New Era, New Choice: The Implementation Path of the “General-to-Vocational Student Roughly Equivalent” Policy in High School Education

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Abstract: The “General-to-Vocational Student Roughly Equivalent” policy is an integral part of the top-level design of China’s vocational education. The paper analyzed the value of the policy from a multidisciplinary perspective and reviewed its development path. According to the statistical analysis of the “General-to-Vocational Student Ratio (GVR)” data from 2009 to 2018, it can be seen that the policy has been implemented well. Still, the GVR has a trend of further expansion. Therefore, to ensure the effective implementation of this policy, relevant policy recommendations are put forward from stakeholders such as the government, secondary vocational schools, and parents of students.
CHINA attaches great importance to education and has always “adhered to the development of education as the priority to promote the development of various national undertakings.” After the reform and opening up, China began implementing the “General-to-Vocational Student Roughly Equivalent (GVRE)” policy. A series of practical measures have been taken to change the single secondary education structure so that vocational and technical education can develop rapidly. As a result, a large number of high-quality talents have been cultivated for the country. Today, the “GVRE” policy has become an essential content in the top-level design of national vocational education, which has played a vital role in consolidating the fundamental status of secondary vocational education in the entire vocational education and has formed a system with Chinese characteristics. In the new era, China’s economy has shifted from rapid growth to a stage of high-quality development. The principal contradiction of education has also turned into the contradiction between the growing demand for high-quality education and the unbalanced and inadequate educational development. At the same time, as high school education enters the era of universalization, and economic transformation and technological upgrading continue to accelerate, industry enterprises have continuously increased their requirements for technical and skilled personnel and the internal and external environment for the implementation of the “GVRE” policy has also changed. Therefore, how to effectively implement the “GVRE” policy has become an important issue we face.

The Era Meaning of the “GVRE” Policy

By implementing the “GVRE” policy, the bottom line has been set for the reserve of students needed to develop secondary vocational education, which has played a role in promoting its sustainability. However, as the social recognition of vocational education continues to decline and the popularity of high school education continues, the “GVRE”

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policy has been criticized by all walks of life and questioned by some experts and scholars. Some parents of students find it challenging to accept it, and many education administrators and even educational administrators have criticized it. Some experts and scholars believe it lacks a scientific basis (Ou & Dec, 2016) and has exacerbated educational unfairness (Zhu & Zhao, 2020). However, as an important national policy, whether “GVRE” is scientific and reasonable and needs to be adjusted must be based on a long-term perspective, stay away from subjective judgments, and must not be mixed with personal emotions and preferences. We will examine and think about the “GVRE” policy from a multidisciplinary perspective from different disciplines such as management, education, psychology, economics, and statistics, and explain the policy’s rationality and scientific value.

Reflect the Government’s Scientific Decision-Making and Retain Flexibility

Scientific decision-making, also known as rational decision-making, is decision-making made by decision-makers under the guidance of correct theory, relying on scientific thinking, methods, and technology (Li, 2019). “GVRE,” as a national policy, is a long-term decision made by the central government based on the overall consideration of the country’s future economic and social development. Due to the significant differences in regional economic development, industrial structure, talent demand, and educational demand, it is impractical to require all localities to maintain “GVRE.” Moreover, “GVRE” does not rigidly need the “General-to-Vocational Student Ratio (GVR)” to be 1:1, which reserves flexible space for policy implementation and reflects the rationality and scientific nature of the central government’s decision-making. “GVRE” does not require the whole country to be “roughly equivalent” or to set “GVR” as 1:1 but requires local governments based on local economic and social development and the total number of middle school graduates. In the end, the “GVR” can be determined with the suitability of its contribution to local economic and social development needs and ensure the effective implementation of the “GVRE” policy.

Follow the Law of Educational Development and Improve the Vocational Education System

The law of education is an essential or inevitable connection between the internal elements of the education system and between the education system and its environment (material, spiritual, and social) in the course of its operation and development (Hu, 2000). As the type of education most closely related to economic and social development, vocational education is the most direct educational means to solve practical problems. The “GVRE” policy follows the law of the relationship between education and economic and social development. Economic and social development has a restrictive effect on secondary vocational education and general high school education. The develop-
Development level of these two types of education will also have a particular impact on economic growth. The specific interaction between the two is as follows: On the one hand, economic and social development restricts the scale and speed of the development of secondary vocational education and limits the talent training specifications and educational structure. On the other hand, secondary vocational education can reproduce labor, science, and technology, increase productivity, and promote economic and social development.

**Respect Individual Physical and Mental Differences and Implement Teaching per their Aptitude**

The famous American educational psychologist Howard Gardner put forward the theory of multiple intelligences in 1983. He believed that eight kinds of intelligence are related to specific cognitive domains or knowledge categories in individuals relatively independently, including language intelligence, mathematical logic intelligence, spatial intelligence, body-motor intelligence, musical intelligence, interpersonal intelligence, reflective intelligence, and natural intelligence (Pi, 2009). Individuals also have differences in the ways of cognition, thinking level, and personality characteristics. Therefore, every student is a plastic talent with intellectual characteristics, learning type, and development direction. Education plays a leading role in developing the individual’s body and mind, but education must be restricted by creating the individual’s body and mind. High school is a critical period for the formation of rational knowledge, self-awareness, and personality, and it is also a watershed for the growth of different types of talents. In the high school stage, the general job division provides suitable development space to grow different skills and create the best environment. This reflects that the “GVRE” policy follows the law of individual physical and mental development and takes the individual’s physical and psychological development as the basis for educational behavior. Teach students per their aptitude so that every student can receive “appropriate education.” Let every student have their track to obtain development in line with their physical and mental characteristics.

**Implement Human Capital Theory and Develop Human Resources**

Human capital refers to the sum of economically valuable knowledge, skills, and physical strength (health status) in the human body (Li & Huang, 2001). In 1776, the British economist Adam Smith explained the importance of “talent” for the first time in The Wealth of Nations. In the 1960s, American economists Thodore W. Schults and Gary S. Becker co-founded Human Capital Theory. One of the core views is that the core of human capital is to improve population quality, and education investment is the central part of human investment. Education and training play an essential role in the formation of human capital. Education can improve the quality of the labor force, the workability,
and the technical level of the laborers, thereby increasing labor productivity. The formulation and implementation of the “GVRE” policy will help train laborers with higher quality and skills, that is, laborers with a higher stock of human capital, to meet the demand for economic and social development talents.

Meet the Needs of the Economy and Society, Optimize the Talent Structure

According to talents’ knowledge and ability structure, talents are usually divided into four categories: academic, engineering, technical, and skill. Among them, the latter three types of talents can be collectively referred to as applied talents. From the perspective of the demand for social talents, “the ratio of applied technical talents and academic talents in developed European countries is generally 8:2, which is consistent with the structure of the supply and demand of talents for social and economic development” (Jiao & Jan, 2014). Assume that 100% of middle school graduates are promoted to high school, 50% are encouraged to ordinary high schools, and 50% are promoted to secondary vocational schools. Furthermore, 40% of the students entering general high school are promoted to academic colleges and universities, and 60% are encouraged to applied colleges and universities (Zhang, 2018) According to this assumed proportion of entering higher education, at the same time node, the ratio of academic talents obtained by the society to middle and higher applied talents is exactly 2:8. This ratio is in line with economic and social development needs, and both academic and applied talents have room for full play. Therefore, the “GVRE” policy is reasonable and necessary and can guarantee all talents needed for economic and social development.

The Development Path of the “GVRE” Policy

In China, “education reform and development are mainly promoted through policies” (Tu & Wei, 2014). Therefore, a series of policies related to the coordinated development of general vs. vocational education at the stage of high school education promulgated by the state have become the critical basis for implementing the “GVRE” policy. Reviewing these policy documents shows that the country first proposed the “GVRE” policy in 1983. A series of essential documents issued subsequently clearly set forth the goals and requirements for implementing this policy. At the same time, based on the historical time nodes of political changes, institutional changes, and key actors’ concepts and behaviors that have a profound impact on the “GVRE” policy, the implementation process can be divided into pilot exploration, preliminary implementation, development and improvement, and adjustment and optimization.

Stage of Pilot Exploration

From the late 1970s to the early 1980s, the scale of general vs. vocational in China’s high school stage has been severely unbalanced. In 1978, Premier Xiaoping Deng put
forward the first guidance on “Expanding the proportion of vocational and technical schools” at the National Education Work Conference. Subsequently, many regions have carried out pilot work on the reform of the secondary education structure. In 1980, the State Council approved and transmitted the “Report of the Ministry of Education and the State Administration of Labor on the Reform of Secondary Education Structure.” It put forward the requirement of “making the number of students in various vocational (technical) schools a significant increase in the overall high school education.” By 1982, the number of students in urban vocational middle schools (classes) and vocational (technical) schools had reached more than 350,000, and the ratio of students in general high schools at that time was 1:5 (The Chinese Ministry of Education, 1983). In 1983, the Ministry of Education, the Ministry of Labor and Personnel, and other four ministries and commissions put forward in the Opinions on Reforming the Structure of Urban Secondary Education and the Development of Vocational and Technical Education: The ratio should be roughly the same.” This was the first policy requirement of “GVRE” proposed by China, and it provided a strong system guarantee for further promoting the reform of the secondary education structure.

Stage of Preliminary Implementation

In 1985, the “Decision of the Central Government on Education System Reform” proposed: “Adjust the structure of secondary education and vigorously develop vocational and technical education” and “strive to achieve the same number of students enrolled in vocational and technical schools at various high school stages in most regions within five years. As a result, the number of students enrolled in general high schools has reversed the current irrational structure of secondary education.” To implement this requirement, in July 1986, the first national vocational and technical education work conference was held. It was proposed that “the enrollment of vocational and technical schools in most regions of the country should be approximately equal to that of ordinary high schools around 1990”. Since then, “GVRE” policy discussions have been widely carried out across the country. As a result, the enrollment ratio of vocational and technical schools at the high school level has also increased rapidly.

Since the 1990s, as people’s desire to go to university has become more robust, the requirement for general high school education has become more urgent, and the phenomenon of “general high school fever” has appeared. As a result, the implementation of the “GVRE” policy has been seriously affected. For example, in 1991, the Decision of the State Council on Vigorously Developing Vocational and Technical Education proposed that: “Expand the scale of enrollment, especially the expansion of the enrollment scale of secondary vocational and technical schools, so that the number of students in vocational and technical schools exceeds the number of students in general high schools.” In 1993, there were more than 20 mentions of “vocational education” in the Outline of China’s Education Reform and Development, which showed that China attaches great importance to the development of vocational education. Among them, it is proposed that: “Vigorously develop vocational education, and gradually form a series
of education for the common development of elementary, secondary, and higher vocational education and general education," “gradually achieve that 50%-70% of middle school graduates enter secondary vocational schools or vocational training center.”

**Stage of Development and Improvement**

Since the 21st century, the Chinese government has successively issued a series of policy documents to ensure the effective implementation of the “GVRE” policy. In 2002, the *Decision of the State Council on Vigorously Promoting the Reform and Development of Vocational Education* stated that: “It is necessary to focus on secondary vocational education and maintain roughly the same ratio of secondary vocational education to regular high school education.” In 2005, the *Decision of the State Council on Vigorously Developing Vocational Education* stated that: “By 2010, the enrollment scale of secondary vocational education will reach 8 million, which is roughly equivalent to the enrollment scale of general high schools.” The *Notice on Enrollment of Educational Schools* stated: “According to the national high school education development plan and gradually achieving the roughly equivalent requirements of GVR, combined with the actual situation of the region, ...... determine the enrollment scale of various schools for high school education.” In 2010, the *National Medium and Long-term Educational Reform and Development Plan (2010-2020)* proposed that: “According to the needs of economic and social development, reasonable determination of the enrollment ratio of general high schools and secondary vocational schools, and maintain the general high school and secondary vocational schools for a while, and keep the school’s enrollment scale be roughly the same.” In 2014, the *Decision of the State Council on Accelerating the Development of Modern Vocational Education* stated that: “In general, the enrollment scale of secondary vocational schools and general high schools should be roughly equal, and the scale of higher vocational education accounts for more than half of higher education.” In 2014, the *Modern Vocational Education System Construction Plan (2014-2020)* stated that: “Secondary vocational education is the focus of developing vocational education. In the future, the enrollment scale of general high schools and secondary vocational schools will be roughly the same.”

**Stage of Adjustment and Optimization**

In 2017, the Ministry of Education and other four ministries and commissions put forward in the *High School Education Popularization Plan (2017-2020)* and stated that: “By 2020, the structure of general high school and secondary vocational education will be more reasonable, and the enrollment scale will be roughly the same.” In 2019, the *National Vocational Education Reform Implementation Plan* proposed that: “The development of secondary vocational education shall be an important foundation for popularizing high school education and building a vocational education system with Chinese characteristics. The new workforce is receiving high school education.” This showed that “GVRE,” as an essential policy for developing vocational education, will
continue to be implemented in the future. In 2019, the Ministry of Education put forward the Notice on In-depth Study and Implementation of the National Vocational Education Reform Implementation Plan. It stated that: “To perfect the modern vocational education system, it is necessary to raise the level of secondary vocational education development and maintain a roughly equivalent ratio of high school education vocational education.” At the same time, the Ministry of Education has clearly stated in the high school admissions notices over the years that “arrange high school admissions plans per GVRE.” The Notice of the General Office of the Ministry of Education on Doing a Good Job in the Enrollment of Secondary Vocational Schools in 2019 stated that: “Persist that the ratio of general vs. vocational is roughly equivalent, and improve the development level of secondary vocational education”; “All localities must strictly follow the principle of the roughly equivalent ratio of general vs. vocational.” According to the needs of economic and social development and the source of middle school graduates in the region, reasonable arrangements for secondary vocational school enrollment plans, adjustment and optimization of the high school education structure, and promotion of the coordinated development of general vs. vocational high school education” (General Office of the Ministry of Education, Jan, 2020)

Analysis of the Status Quo of the “GVRE” Policy

According to the Basic Situation of National Education Development in 2018 (The Chinese Ministry of Education, Jan, 2020) and Basic Situation of Vocational Education in 2018 (The Chinese Ministry of Education, Jan, 2020) issued by the Ministry of Education, in 2018, there were 13,677,700 middle school graduates nationwide; high school enrollment was 13,521,200. About 7.9271 million students were enrolled in general high schools, and 5.5941 million students were enrolled in secondary vocational schools. The general undergraduate colleges and universities enrolled 7.909 million students, of which 4.2216 million were enrolled for general undergraduates and 3.6883 million were enrolled for higher vocational colleges. Based on the above data estimation, the total number of applied talents in middle and higher vocational education is 9,282,400, accounting for 68.76% of professional talents. In addition, coupled with applied talents at or above the undergraduate level, China’s talent structure is close to the 8:2 of applied talents to academic talents. Therefore, all kinds of talents can meet the needs of economic and social development.

Regional Comparison

According to the 2009-2018 national education development statistics released by the Ministry of Education of China, based on the number of students enrolled in high schools across the country (see Table 1), it shows that: First, in the past ten years, the population of school-age enrolled in high school education across the country under the background of declining and diversified parental education choices of students, the number of students enrolled in secondary vocational education has shown a downward
Table 1. The Number of Enrolled Students for High School Education in China (Unit: 10,000).

<table>
<thead>
<tr>
<th>Year</th>
<th>General High School</th>
<th>Secondary Vocational Education</th>
<th>Total Enrollment</th>
<th>General-Vocational Student Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>792.71</td>
<td>557.05</td>
<td>1,349.76</td>
<td>59:41</td>
</tr>
<tr>
<td>2017</td>
<td>800.05</td>
<td>582.43</td>
<td>1,382.49</td>
<td>58:42</td>
</tr>
<tr>
<td>2016</td>
<td>802.92</td>
<td>593.34</td>
<td>1,396.26</td>
<td>58:42</td>
</tr>
<tr>
<td>2015</td>
<td>796.61</td>
<td>601.25</td>
<td>1,397.86</td>
<td>57:43</td>
</tr>
<tr>
<td>2014</td>
<td>796.60</td>
<td>619.76</td>
<td>1,416.36</td>
<td>56:44</td>
</tr>
<tr>
<td>2013</td>
<td>822.70</td>
<td>674.76</td>
<td>1,497.45</td>
<td>55:45</td>
</tr>
<tr>
<td>2012</td>
<td>844.61</td>
<td>754.13</td>
<td>1,598.74</td>
<td>53:47</td>
</tr>
<tr>
<td>2011</td>
<td>850.78</td>
<td>813.87</td>
<td>1,664.65</td>
<td>51:49</td>
</tr>
<tr>
<td>2010</td>
<td>836.24</td>
<td>870.42</td>
<td>1,706.66</td>
<td>49:51</td>
</tr>
<tr>
<td>2009</td>
<td>830.34</td>
<td>868.52</td>
<td>1,698.86</td>
<td>49:51</td>
</tr>
</tbody>
</table>


Trend yearly. Taking 2014 as the “turning point,” the downward trend in enrollment of secondary vocational schools was more evident than before, and it would ease slightly in the future. However, the number of students enrolled in general high schools was relatively stable during the same period, with no significant decrease. Second, the “GVR” has increased year by year, but it has remained within the “roughly equivalent” range. Taking 2011 as the “turning point,” the previous “GVR” was always less than “1”, that is, the number of students enrolled in general high schools was smaller than that of secondary vocational schools, but the gap between the two has been narrowing yearly. Since 2011, “GVR” has been more significant than “1”, that is, the number of students enrolled in general high schools was more than the number of students enrolled in secondary vocational schools, and the gap between the two has been widening yearly. However, from the data in the past ten years, the enrollment of high school education has better implemented the basic requirements of the “GVRE” policy. However, adequate measures must be taken to enhance further the attractiveness of secondary vocational schools to prevent further expansion of the “GVR” to maintain the balance of social talent structure.

Among the four major economic regions in the country, Beijing, Shanghai, Jiangsu, Zhejiang, and Guangdong in the eastern region; Liaoning in the Northeast; Henan in the central area; and Shaanxi in the western area were selected for analyzing and comparing “GVRE” policy implementation. According to the 2013-2018 national education statistics released by the Ministry of Education of China, the enrollment status of high school education in these eight provinces and cities was obtained (see Table 2).

According to Table 2, the implementation of “GVR” in 8 provinces and cities in the four major economic regions across the country from 2013 to 2018 was roughly calculated (see Table 3).
In the eastern region, the growth trend of “GVR” in Beijing high schools was more pronounced. The “GVR” in 2013 was 52:48, which achieved the goal of “GVRE”; however, from 2014 to 2018, the “GVR” increased rapidly, reaching 77:23 in 2018, and ranked the first in the country. The “GVR” of Shanghai high schools has been increasing yearly, but the increase was slight. From 2013 to 2018, it remained between 55:45 and 60:40. The “GVR” of high schools in Jiangsu Province increased yearly, but the increase was slight. From 2013 to 2017, it remained at 58:42, basically fulfilling the target requirements of “GVRE.” Before 2018, the “GVR” in Jiangsu Province was relatively stable. However, since 2018, the provincial government has adjusted the number of high school enrollment plans following Jiangsu’s economic and social development needs. As a result, the “GVR” has increased significantly to 64:36. The “GVR” of Zhejiang high school was relatively stable. From 2013 to 2018, it remained at around 58:42, which achieved the target requirements of “GVRE.” The “GVR” of high schools in Guangdong Province increased yearly, but the increase was slight. From 2013 to 2018, it remained around 65:35.

In the Northeast, the base of “GVR” in high schools in Liaoning Province was relatively large, with a slight increase, which generally remained at around 65:35, but increased significantly in 2018, reaching 70:30. The high school “GVR” base was relatively large in the central and western regions, increasing yearly. The high school “GVR” in Henan Province remained at around 65:35, with a slight increase. The “GVR” of high schools in Shaanxi Province remained at around 70:30 and increased significantly. As a result, neither of these two provinces achieved the “GVRE” requirements.

In general, the “GVR” of the three provinces and cities of Shanghai, Jiangsu, and Zhejiang is relatively balanced, and the target requirements of the “GVRE” have

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Table 2. Number of Students Enrolled in General High Schools and Secondary Vocational Schools in 8 Provinces and Cities from 2013 to 2018 (Unit: Person).

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<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Jiangsu</td>
<td>259,05</td>
<td>341,41</td>
<td>234,36</td>
<td>228,70</td>
<td>319,48</td>
<td>200,93</td>
<td>318,23</td>
<td>225,97</td>
<td>314,57</td>
<td>199,20</td>
<td>352,08</td>
<td>2</td>
</tr>
<tr>
<td>Zhejiang</td>
<td>191,50</td>
<td>265,19</td>
<td>179,07</td>
<td>187,11</td>
<td>259,85</td>
<td>188,35</td>
<td>258,89</td>
<td>184,67</td>
<td>259,29</td>
<td>177,63</td>
<td>254,91</td>
<td>2</td>
</tr>
<tr>
<td>Guangdong</td>
<td>474,92</td>
<td>730,78</td>
<td>417,04</td>
<td>395,37</td>
<td>696,80</td>
<td>643,29</td>
<td>564,67</td>
<td>432,26</td>
<td>611,38</td>
<td>297,19</td>
<td>604,22</td>
<td>4</td>
</tr>
<tr>
<td>Liaoning</td>
<td>117,98</td>
<td>222,93</td>
<td>208,91</td>
<td>111,18</td>
<td>209,79</td>
<td>112,03</td>
<td>212,04</td>
<td>103,38</td>
<td>213,68</td>
<td>80,526</td>
<td>191,10</td>
<td>8</td>
</tr>
<tr>
<td>Henan</td>
<td>422,20</td>
<td>661,06</td>
<td>433,38</td>
<td>644,93</td>
<td>372,22</td>
<td>679,81</td>
<td>374,90</td>
<td>420,40</td>
<td>709,73</td>
<td>391,98</td>
<td>726,45</td>
<td>4</td>
</tr>
<tr>
<td>Shaanxi</td>
<td>163,98</td>
<td>299,38</td>
<td>135,29</td>
<td>279,79</td>
<td>106,43</td>
<td>264,27</td>
<td>93,314</td>
<td>257,19</td>
<td>98,383</td>
<td>243,80</td>
<td>232,05</td>
<td>7</td>
</tr>
</tbody>
</table>

Note: GHS: General high school; SVS: Secondary vocational school.

<table>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jiangsu</td>
<td>64:36</td>
<td>58:42</td>
<td>59:41</td>
<td>58:42</td>
<td>57:43</td>
<td>56:44</td>
</tr>
<tr>
<td>Zhejiang</td>
<td>59:41</td>
<td>57:43</td>
<td>58:42</td>
<td>58:42</td>
<td>58:42</td>
<td>58:42</td>
</tr>
<tr>
<td>Liaoning</td>
<td>70:30</td>
<td>67:33</td>
<td>65:35</td>
<td>65:35</td>
<td>66:34</td>
<td>65:35</td>
</tr>
</tbody>
</table>

Table 4. 2009-2019 Nanjing General High School and Secondary Vocational School Planned Enrollment Number (Unit: Person).

<table>
<thead>
<tr>
<th>Year</th>
<th>Middle School Graduates</th>
<th>Total Enrollment</th>
<th>General High School</th>
<th>Secondary Vocational School</th>
<th>General-Vocational Student Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>51,286</td>
<td>53,802</td>
<td>31,000</td>
<td>22,802</td>
<td>57.62:42.48</td>
</tr>
<tr>
<td>2018</td>
<td>47,000</td>
<td>47,717</td>
<td>25,511</td>
<td>22,206</td>
<td>53.46:46.54</td>
</tr>
<tr>
<td>2017</td>
<td>47,800</td>
<td>47,971</td>
<td>25,465</td>
<td>22,506</td>
<td>53.08:46.92</td>
</tr>
<tr>
<td>2016</td>
<td>46,541</td>
<td>47,565</td>
<td>25,060</td>
<td>22,505</td>
<td>52.69:47.31</td>
</tr>
<tr>
<td>2015</td>
<td>47,857</td>
<td>48,463</td>
<td>25,045</td>
<td>23,418</td>
<td>51.68:48.32</td>
</tr>
<tr>
<td>2014</td>
<td>45,939</td>
<td>45,973</td>
<td>21,605</td>
<td>24,368</td>
<td>46.99:53.01</td>
</tr>
<tr>
<td>2013</td>
<td>48,000</td>
<td>48,197</td>
<td>22,190</td>
<td>25,989</td>
<td>46.08:53.92</td>
</tr>
<tr>
<td>2012</td>
<td>49,900</td>
<td>50,015</td>
<td>22,670</td>
<td>27,345</td>
<td>45.33:54.67</td>
</tr>
<tr>
<td>2011</td>
<td>52,500</td>
<td>52,500</td>
<td>23,600</td>
<td>28,900</td>
<td>44.95:55.05</td>
</tr>
<tr>
<td>2010</td>
<td>55,400</td>
<td>54,900</td>
<td>24,500</td>
<td>30,400</td>
<td>44.63:55.37</td>
</tr>
<tr>
<td>2009</td>
<td>59,000</td>
<td>58,500</td>
<td>25,600</td>
<td>32,900</td>
<td>43.76:56.24</td>
</tr>
</tbody>
</table>


been achieved. The “GVR” in Guangdong and Henan provinces remained within a reasonable range but showed an expansion trend. On the other hand, the “GVR” of the three provinces and cities of Beijing, Liaoning, and Shaanxi are seriously out of balance, with an enormous gap and a trend of expansion, with a significant increase.

Take Nanjing City, Jiangsu Province, as an example; before 2014, the total enrollment of secondary vocational schools was higher than that of general high schools, but it was downward. For the first time in 2015, the planned enrollment of general high schools surpassed the planned enrollment of secondary vocational schools, and it was on the rise. After 2016, the number of general high school enrollment has gradually increased, and the number of secondary vocational school enrollment has declined, and it was more evident in 2019. In 2015, the total number of Nanjing middle school gradu-
ates was 47,857, and the total number of high school enrollment was 48,463, including 25,045 from regular high schools and 23,418 from secondary vocational schools. The “GVR” was 1.07 (51.68: 48.32). In general, from 2009 to 2019, Nanjing maintained the “GVRE” enrollment status (Table 4).

Cause Analysis

“The country’s main hope lies in the correct education of young people” (Daniel, 2010). Therefore, China has always emphasized the appropriate ratio of general high schools to secondary vocational schools. Thus, from a nationwide perspective, GVRE is maintained. However, the development of secondary vocational education in some regions is lagging. Implementing the “GVRE” policy has been loosened, causing the “GVR” in the various areas to increase yearly. Still, the actual value and increment of “GVR” were quite different. The reason was that some local governments have one-sidedly interpreted the “universalize of high school education” as the need to develop general high school education vigorously. Therefore, the support for secondary vocational education in terms of funding, resource allocation, and school-running conditions was relatively low, resulting in the uncoordinated development of general high school education and secondary vocational education.

The status and trends of economic and social development in different regions have different levels of talent requirements, and naturally, the implementation of “GVR” is also different. In economically developed areas, the performance of the “GVRE” policy is relatively good. Because these areas have many private enterprises and small and medium-sized enterprises, a large number of technical and skilled talents are needed to provide more jobs for graduates of secondary vocational schools. At the same time, the number and quality of higher vocational schools in these areas are large, providing more opportunities for vocational school graduates to enter higher education. Therefore, many parents of students are willing to accept “general-vocational diversion” and choose to attend secondary vocational schools.

Economically underdeveloped areas need more technical and skilled talents and larger-scale vocational education. However, the “GVR” in these areas is often very high, and more middle school graduates choose to attend general high schools. They entered universities after graduating from high school. They then went to work in economically developed areas after graduation because their local sites could not provide them with more and better job opportunities. For financially underdeveloped areas, to create local education, a large number of education funds are paid from their limited local finances. Suppose the trained talents cannot return to the local area and serve the local economy. In that case, this will waste local educational resources and cause the loss of talents, which is even more detrimental to the local economic and social development and forms the “Matthew Effect” of economic backwardness.

The level of economic and social development is directly proportional to the level of educational development. Education development is a crucial way to enhance the local “hematopoiesis” function, and it can train a large number of suitable talents for
local economic development. However, education cannot significantly advance economic and social development; otherwise, it will negatively affect education. It will cause a brain drain and waste limited local educational resources. The eastern region has a developed economy and can provide suitable jobs for laborers of different levels. As far as the northeast and central and western regions are concerned, the talents they train will flow to the economically developed eastern regions if the local areas cannot provide enough jobs. Therefore, the local government must reasonably determine the “GVR” based on the local economic and social development level to ensure an adequate supply of technical and skilled personnel.

**Recommendations for the Implementation of the “GVRE” Policy**

In recent years, China’s secondary vocational education has shown a good development trend and is in the most critical development period. With the rapid development of science and technology, the benefits of a large number of working-age young people from vocational education may be offset by their lack of adaptability, thereby reducing the possibility of their future employment (Eric et al, 2017). This has directly led to the loss of a large number of students in secondary vocational schools, the scale of secondary vocational education is shrinking day by day, and the implementation of the “GVRE” policy for high school education has also encountered significant challenges. Therefore, ensuring the adequate performance of the “GVRE” policy has become a “historical question” that we must face. Improving the quality of secondary vocational education and enhancing the attractiveness of secondary vocational education has become the “question of the times” that we must answer. How to cultivate the comprehensive quality and employability of secondary vocational students and enhance their employment competitiveness has become the “question of the soul” that we must answer. Breaking enterprises’ academic qualification-only selection and employment criteria have become a “practical question” that we must improve. Enhancing the public’s satisfaction and recognition of secondary vocational education has become a “question of the people’s heart” that we must think about.

**Government Departments Establish a Scientific Concept of Vocational Education and Reasonably Determine GVR**

The establishment of satisfactory vocational education is the responsibility and mission of governments at all levels, and it is also an inevitable choice for them to promote economic development. The central government should improve the top-level design of vocational education, establish a “general-vocational integration” overpass, facilitate the connection between vocational education and general education, and open up a channel for vocational education to rise. At the same time, establish a guarantee mecha-
nism for implementing the “GVRE” policy to promote the modernization of China’s vocational education governance system and capabilities. The local government strengthened the publicity of the “GVRE” policy, deeply interpreted the purpose, significance, and connotation of the implementation of the policy eliminated the worries and doubts of the general public, and maximized consensus. According to the regional economic and social development’s demand for technically skilled talents and the actual number of high school graduates in the region, and following the requirements of the “GVRE” policy, the “GVR” is reasonably determined. The “general-vocational diversion” must fully respect the education choice rights of the parents of students and cannot implement “one size fits all” rigid rules. It cannot become a mechanism for inter-generational transmission of poverty. The local education administrative department should coordinate the region’s general high school and secondary vocational education and promote the structural balance. It is even more necessary to eliminate the “hard border” between the two and promote exchanges and cooperation.

**Secondary Vocational Schools Establish a Scientific View of Quality and Strengthen their Connotation Construction**

For secondary vocational schools, instead of struggling with “GVR,” it is better to work hard to provide high-quality vocational education. Persevere in establishing morality and fostering people, and return to the original aspiration of educating people. Showing the concept of quality education while highlighting ability training, is also necessary to strengthen students’ ideological and psychological qualities. This is the fundamental difference between modern vocational education and other types of education. Set up majors suitable for students’ development, get out of the misunderstanding of academic qualifications, and improve students’ core literacy and critical abilities. Deepen general-vocational integration and promote sustainable development. The integration of “successful” education and “adult” education, employment education and sustainability, and the strength of skill and overall growth will provide more choices for student development. Cultivate school-running characteristics and create a vocational education brand. Follow the educational ideology of “learning must be expected to be used, and using must be suitable for the place.” In terms of professional settings, faculty, course content, teaching methods, etc., it is closely integrated with the production practice of the enterprise industry, and a batch of particular advantages that meet the needs of the local economy and society is run. Strengthen the construction of connotation and improve the level of running a school. Adhere to the educational concepts of “integration of production and education, school-enterprise cooperation, the combination of work and learning, and integration of knowledge and action,” further eliminate the “gap between learning and use,” and provide vocational education that makes students feel “useful.” Only when the secondary vocational school is well run can the students’ lives be brilliant, the vocational education can be glorious, and can win the applause of the society. As the
American educator, Ernest L. Boyer said: “The purpose of education is not only to prepare students for their careers but also to enable them to live a dignified and meaningful life” (Ernest, 1993)

**Parents of Students Establish a Scientific View of Education and Rationally Choose Suitable Education**

With the improvement of economic conditions, the ability of each family to pay for education continues to increase. Education expenditure has become the central aspect of family financial expenditure, and the demand for high-quality education from parents of students is also growing. Efforts to make every student receive a fair and quality high school education do not mean that every student can be promoted to a regular high school to meet everyone’s demand for quality education. Therefore, it is necessary to break the traditional understanding of the parents of students from the conceptual point of view, which is also a prerequisite for eliminating the resistance to enrollment in secondary vocational schools. Parents of students should change the stereotype that “vocational schools are bad schools” and “no one wants to read vocational education.” It is necessary to treat vocational education rationally, reduce utilitarian and blind school choice behaviors, and help children choose a more suitable education path for their development. Guide parents to fully understand the meaning and value of education, labor, and professional activities. No matter what type of education you receive, as long as you can provide high-quality education for students’ healthy growth and comprehensive development, you can grow into talents, make due contributions to the cause of social construction, and realize the value of life. In Germany, elementary school students are divided based on teacher identification, parental opinions, personal interests, and academic performance. They can choose vocational preschool, practical middle school, liberal arts, and comprehensive middle school, and the first two types of middle school graduates mainly choose to receive vocational education. About half of the parents will rationally let their children choose pre-vocational schools or practical middle schools, ready to acquire vocational education in the future and develop technical skills (Zhang, 2018).

**Enterprise Employers Establish a Scientific Outlook on Talents and Focus on Assessing Skill Levels**

In recent years, China has repeatedly experienced a shortage of senior skilled workers. Its root lies in the severe backwardness of secondary vocational education. From the perspective of the development of the world economy, the talents cultivated by secondary vocational education are the essential laborers needed for economic and social development and account for the most significant proportion in the whole talent chain under the background of the entire industry chain (Jiang et al., 2018). However, judging from the current employment orientation of enterprises, the pursuit of high academic
qualifications is the norm, and various “glass doors” for the employment of vocational college graduates are widespread. Therefore, enterprises should actively participate in talent training in secondary vocational schools from professional construction, personnel training plan formulation, curriculum design, teaching implementation, and internship guidance. In-depth development of school-enterprise cooperation education targeted training of qualified talents for enterprises and improves the practicality and effectiveness of talent training. Change the traditional concept of evaluating talents based on their academic qualifications, break the selection and employment criteria of only academic qualifications and diplomas, focus on the knowledge and skills of job applicants, and open the door for vocational school graduates to enter the “main labor market.” As a result, improve skilled workers’ salaries and social status, open up room for growth, and actively attract middle school graduates to choose secondary vocational education.

**The Public Should Establish a Scientific Career View and Create a Good Atmosphere of Public Opinion**

Since ancient times, China has had the traditional concepts of “Valuing Theoretic Knowledge More Than Craftsmanship” and “Emphasis on Learning and Less Skill.” For example, in *The Analects of Confucius: Wei Zheng*, Confucius believed that “a gentleman is not a tool.” There is also a saying in *Tao Te Ching* that “there are many skills and strange things arise.”

Although this traditional concept inspired the ambition of “A good scholar who studies with relative ease can become an official,” it also caused the embarrassment of “Fan Chi learns to do farming life in the country and be engaged in agriculture.” This has an important impact on the current public’s assessment of the quality of a specific profession. Moreover, it is affected by unfavorable factors such as “low level of education,” “low overall quality,” “poor social image,” “low social status,” and “limited development of graduates.” As a result, the public has formed a pessimistic view that “secondary vocational education belongs to second class education,” and attending a secondary vocational school has become a helpless choice for many families. Therefore, to promote the effective implementation of the “GVRE” policy, the public must be guided to break the traditional concept of “centring on general education.” Recognize the acceptance of vocational education ideologically, and place vocational education in the same important position as general education. Promote the public to change outdated professional concepts, establish a sense of honor for labor, and treat and understand the skilled operators on the frontline more rationally. Abandon the practice of classifying occupations and found the concept of all occupations regardless of high or low, no matter what position they are in, and they can contribute to society.

**Concluding Remarks**

“Today’s education problem is deeper, more acute, and more difficult because it has to face all the problems of the modern world.” (Zhao & Wang, 2006) Under the require-
ments of the “GVRE” policy, it has promoted and formed the current development of vocational education in China. The basic structure of vocational education has been initially established as a framework for a modern vocational education system based on secondary vocational education. However, due to the severe shortage of skilled personnel cultivated by secondary vocational education, the quality of China’s labor force is far from reaching the level of developed countries. At the 2014 National Vocational Education Work Conference, Jinping Xi emphasized that: Accelerating the development of modern vocational education should be placed in a more prominent position; better support and help the development of vocational education; provide solid talent guarantee for the realization of the “Two Centenary” goals and the Chinese Dream (Xi & Jan, 2020). This provides a direction indicator and an essential basis for further implementing the “GVRE” policy.

Secondary vocational education is an integral part of China’s high school education. It is responsible for the vital mission of cultivating a large number of high-quality workers and is the fundamental force for China’s economic and social development. Secondary vocational education and general high school education are like “human hands,” “bird’s wings,” and “bicycle’s wheels” and they are both critical parts of high school education. Therefore, it is of great significance to accomplish China’s “universalize high school education” goal and task, and both are indispensable.

In 2020, China achieved its goal of universalizing high school education. This is not just to popularize general high school education; the purpose of popularization is bound to be inseparable from secondary vocational education. Therefore, we must comprehensively coordinate the balanced development of general high schools and secondary vocational schools. Solve the predicament of the development of secondary vocational education and make it enter the track of peaceful development. Ensure that the “GVRE” policy is effectively implemented and accurately realized. Meanwhile, we will strive to build a proper and high-quality high school education to meet everyone’s needs for quality education and enhance everyone’s sense of educational attainment and happiness.

References


Liu & Gao. General-to-Vocational Ratio in Chinese High School Education.


Ou, Y.H. (2016, December 2). The focus of future vocational education should be on higher vocational education. *China Youth Daily*, p.7A


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