cultural view of education as a vehicle for personal achievement rather than intellectual curiosity. This forces education to focus narrowly on competition, explains Chu, ignoring knowledge and skills transfer.

At the same time, the Xi leadership is ensuring education incorporates Party ideology, traditional Chinese culture and patriotism as much as teaching of knowledge and skills. *Chongqing Daily* reported on 6 November that its *gaokao* would include a political section to examine candidates' ideology and social contributions. Chongqing authorities later apologised for what they termed a 'public misunderstanding', but there are similar trials in other provinces amid efforts to deepen the Party's role in education and exercise greater control over administration.

outlook: towards 'holistic' evaluation

post-reform *gaokao* to incorporate talent identification, incentivisation of hard work and passing on of values

In 2014 'Implementation opinions on reforming the examination and admission system', State Council stipulated that the most 'revolutionary' *gaokao* change would be to 'separate the authority of examination from admission'. An ideal college entrance scheme would incorporate *gaokao* scores, academic qualification test scores, supplementary exams and interviews held independently by universities. Post-reform *gaokao* will seek an optimal solution to

- identify and foster the 'best talent' in line with development priorities, through efficient use of limited education resources
- set up effective incentives to motivate and reward those who work hard, regardless of socioeconomic status
- pass on the nation's cultural traditions and socio-political values

Universities have yet to be granted full autonomy in setting admission policies and enrollment quota. Reforms in other East Asian countries suggest rejigging college entrance exams does little to reduce school burdens and competitiveness. But given skills-based technological change, refining *gaokao* is critical to mass higher education and human capital accumulation.

The centre will also gain experience for other troublesome exams: those for graduate school and to join government. *Gaokao* will likely be kept as the 'great equaliser' in upward social mobility. It is at the same time, and at no little risk, being retooled for an ambitious social engineering project, promoting lifelong learning driven less by family expectations or societal pressures, and more by individual interests and curiosity.

what are the experts saying?

Zhang Jianshi 章建石

National EEA Centre of Evaluation associate research fellow



A renowned expert in educational admissions and evaluation. Zhang's research suggests it is not feasible to curve scores for all *gaokao* tests. Zhang argues that conversion from equated scores to equivalent scores should not be completely proportional to the population of test takers, because it would disable comparison between tests on different dates. Zhang advocates linear mapping to ensure fair and equivalent conversion of scores.

Qin Chunhua 秦春华

Peking University School of Education dean



Qin argues for separating authority over college entrance examination and college admission. In China, universities ‘enrol’ but never ‘admit’ students, because they are generally unable to evaluate and select candidates directly. Central and local EEAs should be responsible for arranging tests, while universities should be granted full autonomy in admission decisions. To prevent admission malpractice, Qin calls for strict punishment of any misbehavior and recommends universities build teams of admission specialists and set up admission committees to make collective decisions.

Ke Zheng 柯政

East China Normal University Institute of Curriculum and Instruction



The ‘3+X’ regime, notes Ke, cuts the weight of science disciplines. Pilots show fewer students elect to take physics or chemistry substantially than history or politics. However, China needs a sizeable talent pool in basic science to meet its technology-driven development agenda. Ke describes two ways to stop students speculating on *gaokao* by studying the ‘easiest’ subjects: science subject grades should first be curved proportionally to their difficulty; second, universities can add science requirements for admission to tech programs.

National Education Examination Authority (NEEA) 教育部考试中心



NEEA is an MoE agency. Besides organising exams, the agency also helps formulate education and testing policy, research standardised testing, train exam personnel, and supervise adult education. NEEA test services fall into three broad categories: national educational exams such as *gaokao* and the graduate school entrance exam; certificate exams for English proficiency, computer skills, calligraphy and painting; and foreign tests like TOEFL, IELTS and GRE.

27 Nov 2018	outbreak of Zhejiang grading scandal
6 Nov 2018	outbreak of Chongqing <i>zhengshen</i> scandal
September 2018	provinces scheduled to kick off <i>gaokao</i> 2.0 pilots (third batch)
16 Jan 2018	MoE released a new curriculum plan , adding German, French and Spanish to the foreign languages taught in high school; traditional culture classes will be offered as compulsory subjects, optional compulsory subjects and optional subjects
June 2017	Zhejiang and Shanghai hold the first 'new <i>gaokao</i> '
19 Oct 2017	Baosheng 陈宝生 MoE minister announced during the 19th Party Congress <i>gaokao</i> 2.0 to be fully rolled out by 2020
April 2017	Beijing, Tianjin, Shandong and Hainan announced carrying out the second batch of <i>gaokao</i> 2.0 pilot reform
December 2014	MoE issues 'Implementation opinions on graduation examination for ordinary high school students', stipulating to roll out customised course-taking
September 2014	Zhejiang and Shanghai unveil the earliest <i>gaokao</i> reform pilot plans; date of implementation set in 2017
4 Sep 2014	State Council released 'Implementation opinions on deepening the reform on examination and admission system', proposing to abolish the division of humanity track and science track
August 2013	third plenum of the 18th Party Congress decides that the core task of <i>gaokao</i> reform is 'to separate the administrative authority of college admission and examination'
June 2010	State Council issues 'National education reform and development mid- to long-term plan (2010-20)', which sets three conflicting goals for <i>gaokao</i> —cultivating the youth, sorting the best and ensuring social equality