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Inter-disciplinary evaluation to provide support to new liberal arts construction

EDITOR'S NOTE

First proposed by Hiram College in 2017, the concept of new liberal arts advocates integrating new technologies into philosophy, literature, language, and other courses, to provide students with comprehensive interdisciplinary learning. Chinese scholars believe that new liberal arts uphold approaches such as inheritance and innovation, academic crossovers and integration, and collaboration and sharing, to promote interdisciplinary integration. The new liberal arts upgrade traditional liberal arts, shifting their orientation.

By ZHANG LIN

In 2019, 13 organizations in China, including the Ministry of Education and the Ministry of Science and Technology, started to push forward new disciplines in the fields of engineering, medicine, agriculture, and liberal arts. New liberal arts need to be developed to dismantle the barriers of traditional disciplines and proceed with integration.

As an important support mechanism, inter-disciplinary evaluation is intimately pertinent to the situation and the prospects of China's new liberal arts. It behooves us to uphold the major themes inherent in the new liberal arts, and formulate concrete approaches to interdisciplinary evaluation, thus fueling comprehensive development of relevant evaluations.

Development trend

A top-down design is a necessity. Presently, unified disciplinary standards in the new liberal arts have yet to take form. Many institutional structures are still in an exploration phase, bringing challenges to this evaluation, such as a lack of disciplinary consen-



National Research Center for New Liberal Arts was established in Shandong University. Photo: XINHUA

sus, organizational construction, and institutional support. As for discipline institutionalization, a number of new liberal arts have been added to some universities' catalogs, including the digital humanities and financial technology. Many studies, however, are categorized as traditional liberal arts even though their content and methodologies conform to the features of the new liberal arts. The development of these studies falls into a dilemma, as scholars debate over disciplinary identity and evaluation methods.

For the disciplines that have been labeled as new liberal arts, evaluation work can draw on existing discipline evaluations. For budding studies or those at an early growth stage, it is inappropriate to transplant existing evaluation methods. Creating new channels and mechanisms can encourage their progress and perfection, providing sufficient room for growth. Also, new liberal arts fields may change due to varied discipline institutionalization stimulus. The stimulus can come from national policies, scientific studies or educational demands.

Evaluation work should distinguish different forms of stimulus and distinguish stages of development of the disciplines, thus developing targeted criteria

and principles based on specific characteristics. In a top-down design, the construction of new liberal arts is a systematic project—evaluation is merely one of its subsystems. Effective evaluation requires non-linear interactions among other subsystems including the construction of discipline systems, organizational administration, funding for research, the allocation of academic resources, and the development of professional journals. The only way forward is to coordinate these subsystems' goals and tasks.

Evaluation criteria

Developing adequate evaluation criteria is expected to accelerate the construction of new liberal arts. First, evaluation should consider disciplinary characteristics and respect inter-disciplinary development laws and values. Also, it should pay attention to the quality of reflexivity and other features of social sciences. Evaluation should focus on cultivating talent, the fundamental task. When evaluating talent cultivation, apart from traditional input and output indicators, evaluators need to focus on students' ability to integrate interdisciplinary knowledge and solve problems. New liberal arts will cultivate talent with a creative vision.

Those who are building the new liberal arts are still making exploratory efforts with talent training models, developing research norms and ethics, organizational edifices, and infrastructure. Evaluators are obliged to shift their primary goal from "review" to "diagnose and recommend," thus expanding their service role.

Varied evaluation

Meanwhile, scholars should respect the new liberal arts' characteristics while refining evaluation classifications. Unlike traditional liberal arts, the new liberal arts are interdisciplinary, so they generally feature problem orienta-

tion, integrated knowledge and personnel collaboration. A major driving force establishing the new liberal arts is the desire to solve social problems. To solve major issues in human development, the new liberal arts aim to supply a disciplinary perspective other than natural sciences.

This new quality of liberal arts, adds empathy and humanistic values to the effective coordination of scientific culture. Meanwhile, information technology has remarkably transformed people's methods of production and lifestyles. The humanities and social sciences have encountered unprecedented issues in the context of artificial intelligence, including serious legal, ethical, and moral quandaries. There is a critical need to analyze them through interdisciplinary collaboration. The practice of evaluating the new liberal arts must regard each discipline's social influence and emphasize the effectiveness of constructing a social feedback mechanism.

Comprehensive methods

Evaluators should seek concise and comprehensive approaches while focusing on typical case studies. In regard to implementation, the first step in designing evaluation work is to sharpen existing methods. The new liberal arts have yet to develop a mature disciplinary ecology, and have not gathered enough peers for a sophisticated peer review process. This means that evaluation experts should have excellent interdisciplinary literacy. It is quite challenging to select and organize experts for peer review work, and the experts will find it difficult to reach a consensus. Meanwhile, metric-based evaluation also relies on data. In this regard, the new liberal arts lack systematic data support and standardized metrics. The adoption of either qualitative or quantitative evaluation methods is likely

to cause greater deviations than traditional disciplines. Therefore, evaluators should adopt a comprehensive approach that combines qualitative and quantitative methods. The approach can formulate evaluation strategies in accordance with concrete application scenarios.

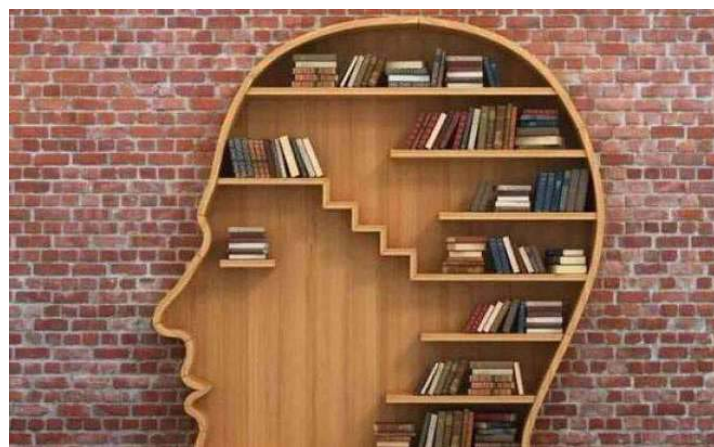
The structure of the humanities and social sciences is not as rigid as that of the natural sciences, and this flexibility also applies to new liberal arts disciplines such as economic anthropology, historical anthropology, and fine arts archaeology. These new subjects are more similar to traditional humanities and social sciences, and evaluators should consider features such as the difficulty of quantifying academic achievements, the limited number of published papers, the difficulty of publishing papers in international journals, and un-systematic data citation. It is not practical to apply metric-based evaluation methods in these contexts. Therefore, a comprehensive evaluation would rely on peer review, while metric methods would play a supplementary role, such as automatic verification of reported data.

With the introduction of information technology, the deepening of human understanding, and the transformation of production methods and lifestyles, the humanities and social sciences are facing more complex social and cultural problems than ever before, and they have become more active in resolving them. In terms of disciplinary composition, social sciences and natural sciences, with distant backgrounds, integrate into fields such as computational social science.

These new liberal arts are directly problem-oriented. When considering computational social science, selecting and organizing peer review experts is even more challenging. In this context, a metric-based analysis method may be more helpful. Metric-based analysis of multiple data points can aid experts to make more effective judgments based on a higher level of integrated information.

A special interdisciplinary form, the new liberal arts, is more complex in terms of factors that influence their achievements when compared with those of traditional disciplines. The nonlinear relationship between its input, output, and influence makes the production cycle of its studies longer, and its achievements may take effect over a longer period of time. Hence, evaluators should focus on the incremental validity of the new liberal arts, thus contributing to the solutions of major social problems.

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