Enlightenment from the Curriculum Reform of Primary and Secondary Schools in Mainland China from a Global Perspective

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Abstract With the advancement of globalization and technological development, countries around the world are placing greater emphasis on the reform of basic education curricula. The curriculum reforms in countries such as Australia, Finland, Canada, the United States, Japan, and the United Kingdom are becoming more life-oriented and open. By reviewing, organizing, and drawing lessons from the experiences of curriculum reforms worldwide, the curriculum reform of primary and secondary schools in mainland China should reflect educational equity and high-quality development, pay more attention to the construction of teacher teams, emphasize students' competency orientation, strengthen the overarching role of core curricula, and fully leverage the role of local characteristic curricula.

Key words Basic education; Curriculum reform; International comparison; Trends in mainland China's curriculum reform

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With the deepening of globalization and the rapid development of science and technology, talent has become the primary productive force that countries are competing to develop. The Organization for Economic Co-operation and Development (OECD) released the 21st *Century Skills and Competences for New Millennium Learners in OECD Countries* in 2009, emphasizing the cultivation of learners for the new century from four dimensions: information, communication, ethics, and social impact[1].

Furthermore, to ensure that students are prepared for successful lives and careers in the 21st century, the Australian Department of Education released the *Australian Curriculum, Assessment, and Reporting Authority* (ACARA) in 2011, focusing on knowledge, skills, behavior, and ethics as the core of curriculum reform[2].

The European Commission published the *Assessment and Teaching of* 21st*-Century Skills* (ATC21S) in 2013, encouraging basic education classrooms to strengthen the cultivation of student competencies[3].

The United Nations Educational, Scientific and Cultural Organization (UNESCO) emphasized in its 2014 - 2021 *Medium-term Strategy* the need to support member states in establishing high-quality education systems and promoting lifelong learning. At the same time, in the face of rapid technological innovation and strengthened global cooperation, the second goal of the strategy highlights the importance of cultivating world citizens with innovative spirit, critical awareness, global perspectives, and a sense of human responsibility[4].

In this international context, whether reflecting on the shortcomings of their own education systems or proposing new goals and measures for educational reform, countries are focusing on the key points of basic education. The orientation of educational reforms goes beyond mere systemic changes, increasingly focusing on curriculum and teaching innovations, and striving to implement the concepts of educational reform in classroom teaching and teacher - student interactions. In this global environment, countries around the world are actively engaging in basic education curriculum reforms.

1 Curriculum reforms in various countries

1.1 Basic education curriculum reform in Australia Australia's educational philosophy emphasizes equity and the pursuit of excellence. It establishes a national curriculum, develops school-based curricula, flexible and humanized curriculum settings, and a well-developed and systematic evaluation system. Teacher standards are unified, and a decentralized and democratic management system is implemented. The main contents of Australia's curriculum reform are as follows:

(1) Emphasis on equity and pursuit of excellence. In 2007, Labor Party leader Kevin Rudd paid attention to the issue of equity in basic education, emphasized the need to shift the focus from quality to equity, and issued the *Melbourne Declaration*, aiming to make all Australian youth successful learners, confident and creative individuals, and active and informed citizens[5].

(2) Establishment and implementation of a national curricu-

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lum. In April 2008, Australia established the "National Curriculum Committee", led by Professor Barry McGaw and a 12-member think tank, to develop unified core content and achievement standards for curricula from preschool to high school (12 grades). The "national curriculum" was piloted in about 150 schools starting in January 2011 and fully implemented across all Australian schools in 2013. The national curriculum has largely eliminated differences between states and territories, addressed issues related to student mobility, and provided a unified standard for assessing student learning and development in Australia[6].

(3) Development of school-based curricula. While establishing a national curriculum, Australia also allows local schools to develop school-based curricula with local characteristics. In addition to the national curriculum, Australian primary and secondary schools offer locally tailored school-based curricula.

(4) Humanized curriculum design. Australia has been continuously reforming its curriculum, improving both the national and school-based curricula, and giving schools maximum autonomy in curriculum development and selection. The basic curriculum in Australia is designed to be close to life, respect individuality, and offer a rich variety of courses, which is a distinctive feature of Australian basic education.

(5) Well-developed assessment system. In addition to national exams, Australian middle schools also have state and private school assessments. These assessments vary depending on the school level, subjects, and state policies. In high school (Grades 11 – 12), multiple assessment methods are used, including external unified exams, school-based assessments, non-school-based assessments, and sample tests.

1.2 Finland's latest basic education curriculum reform Finland's achievements in basic education are globally renowned, especially with the introduction of "phenomenon-based teaching" in the 2016 curriculum reform, where traditional subjects are replaced by phenomena or themes. The *National Core Curriculum for Basic Education* (2014) in Finland emphasizes the use of phenomenon-based teaching to describe and explain multi-disciplinary learning modules, requiring the study of real-world phenomena or themes as a whole within each subject[7].

1.3 Basic education curriculum reform in British Columbia, Canada Rob Fleming, the Minister of Education in British Columbia (BC), Canada, emphasized that improving future national competitiveness lies in ensuring the leading quality of basic education. The new curriculum reform in BC aims to cultivate knowledgeable citizens[8].

The BC curriculum reform of basic education features a "core" and "flexible" approach, aiming to cultivate "well-educated citizens". BC issued the Introduction to British Columbia's Redesigned Curriculum in August 2015[9]. The reform is based on practical research, extensive consultation, and successful teaching experiences from around the world, forming a KDU (Know-Do-Understand) curriculum model that combines "flexibility" and "core". It promotes students to become high-quality citizens with good education in the future, and has certain reference significance for the development of basic education in China.

1.4 Basic education curriculum reform in the United States Since 2000, the United States has implemented two acts (the *No Child Left Behind* and the *Blueprint for Reform*) to address international competition and improve the worrying state of basic education domestically. The reforms cover curriculum concepts, content, teacher support, curriculum management, and evaluation.

1.4.1 Background of the *Next Generation Science Standards* (NGSS) in the United States. First, performance of U.S. middle school students in international tests is poor. In the 2010 PISA (the Program for International Student Assessment), the United States students ranked 23rd out of 65 countries[10]. Regarding this phenomenon, David, the executive of NSTA, pointed out that the United States urgently needs to change the way and content of science education, and urgently needs a new guideline.

Second, the United States began a new round of research and development of science education standards in 2010, and developed the *Framework for K-12 Science Education* (hereinafter referred to as the *Framework*) in July 2011. The *Framework* outlines the core concepts and practical knowledge that high school graduates should master in science education, providing strict and effective guidance for the formulation of the NGSS. Based on the Framework and years of scientific research results in science education, the United States promulgated the *Next Generation Science Standards* in April 2013.

1.4.2 Main contents of basic education curriculum reform the United States in new century. Firstly, to address the bottlenecks encountered in the implementation of the act *No Child Left Behind*, the Obama administration made the following improvements: firstly, pre-school education was formally incorporated into the curriculum reform system for basic education in the new century. Emphasis was placed on early childhood care and education, with a focus on expanding childcare and early education programs for low-income families. Secondly, importance was attached to the curriculum reform for special education among special needs children to provide them with special education. It should ensure academic success for disabled children, support early intervention and services for disabled infants and toddlers, and increase opportunities for disabled students to attend college.

Secondly, in terms of curriculum content, basic subjects were emphasized as the core of primary and secondary school curricula. Students were trained in systematic and solid fundamental knowledge and skills through the study of core subjects such as English, mathematics, science, history, and geography. The act *No Child Left Behind* proposed the "Reading First Initiative" to ensure universal literacy among American students, aiming to ensure that all students reach the third-grade reading level.

Thirdly, in terms of teacher quality assurance, in addition to continuing policies to improve teacher quality, the Obama administration's *Blueprint for Reform* placed greater emphasis on balancing the need for excellent teachers across schools. In terms

of teacher recruitment, a new "Teacher Service Bonus" was established, and high-quality, selective learning programs were provided for in-service teachers. In addition, all colleges of education were required to undergo accreditation, and the nation established a voluntary national performance evaluation system to ensure new teachers received training.

1.5 Basic education curriculum reform in the United Kingdom The basic philosophy of the UK's curriculum reform is to "better prepare students for life after graduation" and to "create educated citizens". The curriculum action based on core competencies focuses on integrating key skills into the national curriculum system, manifested in a "flexible yet structured" subject setting, an "innovative yet traditional" design of study phases, and the creation of "inclusive" learning opportunities. Fig. 1 is the distribution of key abilities among British students in different age groups[11].

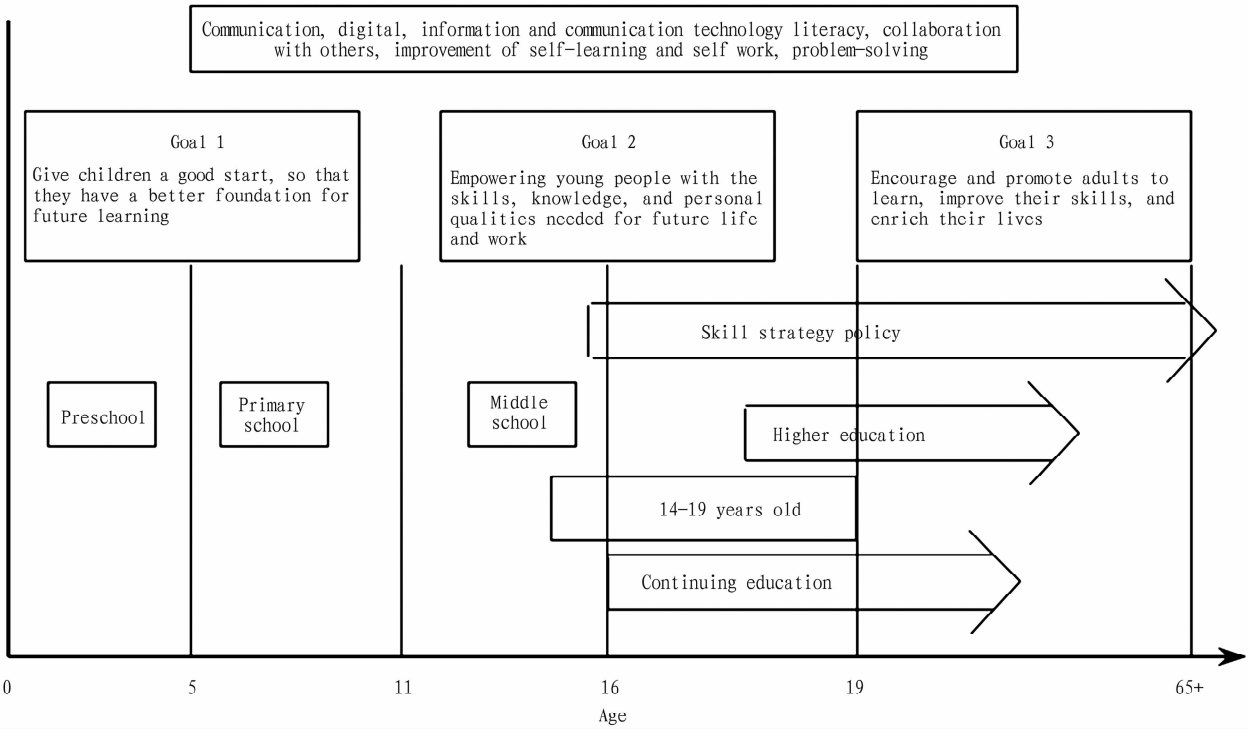

Fig. 1 Distribution of key abilities among British students in different age groups

The UK curriculum reform retains the structure of "core subjects + foundation subjects". To highlight the knowledge essential for future development, English, mathematics, and science are identified as core subjects. Table 1 is the focal points of the national curriculum objectives in the UK[12].

1.6 Basic education curriculum reform in Japan Japan's *Guidelines for Learning Instruction* were officially promulgated in March 2017, marking the beginning of a new round of curriculum reform in Japan. It was the second curriculum reform since Japan entered the new century.

The background of this new round of curriculum reform in Japan includes several aspects. Firstly, Japanese basic education is at a disadvantage in international competition. Due to the "easy education" philosophy in the early 21st century, Japanese students' academic abilities declined. Although the Ministry of Education, Culture, Sports, Science, and Technology (MEXT) took measures such as increasing total instructional time, reducing comprehensive learning time, and increasing foreign language class hours, the Trends in International Mathematics and Science Study (TIMSS) survey conducted by the International Association for the Evaluation of Educational Achievement (IEA) in 2011 showed that Japanese middle school students' thinking, judgment, and expression abilities were at a disadvantage[13].

Secondly, it is to comply with the global trend of using core competencies as educational goals. Since the beginning of the 21st century, countries have proposed visions for future talent cultivation to enhance their comprehensive national strength. Against this backdrop, Japan's *Guidelines for Learning Instruction* in 2017 was based on the "Basic Research on the Compilation of Educational Curricula" project in 2009. It integrated core competencies and ideas throughout the objectives and content of various subjects, and placed greater emphasis on students' life skills, such as "acquisition of knowledge and skills, thinking and judgment abilities, and expression abilities"[13].

Thirdly, it is the requirements of newly revised Japanese laws. The 2017 revised edition of the *Guidelines for Learning Instruction* is based on laws such as the *Basic Education Act* and the School Education Act, fostering students' creativity and autonomy while respecting their personal values and individual health. Grea-

ter emphasis is placed on training students' thinking and judgment abilities, expression abilities, and strengthening the conduct of social experience activities and the development of vocational concept training activities[14].

Table 1 Focal points of the national curriculum objectives in the UK

Subject	Focus in goal statement
English	Spoken language; reading (vocabulary, comprehension); writing; spelling; vocabulary; grammar, *etc.*
Mathematics	Conceptual understanding; recall and apply knowledge; mathematical reasoning; problem solving; information and communication technology
Science	Scientific knowledge; big concept understanding; developing an understanding of natural processes and scientific methods; application of current and future science
Citizenship education	Acquiring solid knowledge; law and social justice; interest and participation; critical thinking and political issues; self management
Art and design	Human creativity; creative works; exploration; analysis and evaluation; understand and comprehend
Computer	Computer thinking; understanding and application; analyze the problem; evaluation and application; responsible, capable, confident, and creative users
Design and technology	Developing expertise in creativity, technicality, and practicality; building and applying knowledge, understanding, and skills; criticism, evaluation, and testing; understanding and application
Geography	Background knowledge; understand the characteristics and processes of the relationship between the world and human geography; geographic skills (collecting, analyzing, communicating, mining geographic information resources, and communicating geographic information through multiple channels)
History	Knowing and understanding consistent, chronological national history and key global events; acquiring and developing an understanding of the historical context of abstract historical terminology; understand historical concepts, historical exploration methods, and historical perspectives; critical thinking, weighing evidence, screening arguments, developing viewpoints
Language	Understand and respond to spoken and written language; increasingly confident, fluent, and spontaneous speech; writing; discover and develop an appreciation for language; curiosity; deepen understanding of the world; expressing thoughts and opinions
Music	Develop music hobbies and talents; enhance confidence, creativity, and sense of achievement; playing, listening, commenting, and appreciating; learn to sing and produce sound, arrange and use musical instruments; understanding and exploration
Physical education	Inspire; experience confidence in a healthy way; develop values of fairness and respect; development capability; enhance physical vitality; participate in competitive sports; guide a healthy and positive lifestyle

2 Trends in curriculum reform of primary and secondary schools in mainland China under international education curriculum reform insights

2.1 Reflecting fairness and excellence Issues that trigger educational reform can generally be categorized into three types: problems with educational outcomes, issues related to social organizational changes, and those triggered by changes in academic thinking[15]. Throughout the world, the purposes of educational reform are generally to pursue excellence, hoping to enhance education's role through reform, and to pursue equality, ensuring everyone has access to fair and high-quality education through reform.

Australia focused on the role of education in promoting equity and excellence in the *Melbourne Declaration* in 2008 and designed world-class national curricula in 2012 to meet future societal needs for talent.

As a multi-ethnic country, China faces uneven economic, cultural, and educational development across regions. Therefore, it is necessary to establish first-rate national curricula, like Australia, to accommodate the development needs of different regions, highlighting the two goals of fairness and excellence through a high-quality curriculum framework.

2.2 Emphasis on teacher team building and professional development of teachers and principals To ensure the quality of principals' professional development, the Australian government established a national professional standard on July 8, 2011: the *National Professional Standard for Principals in Primary and Secondary Schools*. Currently, in mainland China, school curriculum managers lack adequate pedagogical content knowledge and curriculum management abilities, hindering the smooth progress of curriculum reform. These adverse phenomena require educational reform in mainland China to focus on teacher team building, prioritize the professional development of teachers and principals, improve the academic qualifications and professional competence of primary and secondary school principals, and cultivate a group of school curriculum teams with professional qualities.

2.3 Emphasis on competency-oriented approaches to promote students' comprehensive ability development

(1) Adhering to the "people-oriented" educational philosophy. It should move out of the dilemma of instrumental rationality, help local schools overcome the erroneous tendency of "solely emphasizing scores", clarify the "people-oriented" philosophy, and cultivate students' core competencies in line with social development[16].

(2) Expanding the scope of subjects in new curriculum and strengthening the cultivation of students' social growth skills. Finland's new curriculum reform introduces new teaching methods, strengthens the integration of basic education, and enhances the cultivation of comprehensive quality of students' adaptation to so-

cial development.

The new round of curriculum content in British Columbia, Canada, covers nine learning areas: applied design, skills, and technology; arts education; career education; core French; English language arts; mathematics; physical and health education; science; and social studies.

The new curriculum reforms and implementation methods in the United States, Japan, and the United Kingdom tend towards daily life and openness. The life-oriented curricula mainly includes two aspects. Firstly, curricula increasingly incorporate content closely related to life. Japan's new curriculum program requires integrated guidance centered on life sciences for elementary school students. Secondly, various educational activities are conducted in connection with real-life social situations. Modern foreign languages are no longer mandatory for students of one year old in the UK, allowing students time for autonomous social experience learning.

The UK's new curriculum reform retains the structure of "core subjects + foundation subjects". To highlight the knowledge essential for future development, English, mathematics, and science are identified as core subjects. Additionally, the nine newly revised foundation subjects cover art and design, citizenship education, computer, design and technology, geography, history, language learning, music, and physical education.

Therefore, China's new curriculum reform should expand subject content, enrich students' practical experiences while strengthening their academic learning, expose students to society and social learning as early as possible, and cultivate their abilities and levels in mastering and applying growth skills in future society.

(3) Curriculum objectives should focus on improving students' core competitiveness. Japan's new curriculum reform emphasizes "deep learning, dialogical learning, and subject-centered learning" in teaching methods, highlighting three levels of student development: achieving deep learning in problem-finding and problem-solving through practical inquiry; expanding one's own ideas through interaction with others to realize dialogical learning; and realizing subject-centered learning with a vision for the future.

Therefore, in addition to emphasizing the "five educations" (moral, intellectual, aesthetic, physical, and labor education), curriculum reform in mainland China should also strengthen the cultivation of students' core competitiveness, enabling them to become talents for building China and participating in international competition.

2.4 Strengthening the dominant role of core curriculum and giving full play to the role of local characteristic courses

(1) Strengthening the dominant role of core curriculum in the curriculum system. The new rounds of curriculum reforms in the United States, Japan, and the United Kingdom all exhibit a trend of strengthening core curricula to ensure the core competitiveness of their basic education.

The United States strives to consolidate its existing educational advantages by enhancing the dominant role of core curricula, thereby improving its international competitiveness.

In addition to language, mathematics, and English, the United Kingdom has included "technology, history, geography, modern foreign languages, arts, music, and physical education" as basic subjects. Moreover, these core curricula account for 30% – 40% of total class hours in elementary schools. Later, the *Independent Evaluation of the Primary Curriculum: Final Report* further divided the original 11 statutory subjects into "six learning areas" and "four core curricula".

Since the mid-1980s, Japan has reversed the trend of continuously reducing class hours in primary and secondary schools. Starting from 2011, it increased the total class hours for the six years of elementary school, decreased the number of comprehensive class hours representing "easy education," and increased the number of class hours for core curricula.

In China's basic education curriculum reform, greater emphasis should be placed on "reducing quantity and improving quality". In the process of promoting the return of the "human-oriented" educational philosophy, the high-quality development of the basic education curriculum should be achieved.

(2) Giving full play to the role of local characteristic courses. The curriculum reforms in the United States, Japan, and the United Kingdom show a converging trend between the "decentralization" and "centralization" models. On the one hand, "decentralization" tends toward "centralization." Both the United Kingdom and the United States are increasingly involved in curriculum management, gradually expanding their intervention in curricula. On the other hand, the "centralization" model tends toward "decentralization." Japan is increasingly emphasizing the role of local governments and schools in curriculum reform. From the Meiji period to the mid-1980s, Japan gradually proposed a "liberalization" education reform route and the reform concept of "easy education", emphasizing proceeding from reality.

While focusing on improving the top-level design, China's curriculum reform should give full play to the role of local characteristic courses, fully guide local schools to develop curriculum content with local cultural characteristics, and construct a characteristic foundational education curriculum system featuring multiple regions, ethnicities, and cultures.

References

[1] 21st century skills and competences for new millennium learners in OECD countries (OECD Education Working Papers, No. 41)[EB/OL]. (2009 – 07 – 01) [2018 – 03 – 25]. http://dx. doi. org/10. 1787/218525261154.

[2] Australian Curriculum, Assessment, and Reporting Authority (ACARA). General capabilities[EB/OL]. (2011 – 05 – 21) [2018 – 03 – 25]. http://www. acara. edu. au/curriculum/general-capabilities.

[3] ATC21S. Assessment and teaching of 21st century skills[EB/OL]. (2013 – 03 – 11) [2018 – 03 – 26]. http://atc21s. org.

[4] 2014 – 2021 medium-term strategy[EB/OL]. (2014 – 02 – 19) [2018 – 03 – 26]. http://unesdoc. unesco. org/images/0022/002278/227860e. pdf.

[5] Australian Education Ministers. *Melbourne Declaration* on education goals for young Australians[EB/OL]. [2013 – 05 – 05]. http://www. mceecdya. edu. au/mceecdya/melbourne_declaration,25979. html.

[6] CAO Y. A preliminary study on the reform of Australia's national unified curriculum framework for basic education[J]. World Education Information, 2012(9): 68 – 72.

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and Personal Relationships, 2020, 37(2): 695 – 714.

[25] MCCORMICK WH, TURNER LA, FOSTER JD. A model of perceived parenting, authenticity, contingent self-worth and internalized aggression among college students [J]. Personality and Individual Differences, 2015, 86: 504 – 508.

[26] MUTHÉN LK, MUTHÉN BO. Mplus user's guide[M]. Eighth edition. Los Angeles, CA: Muthén & Muthén (1998 – 2017).

[27] MARSH HW, HAU KT, WEN Z. In search of golden rules: Comment on hypothesis-testing approaches to setting cutoff values for fit indexes and dangers in overgeneralizing Hu and Bentler's (1999) findings[J]. Structural Equation Modeling: A Multidisciplinary Journal, 2004, 11(3): 320 – 341.

[28] CAO C, LIANG X. Sensitivity of fit measures to lack of measurement invariance in exploratory structural equation modeling[J]. Structural Equation Modeling: A Multidisciplinary Journal, 2022, 29: 2, 248 – 258.

[29] CHEUNG GW, RENSVOLD RB. Evaluating goodness of fit indexes for testing measurement invariance[J]. Structural Equation Modeling: A Multidisciplinary Journal, 2002, 9: 233 – 255.

[30] SCHAEFER LM, BURKE NL, THOMPSON, JK, *et al.* Development and validation of the sociocultural attitudes towards appearance questionnaire-4 (SATAQ-4)[J]. Psychological Assessment, 2015, 27: 54 – 67.

[31] SETTE S, ZUFFIANO A, LUCIDI F, *et al.* Evaluating the student-teacher relationship scale in Italian young children: An exploratory structural equation modeling approach[J]. Journal of Psychoeducational Assessment, 2018, 36(3): 284 – 290.

[32] MORIN AJS, MARSH HW, NAGENGAST B. Exploratory structural equation modeling. HANCOCK GR, MUELLER RO (Eds.), Structural equation modeling: A second course (2nd ed., 395 – 436)[M]. Charlotte, NC: Information Age, 2015.

[33] FU Y, WEN Z, WANG Y. A Comparison of reliability estimation based on confirmatory factor analysis and exploratory structural equation models [J]. Educational and Psychological Measurement, 2022, 82(2): 205 – 224.

[34] KUBSCH M, STAMER I, STEINER M, *et al.* Beyond p-values: Using Bayesian data analysis in science education research[J]. Practical Assessment, Research, and Evaluation, 2021, 26, Article 4.

[35] MARSH HW, MUTHÉN B, ASPAROUHOV T, *et al.* Exploratory structural equation modeling, integrating CFA and EFA: Application to students' evaluations of university teaching[J]. Structural Equation Modeling: A Multidisciplinary Journal, 2009,16(3): 439 – 476.

[36] PADILLA-WALKER LM, NELSON LJ, KNAPP DJ. "Because I'm still the parent, that's why!" Parental legitimate authority during emerging adulthood[J]. Journal of Social and Personal Relationships, 2014, 3: 293 – 313.

[37] YAFFE Y. Systematic review of the differences between mothers and fathers in parenting styles and practices[J]. Current Psychology, 2020: 1 – 14.

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[7] Finnish National Board of Education. National core curriculum for basic education (2014)[M]. Helsinki: Finnish National Board of Education, 2016: 33 – 34.

[8] Education ministerial declaration[EB/OL]. (2018 – 02 – 19)[2018 – 03 – 26]. https://news.gov.bc.ca/ministries/education/biography.

[9] Introduction to British Columbia's redesigned curriculum[EB/OL]. (2015 – 08 – 01)[2018 – 03 – 24]. https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/curriculum_intro.pdf.

[10] BROOKFIELD S. The skills of university teachers: On technique, trust, and responsiveness in the classroom teaching[M]. ZHOU XH, HONG N (translators). Hangzhou: Zhejiang University Press, 2005: 2.

[11] Department for Education and Skills. 21st century skills: Realizing our potential[EB/OL]. [2017 – 06 – 03]. https://www.gov.uk/government/publications/21st-century-skills-realising-our-potential-individuals-employers-nation.

[12] National curriculum in England: framework for key stages 1 to 4[EB/OL]. [2017 – 07 – 06]. https://www.gov.uk/government/publications/national-curriculum-in-england-framework-for-key-stages-1-to-4/the-national-curriculum-in-england-framework-for-key-stages-1-to-4.

[13] Ministry of Education, Culture, Sports, Science and Technology. Learning instructions in schools[EB/OL]. http://www.mext.go.jp/component/a_menu/education/micro_detail/__icsFiles/afieldfile/2017/05/12/1384661_1_1.pdf, 2017.

[14] Ministry of Education, Culture, Sports, Science and Technology. Key points of the revision of the learning instructions in kindergarten education and the elementary and middle schools[EB/OL]. http://www.mext.go.jp/b_menu/shingi/chukyo/chukyo0/gijiroku/__icsFiles/afieldfile/2017/12/25/1399722_09_1.pdf, 2017.

[15] ZHOU SD. Building a world-class basic education curriculum[J]. World Education Information, 2013(10): 40 – 44.

[16] LIU DH. The strategies of curriculum integration to effective transformation of core competencies[J]. Educational Development Research, 2018(6): 40 – 47.