

Actively Promoting Collaborative Innovation and Enhancing Higher Education Quality -- China Ministry of Education

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Below please find the Q & A from China Ministry of Education about the “2011 Plan” (also called “the Acceleration Plan for Enhancing Higher Institutions Innovation Capacity”):

1. Please provide a briefing on the context and design process of the “2011 Plan”.

On May 4 1998, Mr. Jiang Zeming, former Party Secretary General made a remark on the 100th year anniversary celebration of Peking University. In the remark, Mr. Jiang highlighted that China should build up a number of world class universities to achieve modernisation. The Ministry of Education and the Ministry of Finance then jointly implemented the “985 Project” to respond to the call for world class universities.

On April 24 2011, Mr HU Jintao, Party Secretary General, made a remark at the 100th year anniversary celebration of Tsinghua University. In the remark, Mr. HU stressed that collaborative innovation should be actively promoted across the country. Higher institutions should be encouraged to collaborate closely with research institutes, industries through systematic innovation and policy support. Such collaboration will be achieved on the basis of setting up a collaborative innovation strategic coalescence, promoting resource sharing and jointly conducting key research projects. Mdm LIU Yandong, State Councillor, has urged us to draw up a concrete plan to respond to the issues raised in Mr HU’s remark. With this in mind, the Ministry of Education and the Ministry of Finance decided to jointly launch and implement the “2011 Plan”. The Plan has had input from universities that are directly led by the Ministry of Education, and also had input from local education authorities and 11 central government bodies including the State Development and Reform Committee, Ministry of S&T, Ministry of Industry and Information, Ministry of HR and Social Welfare, State Assets Committee, State IPR Bureau, China Academy of Science, China Academy of Social Science, China Academy of Engineering, State Foundation Committee, China Association of S&T.

On Dec. 27 2011, the State Education System Reform Leadership Office held the 4th leadership meeting, discussing the draft “2011 Plan” and passing it on the basis of certain principle. The meeting also suggested speeding up the formal approval process and launching the Plan. On March 22 2012, *Guidance by Education Ministry and Finance Ministry on the Implementation of Acceleration Plan for Enhancing Higher Institutions Innovation Capacity* was launched on the Working Meeting on Improving Higher Education Quality.

2. What is the impact of the “2011 Plan”? Why “collaborative innovation” was positioned as the key theme of “2011 Plan”?

The world today is undergoing major transformation. A multi-polar world and economic globalisation is evolving. The global economy is undergoing new changes with more intense competition. Productivity, production, lifestyles and social and economic development patterns are undergoing profound changes world- wide. Innovation, in particular, is becoming the driving force of socio-economic development, and knowledge innovation is becoming the core element of national competitiveness. With such great transformation, releasing the full potential of human resources and achieving innovation-based development are a strategic choice for countries to take the lead in international competition.

Compared with leading developed countries, innovation capacity is a salient weakness of our country, particularly in the areas of education, science and technology. Such weaknesses will significantly constrain China's socio-economic development. Since long before, China's innovation powers have developed in an individual basis with wasteful duplication of resources and low efficiency. Training of talents and S&T research are not compatible with the socio-economic development needs. There is now a pressing need to avoid a dispersing model of innovation, instead what is pressing is to break the systematic barriers that constrain innovation and to promote collaboration of all types of innovation power to enhance the country's competitiveness.

Higher institutions have disciplinary strength, ample human resources. They are multi-functional and serve as a joint base for S&T, the primary productivity, and HR, the primary resource. Higher institutions should take advantage of its strength to conduct in-depth collaboration with research institutes, industries, local governments, international society, forming collaborative innovation coalescence to tackle key issues of the country.

3. Please describe the overview of “2011 Plan”

The overview of “2011 Plan” can be described as: meeting needs, facilitating reform, exploring models, enhancing capacity. It can be summarised as “1148”, i.e.: 1 fundamental starting point, 1 key task, 4 types of collaborative innovation and 8 systematic reforms.

- (1) 1 fundamental starting point: meeting the country's urgent needs, achieving world-class standard. This sets the goal and direction of “2011 Plan”. It can also be viewed as a standard and condition. It guides higher institutions to look into strategic and leading-edge issues that have significant impact on the country's development. It encourages institutions to set up world-class innovation teams, nurture world-class innovation environments, consolidate world-class innovation results, train world-class talents, gradually achieving a new education model with Chinese characteristics and with a world-class capacity.
- (2) 1 key task: enhancing the innovation capacity based on the integration of HR, disciplines and research. The objectives of setting this key task are:
 - to strengthen the interaction of these three aspects;
 - to strengthen effective integration of innovative elements;
 - to strengthen a needs-based model of innovation capacity enhancement;
 - to demonstrate the effectiveness of ROI

Within these 3 aspects, HR is the prime, discipline is the basis, and research is the pillar.

- (3) There are 4 types of collaborative innovation based on collaborative innovation centres. In-depth collaboration should be promoted among institutions, research institutes, government authorities, industries and international organisations. 4 types of collaborative innovation should be established to meet the needs of
 - leading-edge science and technology
 - industrial development
 - regional development
 - cultural heritage

It is expected that a number of “2011 Collaborative Innovation Centres” will be established and gradually become academic bases of major international influence,

research bases for industrial technology innovation and engines for regional innovation and cultural innovation;

- (4) To deepen systematic reform through transforming the innovation development model. The 2011 Plan will break internal barriers that constrain the enhancement of higher institutions innovation capacity. It will break the systematic barriers between higher institutions and other innovation organisations. It aims at releasing people’s potential, making full use of capital, information and technology, so as to nurture an environment that benefits collaborative innovation. Higher institutions will conduct reforms in the following 8 aspects:
- collaborative innovation organisation management
 - HR system
 - talent training
 - staff performance assessment
 - research model
 - resources allocation model
 - international collaboration
 - innovative culture development

The above reforms are expected to achieve the following changes:

- Research and talent training will be changed from being discipline-based to being needs-based;
- Management will be changed from a closed, isolated status to an open, collaborative, flexible status;
- Innovative elements and resources will be changed from a dispersing, isolated status to an aggregated and integrated status.

4. Please describe the key features of the implementation of “2011 Plan”.

There are 4 features:

- (1) **Full openness.** The Plan encourages openness to all higher institutions without limits of range or organisation nature, widely attracting research institutes, industries, local government authorities and international innovative powers to form a diverse, open and smart organisation model and operation model.
- (2) **Guidance & Support.** All types of higher institutions should actively take part in the “2011 Plan” to enhance the innovation capacity and standard. Institutions and local governments are encouraged to take the lead in piloting, setting up either institutional-level collaborative innovation plan or provincial level 2011 Plan and organising collaborative innovation centre. Institutions are encouraged to collaborate with industry and, industrial-owned research institutes. On the basis of these pilots, local collaborative innovation centres can submit applications for setting up a national “2011 Collaborative Innovation Centre”.
- (3) **An objective and fair accreditation mechanism.** According to set objectives, tasks and benchmarks for the 4 types of collaborative innovation model, a third party will organise detailed accreditation process. Administrative interfering will be replaced by periodic assessment and review. Experts from various areas will be invited to the accreditation and assessment process.
- (4) **A diverse support mechanism.** Central finance has set up ring-fenced funding to accredited “2011 Collaborative Innovation Centres”. Relevant authorities, higher

institutions should prioritise its resources in terms of HR management, talent planning, recruitment targets and research projects to ensure smooth implementation of “2011 Plan” and support system reform for the set-up of the “2011 Collaborative Innovation Centre”.

5. “2011 Plan” sets systematic reform as its priority. Please give a detailed introduction on the reform.

Based on previous experience and through systematic design, there will be reforms in the following 8 aspects:

- (1) To establish an effective organisational management system, a management body, attended by relevant parties, will be set up to be responsible for co-ordination and decision-making. Such a body will map out the overall strategy for science and technology, clarifying roles and responsibilities, staffing, ownership of resources, achievements and IPR, so as to achieve resource sharing and sustainable development.
- (2) To explore a HR management system for promoting collaborative innovation. Such a system will endorse task-based employment, forming collaborative innovation teams led by talents. It will also encourage staff transfer across higher institutions, research institutes and industries.
- (3) To establish a training model of top innovation talents. Such a model is based on S&T research and practice innovation, promoting cross-disciplinary integration and collaboration between industry, education and research.
- (4) To establish an assessment mechanism based on innovation quality and contribution. The old assessment mechanism relied on research papers and awards and will be replaced with one that encourages exit strategy, competition and meets the country’s major development needs.
- (5) To establish an organisation format for sustainable innovation. Such a format will take full advantage of collaborative innovation talents, disciplines and resources, identifying and tackling major issues.
- (6) To establish a resource allocation model based on cross-disciplinary integration. Such a model will make full use of existing resources to support key disciplines, laying a solid basis for collaborative innovation.
- (7) To establish an innovative international exchange and collaboration model. Such a model will attract international innovation powers and resources, supporting world-class experts to take part in collaborative innovation and to jointly train talents. It will accelerate the globalised development of our higher institutions through encouraging collaboration with top overseas universities and research institutes.
- (8) To nurture a culture environment that is good for collaborative innovation. Such an environment will encourage freedom, openness, innovation and welcome failure. It promotes team spirit, professionalism and integrity.

6. Compared to existing platform such as laboratories, research base, what are the new features of “collaborative innovation centre”?

The features are as below:

- (1) **Dynamic.** Unlike research bases which are discipline-based, collaborative innovation centres are needs-based and task-based. All research is aimed at resolving problems.
- (2) **Diverse.** Unlike laboratories, research centres or innovation platforms, the organisational management tends to be more flexible. All staff are from different organisations or institutes on an appointment basis.
- (3) **Integration.** A collaborative innovation centre will take full advantage of its resources to attract social investment and support, ensuring in-depth collaboration across different sectors to achieve greater results and impact.
- (4) **Sustainable.** The key task of a collaborative innovation centre is to conduct systematic reform in 8 aspects mentioned above. All reforms hope to nurture an environment that adds value to the sustainable development of a collaborative innovation centre.

7. In recent years, there have been many types of research collaborations. What are the new requirements for the concept of collaborative innovation?

Collaborative Innovation focuses on resolving problems that exist in the current innovation chain and innovation management, i.e.: lack of co-ordination, lack of adaptability, lack of collaboration and integration. Compared with the traditional S&T research, collaborative innovation aims higher. First, it looks for a combination of core innovative elements of different innovation bodies; secondly, it looks for an effective long-term mechanism; thirdly, it looks to form new advantages through collaborative innovation.

8. What is the relationship between “2011 Plan” and “211 project”, “985 Project”?

The “2011 Plan” is a further development and legacy of “211 Project” and “985 Project”. The “211 Project” and “985 Project” focus on disciplines, talent training and a platform for institutions’ with internal operation as priorities. The “2011 Plan” focuses on systematic reform, promoting institutions’ internal collaboration and collaborations between institutions and external innovation powers, establishing collaborative innovation model, so as to further “211 Project” and “985 Project”.

9. How is “2011 Plan” implemented?

The Ministry of Education and the Ministry of Finance have draw up an implementation plan with the following as priorities:

- (1) To clarify the overall goals, key tasks, centre types, range of implementation and time frame of implementation. The implementation principles are:
 - strategic co-ordination;
 - implementation at different levels;
 - classification of construction;
 - supports given to priorities
 - resources integration
 - diverse input

Pilots are encouraged to take place at local level and with institutions that are ready to try out collaborative innovation.

- (2) To set up clear management which consists of 3 stages: preparation & set up; accreditation and evaluation. Working priorities of each stage are identified with clear application requirements, accreditation criteria, and central operation management as well as setting out an evaluation process.
- (3) Funding and policy support will be given to approved “2011 Collaborative Innovation Centre”. The “2011 Plan” Leadership Office and its branch offices, expert committee, third-party accreditation & evaluation mechanism will all be set up to ensure effective implementation of the “2011 Plan”.