

From "Extensive" to "Connotative" Development: Modernization of Chinese-Style Education

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Jiuquan Yang (杨九诠) 🗅

Institute of Curriculum & Instruction, East China Normal University

Highlights

- The transformation of China's education reform from extensive to connotative development involved a shift from characteristically exogenous and late development to endogenous and spontaneous development.
- The mechanism behind the shift from rationalism to universalism has resulted in tension between *extension* and *intension* in the process of modernization.
- Reflexive modernity has always existed in historical experience and situations, strengthening the appeal of intension to the right of defining.
- In terms of the scale effect, the expansion of higher education enrollment made historically significant contributions to the modernization of education in China; however, it also had several disadvantages.
- China's educational modernization invariably requires solving the problem of large-class teaching and promoting small-class teaching in the process of shifting from extensive to connotative development.

Keywords

Connotative development, extensive development, globalization, higher education enrollment expansion, intension, small-class teaching, universalism

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Corresponding author:

Jiuquan Yang, Institute of Curriculum & Instruction, East China Normal University, 3663 North Zhongshan Road, Shanghai 200062, China.

Email: jiuquan@vip.163.com

How to identify, describe, and analyze the modernization of Chinese-style education, as well as its *extensive* and *connotative* development, may be a more appropriate option for building a research framework. However, most researchers agree that the shift from extensive to connotative development reflects the inherent laws and realistic requirements of China's educational reform and development. Indeed, in the pragmatics of scientific knowledge, the shift *from extensive to connotative development* has become a common and familiar expression, indicating its value as a framework. By clarifying and recontextualizing this framework, this study explores the basic characteristics and development process of the modernization of Chinese-style education.

From exogenous to endogenous: Facts as the logic

In China, modernization—the strategic theme guiding the country's advancement—is characteristically exogenous and late-developing. In other words, China is still in the general and long-term process of transformation (i.e., exogenous) and still catching up with and seeking to surpass others (i.e., late-developing). As endogenous development cannot occur through internal resources alone, the exogenous nature of China's modernization necessitated the strategy of reform and opening-up. Meanwhile, the late-developing nature of China's modernization required accelerated development. Consequently, education reform and development was periodically characterized by supernormal growth, while many decisions and matters ran against the regular pattern. Although many of the cases considered to be against the regular pattern are "facts" requiring our vigilance, reflection, and correction, broadly speaking, they were more likely to be against the norm—an understandable and even necessary approach at the strategic level. When the imitative exogeneity developed to a certain level and extent, it gradually became endogenous, the subsequent connotation initiating the education reform and development agenda of education in the new era. When the late development progressed to a certain level and extent, it gradually became spontaneous, the intension guiding the reform and development agenda of education in the new era. This shift can be summarized as the transformation from the hypernormal to the new normal (Chen, 2016; Yang, 2014).

With the rapid expansion of the extensional scale and quantity of funds, land, personnel, and hardware after a certain period of time, the *intensional* features—such as meaning, value, function, and quality—must become dominant in China in order to steer the reform and advancement of its endeavors, including that of education.

In November 2011, the Chinese government declared that all of its county-level administrative units and provincial-level administrative divisions had successfully popularized nine-year compulsory education and eliminated illiteracy among the young and middle-aged ("double bases"), noting that the results had been checked and accepted by the state. As such, the state had successfully

accomplished a strategic mission of historical significance—one reflected in several key policy developments. Corresponding to this historical development, the theme of the National Education Working Meeting changed from "Fighting for 'Double Bases'"—originally adopted in its second meeting in 1994—to the "Full Implementation of Well-Rounded Education" in the third meeting in 1999. In 2002, the National Education Working Meeting reiterated the need to "accelerate the high-quality and connotative development of education." Issued in 2006, Several Opinions of the Ministry of Education on Comprehensive Improvement of the Teaching Quality of Tertiary Vocational Education (No. 16 [2006] of the Ministry of Education about higher education) was the first document to advance the need to "appropriately control the growth rate of enrollment in tertiary vocational schools, relatively stabilize the scale of enrollment, and effectively place the focus of the work on proving quality." With the State Council's 2006 decision to limit the growth rate of higher education enrollment expansion to 5%, the extensive development mode initiated in 1999, which featured the enrollment expansion of higher education institutions, came to an end. Released in 2010, The Outline of the National Plan for Medium- and Long-Term Education Reform and Development (2010-2020) (hereinafter, the National Education Plan) proposed that "the focus of vocational education should be on quality improvement, taking service as the goal and facilitating employment as the guidance, thereby promoting the reform of education and teaching." With the promulgation of the National Education Plan as the turning point, the development rate of China's preschool education changed from slow to fast. Despite the phased alleviation of the "kindergarten crunch," the problem of "low-quality kindergartens" has become prominent, resulting in quality improvement emerging as a new theme in preschool education development. Then, in March 2012, Several Opinions of the Ministry of Education on Comprehensive Improvement of Higher Education Quality (No. 4 [2012] of the Ministry of Education about higher education) was issued and stipulated that the public regular institutions of higher education should maintain a stable rate of undergraduate enrollment and adhere to "the road of connotative development with quality improvement as the core."

As some scholars have noted, the transition from extensive to connotative development does not mean that the macro decision that prioritized extension was wrong. Connotative development "is not a strategy for enhancing quality and suppressing quantity, or else it becomes an action to add an exact opposite connotation to the concept" (Fu, 2009). The thematic changes from scale expansion, increasing the total quantity, as well as imitation and learning from others to structure optimization, quality improvement, and innovation and development represent the shift in China's education reform and development from one underpinned by extensive logic to one on connotative logic. Intension will gradually become the main aspect of the contradiction in its relationship with extension, coming to play a leading and decisive role. Of course, this process is long-term, arduous, and full of uncertainties.

Issued in January 2018, Opinions of the Central Committee of the Communist Party of China and the State Council on Deepening the Reform of the Building of the Teacher Team in the New Era (hereinafter, Opinions) advocated that, in the development of education, "the issue of emphasizing extension and neglecting connotation still stands out." Although there is no lack of extensional planning and orders in *Opinions*, the majority are aimed at connotative development. Examples include supporting and promoting "teacher education in high-level comprehensive universities"; innovating, optimizing, and standardizing the "personnel establishment and staffing of primary and secondary school teachers"; emphasizing and strengthening the identity and role of "the public nature of the teacher's profession"; as well as orders concerning the treatment and guarantee mechanism for primary and secondary school teachers, all of which focused on improving the "professional quality and ability" of the teaching staff. On the one hand, in certain fields and periods of China's education, extensive development and connotative development are and will continue to be intertwined. On the other hand, connotation is more complicated than extension. Initially, scholars of logic were daunted by the study of intensional logic, as intension is opaque, uncertain, more complex, and difficult to comprehend. Therefore, there is a consequential and corresponding relationship between the judgment that "China has entered the deep end of its reform" and the strategy of connotative development.

Modernity drives modernization: Logic as fact

Although the discussion above provides an explanation of the modernization of Chinese-style education, it is not entirely convincing. According to the framework of extensive and connotative development, this explanation indicates that the logic of "transforming from learning and imitation to self-reliance" remains dominant. Common logic holds that the process of learning and imitation necessarily involves a stage of extensive development from "being similar to" to "being decent." While the process of transforming from learning and imitation to self-reliance is characterized by the shift from extension to connotation, it is not necessarily related to modernization.

It is necessary to clarify how "the shift from extensive to connotative development" itself is a construction model of modernization, one underpinned by the logic of modernity. According to Huntington (1971, p. 289),

Modernization is a homogenizing process. Many different types of traditional societies exist; indeed, traditional societies, some argue, have little in common except their lack of modernity. Modern societies, on the other hand, share basic similarities. Modernization produces tendencies toward convergence among societies.

In this respect, the notion of "tendencies toward convergence" refers to the *homogenizing* process of universalism, which is caused by rationalism. As the most basic principle of modernity,

rationalism derives the basic structure of modern society. As universalism is the manifestation of rationalism, "enforcing justice on behalf of Heaven" articulates the power of rationalism to shape and discipline the world. Expanding on this, Max Weber introduced *universalism* to the definition of modern capitalism in reference to the free flow and organization of labor and resources after the elimination of distinctions between inside and outside, as well as the form rationalization that is impersonal and corresponds to the facts. In opposition to this, particularism refers to the difference between inside and outside and the differences from person to person. Therefore, some scholars argue that, "Compared to rationalism, universalism is more suitable for Weber's definition of modern capitalism" (Xiao, 2020, pp. 22–40).

Formalized universalism is characterized by extension and, as the driver of the agenda and the initiator of the issue, it dominates the relationship between extension and intension. Contrary to "the principle that intension determines extension," which is the generally believed logic, *extensional definition* as an act of "referring" and "assigning" dominates *intensional definition* as an act of "meaning" and "endowment" (Hurley & Watson, 2016).

The derivation mechanism from rationalism to universalism has resulted in the tension between extension and intension in the process of modernization. This tension is systematically manifested in the two paradoxes of modernity during the process of modernization. The first paradox is that rationalism results in the prominence of subjectivity, while universalism, which features "the form rationalization that is impersonalized and corresponds to the facts," dominates individualism in reverse so that everything is "produced as a sign and an exchange value (the relationship value of signs)" (Baudrillard & Levin, 1980).

It is on this basis that Marx and Engels (1975) advanced the argument of the socialization of production, which is "premised on the production that is built on the foundation of exchange value" and "produces the universality and comprehensiveness of personal relationships and personal abilities." The second paradox involves the tension between nation-states and globalization. Hobsbawm's *Nations and Nationalism* regards nation-states as a product of modernity, a view generally accepted by the social science community. Indeed, the nation-state is often regarded as the unit of globalization. At the same time, globalization has disciplined and restrained the national characteristics and local knowledge of nation-states. Indeed, the process of globalization and the trend of anti-globalization have always gone hand-in-hand. Upon applying this concept to China's "reform and opening-up," the key term of Chinese-style modernization, "reform" refers to the transformation from an agricultural society to a modern industrial society, underpinned by the logic of rationalism and universalism in the socialization of production, while "opening-up" refers to the active response of nation-states to globalization. The control of universalism over individualism and of globalization over local knowledge conform to a basic logic that is linear, controllable, externalized, and simply modernized (Beck et al., 1994), as well as a typical dominant logic of extension with an assigning nature.

However, modernization is not very clean and tidy. There have always been contradictions and conflicts between universalism and individualism, as well as between globalization and localization, illustrating the reflexive characteristics of modernity. On the one hand, the reflexivity of modernity has always existed in historical experience and situations, with ceaseless intersections and conflicts between various forces. On the other hand, once modernization progresses to a certain stage, the reflexivity of modernity becomes a characteristic of the times. As Beck et al. (1994) explain, "The more societies are modernized, the more agents (subjects) acquire the ability to reflect on the social conditions of their existence and to change them in that way." This is the "basic thesis" of the theory of "reflexive modernization" (Beck et al., 1994). Accordingly, this article's discussion of the transformation process of the Chinese-style modernization of education from extensive to connotative development can be situated as following Lash's idea of "with the advent of reflexive modernity, what follows is ..." (Beck et al., 1994). The aforementioned stage of modernization can be explained by the knowledge economy, a term familiar to most people. In terms of the relationship between extension and intension, the discussion of the transformation brought about by the knowledge economy is best illuminated by McLuhan's (2019) notion of explosion and implosion. According to McLuhan (2019, pp. 53-54),

The stepping-up of speed from the mechanical to the instant electric form reverses explosion to implosion. In our present electric age, the imploding or contracting energies of our world now clash with the old expansionist and traditional patterns of organization.

Interestingly, McLuhan (2019, p. 54) went on to discuss education, noting that,

In education, likewise, it is not the increase in numbers of those seeking to learn that creates the crisis. Our new concern with education follows upon the changeover to an interrelation in knowledge, where before the separate subjects of the curriculum had stood apart from each other.

As these excerpts clarify, intension is becoming the driver of agenda and initiator of discussion in educational development and reform within the relationship between extension and intension.

If the first section of this article is the first clause, then the foregoing discussion is the second—thus forming the complex sentence: "the reason for ... to happen is" However, this article prefers to "weave" these into more complete expressions of "exogenous and late-developing" and "endogenous and spontaneous," which serve as the "verbs" of China's education modernization as driven by modernity. In his article, "Modernization Theory and the Comparative Study of National Societies: A Critical Perspective" (1973), Tipps, a professor at the University of California, Berkeley, regards the national territorial state as a concept of *critical theoretical significance* for the analysis of modernization. After all, he notes, "it is here, at the national level, that the

various facets of the modernization process are seen to be aggregated" (Tipps, 1973, p. 202). The general expression of the transformation of Chinese education from extensive to connotative development is thus a vivid illustration of universalism and globalization in the context of China's reflexive modernization. This perspective allows us to identify and examine the various transformations and developments of China's education, as well as the contradictions and difficulties faced in the process.

The logical relationship between extension and intension: Two cases

This section introduces two case studies to illustrate extension dominance and intension dominance respectively: namely, the expansion of higher education enrollment and the problem of large- and small-class teaching. Rather than detailing the elements and structures of the cases in terms of the process of modernization, this section seeks to illustrate the mechanism underlying the transition from extensive to connotative development.

The first case pertains to the plan to expand student enrollment in higher education institutions. Chinese-style modernization involved the transformation from an agricultural to an industrial society, and has been characterized as late-developing and seeking to catch-up with and surpass other advance countries (Wang & Huang, 2022). In this regard, extensional definition, as an act of referring and assigning, was adopted as the basic perspective and strategy during the initiation stage. Before stepping into the new normal dominated by intension, there was a general tendency to act against the regular pattern. Initiated in 1999, the enrollment expansion plan of higher education institutions was a typical extensive development of education. It should be noted that the expansion of higher education enrollment achieved the government's goal of "driving domestic demand, stimulating consumption, promoting economic growth, and relieving employment pressure" to some extent. Certainly, in terms of scale effect, it made historically significant contributions to the modernization of education in China, while promoting the expansion of scale and improving the quality of China's industrialization as a whole. However, the expansion of higher education enrollment also produced several disadvantages, including a decline in the quality of education, and was thus terminated in 2012 (China Education Online, 2012).

The foregoing raises the question of whether the logic of extension domination is wrong. This study argues that this is not the case. Rather, the expansion of higher education enrollment was not only proposed with good intention but also based on sound logic. Arguably, this hypernormal plan created problems against the regular pattern because the extension itself, which was supposed to play a leading role, had gone wrong. At the Forum for Presidents of Chinese and Foreign Universities celebrating the 85th anniversary of Xiamen University, Professor Maoyuan Pan bluntly admitted that the expansion of higher education enrollment had resulted in a serious

shortage of university resources. Indeed, in addition to shortage of accommodation, there were too few desks for the growing number of students, which illustrated the weak leadership of extension. However, in his keynote address at a summit held in November 2022, for which the author was responsible for summating and commenting on, Professor Jie Yin, Provost and Vice-Chancellor of ShanghaiTech University, noted the urgent need for a vast number of talents to advance China's modernization, placing particular emphasis on the enrollment expansion of higher education institutions. He further noted the importance of expanded enrollment in accelerating the process of China's modernization. Yin also argued that the decline in education quality as a result of enrollment expansion could be mitigated by the combination of higher education institutions following the completion of the enrollment expansion plan. In other words, as the plan had been implemented in the wrong order, extension featuring downsizing had been forced to play the role of expansion, resulting in varying degrees of deviation in the advancement of the agenda—that is, the "imbalance of educational expansion" (Zhan, 2009, pp. 24–25), caused by the enrollment expansion of higher education institutions, is the imbalance of the relationship between extension and intension.

The second case is that of the problem of large- and small-class teaching, with particular emphasis on the latter. China's educational modernization invariably requires solving the problem of large-class teaching and promoting small-class teaching in the process of transforming from extensive to connotative development. In 2011, the Ministry of Education held a special seminar on solving the problem of large-class teaching in cities and towns. Issued in 2016, Several Opinions of the State Council on Overall Plans to Promote the Reform and Development of the Integration of Urban and Rural Compulsory Education Within Counties (No. 40 [2016] of the State Council) announced the government's intention to control the proportion of large-class teaching in compulsory education, setting a bar of no more than 5% of classes across the countrywide, and completely eliminate super-large classes comprising more than 66 students by 2020. By 2019, the number of large classes in compulsory education had dropped to 3.98% nationwide, fulfilling the target ahead of schedule.

Reducing or even eliminating large classes has typically been dominated by extension. Large-scale educational evaluations have confirmed that solving the problem of large class teaching can promote the physical and mental health of students and improve the quality of education and teaching. Meanwhile, although the promotion of small-class teaching seems like a concept of extension, it is primarily dominated by intension. As a new model of educational development, small-class teaching is an important educational agenda initiated by the connotative development method. Known as the "Copernican revolution", this approach seeks to realize a shift from the materialization of education to humane education (Tao, 2010). The promotion of small-class education at the state and provincial level was first stipulated in 2010, with the issuance of the Outline

of the 12th Five-Year Plan for Economic and Social Development. In 2017, Baosheng Chen, the Minister of Education, delivered a work report at the National Education Working Meeting, stating that "it is necessary to implement the special plan for eliminating large classes and prepare overall plans to promote the reform of small-class teaching."

However, various surveys and studies have found that many regions still use small-class teaching as a means of improving student performance, evidencing the emergence of a worrying trend of the "phenomenon of materialization" in small-class teaching. Small-class teaching has also alleviated the intensity of competition, the basis of test-based teaching. Therefore, under traditional teaching and learning methods, which are largely characterized by "spoon-feeding education" and "constant practice," small-class teaching leads to lower student test scores. The purpose of small class teaching is to provide educational opportunities for dialogic teaching, cooperative learning, inquiry activities, and the exchanges between subjects, namely teacher-student and studentstudent, in terms of time and space. In the terminology of the reflexive modernization theory, small class teaching is the construction of activity sites by "agents (subjects)" and the transformation of the teaching (learning) space into scenarios and ecologies. However, the educational agenda originally initiated for connotation "barely changed the situation due to the classroom teaching of the vast majority of teachers in small-class schools" (Wu, 2015). As such, the basic elements of the education model have been lost, the model even twisted against its original purpose so that the initiator of the agenda of intension has surrendered the dominance it should have had. As indicated by the title of Achilles's (1999) seminal work on small-class teaching, Let's Put Kids First, Finally: Getting Class Size Right, intension always plays an initiating and dominating role. Indeed, "Getting Class Size Right" is the qualifying subtitle, reflecting how extension plays the role of echoing and communication. It is only in this way that small-class teaching can realize the function and value of "humane education."

Conclusion

The transformation from exogenous and late-developing to endogenous and spontaneous is the "logical fact" of how China's education reform and development transformed from extensive to connotative development. Driven by modernity, modernization is the actual deep logic underlying Chinese education's transformation from extensive to connotative development. Given its assigning nature, extensive development is characterized as controllable, externalized, and simply modernized, which is generally input and supplied. The input subjects are mostly external and are usually expressed in single imperative sentences in the discourses. Reflexive modernity has always existed in historical experiences and situations, strengthening the appeal of intension to the right of defining. With the advent of the knowledge economy, intension has become the initiator

and leader of the education modernization agenda in the form of implosion. The connotative development of education is, as a whole, occurring through output and is endogenous, while the output subjects are more internal and are usually expressed in compound propositions in the discourses. In the sentence patterns dominated by connotation, different subjects intervene at the same time, manifesting as a form of complex sentences in the public governance of education. This is an extremely complicated ecological scene. It is also an appropriate scene that we can expect to see in the future of Chinese-style modernization of education.

Therefore, to conclude, it is worth emphasizing that "from extensive to connotative development" may be treated only as an analytical framework; otherwise, it may be alienated into another kind of "assigning" and thus becomes extensional. For example, a school-based curriculum is supposed to be vivid, living, and growing. However, those who implement the school-based curriculum are inclined to "borrow" the design ideas and working mechanisms of the "ideal curriculum" and "formal curriculum," thus failing to solve the "crisis of education" mentioned by McLuhan. Let us heed the warning of the contemporary French novelist Michel Houellebecq: "Life has never been recognized; we are all captured by concepts." Only in this way can the connotation be truly connotative.

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ORCID iD

Jiuquan Yang https://orcid.org/0000-0003-3476-4829

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