

Chapter 2

Elementary Education in China



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Abstract This chapter introduces elementary education in China, the first stage in formal education. The first part of this chapter provides an overview of elementary education in China with the situation in major developed countries presented as a reference. Then, Shanghai and California are compared to further understand excellence in elementary education, based on publicly accessible statistics retrieved from OECD, official yearbooks, and government websites. Our results demonstrate that China has been doing a remarkable job serving the highest number of children in the world and has been comparable with excellent elementary educational systems across the world with regard to total educational expenditure, gross enrollment rate, student–teacher ratio, student academic abilities, as well as the quality of educational facilities. However, it still falls behind in terms of educational expenditure per student and the composition of the highest educational degree received by teachers. The second part of this chapter further introduces elementary education in China from four aspects, including featured educational practices, stories of inspiring teachers, contemporary educational research, and critical educational policies. Examinations in this chapter suggest that policies, research, and practices go hand-in-hand in improving the quality of elementary education in China by emphasizing educational equity, morality in education, reducing student burdens, and promoting students’ well-being and holistic development. In sum, elementary education in China has been and will further increase its capacity in supporting students’ lifelong development and the sustainable development of the country.

Keywords Elementary education · Educational quality · Educational equity · Moral education · Reducing student burden · All-round development

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1 Introduction

1.1 *The Establishment of Formal Elementary Education in China*

The beginning of formal elementary education in China can be dated back to 1878 when Zhengmeng Academy (*Zhengmeng Shuyuan*) was established in Shanghai. In 1904, the government of the Qing Dynasty implemented the *Presented School Regulation (Zouding Xuetaang Zhangcheng)* (Zhang et al., 1904), which stipulated that seven-year-old children can enroll in elementary school with curriculums including morality, Chinese language arts, arithmetic, history, geography, gymnastics, etc. After the May Fourth Movement in 1919, the Chinese writing system underwent a great change—the Ministry of Education (MOE) promoted simplified Chinese characters to replace traditional Chinese characters starting from the education in the first and second grade in elementary schools. This change has facilitated children's acquisition of reading and writing abilities and contributes to the enlightened role of elementary education.

Since the founding of the People's Republic of China, China's elementary education has become increasingly popular and, particularly has seen a robust growth since the late 1970's. In 1952, *Elementary School Teaching Plan* was issued by MOE, which was the first nationwide standard for elementary education. In 1980, the government issued the *Decision on Several Issues Concerning Popularizing Elementary Education*, elevating the popularization of elementary education nationwide and creating an unprecedented enrollment goal to be achieved in the near future (The State Council, 1980). In 1985, the *Decision on the Reform of the Educational Structure* was issued (Central Committee of the CPC, 1985). This was the first time that the nine-year compulsory education was proposed, which aimed to increase opportunities for enrollment in elementary education. In 1986, elementary education became compulsory, safeguarded by the *Compulsory Education Law of the People's Republic of China*. Since then, elementary education has been both a right and obligation of every citizen in this country. In 1993, the government promulgated the *Program for Educational Reform and Development in China*, which emphasized the importance of elementary education for the development of individuals and that of the country (The State Council, 1993).

1.2 *Contemporary Elementary Education in China*

During the twenty-first century, research on elementary education in China has flourished driven by national needs. In 2001, the New Curriculum Reform was implemented, which encourages in-depth studies on restructuring curriculum, creating evaluation standards, and establishing educational management system. In 2016, the State Council issued *Several Guidelines on Comprehensively Promoting Reform and*

Development to Integrate Urban and Rural Compulsory Education within County Areas, which targets the problem of educational inequality between rural and urban areas (The State Council, 2016). In 2019, the government issued *Guidelines on Deepening the Reform of Education and Teaching and Comprehensively Improving the Quality of Compulsory Education*, which actively responded to issues that have raised great concern in the society, such as elementary school enrollment, reducing student burdens, and teachers' right to discipline students when necessary (The State Council, 2019). Further, it emphasized the need to strengthen family education and home-school ties, so as to collaboratively create a collaborative educational ecology. In 2022, MOE released the *Curriculum Program and Curriculum Standards of Compulsory Education* (MOE, 2022), which updates the content and goals of instructions in elementary schools, strengthening support and guidance for online learning in response to the outbreak of COVID-19.

Nowadays, elementary education in China is free and compulsory for all children who reach six years old, and universal access to compulsory education in China has been achieved since 2011. As a result, elementary education in China serves the largest number of students in the world. With continuous efforts from government and society, the quality of elementary education is advancing as indicated by growing educational expenditure, increasing gross enrollment rate, high-quality teacher professional development, guaranteed educational facilities in the vast majority of elementary schools, and outstanding student outcomes, such as the high completion rate, extraordinary academic abilities, as well as all-round competence in lifelong learning.

A considerable number of outstanding schools have emerged in China as a result of continuous innovation in the new era. Schools have continuously explored new education modes, emphasizing students' well-rounded development and teachers' morality and competencies in teaching. Meanwhile, research on elementary education in China is no longer confined to instructional strategies in certain subject domains but has been extended to a wider range of topics, including all-round development, education equity, and individualized development. China has also been refining educational policies so as to better guide the development of practices in elementary education.

Elementary education in China is now standing at a new historical moment after solving the problem of accessing elementary education, providing high-quality elementary education to all people in the country is the next major challenge. First, from the perspective of educational equity, beyond offering fair opportunities in enrollment, elementary education in China is working on providing fair and high-quality educational resources during the process of education. Particularly, regarding the quality of elementary education across regions, there is still a significant gap across the eastern, central and western regions, between urban and rural areas, and even between districts within the same cities in China. Second, teachers and parents do not always share the same educational beliefs and work closely with each other. It is still prevalent among parents who urge their children to pursue high testing scores and high educational degrees without supporting their children in fully exploring personal interest and advantages. Third, although educational technology can facilitate the sharing of high-quality educational resources, the integration of technology

and elementary education is far from enough. On the one hand, technologies should be designed by using evidence-based research and seek to meet specific educational needs. On the other hand, teachers and students may need better training in implementing novel technologies. It is clear that elementary education in China has taken many steps forward, yet there may still be a long way to providing excellent elementary education for every citizen in China. What shall we expect in the near future? The Chinese MOE has been committed to the realization of high-quality and balanced elementary education by 2035.

The following sections of this chapter starts with an overview of China's elementary education and its development. It then takes Shanghai as a case study to compare its elementary education with that of California state in the U.S. The chapter provides analysis on the best practice of elementary schools in China, and shares inspiring stories on three outstanding educators in the Chinese elementary education sector who aim to deliver educational philosophies through their daily work. This chapter also reviews the latest research trends and the national policies significantly shaping elementary education in China.

2 Highlighting Data

2.1 Duration and Scale of Elementary Education

The duration of elementary education in China typically is six years with a few exceptions, such as in Shanghai for five years which is further discussed in section three in this chapter. Based upon 2019 statistics from UNESCO Institutes for Statistics (UIS), the scale of the Chinese elementary education is significantly larger than other major countries including the United States (U.S.), the United Kingdom (U.K.), Germany, France, the Netherlands, Japan, and the Republic of Korea (ROK) (Figs. 1, 2). The numbers of teachers and enrolled students at Chinese elementary schools reached 6,526,772 and 106,250,528 respectively in 2020.

2.2 Gender Proportions Among Teachers in Elementary Education

Among teachers, about 70% of them are female, which is lower than other major developed countries (Fig. 3). This suggests a relatively more balanced gender distribution among elementary school teachers in China.

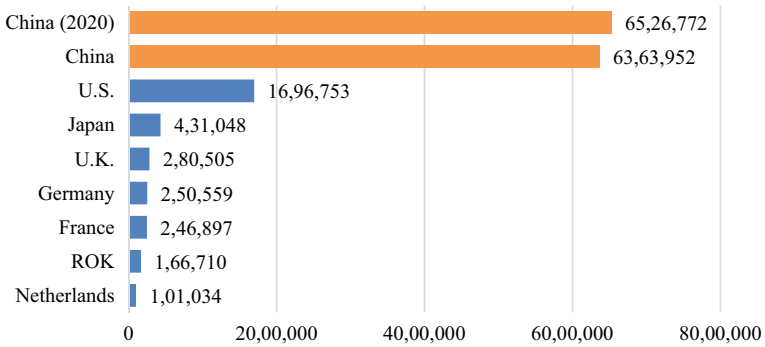


Fig. 1 Number of teachers in elementary education (2019). *Source* UIS (2022). *Notes* The latest available information for most countries is 2019, although 2020 data have been available for China. Thus, the information for China in these two years are presented

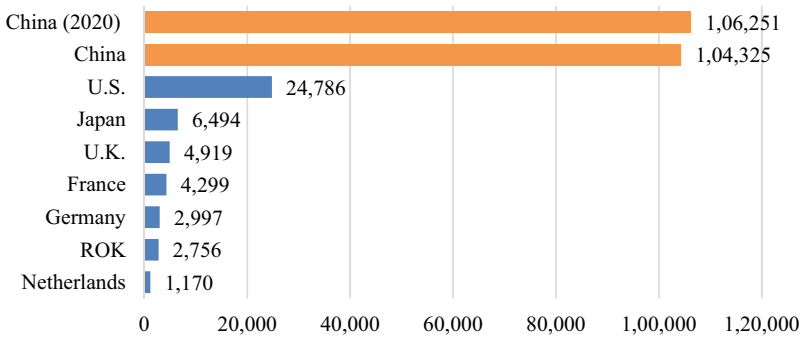


Fig. 2 Number of enrolled students in elementary education (in thousands) (2019). *Source* UIS (2022). *Notes* The latest available information for most countries is 2019, although 2020 data have been available for China. Thus, the information for China in these two years are presented

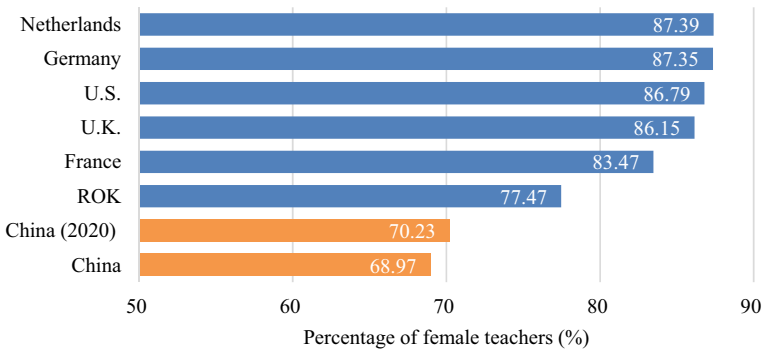


Fig. 3 Percentage of teachers in elementary education who are female (2019) (%). *Source* UIS (2022). *Notes* The latest available information for most countries is 2019, although 2020 data have been available for China. Thus, the information for China in these two years are presented

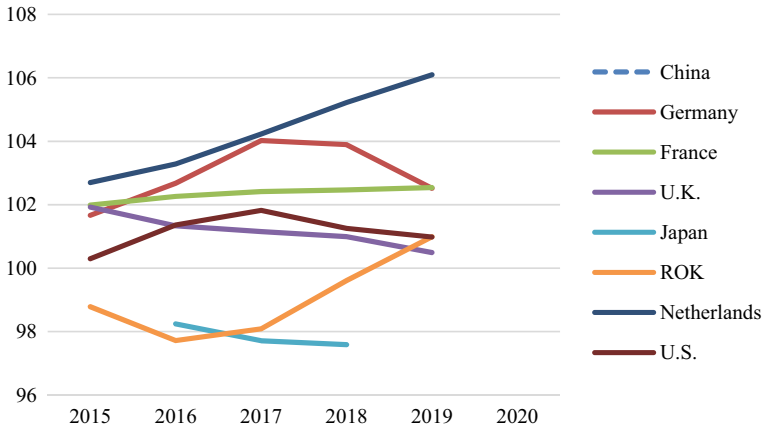


Fig. 4 Gross enrollment ratio in elementary schools (2015–2020) (%). *Source* UIS (2022). *Notes* The latest available information for most countries is 2019, although 2020 data have been available for China. Thus, the information for China in these two years are presented

2.3 Gross Enrollment Ratio of Elementary Education

The gross enrollment ratio refers to the number of students enrolled in each level of education, regardless of age, which is demonstrated as a percentage of the official school-age population corresponding to the same level of education based on the definition provided by UIS. In China, the gross enrollment ratio for elementary education has been growing in recent years. It reached 102% in 2019 and 103% in 2020, which is comparable with, if not higher than, other major developed countries (Fig. 4). The gross enrollment rate by gender is presented in Fig. 5, which favors girls slightly better than boys in China, with both rates being comparable with other major developed countries.

2.4 The Proportion of Enrollment in Public Institutions

UIS differentiates public and private educational institutions by whether they are operated by a public authority or controlled and managed by a private body (e.g., non-governmental organization, religious body, special interest group, foundation, or business enterprise). In China, among students enrolled in elementary education, more than 90% were enrolled in public (as opposed to private) educational institutions. This proportion has been stable in the past few years (Fig. 6) and is comparable with major developed countries (Fig. 7). Thus, the statistics reported in this chapter focus primarily on public schools in elementary education.

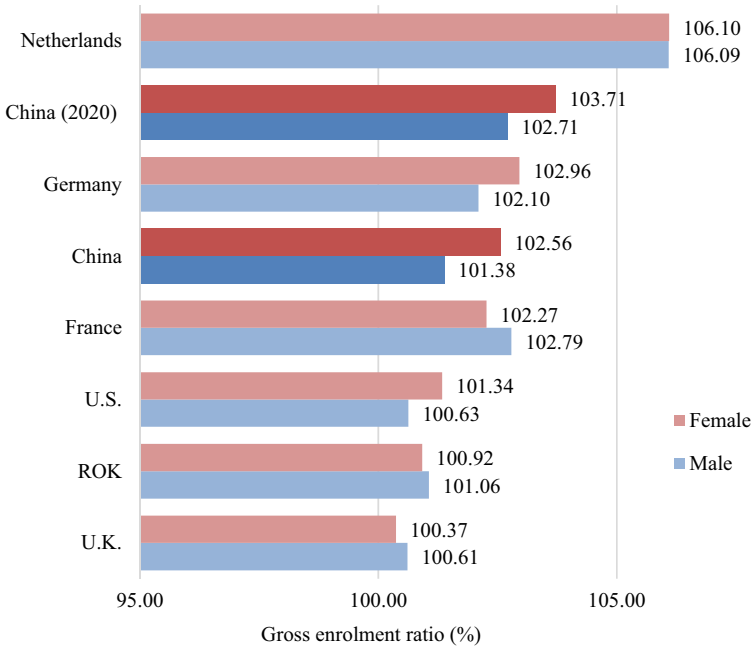


Fig. 5 Gross enrollment ratio by gender in elementary schools (2019) (%). *Source* UIS (2022). *Notes* The latest available information for most countries is 2019, although 2020 data have been available for China. Thus, the information for China in these two years are presented

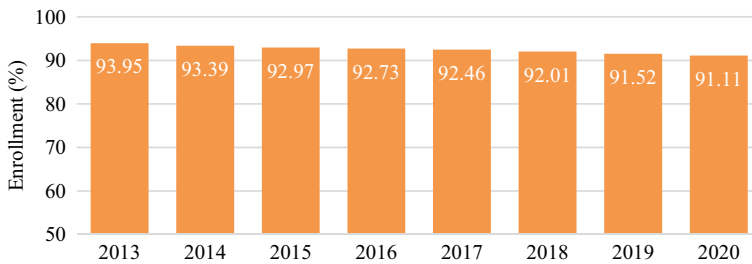


Fig. 6 Proportion of enrollment in public institutions in China (2013–2020) (%). *Source* UIS (2022)

2.5 Government Expenditure on Elementary Education

Government expenditure on elementary education refers to the total general (local, regional and central) government expenditure on elementary education based on the definition from UIS. In China, the governmental expenditure on elementary education was Chinese yuan (RMB) 1,379,291 million in 2019 (Ministry of Finance, 2020), which was equivalent to US\$327,776 million in purchasing power parity dollars (PPPs) or 1.40% of the GDP of the country in 2019 (National Bureau of

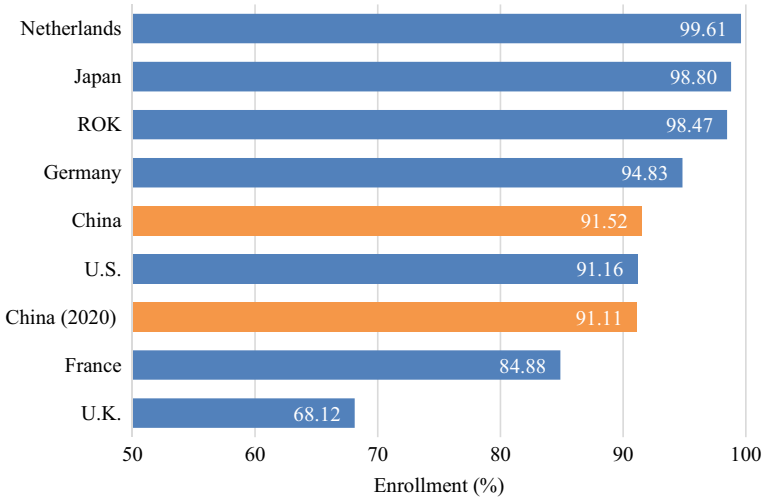


Fig. 7 Proportion of enrollment in public institutions (2019) (%). *Source* UIS (2022). *Notes* The latest available information for most countries is 2019, although 2020 data have been available for China. Thus, the information for China in these two years are presented

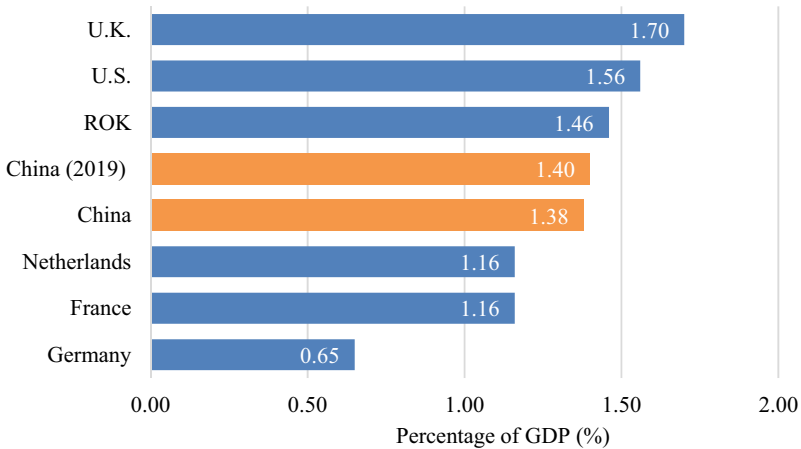


Fig. 8 Government expenditure on elementary education as a percentage of GDP (2018) (%). *Source* UIS (2022); Ministry of Finance (2020); National Bureau of Statistics (2021a). *Notes* The latest data for all countries except that of China were retrieved from UNESCO, where the latest available information is for 2018. The data for China were missing in the UNESCO database, so the data were manually calculated based on the *China Educational Finance Statistical Yearbook* (Ministry of Finance, 2020) and the *China Statistical Yearbook* (Ministry of Finance, 2021a)

Statistics, 2021a). For comparisons with other major developed countries, please see Figs. 8 and 9 based on the latest information retrieved from the UIS database.

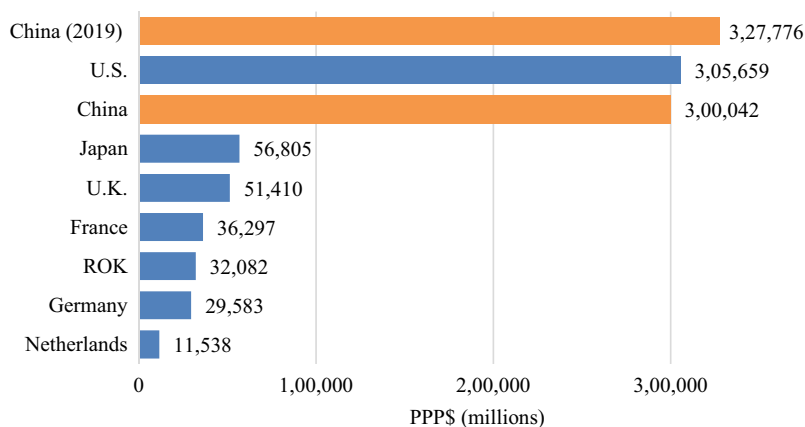


Fig. 9 Government expenditure on elementary education in PPP\$ (2018). *Source* UIS (2022); Ministry of Finance (2020); National Bureau of Statistics (2021a); OECD (2022a). *Notes* The latest data for all countries retrieved from UNESCO was for 2018. The data for China was not available in UNESCO database, which was manually calculated based on the *China Educational Finance Statistical Yearbook* (Ministry of Finance, 2020) and the *China Statistical Yearbook* (National Bureau of Statistics, 2021a). The data for 2018 are for the purpose of comparison with the other countries, and the data for 2019 are the latest available

2.6 Government Funding Per Elementary Student

The above total amount of government expenditure may not provide the whole picture, as the elementary education system in China serves a large number of populations. The initial government funding per elementary student in China was calculated based on the total expenditure in elementary education retrieved from the *China Educational Finance Statistical Yearbook* (Ministry of Finance, 2020) and the total enrollment in elementary school retrieved from the *China Statistical Yearbook* (National Bureau of Statistics, 2021a). As presented in Fig. 10 and Fig. 11, government funding per elementary student has been growing in China in recent years, although it is still far from comparable with other major developed countries.



Fig. 10 Initial government funding per elementary student in constant PPP\$ in China (2015–2019). *Source* Ministry of Finance (2020); National Bureau of Statistics (2021a); OECD (2022a)

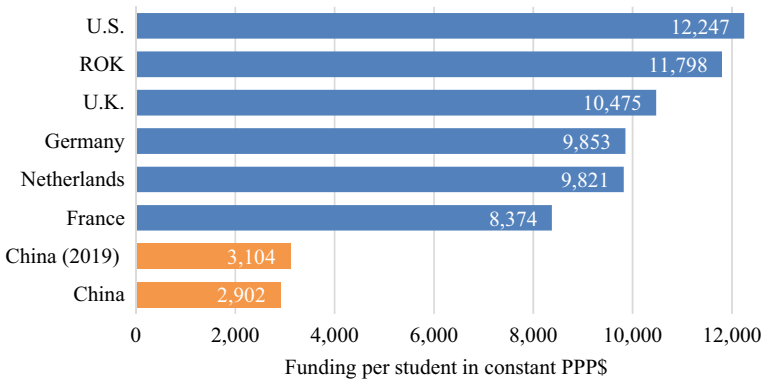


Fig. 11 Initial government funding per elementary student in constant PPP\$ (2018). *Source* UIS (2022); Ministry of Finance (2020); National Bureau of Statistics (2021a); OECD (2022a). *Notes* The latest data for all countries were retrieved from UNESCO for 2018, except that the data for China were missing in the database. The latest data for China were calculated by dividing the amount of government funding for elementary schools (Ministry of Finance, 2020) by the number of enrolled elementary school students for the corresponding years (National Bureau of Statistics, 2021a). The RMB was transformed into PPP\$ based on the conversion rate for the specific year reported by OECD (2022a)

2.7 Basic Facilities in Elementary Schools

The proportion of elementary schools with basic facilities has been rising in recent years in China. As of 2020, 99% elementary schools have the access to basic drinking water, handwashing facilities, single-sex basic sanitation facilities, and electricity; more than 98% elementary schools have the access to computers and the internet for pedagogical purposes (Fig. 12).

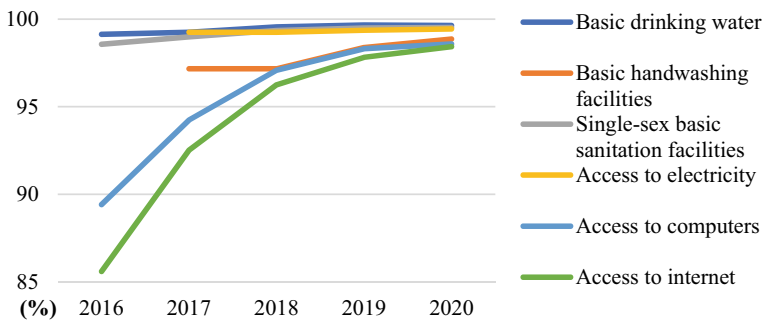


Fig. 12 Proportion of elementary schools with basic facilities in China (2016–2020) (%). *Source* UIS (2022)

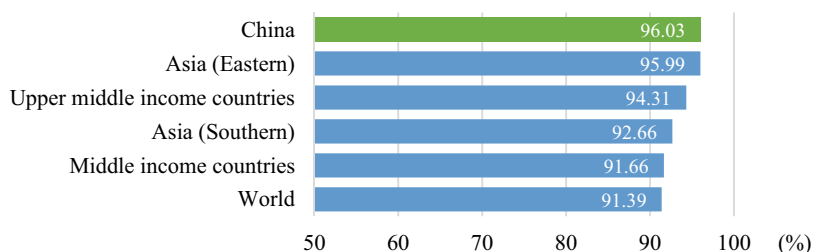


Fig. 13 Percentage of qualified teachers in elementary education (2020) (%). *Source* UIS (2022)

2.8 *Qualified Teachers*

Qualified teachers refer to teachers who have at least the minimum academic qualifications required for teaching their subjects at the relevant level in a country, in an academic year. In China, the percentage of qualified teachers in elementary education has remained stable at 96% for the past few years (2015–2020) based on the data released by the UIS. Although major developed countries mentioned in the prior indicators are not available through the UIS database, the percentage for China is higher than most countries (Fig. 13).

2.9 *Student–Teacher Ratio and Class Size*

Student–teacher ratio refers to the average number of students per teacher, while average class size is the average number of students in a classroom. These two indicators represent the amount of teacher resources individual students could receive in classrooms. Based on the latest available information released by UIS, the average student–teacher ratio for elementary education in China was about 16 (Fig. 14), and the average class size was 37 (Fig. 15). These two indicators suggest that although the total amount of educational resources is considerable in China in comparison with the world, educational resources per student falls relatively behind many developed countries.

2.10 *Teacher Attrition Rate*

The teacher attrition rate refers to the percentage of teachers at a level of education leaving the profession in a school year based on the definition from UIS. In China, the overall teacher attrition rate for elementary education was 4.76% in 2020, which is at a middle-to-low level compared to many other countries or regions in the world (Fig. 16). However, although the attrition rate for female teachers is low, the rate

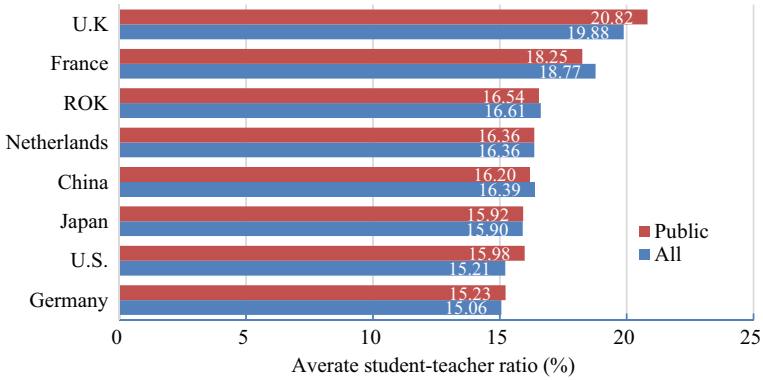


Fig. 14 Average student-teacher ratio in elementary education (2019) (%). *Source* UIS (2022)



Fig. 15 Average class size in China and the world. *Source* UIS (2022). Notes: The latest available information for most countries is 2019, while for China was 2014. For the countries with available data for 2019, the class size is comparable with that in 2014

for male teachers is relatively high when compared to other regions in the world (Fig. 17). Note, the information for developed countries mentioned in other figures was missing for the current indicator in the UIS dataset, therefore, the values for various regions are reported here.

2.11 Elementary Education Completion Rate

Defined by UIS, the completion rate for elementary education refers to the percentage of a cohort of children or young people aged three to five years above the intended

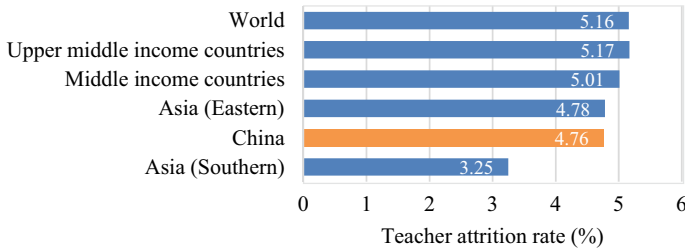


Fig. 16 Teacher attrition rate from elementary education (2020) (%). *Source* UIS (2022)

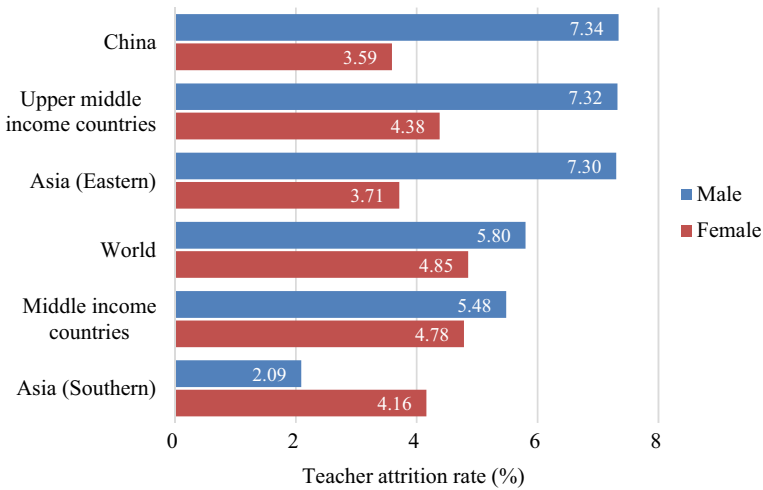


Fig. 17 Teacher attrition rate from elementary education by gender (2020) (%). *Source* UIS (2022)

age for the last grade of elementary education who have completed that grade. In China, the overall completion rate for elementary education was 95.60% in 2020, which has slightly increased from 94.60% in 2015. Also, girls consistently have a higher completion rate than boys (Fig. 18).

2.12 *Second and Third Graders Achieving at Least a Minimum Proficiency in Math and Reading*

UIS refers to the minimum proficiency level in math and reading as the benchmark of basic knowledge in math or reading measured through standardized tests conducted and certified by OECD. Based on the latest data available in the UIS dataset, the proportion of students in Grade 2 or 3 achieving at least a minimum proficiency level in math was 84.60% in China, which was higher than that in many developed countries

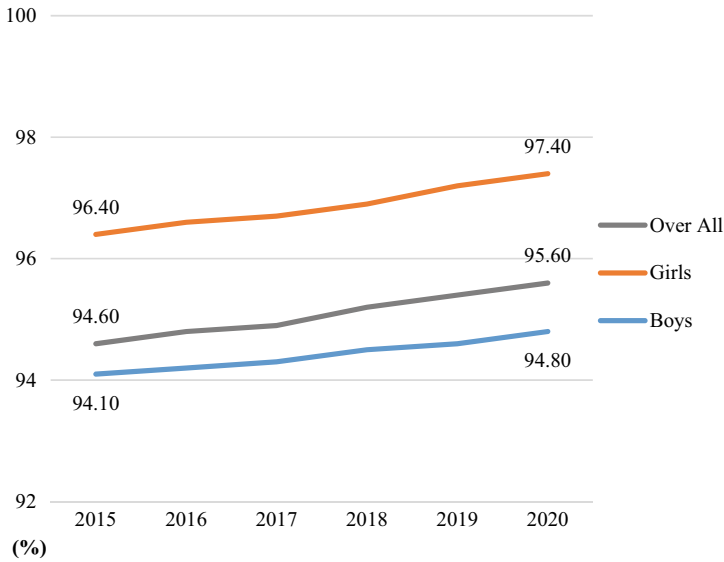


Fig. 18 Elementary education completion rate in China (2015–2020) (%). *Source* UIS (2022)

(Fig. 19). However, the proportion in reading was behind many developed countries (Fig. 20), which might relate to differences in metalinguistic skills needed in alphabetic and non-alphabetic writing systems. For instance, researchers have suggested that comprehending alphabetic languages in text relies more on readers' phonological awareness, while comprehending Chinese in text relies more on readers' morphological awareness, which is believed to be more difficult for young children (e.g., Kuo & Anderson, 2006).

2.13 Survival Rate to Grade 4

UIS describes the survival rate to Grade 4 as the percentage of a cohort of students enrolled in the first grade of elementary education in a school year who are expected to reach fourth grade, regardless of repetition. Based on the latest information, the survival rate to Grade 4 of elementary education in China was 99.92% in 2019, which is at a middle-to-high range when compared to many other countries in the world (Fig. 21).

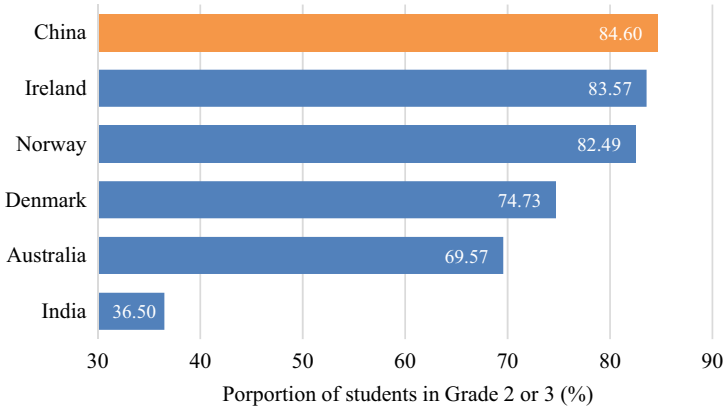


Fig. 19 Proportion of students in Grade 2 or 3 achieving at least a minimum proficiency level in math (%). *Source* UIS (2022). *Notes* The latest available data for most countries in this figure are 2019, while for China was 2015 and for India are 2017

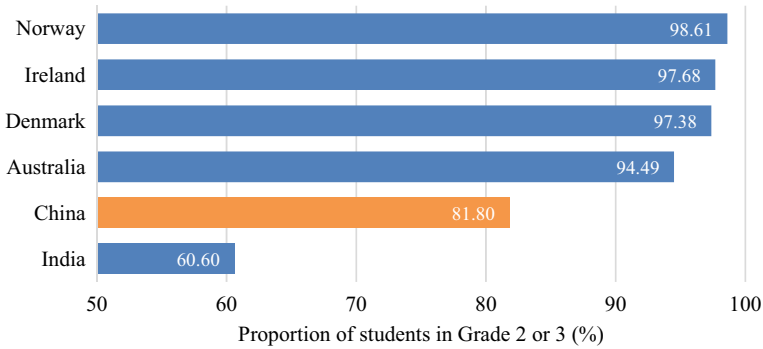


Fig. 20 Proportion of students in Grade 2 or 3 achieving at least a minimum proficiency level in reading (%). *Source* UIS (2022). *Notes* The latest data for most countries in this figure are 2016, while for India are 2017

3 Excellence Indicators

To demonstrate excellence in elementary education, this section compares one of the most developed regions in China (Shanghai) and that in the U.S. (the state of California). The duration of elementary education in Shanghai is five years, which is the same as the typical situation in California.

As shown in Fig. 22, the scale of elementary education in Shanghai is about one-third of that in California with regard to the number of students and full-time teachers. Based on the latest publicly available information, elementary education in Shanghai included 826,347 students and 59,451 full-time teachers dedicated to teaching and instruction in 2019. Elementary education in California, on the other

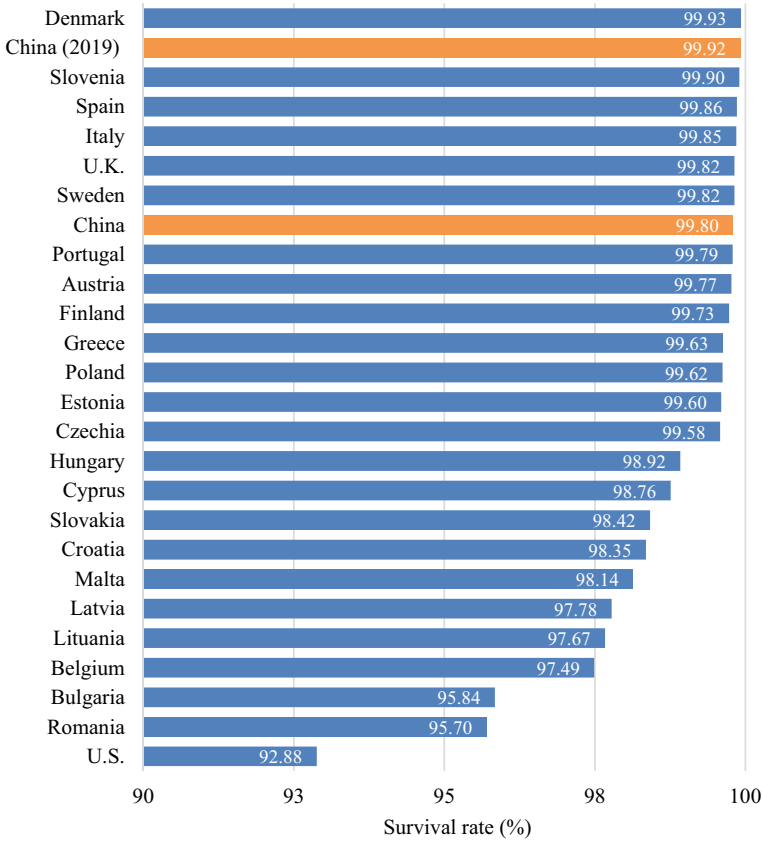


Fig. 21 Survival rate to Grade 4 of elementary education (2018) (%). *Source* UIS (2022). *Notes* The information for many developed countries mentioned above is not available in the UNESCO database, and, therefore, OECD countries are presented instead. The latest available information for most countries is 2018, although 2019 data have been available for China. Thus, the information for China in these two years are presented

hand, included 2,270,364 students from Grade 1 to Grade 5 and 154,504 teachers with full-time equivalent teaching duties.

3.1 Design

Indicators that are selected for comparison reflect excellence in elementary education across three primary aspects: educational resources, teacher quality, and student outcome. Besides conceptual reasoning, the selection of indicators is constrained by two additional criteria to allow for transparent and replicable comparisons. First, the indicators should come from publicly accessible databases and yearbooks. Second,

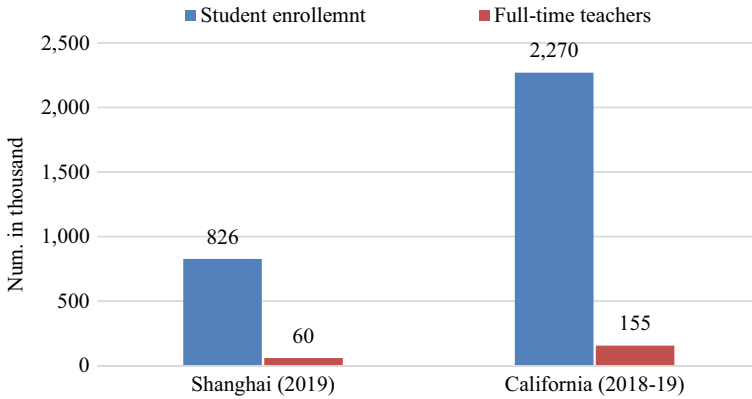


Fig. 22 The scale of elementary education in Shanghai and California. *Source* Shanghai Municipal Education Commission (2021); California Department of Education (2022)

for each indicator, the statistic found for Shanghai and that for California should be calculated in a similar (if not identical) way based upon operational definitions released by public databases and yearbooks as detailed in the following section.

Eventually, four indicators are identified for the comparison between Shanghai and California regarding excellence in elementary education: public expenditure on education (per student and in relation with other educational stage during K-12), student–teacher ratio, highest level of education received by full-time teachers, and education completion rate.

3.2 Definitions and Sources

3.2.1 Definitions

Definitions of the selected indicators to demonstrate excellent elementary education are summarized in Table 1 and are elaborated in the paragraphs below.

Public Expenditure on Education. This indicator represents societal resources invested in education, which is essential for maintaining and developing high-quality education. To make it comparable between regions with different population scales, this section focuses on two sub-indicators. One sub-indicator is the public expenditure per student at the elementary education level, which is defined as the total public expenditure on elementary education dividing the total number of students enrolled in elementary schools based on a certain year. For this indicator, RMB is transformed into PPP\$ for the specific year to make the value comparable between Shanghai and California. Second, to understand public expenditure on elementary education in relation to other educational stages during K-12, the proportion of expenditure on elementary education in the total expenditure on regular K-12 education is examined,

Table 1 Operational definitions of excellence indicators

| Excellence indicators | Definitions |
|---|--|
| 1. Public expenditure on elementary education | Public expenditure per student: The total public expenditure on elementary education dividing the total number of student enrollment Public expenditure on elementary education in relation to other K-12 educational stages: The proportion of the total public expenditure on elementary education in the total public expenditure on the entire regular K-12 education |
| 2. Student–teacher ratio | Student enrollment over the total number of full-time teachers |
| 3. The highest level of educational degree received by teachers | The proportion of teachers whose highest level of educational degree is postgraduate degrees, bachelor's degree, associate degree, and high school diploma respectively |
| 4. The elementary education completion rate | The percentage of individuals who completed elementary school among: <ul style="list-style-type: none"> • Students who are 3–5 years above the elementary school graduation age • Young people who are 15–24 years old |

which is operationalized as the proportion of the total amount of public expenditure on elementary education in the total amount of public expenditure on the entire regular K-12 education.

Student–Teacher Ratio. This indicator has consistently been cited as an essential indicator associated with student achievement and learning experiences, especially for early school grades (e.g., Cuseo, 2007; Graue et al., 2007). The student–teacher ratio is typically operationalized as dividing the total number of students enrolled in elementary schools by the total number of full-time teachers.

The Highest Level of Educational Degree Received by Teachers. This indicator is critical in pre-service training, which has long been believed as a contributor to educational quality (for review, please see Darling-Hammond, 2000). Based on the information available from the *Educational Statistics Yearbooks of China* and the website of the California Department of Education, the highest level of education for full-time elementary school teachers can be categorized into four levels: postgraduate degrees, bachelor's degree, associate degree and high school diploma.

The Elementary Education Completion Rate. This indicator shows the outcome of elementary education. Student outcomes in learning and development reflect educational quality. However, at the stage of elementary education, there is a lack of standardized tests to support comparison at the school, region, or country level. Therefore, the elementary education completion rate reported in the World Inequality Dataset (OECD, 2022b) is selected, which defines two completion rate indices: the percentage of individuals who completed elementary school among children who

are three-five years above the elementary school graduation age and young people who are 15–24 year-olds.

3.2.2 Sources

Data and information reported in this section were retrieved from or calculated based on publicly accessible databases and yearbooks. Specifically, the data for Shanghai are mainly found in various yearbooks, including *Shanghai Educational Yearbook* (Shanghai Municipal Education Commission, 2021), *China Social Statistical Yearbook* (National Bureau of Statistics, 2017, 2018, 2019, 2020, 2021b) and *Educational Statistics Yearbook of China* (MOE, 2019, 2020a, 2021a).¹ The data for California are mainly retrieved from rich statistics and datasets on the website of the California Department of Education (2022). An additional indicator is found in the World Inequality Dataset (OECD, 2022b).

Note, when it comes to financial indicators, where RMB needs to be converted to PPP\$, the conversion rate for a specific year is found in the OECD report (OECD, 2022a).

3.3 Findings

3.3.1 Public Expenditure on Elementary Education

Regarding the public expenditure per student, in Shanghai, “per student general public budget expenditure on education” for regular elementary school is identified as RMB30,765.87 in the year 2020 based on the *China Social Statistical Yearbook* (National Bureau of Statistics, 2021b), equivalent to 7,350 PPP\$. For California, it is reported that the “current expense per average daily attendance” for elementary education was US\$12,647.80 in the 2019–2020 academic year and was US\$13,215.90 in the 2020–2021 academic year (California Department of Education, 2022). The above statistics for Shanghai and California for the recent years are presented in Fig. 23, where the PPP conversion rate is based on each of the specific years as reported by OECD. It shows that Shanghai is significantly behind California regarding expenditures on elementary education per student, although it has been growing in recent years.

To further understand the above gap between Shanghai and California, the proportion of expenditure on elementary education in the total expenditure for the entire regular K-12 education is calculated. For Shanghai, the amount of “public expenditure on education” is identified by education levels in the *China Social Statistical Yearbook* (National Bureau of Statistics, 2018, 2019, 2020, 2021b). The proportion

¹ These yearbooks can be found at <https://www.yearbookchina.com>.

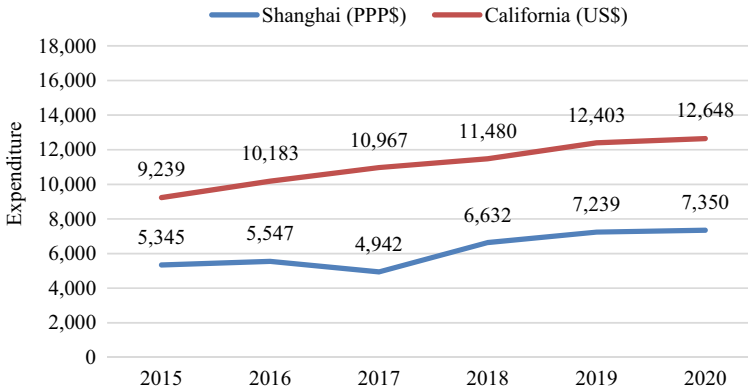


Fig. 23 Expenditure on elementary education per student in Shanghai and California. *Source* National Bureau of Statistics (2017, 2018, 2019, 2020, 2021b); California Department of Education (2022)

is calculated by dividing the expenditure on elementary education by the total expenditure from kindergarten through regular senior secondary schools. For California, the current expense for each category of K-12 “local educational agencies” is found on the website of the California Department of Education. The proportion of expenditure on elementary education is calculated by dividing the amount of expense for “elementary” schools by the total amount of expense across all types of local educational agencies. The above statistics for Shanghai and California (Fig. 24) shows that the proportion of expenditure on elementary education in the total expense for K-12 education has remained at about 19% over the past few years, which is similar between Shanghai and California. It suggests that the relative importance of elementary education in K-12 education is comparable between these two regions in terms of educational expenditure.

3.3.2 Student–Teacher Ratio

For Shanghai, the student–teacher ratio is calculated based on the elementary school enrollment and the number of full-time elementary school teachers retrieved from the *Shanghai Educational Yearbook* (Shanghai Municipal Education Commission, 2017, 2018, 2019, 2020).

For California, the elementary education enrollment (Grade 1–5) is calculated based on the *Annual Enrollment Data* found on the website of the California Department of Education (2022), by multiplying the total number of K-12 enrollment and the total proportion of students enrolled in Grade 1 to 5. Regarding the number of teachers, information is retrieved from the staff demographic data found on the website of the California Department of Education (2022). Based on this teacher-level dataset, teachers who had qualification to teach in elementary school

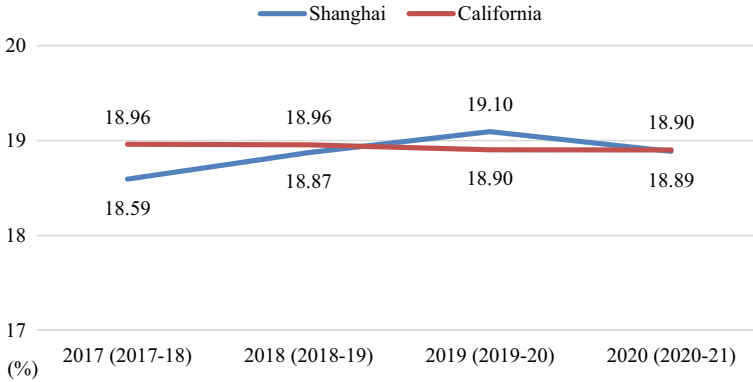


Fig. 24 Percentage of expenditure on elementary education in the total expenditure on regular K-12 education (%). *Source* National Bureau of Statistics (2018, 2019, 2020, 2021b); California Department of Education (2022)

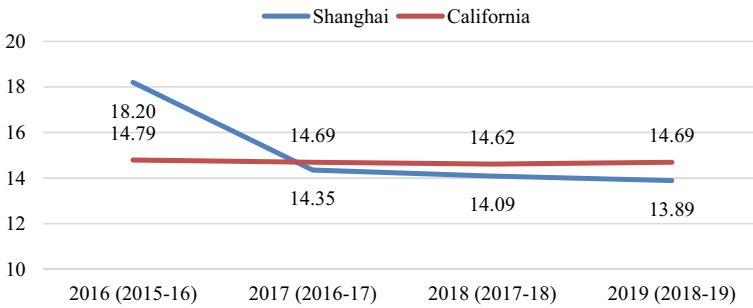


Fig. 25 Student–teacher ratio in elementary education. *Source* Shanghai Municipal Education Commission (2017, 2018, 2019, 2020); California Department of Education (2022)

and whose full-time equivalent (FTE) teaching duties were 100 are selected. Based on the number of students and the number of teachers in the most recent years that are available, the student–teacher ratios in Shanghai and California are calculated.

As shown in Fig. 25, Shanghai and California are comparable regarding the student–teacher ratio in elementary education, which has remained at about 14% in the recent a few years in both regions.

3.3.3 Highest Level of Education Received by Elementary School Teachers

For Shanghai, the highest level of education received by full-time elementary school teachers was identified based on the *Educational Statistics Yearbook of China* (MOE, 2019, 2020a, 2021a), in which the total numbers of elementary school teachers

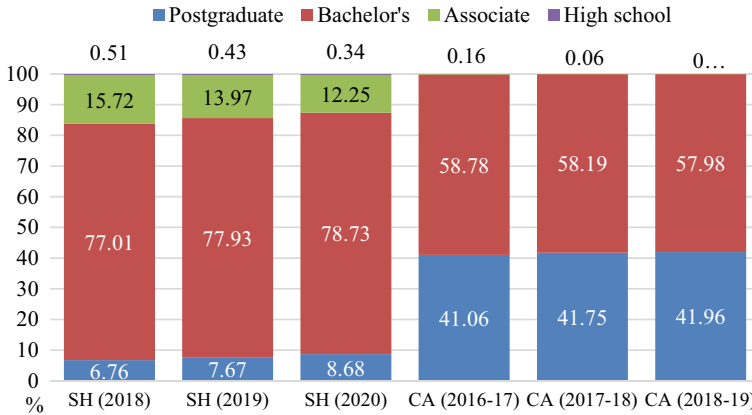


Fig. 26 Highest level of educational degree received by full-time elementary school teachers in Shanghai (SH) and California (CA) (%). *Source* MOE (2019, 2020a, 2021a); California Department of Education (2022)

whose highest level of education fall into each of the four categories are reported: postgraduate degrees, bachelor’s degree, associate degree, high school diploma.

For California, the information on teacher education is presented in the *Staff Demographic Data* on the website of the California Department of Education (2022). This dataset include teacher-level information, where there are 10 types of teacher education, which are regrouped into three large categories for the comparison between regions: postgraduate degrees (“Doctorate”, “Special”, “Master’s degree plus 30 or more semester hours”, and “Master’s degree”); bachelor’s degree (“Fifth year within bachelor’s degree”, “Fifth year induction”, “Fifth year”, “Baccalaureate plus 30 or more semester hours”, and “Baccalaureate”); and associate degree. The available statistics for the latest few years are included in the current comparison.

As presented in Fig. 26, the education degree of elementary school teachers in Shanghai is significantly behind California. In Shanghai, the vast majority (above 77%) of the full-time elementary school teachers had a bachelor’s degree as their highest level of education, more than 10% held an associate degree or a high school diploma, and only about 8% had postgraduate degrees. In comparison, more than 40% of the full-time elementary school teachers in California had postgraduate degrees, about 60% held a bachelor’s degree, only very few had an associate degree, and no teacher had a high school diploma or below.

3.3.4 Elementary Education Completion Rate

The elementary education completion rate at the regional level within various countries is included in the *World Inequality Database on Education* (OECD, 2022b). The available completion rate information for Shanghai and California is presented in Fig. 27, which is above 99% for both regions regardless of the method of calculation.

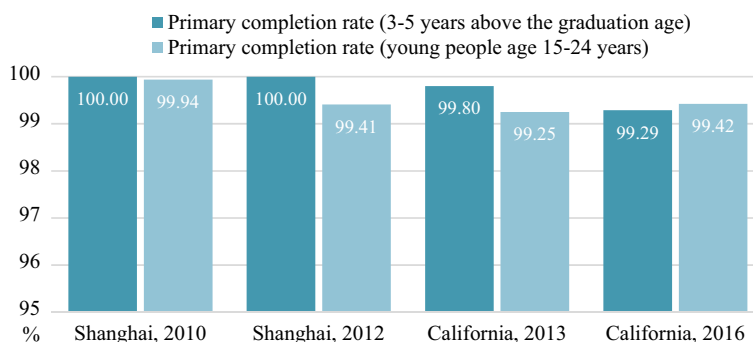


Fig. 27 Elementary completion rate by OECD (%). *Source* OECD (2022b)

3.4 Discussion

In sum, our findings show that, for elementary education, Shanghai has been comparable with California regarding student–teacher ratio and the education completion rate. However, Shanghai is significantly behind California regarding the proportion of elementary school teachers with postgraduate degrees. Additionally, the expenditure on elementary education per student has been significantly lower than that in California, although the public expenditure by student in Shanghai has been steadily growing during the past few years and the proportion of public expenditure on elementary education among the total expenditure for the entire regular K-12 education is comparable between these two regions.

The above indicators might not capture the whole picture of elementary education in either region, since most of them mainly speak to structural quality (i.e., regulable characteristics such as student–teacher ratio, enrollment rate, and teacher education), while information on process quality (i.e., students’ daily experiences in instructional activities and social interactions) is missing in public accessible database and year-books. However, researchers suggest that although process quality arguably may be more critical to students’ learning and development than structural quality, these two camps of quality indicators are interrelated (e.g., Slot et al., 2015). For instance, with a lower student–teacher ratio or a smaller class size, each student would be able to receive more attention and better support from teachers (e.g., Pianta et al., 2005); teachers with richer pre- and in-service training may gain greater competencies in teaching, which could lead to higher process quality, such as better instructional designs and warmer teacher-student interactions (Brühwiler & Blatchford, 2011). Nevertheless, the following sections of this chapter go beyond statistics, aiming to present a more vivid picture of elementary education in China through qualitative examinations of educational practices, policies, and the latest research.

4 Best Practices

4.1 *Emphasizing Teacher In-Service Professional Development*

Elementary education in China emphasizes teachers' professional development and morality building so as to ensure high-quality educational services. For this purpose, elementary schools in China have adopted various approaches, such as arranging group learning and seminar discussions, setting role models, and peer evaluation. As elaborated below, the practice in the Mengyuan Elementary Education Group is presented as an example, which is a group of elementary schools located in Hefei city, Anhui province, east China.

First, the school holds collective training programs and study tours for teachers to enhance their skills and competencies in teaching. For instance, junior teachers typically need to complete "three lessons a year" with support from a team of mentors, in which they refine their lessons iteratively with suggestions from mentors before giving an entry-level lesson as an evaluation, an intermediate lesson as a report, and a final lesson as a demonstration. Second, the leadership group holds workshops and activities regularly for team building and mentoring purposes, in which teachers share their experiences, learn and seek help from each other. Third, the ethical committee of the school regulates and evaluates teachers' ethical performance, based on which various types of rewards are established, such as *responsible teachers*, *advanced teachers with virtues*, *outstanding master teachers*, and *outstanding education practitioners*.

The practices of Mengyuan Elementary Education Group reflect a teacher training system featured in Chinese elementary education, which emphasizes on teacher professional development and moral development. Junior teachers are well-supported by a collective effort from senior teachers and peers through various activities, such as team buildings, co-developing lesson plans, and professional workshops. Collective effort among colleagues is unique and has demonstrated a great advantage of the socialist system in facilitating teacher professional development and promoting high-quality educational services.

4.2 *Dedicated to Students' Physical and Mental Well-Being*

Students' physical and mental health has always been a major focus of elementary education. East Beijing Road Elementary School in Shanghai, is taken as an example to present the joint effort of teachers, parents, and society in promoting students' physical and mental well-being throughout elementary education.

First, the curriculums in school are committed to the philosophy that "health comes first". It offers adequate class hours of physical education (P.E.) classes covering a wide range of sports, where students can enhance their physique and

build a well-rounded personality through physical exercise. Through collaborative teaching research on P.E. classes, schools reinforced the strategy of “learning, practicing, and competition”, aiming to ensure every student can master at least one or two sports skills. To diversify teaching strategies, the P.E. classes have incorporated augmented reality (AR) technology in sports interactions, which could effectively help with the shortage of sports fields and may serve as an alternative teaching approach when outdoor sports are restricted by weather, season, or other factors.

Second, mental and physical health examinations offered by the school are customized to students. The examination report specifies individual students’ physical examination results and self-reported learning adaptive ability, through which parents and teachers can closely monitor students’ health conditions. Regarding health intervention, for instance, the school has established a three-level intervention system for students’ myopia, which enhances students’ awareness to take autonomous care of their eyes, offers group intervention for nearsighted students, and integrates medical resources and targeted prescriptions for students with serious cases.

Third, the school emphasizes home-school cooperation in facilitating students’ mental and physical development in and out of school. The school organizes a series of activities featuring health education for parents, such as workshops, committee talks, and WeChat pushes on health-related topics, aiming to promote parents’ engagement in health education and therefore better support students’ development. For example, in a newsletter for parents, the school calls for parents to spend more time with their children and to supervise children in maintaining a healthy schedule. Additionally, the newsletter was accompanied with a video from ophthalmologists, where they introduce an episode of eye exercise tailored for elementary school students, to support parents in supervising students in taking care of their eyesight.

East Beijing Road Elementary School’s focus on students’ well-being is shared broadly across the educational system. Elementary schools in China are dedicated to promoting the lifelong development of each student through systematic and individualized physical education plans. Meanwhile, the importance of home-school cooperation is well-recognized. Collaborative efforts from school, home, and community aim to provide a solid foundation for individuals to achieve healthy lives from the beginning of school years.

4.3 Advocating the Philosophy of Enjoying Learning, Enjoying Childhood

Elementary education in China has adopted a philosophy of enjoying learning and enjoying childhood, which suggests that elementary school students should be released from heavy-loaded learning tasks assigned by adults and be allowed to enjoy a happy and fulfilling childhood. “Enjoying learning” does not only refer to positive emotions, but also is associated with a sense of fulfillment, as students

acquire knowledge and skills, experience love and social connections, and pursue merit and morality in the process of learning activities. In particular, the “Double Reduction” policy was implemented by the Chinese government in 2021 to ease the burden of excessive homework and off-campus tutoring for students undergoing compulsory education (for details, please see Sect. 7.4). It calls for schools to enrich students’ experiences within schools. Upgrading after-school service is one of the major approaches.

For example, the Elementary School Attached to Wuxi Normal School located in Jiangsu Province in southeast China, has been recognized as one of the seven model schools by the State Education Commission (the predecessor of MOE) of China to promote this philosophy nationwide since the 1970s. The school recognizes the uniqueness of childhood in life-long development and respects peer norms and culture among children, based upon which they developed featured curriculum. The curriculum includes age-appropriate skills across domains, such as language, math, and art, with emphasis on cultivating five merits among students, which are initiation, independence, uniqueness, collaboration, creativity, and responsibility. The implementation of all-round education and the philosophy of “enjoying learning, enjoying childhood” in the Elementary School Attached to Wuxi Normal School is in line with Chinese government’s call for reducing students’ excessive burdens in K-12 education. Elementary education in China emphasizes the importance of students’ individual needs and motivation in learning, so as to foster their well-rounded competence beyond mastering knowledge even when classroom instructions focus on certain subject domains.

Another example is the New World Experimental Elementary School Affiliated to Shanghai Theatre Academy in Pudong district, Shanghai. To design an after-school program that is enjoyed by students, trusted by parents, and recognized by society, the school developed a “one principle, two teams, and three strategies” framework. “One principle” refers to the full coverage principle that the after-school program should cover all the students who would like to participate during weekdays. “Two teams” refer to collaborations between a faculty team consisting of full-time teachers within the school and a volunteer team recruited outside of the school. “Three strategies” refer to thoughtful designs implemented in student application, program activities, and staff benefits. Regarding student application, the school features flexibility for students and their families in choosing after-school services that meet their diverse needs. Students can choose to enroll in a short-term or long-term after-school program and can also choose among three durations each time (i.e., after school to 4:30 pm, to 5:30 pm, or to 6:00 pm). Regarding program activities, various after-school activities are offered to meet students’ various interests, which can be grouped into three categories: physical activities including sports and dance, academic activities including tutoring and consulting services, and art and science activities including both social science and natural science-related topics. Regarding staff benefits, due to the extended workload associated with the after-school services, the school provides a certain degree of flexibility in accounting faculties’ working hours and offers performance-based incentives and awards for faculties. The after-school services offered in the New World Experimental Elementary School Affiliated

to Shanghai Theatre Academy addressed the national call of reducing students' excessive burdens. *By* carefully design featured after-school services, *elementary* schools are committed to meet students' individual needs and are dedicated to supporting teachers in balancing their working hours.

5 Inspiring Stories

5.1 *Lai Xuanzhi: Cultivating World Champions from a Remote Village*

Qixing Elementary School is located in a remote village in Guangdong province, south China. It mainly serves children of migrant workers and those who were left behind by parents working in a different city. In this school, there is a legendary physical education teacher, called Lai Xuanzhi. He established a jump rope team that has been leading elementary school students there setting world records one after another. For instance, at the World Rope Skipping Championships in 2016, the team won the group championship, broke five world records, and became “a dream team” of rope skipping in the world. At the Jump Rope World Cup in 2019, 17 students from the team won 85 gold medals and broke seven match records with competitors from 26 countries and regions.

When Lai started to work at the school right after graduating from the Wuhan Institute of Physical Education in 2010, he was shocked by the great shortage of sports facilities. To meet students' needs for sports, he repaired damaged sports equipment whenever he had time and paved the playground with a hoe every day after work. These efforts earned Lai the nickname “the director of logistics” at the school. In 2012, Lai started to feature rope skipping in his teaching, considering it a potential breakthrough for the students to connect with the bigger world outside of this small village. Through years of exploration, Lai has been advancing his teaching strategies. Under his instruction, more than 30 world champions and 11 world records have emerged from the school team. Rope jumping has become an essential part of the school culture, which gains more resources and attention for the school and, in return, uplifts the educational quality of the remote village. In addition to promoting rope skipping within his school, Lai also shares his expertise and wisdom with other schools, driving the spirit of sports in the broader community.

Lai's commitment and success are driven by his personal experiences and the benefits he saw from participation and excellence in sports during his childhood. He is dedicated to serving the next generation as a P.E. teacher, aiming to support children who are born in less favorable situations. Lai is just one example of numerous educators serving rural areas in China. Regardless of the challenges of conducting high-quality education in the remote villages, educators there have been trying their best to accommodate students' needs and advance their teaching strategies, to better support student success.

5.2 *Long Jihong: Empowering Individual Students*

Long Jihong is the present principal of Datong Elementary School in Hunan province, south China. She has served as the principal of eight elementary schools in the Furong district with extraordinary teaching performance acknowledged by the Changsha Municipal Education Bureau.

Long invited a team of educational experts to develop a system of curriculum, called *Meili Yuan* (which translates to beautiful garden) and aims to support students' individual needs and unique characteristics. The curriculum includes over 50 elective courses in four categories—life and health, roles and responsibilities, interaction and cooperation, and creativity and aesthetics. These courses aim to promote students' awareness of health and responsibilities and their abilities to communicate with others and appreciate the beauty of life. Many featured courses are tailored to students at different grades, such as Future Nova Host, Slam Dunk, Little Manager of Emotion, etc. One of the most popular courses is Healthy Little Kitchen, in which students learn cooking skills such as making pastry, pan-fried eggs, and cold noodles as well as knowledge about nutrition. When the curriculum registration system went online for the first time, it only took about 10 min for all the 50 + courses to be registered by over 1,000 students. Since then, this curriculum has been promoted around China and has won multiple awards at the provincial and the national level.

As Long suggests, schools should be committed to igniting and inspiring students' passion, creativity, and self-regulation. If there is a morning bell awakening children's souls every day, teachers and all educational practitioners are to be perseverant bell ringers. The curriculum should serve as a tool, encouraging students to pursue their interests, providing opportunities for them to discover their talents, and supporting their autonomy and self-regulation in lifelong learning.

5.3 *Yu Yedong: Sowing the Seeds of Science in Students' Hearts*

In 2008, an elementary school student called Yu Danyang won the gold medal in the 23rd China Adolescents Science & Technology Innovation Contest. Danyang is one of many students supervised by Yu Yedong, who supports elementary school students in making inventions based on their everyday life, such as walnut crackers, vegetable slicers, and anti-fog mirrors. Yu believes that educators need to help students gain competencies and perseverance in science and technology, to prepare them for the future (Jiang et al., 2015).

Since becoming the principal at Dongsheng Elementary School, Yu has led teams to develop customized courses for the school, including Approaching Science, Voyage in the Sea of Books, Fun with Math, and Fun with English, to enhance students' autonomy in learning through collaboration and inquiry. In language art classes, teachers promote students' critical thinking skills by encouraging students

to ask questions; in math classes, teachers facilitate students' divergent thinking by encouraging them to figure out a problem with as many solutions as possible; in science classes, teachers supervised students in conducting surveys and interviews and encouraging them to connect scientific and technological innovation with the larger classroom of society. Further, Yu has launched a science and technology program at the school to facilitate students' motivation, competency, and efficiency in learning. This program includes seasonal festivals and more than 20 guest lectures per year, which allows students to learn and to think across disciplines based upon problems and issues grounded in their own experiences.

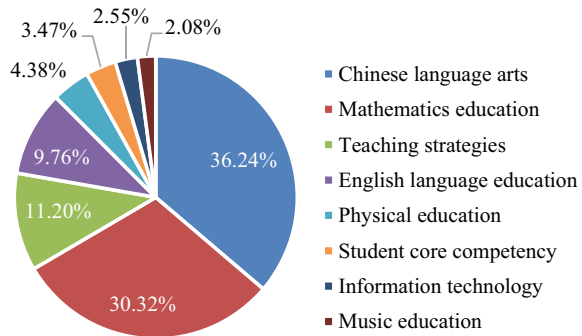
The practice of Yu reflects the trend of Chinese education, which emphasizes bridging the knowledge in textbooks with students' everyday lives, since the beginning of the formal school education. Through observing and identifying problems in real-life and conducting scientific reasonings and examinations, students are encouraged to put their unique ideas into practice, which cultivates an innovative spirit, shapes their attitudes and beliefs towards science, and fosters beliefs as lifelong learners.

6 Latest Research

6.1 *An Overview of Research on Elementary Education in China*

Academic articles written in Chinese focusing on elementary education and published between 2012 and 2022 are searched in a major Chinese academic database - China National Knowledge Infrastructure (CNKI). The total number of articles found is 768,485. The frequencies of the 20 most-used keywords in these articles are retrieved from the CNKI database and these keywords are grouped into themes. As presented in Fig. 28, the most studied theme is Chinese language arts education, which includes keywords such as Chinese language arts (*xiaoxue yuwen*) in elementary schools, Chinese language arts classrooms (*xiaoxue yuwen ketang*) in elementary schools, Chinese language arts instruction (*xiaoxue yuwen jiaoxue*) in elementary schools. The second most studied theme is education and teaching strategies in math, which includes keywords such as math in elementary schools (*xiaoxue shuxue*), math instruction in elementary schools (*xiaoxue shuxue jiaoxue*), and math classroom in elementary schools (*xiaoxue shuxue ketang*). The third most studied theme is education and teaching strategies in English language, including keywords such as English in elementary schools (*xiaoxue yingyu*) and English language teaching in elementary schools (*xiaoxue yingyu jiaoxue*). Meanwhile, emphases have been drawn to students' core competencies (*hexin suyang*), P.E. (*xiaoxue tiyu and xiaoxue tiyu jiaoxue*), music education (*xiaoxue yinyue*), and information technology (IT) (*xinxi jishu*).

Fig. 28 Research themes in Chinese research focusing on elementary education.
Source Compiled from search result in CNKI



6.2 Research Focus and Originality

Featured topics in Chinese educational research and practices focusing on the elementary education stage can be summarized into the following three: emphasizing the all-round development of students, promoting educational equity and justice across regions, and protecting individual differences and creativity. Each of these themes is elaborated in the sections below.

6.2.1 Holistic Development (*Quanmian Fazhan*)

Elementary education in China emphasizes students' all-round development, which is grounded in everyday instructions in each subject domain. For instance, Li (2004) discusses a reading-and-writing integrated teaching mode, which treats reading as the foundation for writing and regards writing as an opportunity to promote reading. Su (2004) discusses that math education in elementary school should invite students to engage in observation, analysis, analogy, supposition, induction, generalization, and deduction, so as to promote the development of divergent thinking and critical thinking. In terms of English education, Lu (2021) emphasizes the importance of real-life scenarios in helping students learn to use English in context and enhancing their awareness and competencies in cross-cultural communication.

One major feature of the holistic education in elementary education in China is "Integrated Education", which refers to the integration of five education domains: moral, intellectual, athletic, aesthetic, and labor education (Zhu, 2003). For instance, Jia (2018) discusses a moral education approach based on tea culture. Liu (2021) proposes incorporating traditional dough sculpture in elementary school art education. Shi and Zhao (2022) integrate labor education and science education in elementary schools through STEM curriculums. Further, Zheng (2021) suggests that Integrated Education should be intentionally incorporated into instructions with thoughtful discussions among teachers' co-design of lesson plans.

Another major feature of the all-round education is future orientation, focusing on cultivating students' competencies to become lifelong learners. For instance,

Liu (2001) discusses the essential role of information and technology education in cultivating lifelong learners in elementary and secondary schools. Zheng (2014) reports a farewell curriculum designed for students prior to their elementary school graduation, which includes three components: experiencing life in middle school, graduation travel, and critical thinking on social issues. Xiao et al. (2021) develop an instrument assessing elementary students' competencies in STEM with particular emphasis on analyzing and solving problems with interdisciplinary knowledge, which is believed to be essential for students' learning in later school stages. Similarly, Yu et al. (2021) develop an evaluation framework for mid and upper grade elementary school students, targeting their skills in searching and utilizing information via technologies.

Additionally, researchers have emphasized the importance of meeting students' needs and gaining competencies in physical exercises. Peng and Liu (2015) discuss the essential role of physical education in childhood and early adolescence in building perseverance in engaging in physical experiences regularly, so as to lay a solid foundation for students' lifelong participation in sports. Feng (2021) emphasizes the critical influence of school culture in helping students form a lifelong affinity for sports. Further, Huang (2020) suggests turning elementary school students into "facilitators of sports and health" in their community so as to strengthen students' competencies and beliefs in living healthy lives. In sum, it has been well recognized that elementary schools play an essential role in building a solid foundation for future citizens to live a healthy and happy life by providing access, guidance, and support for students to engage in sports activities and shaping their beliefs in healthy lives.

6.2.2 Promoting Educational Equity Between Schools and Regions

To address the issue of unequal distribution of education resources between "top-notch" schools and other schools in the same city, the "Enrollment based on Local Residency" (*jiujin fenpei*) policy suggests that all students should be able to receive compulsory education services in the school district based on the place of residence of their household registration regardless of the students' academic abilities or their family background. Researchers discuss that this policy represents the interests of the vast majority as it could facilitate the integration of the educational resources across social classes (Huang, 2016; Zheng & Wang, 2014). However, Shao (2019) discusses two essential aspects of implementing the nearby enrollment policy to provide high-quality education for all students: one is the collaboration between public and private education institutions, and another is evidence-based admission policy and procedure with support from information technology. Further, to address educational inequality within schools, tracking has been discouraged or forbidden in more and more cities. Instead, Zhang (2021) proposes an "ecologically balanced" approach to increase diversity within classrooms, which includes factors such as students' interest and specialization, and family background and parenting styles.

The unequal distribution of educational resources across regions in China has been well-recognized that the rural and the Middle and Western Parts of China has

a greater shortage in educational resources than their economically more developed counterpart. One major aspect of the shortage is high-quality teachers. To address this challenge, on the one hand, the *National Training Plan for Elementary and Secondary School Teachers* (or the *National Training Plan*) put forward by the Chinese government is aimed to promote professional development for in-service teachers in regions of need. Researchers discuss that, through top-down designs and evidence-based teacher education, this plan significantly improves teachers' competencies in instruction, facilitates professional development, and promotes nationwide public welfare (Cui et al., 2019; Zhu, 2010). On the other hand, the *Special-Post Teacher Recruitment Program* (or the *Special-Post Program*) jointly launched by MOE and three other departments aims to increase teacher quality in regions in need from the start, by recruiting high-quality college graduates to serve elementary and middle schools in rural and the Middle and Western Parts of China. It is believed that this program upgrades the staffing structure in rural areas (An & Ding, 2014) and creates new employment options for college students, which helps alleviate their job-searching anxiety and offers opportunities to actualize their goal of making a difference (Shi, 2006).

In addition to the above national plans, researchers have discussed other approaches to promoting educational equity across regions. For instance, Chen et al. (2019) discuss training all-subject teachers in rural schools, who would not only be content experts across subject domains but should deeply believe in education as a way to shape the future, even for children growing up in unfavorable conditions. Shi (2011) discusses a teacher exchange program, which allows the mobility of educational resources as urban teachers serve as volunteers in rural schools in turn. Sheng and Zhang (2021) discuss building Hope schools in remote areas with a joint effort between the schools and the local communities.

Besides improving teacher quality, financial support has been provided to rural students from impoverished families during compulsory education. For instance, the "Two Exemptions and One Subsidy" policy is a national policy, which provides rural students with free textbooks, exempts them from miscellaneous fees, and subsidizes certain living expenses for them. Researchers have discussed that the policy has diminished economic obstacles for numerous students in need, accelerated the popularization of free compulsory education in rural regions, and has made a significant achievement in reducing poverty, which optimizes the configuration of education resources and supports the nation in realizing sustainable economic and social growth (Li, 2008; Nong, 2015).

6.2.3 Supporting Autonomy and Creativity

Elementary education in China values students' autonomy in learning and creative thinking. Taking research focusing on language art in elementary schools as an example, researchers suggest that reading and writing are processes of individualized learning and creating, where personalized observations and unique perspectives would be valued, rather than being trimmed based on certain obsolete right answers

for the sake of standardized testing (Cao, 2009). To achieve this, Du (2021) highlights the importance for educators to observe students' individualized reading experiences and support students' autonomy in reading. Specifically, Ge (2022) proposes a form of writing workshops, where students engage in topic selection, brainstorming, writing, and revision. During the process, students and teachers can discuss as partners with equal status, and conversations among peers are encouraged so as to engage and inspire students in creative writing.

Similarly, autonomy and individual differences are highly valued in instructions in other subject domains. In the context of math education, Meng (2019) discusses learning contexts customized for elementary school students from three aspects—learning environment, learning content, and learning strategies. In arts education, Yu (2016) discusses the importance and values of students' unique expressions in instructional moves, such as appreciation, creation, and evaluation. Further, Li (2020) advocates the project-based learning approach for school-based curriculums, where students are allowed to customize their learning by engaging in in-depth discussions with teachers and collaborations with peers. Even for homework assignments, Peng (2014) proposes that teachers and students should be partners in co-designing assignments to meet individualized instructional goals, which is specified by Lin (2021) as a hierarchy of homework—basic homework, extended homework, and innovative homework.

Creativity has been highly valued in elementary education in China. Ren and Qi (2020a, 2020b) discuss an instructional pattern that could facilitate innovative thinking, which is divided into five instructional moves including induction, creation, design, realization, and summary. Qiu (2021) emphasizes the essential role of collaborative learning in cultivating spirit and competencies in creativity, where students collaborate with peers in exploring novel ideas driven by issues grounded in practice. From the assessment perspective, Liu and Mencius (2011) develop a creativity assessment scale for elementary and secondary school students, which includes three dimensions: creative personality, sense of creativity, and creative thinking. Feng (2017) develops a scale assessing creative problem-solving skills for elementary school students based on the information processing theory, which includes identifying problems, processing information, and analyzing and solving problems.

7 National Policies

7.1 *Policy Development on Elementary Education in China*

Fundamental educational policies regulating elementary education in China can be grouped into two major categories. One focuses on teacher professional development and another focuses on student all-round development. A part of all-round development is students' physical and mental health, which is elaborated in Chap. 10 of this book.

7.1.1 Teacher Ethics and Professional Development

Professional Ethics for Elementary and Secondary School Teachers (MOE, 2008) emphasizes Chinese fine traditions of teachers' ethics and reflects the increasing demands from the society regarding the professional development for teachers in elementary and secondary schools. The document defines teacher professional ethics from the following six aspects: patriotic and law-abiding, devoting to work, caring for students, delivering knowledge and cultivating spirit, being exemplars for students, and lifelong learning. The document is a guideline for educational practices and has served as criteria for evaluating teachers' interactions with students, schools, and society. Below is a clause from the document, as well as that from two subsequent policies.

Elementary and secondary schools should prioritize teacher ethics development, which needs to be incorporated into the whole process of teacher professional development and evaluation.

– *Guidelines on Building the Long-term Mechanism of Teacher Morality Construction in Elementary and Secondary Schools* (MOE, 2013)

Training programs for in-service teachers of elementary and secondary schools should address the needs of the nation and the requirements of the society of the times. The design of teacher training programs should take related theories and practices at home and abroad as references, which is encouraged to include the following four modules: ideal and faith, moral sentiments, solid content knowledge, and love and benevolences.

– *Guiding Standards for Elementary and Secondary School Teacher Training Curriculum (Teacher Morality)* (MOE, 2020b)

7.1.2 Student All-Round Development

There have been several national policies dedicated to promoting all-round education in the stage of elementary and secondary education. It has been well recognized that students' learning outcomes should be evaluated beyond testing scores, and also include a focus on merit, creativity, and all-round development (MOE, 2008). As shown in the clauses below, these policies cover domains such as art, physical exercise, and moral development:

The evaluation of students' learning outcomes in art education should adhere to theories and science in education, and child development. It should simultaneously consider students' learning in the art classroom and their experiences in artistic practices, should highlight students' learning achievements as well as their learning attitudes, and should keep a balance between designing basic requirements for all students and encouraging specialized students based on their interest and strength.

– *Methods for Evaluating the Artistic Quality of Elementary and Secondary School Students* (MOE, 2015)

P.E. should reflect the notion of educational equity. The government and schools should ensure every elementary school student's right to receive physical education. Facing the reality of imbalanced development across regions and between the rural and urban areas, the *Standard* regulates physical equipment and facilities in elementary schools by clarifying

two categories of requirements: basic and optional. The basic requirements are compulsory regulations for all elementary schools, and the optional requirements allow autonomy and serve as goals for schools.

– *Equipping Standard of Equipment and Facilities for Physical Training in Elementary Schools* (MOE, 2020c)

Labor education should be incorporated in elementary school through college. In lower grades in elementary schools, labor education should be grounded in children's personal living needs. With safety awareness embedded throughout, the goal of labor education at this stage is to help children understand that everyone needs to work in society and to provide opportunities for them to enjoy working and cherish the fruitful results.

– *Guidelines on Labor Education for Elementary, Secondary, and Higher Education (Trial)* (MOE, 2020d)

Moral education plays a big role in elementary and secondary education. In middle and upper grades in elementary school, students should be offered opportunities to understand the culture, history, and development of their hometown as well as the country. Based on stories in daily life and those shining through Chinese culture and history, students gain a sense of social norms, develop merits, and enhance their love for the country and people.

– *Guide to Moral Education for Elementary and Secondary Schools* (MOE, 2017)

7.2 Current Policy Highlights

In recent years, significant effort in elementary education in China has been spent on easing students' excessive burdens, which is driven by the *Guidelines on Further Easing the Burdens of Excessive Homework and Off-Campus Tutoring for Students Undergoing Compulsory Education* (the State Council, 2021). The document is released in the social context where the on-campus formal education seems to be overshadowed by extensive off-campus tutoring institutions during the stage of compulsory education, which has created significant mental and financial burden to students and their families. To bring students back to campus, the document indicates that, besides regulating off-campus tutoring practices, it is critical to improve the quality of teaching and other educational services offered on campus. To achieve this goal, the document provides lots of guidance to schools, such as designing homework assignments based on scientific evidence and reducing the amount of time students need to spend on homework as much as possible, implementing after-school services to address students' diverse needs, and optimizing educational administration practices to better support students and teachers. Below are quoted clauses and a follow-up policy.

Standards regarding the total amount of homework across subject domains in each educational stage need to be established. For elementary school students in the first and second grades, they should not be given any written assignments that have to be finished at home, although they may take a certain amount of exercises in school to reinforce what they have learned. For third to sixth graders, their written assignments should not take more than 60 minutes on average, and that for middle school students should be kept under 90 minutes.

– *Guidelines on Further Easing the Burdens of Excessive Homework and Off-Campus Tutoring for Students Undergoing Compulsory Education* (the State Council, 2021)

Examinations in written formats are not allowed in the first and second grades. For other grades in compulsory education, schools can hold examinations once at the end of each semester. Middle schools may add a mid-term exam based on the practical needs of certain subjects. Regional or cross-school examinations are forbidden throughout compulsory education, except for students in the graduating grade in middle school.

– *Notice on Strengthening the Management of Examinations in Compulsory Education Schools* (MOE, 2021b)

8 Summary

Elementary education is the beginning of formal education and the starting point of compulsory education in China, which serves as the foundation for individuals' lifelong development and the sustainable development of the country. Thus, receiving elementary education is both a right and obligation of every citizen in China.

Nationwide, the number of students and teachers in elementary education in China ranks top in the world. With strong support from the government and great efforts from all educational practitioners, the advancement of public elementary schools is ensured. This is evidenced by the comparable government expenditure on elementary education as a percentage of GDP with most developed countries, the guarantee of fine infrastructure and teachers' qualifications, the high gross enrollment rate and completion rate, and the high proportion of children in Grade 2 or 3 achieving at least a minimum proficiency in math. Further, the comparisons between Shanghai and California demonstrate that they are comparable in many aspects, such as the percentage of expenditure on elementary education in the total expenditure on regular K-12 education, student-teacher ratio, and elementary completion rate.

Nonetheless, elementary education in China still falls behind developed countries in a few aspects, particularly in terms of the expenditure on education per student and teacher education. Although the expenditure on education per student in China is growing in recent years, it is still not comparable with developed countries, which could be explained by the huge population and significant diversity within the country. The importance of high-quality teachers has been well-recognized, which is why normal universities' have been desperate in developing and improving teacher education for pre-service teachers both at the undergraduate and the graduate levels and provide opportunities for professional development for in-service teachers. Further, several top-notch comprehensive universities in China have established graduate programs to advance K-12 teacher education, taking the advantage of the universities' world-class resources and achievement in various subject domains (e.g., the School of Education at Shanghai Jiao Tong University).

Besides comparisons based on statistics, this chapter also qualitatively demonstrates the philosophy and characteristics of elementary education in China through featured teaching practices, contemporary educational research, and critical educational policies. First, morality could not be emphasized enough in Chinese education,

which not only refers to cultivating students' virtue but also highlights teachers' professional ethics. Second, students' all-round development and well-being are the ultimate goals of elementary education in China. Beyond content knowledge in certain subject domains, emphases have been drawn on students' physical and mental health, interdisciplinary ability, creative thinking, and the competencies in applying knowledge in solving real-life problems. Third, policies, practices, and research have been going hand-in-hand in elementary education in China. With the evidence provided by educational research, educational policies have been providing guidance and serving as the safeguard for educational practices, such as reducing student burden, promoting all-round development, and addressing the issue of educational equity.

In sum, elementary education in China has been offering a solid and comprehensive foundation for individuals in their early stages of lifelong development. Elementary education in China has been and will further improve its capacity in fulfilling its mission—helping students gain competencies and prepare for the further.

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References

- An, X. H., & Ding, W. L. (2014). “Tegang jiaoshi jihua” zhengce xiaoguo fenxi (Evaluating polity effects of the special-post teacher recruitment program). *Zhongguo Jiaoyuxue Kan (Journal of the Chinese Society of Education)*, 11, 1–6.
- Brühwiler, C., & Blatchford, P. (2011). Effects of class size and adaptive teaching competency on classroom processes and academic outcome. *Learning and Instruction*, 21(1), 95–108.
- California Department of Education. (2022). *California database*. Retrieved July 28, 2022 from <https://www.cde.ca.gov/ds/>
- Cao, H. Y. (2009). Cong “shizhen” dao “guizhen” de lixiang jianxing: Xiaoxue yuwen “wenben jiedu gexinghua” xianzhuang de kaocha yu sikao (The ideal practice from distortion to returning to the reality: The study and thinking of the current situation of “personal interpretation of the text” in primary Chinese). *Kecheng Jiaocai Jiaofa (Curriculum, Teaching Material and Method)*, 29(2), 32–35.
- Central Committee of the Communist Party of China. (1985). *Guanyu jiaoyu tizhi gaige de jue ding (Decision on the reform of the educational structure)*. Retrieved July 28, 2022 from <http://www.gov.cn/gongbao/shuju/1985/gwyb198515.pdf>
- Chen, S. F., Yang, X., & Wang, Q. Q. (2019). Bentu dingxiang peiyang zhuoyue quanxing xiangcun xiaoxue jiaoshi hexin suyang yanjiu (Local-oriented teacher education programs for all-subject teachers in rural elementary schools). *Jiamusi Zhiye Jishu Xueyuan Bao (Journal of Jiamusi Vocational Institute)*, 12, 119–120.
- Cui, Z. D., Cha, S. J., Jin, W., & Fu, Y. (2019). Guopei jihua zhidu chuangujian de jiazhi yinsu tanxi: Jiaoyu zhengce jiazhi fenxi de shijiao (Exploring the value factors of creating national training programs for elementary and secondary school teachers: A perspective of education policy value analysis). *Hebei Shifan Daxue Xuebao (Jiaoyu Kexue Ban) (Journal of Hebei Normal University [Education Science Edition])*, 21(1), 118–124.

- Cuseo, J. (2007). The empirical case against large class size: Adverse effects on the teaching, learning, and retention of first-year students. *The Journal of Faculty Development*, 21(1), 5–21.
- Darling-Hammond, L. (2000). Teacher quality and student achievement. *Education Policy Analysis Archives*, 8(1), 1–44.
- Du, H. X. (2021). Xiaoxuesheng gexinghua yuedu fenxi (Examinations on individualized reading in elementary school students). *Kaoshi Zhoukan (Exam Weekly)*, 52, 25–26.
- Feng, H. (2017). Xiaoxuesheng chuangxin nengli peiyang yu pingjia (Cultivation and evaluation of innovation ability of pupils). *Tianjin Keji (Tianjin Science & Technology)*, 44(4), 1–6+10.
- Feng, T. T. (2021). Shilun xiaoyuan tiyu wenhua dui xiaoxuesheng zhongshen tiyu yishi de yingxiang (Influence of sports culture in elementary schools on students' lifelong sports awareness). *Jichu Jiaoyu Luntan (Basic Education Forum)*, 29, 63–64.
- Ge, H. B. (2022). Cong miaoshu, biaoosu dao chuanguo: Chuangyi xiezuo xue shijiaoxia xiaoxue xiezuo jiaoxue jinjie xinlun (From description, representation to creation: A new writing instructional approach in elementary schools from the perspective of creative writing). *Jiangxi Shifan Daxue Xuebao (Journal of Jiangxi Normal University)*, 55(1), 67–71.
- Graue, E., Hatch, K., Rao, K., & Oen, D. (2007). The wisdom of class-size reduction. *American Educational Research Journal*, 44(3), 670–700.
- Huang, E. (2016). Yiwu jiaoyu jiu jin ruxue jiazhi de shanbian (Transmutation of the value of the “nearby enrollment” policy in compulsory education). *Jiaoxue Yu Guanli (Teaching & Administration)*, 12, 31–34.
- Huang, L. X. (2020). Zhongguo bufen xiaoxuesheng zhongde “tiyu yu jiankang linian yinlingzhe” jiyu renji chuanbo tujing chansheng de tiyu yingxiangli yanjiu (Research on sports forces of “leaders of sports and health concept” among some elementary school students in China based on interpersonal communication channels). *Shoudu Tiyu Xueyuan Xuebao (Journal of Capital University of Physical Education and Sports)*, 32(4), 1–7.
- Jia, J. L. (2018). Xinkegai xingshixia de chawenhua deyu siwei dui xiaoxue jiaoyu guanli de jiejian yiyi (The significance tea culture in improving educational management in elementary schools in the era of New Curriculum Reform). *Fujian Chaye (Tea in Fujian)*, 40(8), 393.
- Jiang, X. F., Zhang, J. H., & Yu, Y. D. (2015). Yu Yedong: Zhuixun lixiang de jiaoyu rensheng (Yu Yedong: Pursuing an ideal lifelong career in the field of education). *Faming yu Chuangxin (Jiaoyu Xinxihua) (Invention and Innovation [Education Informatization])*, 3, 9–11+31.
- Kuo, L., & Anderson, R. C. (2006). Morphological awareness and learning to read: A cross-language perspective. *Educational Psychologist*, 41(3), 161–180.
- Li, H. (2020). Xiangmuhua xuexi qudong gaozhiliang gexinghua tanjiu (Project-based learning drives high-quality and personalized inquiries). *Renmin Jiaoyu (People's Education)*, 23, 102–105.
- Li, X. Y. (2008). Nongcun zhongxiaoxue buju tiaozheng yu “liangmian yibu” zhengce shishi zhuangkuang fenxi: Jiyu nonghu wenjuan diaocha de jieguo (Implementation of the layout adjustment and the “Two Exempt and One Subsidy” in rural schools: Based on the results of questionnaire survey). *Jiaoyu Fazhan Yanjiu (Research in Educational Development)*, 21, 57–61.
- Li, Y. (2004). Wangluo huanjingxia xiaoxue yuwen duxie yitihua jiaoxue tansuo (Study on whole learning process of reading and writing Chinese language in elementary schools in net environment). *Jiangxi Jiaoyu Keyan (Jiangxi Educational Research)*, 5, 36–38.
- Lin, M. (2021). Gexinghua quweihua shijianhua: Xiaoxue yingyu zuoye sheji youhua celve (Individualized, engaging and practice-oriented homework design in elementary school English language learning). *Fujian Jichu Jiaoyu Yanjiu (Fujian Basic Education Research)*, 6, 80–82.
- Liu, H. Q. (2021). Jinjinyouwei meimeiyugong: Jinmei xiaoxue miansu yishu meiyu shijian anli (A case study of dough modelling practice for aesthetic education in Jinmei Elementary School). *Yishu Qimeng (Art Enlightenment)*, 11, 42–43.
- Liu, Y. F. (2001). Zhongxiaoxue xinxi jishu jiaoyu dui xuesheng zhongshen xuexi nengli de peiyang (Education of information technology in schools and cultivation of lifelong study ability of students). *Dianhua Jiaoyu Yanjiu (E-Education Research)*, 10, 37–39.

- Liu, Y. J., & Mencius, M. (2011). Zhongxiaoxuesheng chuangxin nengli wenjuan bianzhi baogao (The development of a creativity scale for elementary and secondary school students). *Zhongguo Teshu Jiaoyu (Chinese Journal of Special Education)*, 6, 62–65.
- Lu, W. R. (2021). Xiaoxue yingyu jiaoxue yu yingyu wenhua yishi de ronghe yu shentou (The integration and penetration of elementary school English teaching and English cultural awareness). *Kexue Zixun (Scientific Consult)*, 13, 160.
- Meng, X. (2019). Xiaoxue shuxue gexinghua xuexi changyu chuangxin de lujing (Innovation approaches for individualized learning field in math in elementary schools). *Jiaoxue Yu Guanli (Teaching & Administration)*, 8, 1–3.
- Ministry of Education. (2008). *Zhongxiaoxue jiaoshi zhiye daode guifan (Professional ethics for elementary and secondary school teachers)*. Retrieved July 28, 2022 from http://www.moe.gov.cn/jyb_xwfb/moe_2082/moe_183/tnull_38633.html
- Ministry of Education. (2013). *Guanyu jianli jianquan zhongxiaoxue shide jianshe changxiao jizhi de yijian (Guidelines on building the long-term mechanism of teacher morality construction in elementary and secondary schools)*. Retrieved July 28, 2022 from http://www.moe.gov.cn/srcsite/A10/s7002/201309/t20130902_156978.html
- Ministry of Education. (2015). *Zhongxiaoxue yishu suzhi ceping banfa (Methods for evaluating the artistic quality of elementary and secondary school students)*. Retrieved July 28, 2022 from http://www.moe.gov.cn/srcsite/A17/moe_794/moe_795/201506/t20150618_190674.html
- Ministry of Education. (2017). *Zhongxiaoxue deyu gongzuo zhinan (Guide to moral education for elementary and secondary schools)*. Retrieved July 28, 2022 from http://www.moe.gov.cn/srcsite/A06/s3325/201709/t20170904_313128.html
- Ministry of Education. (2019). *Educational statistics yearbook of China 2018*. China Statistics Press.
- Ministry of Education. (2020a). *Educational statistics yearbook of China 2019*. China Statistics Press.
- Ministry of Education. (2020b). *Zhongxiaoxue jiaoshi peixun kecheng zhidao biaoqun (shide xiuyang) (Guiding standards for elementary and secondary school teacher training curriculum [teacher morality])*. Retrieved July 28, 2022 from http://www.moe.gov.cn/srcsite/A10/s7002/202008/t20200814_478091.html
- Ministry of Education. (2020c). *Xiaoxue tiyu qicai sheshi peibe biaoqun (Equipping standard of equipment and facilities for physical training in elementary schools)*. Retrieved July 28, 2022 from http://www.moe.gov.cn/srcsite/A17/s7059/201609/t20160928_282532.html
- Ministry of Education. (2020d). *Dazhongxiaoxue laodong zhidao gangyao (shixing) (Guidelines on labor education for elementary, secondary, and higher Education [trial])*. Retrieved July 28, 2022 from http://www.moe.gov.cn/srcsite/A26/jcj_kcjcggh/202007/t20200715_472808.html
- Ministry of Education. (2021a). *Educational statistics yearbook of China 2020*. China Statistics Press.
- Ministry of Education. (2021b). *Guanyu jiaqiang yiwujiaoyu kaoshi guanli de tongzhi (Notice on strengthening the management of examinations in compulsory education schools)*. Retrieved July 28, 2022 from http://www.moe.gov.cn/srcsite/A06/s3321/202108/t20210830_555640.html
- Ministry of Education. (2022). *Yiwu jiaoyu kecheng fang'an he biaoqun (Curriculum program and curriculum standards of compulsory education)*. Retrieved July 28, 2022 from http://www.moe.gov.cn/srcsite/A26/s8001/202204/t20220420_619921.html
- Ministry of Finance. (2020). *China educational finance statistical yearbook*. China Statistics Press.
- National Bureau of Statistics. (2017). *China social statistical yearbook 2017*. China Statistics Press.
- National Bureau of Statistics. (2018). *China social statistical yearbook 2018*. China Statistics Press.
- National Bureau of Statistics. (2019). *China social statistical yearbook 2019*. China Statistics Press.
- National Bureau of Statistics. (2020). *China social statistical yearbook 2020*. China Statistics Press.
- National Bureau of Statistics. (2021a). *China statistical yearbook 2021*. China Statistics Press.
- National Bureau of Statistics. (2021b). *China social statistical yearbook 2021*. China Statistics Press.

- Nong, H. K. (2015). “Liangmian yibu”: Beijing, licheng yu yingxiang (“Two exempt and one subsidy”: Background, process, and influence). *Guangxi Shifan Daxue Xuebao (Journal of Guangxi Normal University)*, 2, 115–123.
- OECD. (2022a). PPP conversion rate. Retrieved July 28, 2022 from <https://data.oecd.org/conversion/purchasing-power-parities-ppp.htm>
- OECD. (2022b). World inequality database on education. Retrieved July 28, 2022 from <https://www.education-inequalities.org/indicators>
- Peng, F., & Liu, Q. (2015). Yangguang tiyu beijing xia xuesheng zhongshen tiyu yishi de peiyang (Cultivation of students’ lifelong sports awareness in the context of Sunshine Sports). *Yatai Jiaoyu (Asia-Pacific Education)*, 10, 222+148.
- Peng, G. Q. (2014). Xiaoxue dier xueduan shuxue gexinghua zuoye sheji de celve (Strategies for customizing math homework for third and fourth grade students). *Xiandai Zhongxiaoxue Jiaoyu (Modern Primary and Secondary Education)*, 30(8), 55–58.
- Pianta, R., Howes, C., Burchinal, M., Bryant, D., Clifford, R., Early, D., & Barbarin, O. (2005). Features of pre-kindergarten programs, classrooms, and teachers: Do they predict observed classroom quality and child-teacher interactions? *Applied Developmental Science*, 9(3), 144–159.
- Qiu, Q. L. (2021). Xiaoxue zonghe shijian huodong hezuo jiaoxue zhizuo zhong chuangxin yishi de peiyang celve (Strategies of facilitating creativity in practice-oriented cooperative learning activities in elementary schools). *Kaoshi Zhoukan (Exam Weekly)*, 53, 7–8.
- Ren, J. F., & Qi, Y. Z. (2020). Mianxiang chuangxin siwei peiyang de xiaoxue kecheng xuexi huodong sheji (Design of learning activities in elementary schools for students’ development in creativity). *Dianhua Jiaoyu Yanjiu (E-Education Research)*, 41(3), 108–113.
- Commission, S. M. E. (2017). *Shanghai educational yearbook 2016*. Shanghai People Press.
- Commission, S. M. E. (2018). *Shanghai educational yearbook 2017*. Shanghai People Press.
- Commission, S. M. E. (2019). *Shanghai educational yearbook 2018*. Shanghai People Press.
- Commission, S. M. E. (2020). *Shanghai educational yearbook 2019*. Shanghai People Press.
- Commission, S. M. E. (2021). *Shanghai educational yearbook 2020*. Shanghai People Press.
- Shao, Y. P. (2019). “Jiujin ruxue” yu jiaoyu gongping: Yuan yuan, shizhi yu fangxiang (The “nearby enrollment” policy and educational equity: The origin, mechanisms, and future directions). *Zhejiang Xuekan (Zhejiang Academic Journal)*, 6, 104–110.
- Sheng, Z. Y., & Zhang, X. Y. (2021). Yu nongcun shequ gongsheng de xiwang xiaoxue gaizao sheji yanjiu (Renovation design of hope elementary school coexisting with rural communities). *Chengshi Zhuzhai (Urban Architecture Space)*, 28(10), 205–206.
- Shi, H. F. (2006). Tigao renshi, jiaqiang “tegang jihua” de shishi (Raise awareness and strengthen the implementation of the special-post teacher recruitment program). *Zhongguo Daxuesheng Jiuye (University Student Career Guide)*, 16, 99–100.
- Shi, H. Z., & Zhao, Q. Y. (2022). Lizu laodong jiaoyu, youxiao kaifa xiaoxue kexue zhuti huodong: Yi “zhihui zhongzhi” zhuti huodong weili (Developing elementary school science activities based on labor education: Taking “Smart Planting” as an example). *Jiaoyu Yu Zhuangbei Yanjiu (Education & Equipment Research)*, 356(3), 70–73.
- Shi, Y. T. (2011). Nongcun zhongxiaoxue jiaoshi zhihuan yanjiu moshi chuangxin tansuo (Exploring the across-school teacher rotation program in rural elementary and secondary schools). *Zhongxiaoxue Jiaoshi Peixun (The Inservice Education and Training of School Teachers)*, 10, 3–5.
- Slot, P. L., Leseman, P. P. M., Verhagen, J., & Mulder, H. (2015). Associations between structural quality aspects and process quality in dutch early childhood education and care settings. *Early Childhood Research Quarterly*, 33, 64–76.
- Su, H. (2004). Cujin xuesheng xingxiang siwei yu chouxiang siwei de xietong fazhan: Xiaoxue shuxue jiaoxue zhong qianghua gainian jiaoxue de yixie zuofa (Promoting coordinated development of students’ figurative thinking and abstract thinking: A few suggestions from teaching practices in elementary math instruction focusing on concept acquisition). *Zhongguo Jiaoyuxue Kan (Journal of the Chinese Society of Education)*, 5, 36–39.

- The State Council. (1980). *Guanyu puji xiaoxue jiaoyu ruogan wenti de jue ding* (Decision on several issues concerning popularizing elementary education). Retrieved July 28, 2022 from <http://temp.pkulaw.cn:8117/chl/852.html>
- The State Council. (1993). *Zhongguo jiaoyu gaige he fazhan gangyao* (Program for educational reform and development in China). Retrieved July 28, 2022 from <https://www.pkulaw.com/chl/884c300f0f82016abdfb.html>
- The State Council. (2016). *Guanyu tongchou tuijin xianyunei chengxiang yiwu jiaoyu yitihua gaige fazhan de ruogan yijian* (Several guidelines on comprehensively promoting reform and development to integrate urban and rural compulsory education within county areas). Retrieved July 28, 2022 from http://www.gov.cn/zhengce/content/2016-07/11/content_5090298.htm
- The State Council. (2019). *Guanyu shenhua jiaoyu jiaoxue gaige quanmian tigao yiwu jiaoyu zhiliang de yijian* (Guidelines on deepening the reform of education and teaching and comprehensively improving the quality of compulsory education). Retrieved July 28, 2022 from http://www.gov.cn/zhengce/2019-07/08/content_5407361.htm
- The State Council. (2021). *Guanyu jinyibu jianqing yiwu jiaoyu jieduan xuesheng zuoye fudan he xiaowai peixun fudan de yijian* (Guidelines on further easing the burdens of excessive homework and off-campus tutoring for students undergoing compulsory education). Retrieved July 24, 2022 from http://www.gov.cn/zhengce/2021-07/24/content_5627132.htm
- UNESCO Institutes for Statistics. (2022). UNESCO institute for statistics database. Retrieved July 28, 2022 from <http://data.uis.unesco.org/>
- Xiao, L., Zheng, Z. Y., & Song, N. Q. (2021). Xiaoxuesheng STEAM xuexi nengli: Shidai jiazhi, neihan renshi ji pingjia kuangjia (The STEAM learning competencies of elementary school students: The contemporary value, connotative cognition, and evaluation framework). *Jiaoyu yu Jingji* (Education & Economy), 37(2), 40–46+57.
- Yu, L. Q., Suo, F., Zhu, S., Lu, C., & Wu, D. (2021). Xiaoxuesheng zhonggaoduan xuesheng xinxi suyang ceping moxing goujian yu yingyong yanjiu: Yi si wu nianji xuesheng weili (Research on the construction and application of information literacy measurement model for middle and upper-grade of elementary school students: Take fourth and fifth grade students as an example). *Zhongguo Dianhua Jiaoyu* (China Educational Technology), 5, 63–69+101.
- Yu, Y. P. (2016). Jiyu fengge yishi de xiaoxue meishu gexinghua jiaoxue (Personalized art instruction in elementary schools based on style awareness). *Xiandai Zhongxiaoxue Jiaoyu* (Modern Primary and Secondary Education), 32(12), 32–35.
- Zhang, B.X., Rong, Q., & Zhang, Z.D. (1904). *Zouding xuetang zhangcheng* (Presented school regulation). Retrieved August 4, 2022 from <https://xuewen.cnki.net/r2011060020003953.html>
- Zhang, X. L. (2021). Xiaoxue ruxue “shengtai junheng” fenban moxing de lilun goujian yu jiazhi kaoliang (The oretical construction and value consideration of “ecological balance” class division model for elementary school enrollment). *Jiaoyu Kexue Yanjiu* (Educational Science Research), 3, 32–37.
- Zheng, L., & Wang, S. M. (2014). Xuexiao xuanze, jiaoyu fuwu zibenhua yu juzhuqu fenge: Dui “jiujin ruxue” zhengce de yizhong fansi (School choice, capitalization of educational services, and residential segmentation: A reflection on the “nearby enrollment” policy). *Jiaoyu yu Jingji* (Education & Economy), 6, 25–32.
- Zheng, R. F. (2014). Xiaoxue biye kecheng tixi jianshe yu shijian yanjiu: Jiyu xuesheng zhongshen fazhan de shijiao (The construction and practices of graduation curriculum in elementary schools: The perspective of students’ lifelong development). *Zhongguo Jiaoyuxue Kan* (Journal of the Chinese Society of Education), 5, 70–72+83.
- Zheng, R. F. (2021). Chuangjian wuyu ronghe gongtongti, tansuo daguimo xiaoxue nianji guanli xinxingtai (Creating a community of “integrated education”, exploring new forms of large-scale elementary school management). *Zhongxiaoxue Guanli* (Primary and Secondary School Administration), 12, 23–25.
- Zhu, X. D. (2010). Lun “guopei jihua” de jiazhi (On the value of the national training programs). *Jiaoshi Jiaoyu Yanjiu* (Teacher Education Research), 6, 3–8+25.

Zhu, X. M. (2003). Renshi xiaoxue ertong, renshi xiaoxue jiaoyu (Understanding elementary school children, understanding elementary education). *Zhongguo Jiaoyuxue Kan (Journal of the Chinese Society of Education)*, 8, 1–6.

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