ASSOCIATED HIGH QUALITY HUMAN RESOURCES TO MEET THE INDUSTRIAL – MODERNIZATION REQUIREMENTS IN VIETNAM (2010 – 2020): BELOW COMPARATIVE VIEW

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ABSTRACT
Developing high-quality human resources is viewed as a social orientation for increasing labor productivity while also laying the groundwork for career advancement and the country's socio-economic stability. From a comparative standpoint, the study used historical and logical methodologies to examine and synthesize, compare, and contrast issues concerning the development of high-quality human resources for industrialization in Vietnam. In addition, the article employs descriptive statistical analysis to shed light on how high-quality human resources are transformed in Vietnam.

Keywords: High-Quality human resources, industrial, modernization, Vietnam

INTRODUCTION
It has actively contributed to economic restructuring, boosted worker productivity, and helped to escape the "middle-income trap" through the process of industrialization, modernization, and development of high-quality human resources. Steps to ensure that workers' lives are not jeopardized.

Human resource development is a societal orientation that aims to increase worker productivity while also laying the groundwork for future career advancement and the country's socio-economic stability. Several developed countries have begun to stream pupils from an early age to build human resources. Students are assisted in picking appropriate occupations and apprenticeship courses. For example, education systems in Japan and Korea are very adaptable and always focus on each student's abilities, interests, and capabilities to help them realize their potential. Aside from incorporating new scientific and technical developments into the classroom, the training program places a strong emphasis on character development and national cultural values. The government invests in a small number of high-quality public schools, has a proper credit policy to attract outstanding training, and works with the private sector to promote development and employment opportunities. Connecting with other nations, encouraging international universities to open branches, and so on...

"Developing and increasing the quality of human resources, especially high-quality human resources, is one of the key determinants for rapid development," Vietnam has determined during its industrialization and modernization process. national sustainability" (Communist Party of Vietnam, 2011, p.41), while also determining the

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direction and tasks of human resource development in the future, necessitates the need to: "Build a development strategy develop human resources for the country, for each industry, for each field, with synchronous solutions, in which focusing on training solutions, retraining human resources in schools as well as in the production process, business, focusing on improving productivity" (Communist Party of Vietnam, 2011, p.41 (Communist Party of Vietnam, 2011, p.116).

LITERATURE REVIEW

The work *The Miracle Revival of Japan* (Hiroshi Mikitani, 2017) shows that education in general and higher education in particular in Japan is liberal. The Japanese government is interested in creating high-quality human resources from high school. Japan advocates that moral and social development must go hand in hand with economic development. The goal of education is to train high-level human resources to increase Japan's competitiveness in the international labor market, especially in the two fields of science and technology (Le Lan Huong et al., 2021).

In Korea, the government establishes the primary aim for educational institutions to prepare their separate workforces to satisfy the needs of the labor market at that time in each stage of economic development. the particular point From 1945 to 1960, universal primary education was implemented, building the initial basic foundation for the educational system while also supplying a workforce for labor-intensive sectors. Following that, educational development plans centered on secondary and vocational education, with both public and private capital mobilized. Between 1960 and the mid-1970s, the education sector provided employees with the basic skills needed to operate in export-oriented light industry, consumer electronics production, and early-stage heavy industries (ships, steel, etc). (Le Lan Huong et al., 2021).

The time from the 1990s to the present is considered the era of mass higher education, according to the author group Le Lan Huong et al (2021) referenced in *A Window into Korean Education*. Korea has gained a highly qualified human resource that is fully prepared with the knowledge, skills, and ability to adapt to a knowledge-based economy as a result of the development of higher education. They can work in a worldwide setting and have access to cutting-edge technology. Research and development efforts, as well as collaboration between institutions and businesses, are also being pursued and promoted at this time.

Referring to the development of high-quality human resources in China, the authors Nguyen Thu Thuy and Tang Thi Thanh Thuy (2020) in the article *China's national human resource development and lessons learned to explain the experience*. China's economy has gradually changed from a simple labor-based economy to a knowledge-based economy. The Chinese government is interested in training and effectively using existing human resources in the country, to improve the quality of these resources through priority, support, and development policies; at the same time strongly attracts talented human resources from abroad.

METHODS

From a comparative standpoint, the study used historical and logical methodologies to
examine and synthesize, compare, and contrast issues concerning the development of high-quality human resources for industrialization in Vietnam. In addition, the article employs descriptive statistical analysis to explain how high-quality human resources are transformed in Vietnam.

RESULTS AND DISCUSSIONS

Human resource situation

Vietnam's major advantage right now is its large workforce and young labor structure. According to the General Statistics Office (2020), Vietnam has a working force of roughly 94 million people, with 55.7 million persons aged 15 and up. In 2019, 54 million persons aged 15 and over were employed, with 18.8 million working in agriculture, forestry, and fisheries (34.5 percent); 14.4 million working in manufacturing and construction (26.7 percent); and 18.7 million working in the service sector (18.7%). (accounting for 37.8 percent ). During the integration process, this is a beneficial situation for Vietnam to rotate workers in the area and around the world.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Thous. persons</th>
<th>15-24 Thous. persons</th>
<th>15-24 Structure (%)</th>
<th>25-49 Thous. persons</th>
<th>25-49 Structure (%)</th>
<th>50+ Thous. persons</th>
<th>50+ Structure (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>44.905</td>
<td>9.168</td>
<td>20.42</td>
<td>28.433</td>
<td>63.32</td>
<td>7.304</td>
<td>16.27</td>
</tr>
<tr>
<td>2006</td>
<td>46.239</td>
<td>9.727</td>
<td>21.04</td>
<td>29.448</td>
<td>63.69</td>
<td>7.064</td>
<td>15.28</td>
</tr>
<tr>
<td>2010</td>
<td>50.393</td>
<td>9.245</td>
<td>18.35</td>
<td>30.939</td>
<td>61.40</td>
<td>10.208</td>
<td>20.26</td>
</tr>
<tr>
<td>2012</td>
<td>52.348</td>
<td>7.888</td>
<td>15.07</td>
<td>32.015</td>
<td>61.16</td>
<td>12.446</td>
<td>23.77</td>
</tr>
<tr>
<td>2013</td>
<td>53.246</td>
<td>7.916</td>
<td>14.87</td>
<td>31.905</td>
<td>59.92</td>
<td>13.425</td>
<td>25.21</td>
</tr>
<tr>
<td>2018</td>
<td>55.354</td>
<td>7.049</td>
<td>12.73</td>
<td>33.339</td>
<td>60.23</td>
<td>14.966</td>
<td>27.04</td>
</tr>
<tr>
<td>2019</td>
<td>55.767</td>
<td>7.159</td>
<td>12.8</td>
<td>3.430</td>
<td>61.5</td>
<td>14.299</td>
<td>25.7</td>
</tr>
</tbody>
</table>

*Table 1. Statistics of Vietnam's labor force aged 15 years and over by age group from 2005-2019*

(Source: General Statistics Office (2020), Statistical Yearbook 2019, Hanoi)
The quality of Vietnam's human resources in recent years has also been gradually improved; The proportion of employees aged 15 and over who are working with training has increased from 12.5% in 2005 to 14.6% in 2010, and 19.8% in 2019; workers' qualifications tend to increase at all levels of training, including vocational training, professional secondary schools, colleges and universities or higher; Trained workers have partly met the requirements of enterprises and the labor market; Vietnam's technical workforce has mastered science and technology, taking on most of the complex work positions in production and business that previously had to hire foreign experts.

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>3.3</td>
<td>3.2</td>
<td>3.5</td>
<td>3.6</td>
<td>3.7</td>
</tr>
<tr>
<td>Intermediate</td>
<td>5.2</td>
<td>5.3</td>
<td>5.3</td>
<td>5.2</td>
<td>1.7</td>
</tr>
<tr>
<td>College</td>
<td>3.0</td>
<td>3.2</td>
<td>3.3</td>
<td>3.7</td>
<td>3.8</td>
</tr>
<tr>
<td>University and over</td>
<td>8.7</td>
<td>9.2</td>
<td>9.5</td>
<td>9.5</td>
<td>10.6</td>
</tr>
</tbody>
</table>

Table 2. Statistics on the percentage of Vietnamese workers aged 15 years and older who have received training and degrees from 2015 – 2019
(Source: General Statistics Office (2020), Statistical Yearbook 2019, Hanoi)

The productivity of Vietnamese workers has also improved in recent years. Statistics show that labor productivity has increased from 44 million VND/worker in 2010 to more than 2 times, reaching 102.2 million VND/worker in 2018. On average, labor productivity in the period 2016-2018 increased by 5.77%/year, higher than the rate of 4.35%/year of the period before 2011-2015; and for the whole period 2011-2018, labor productivity has increased by an average of 4.88%/year.

Figure 1. Social labor productivity (million VND/worker)
(Source: General Statistics Office (2020), Statistical Yearbook 2019, Hanoi)
Vietnam has gradually narrowed the gap with other ASEAN members at such a rapid pace. Vietnam's labor force will continue to expand in 2020... As a result of the industrialization and modernization process, the quality of Vietnam's human resources has improved, as seen by increased productivity. The labor force of the entire society is increased, resulting in a healthy growth rate and boosting the economy's competitiveness and national potential. Contributing significantly to the supply of human resources for growth, rising labor productivity, and assisting Vietnam in escaping the "middle-income trap".

**Training high-quality human resources to meet the requirements of industrialization - modernization in Vietnam today**

Many ways exist for developing and training quality human resources, including training in manufacturing and business establishments, training overseas, training in a university setting, vocational training... In this essay, we will look at two types of high-quality human resource training in Vietnam: university-based training and vocational training.

Training high-quality human resources in a university setting, as determined by the Vietnamese Party and Government in Resolution 7 of the 7th Central Committee (Term X) "On building a contingent of intellectuals in the period of accelerating industrialization and modernization of the country" and Government Resolution No. 44/NQ-CP "Fundamental and comprehensive renovation of education and training, meeting the requirements of industrialization and modernization"… As a result, in the Vietnamese university system, people have developed and improved their professional qualifications by responding imaginatively and effectively to their unique circumstances. Staff and lecturer services, as well as training activities. The schools have prioritized in-depth training, conducting a variety of collaborative training and professional exchange programs for staff and lecturers; the number and quality of university lecturers are steadily expanding. An effective measure in training to increase the quality of human resources in the university environment is to improve the quality of teaching staff and the quality of training in the university environment.

Improving the quality of human resources in the university environment is reflected through scientific research activities in the Vietnamese university system. The scientific research works of lecturers are increasingly going into depth, requiring products created from research to have practical value, meeting the essential needs of the knowledge economy. The period 2000-2018 shows that the growth rate in quantity is quite good, especially in the period 2010-2018, the average growth rate is over 20% per year. The research ability of Vietnamese scientists has also developed well, as shown by the ratio of the number of publications with related Vietnamese authors to the number of publications with Vietnamese addresses (increased from 35% in 2000 to 50% in 2017 and 53% in 2018). Practice shows that the scientific research results of university lecturers and staff are always appreciated, highly applicable in production and life, solving practical problems, creating breakthroughs. development of productive forces, innovation of growth model, and economic development. In terms of computer and
foreign language proficiency for lecturers, especially young lecturers, initially met the requirements of industrialization and modernization. The product quality of university lecturers is that graduates have jobs and can work. However, the Ministry of Labor, War Invalids and Social Affairs said that the number of unemployed laborers with university degrees in the working-age in recent years increased higher than the number of graduates and the number of employed people; the number of unemployed workers with a university degree or higher in 2014 compared to 2010 increased by 103%. In the first quarter of 2016 about 225,000 engineers, bachelor's degrees or higher had no jobs…

To meet the requirements of industrialization, modernization, and training of high-quality human resources in Vietnam's education sector in the face of the strong development of the industrial revolution 4.0, in 2 years 2020, 2021 has been implemented. many solutions to improve the quality of human resources in the university environment such as developing the contingent of officials and employees in universities; fostering and improving the qualifications and professional capacity of university lecturers by measures such as training to improve professional qualifications, using information technology for teaching, and applying advanced forms of education. in fostering teachers, promoting scientific research, research-oriented training, and improving foreign language skills. Completing the planning of the network of higher education institutions and training lecturers based on using state management tools such as standards and regulations for higher education institutions; publicity and transparency of information on quality assurance conditions and output results, education quality accreditation, and quality assurance standards to guide investment as well as organize and rearrange facilities in the system to suit the needs of human resource development of the country. Develop a standard competency framework for lecturers that applies to universities and administrators. This is the basis for building effective training and retraining programs to meet high-quality training requirements and managing training institutions effectively in the context of university autonomy and international integration.

Many universities in Vietnam have successfully adopted several remuneration policies, rewarding professors, and attracting talents to work to increase the quality of human resources in the university environment. at colleges and universities, many universities have developed and implemented policies and regimes in recruitment, working environment, and conditions to ensure the quality and efficiency of teaching staff (especially for the titles of professor, associate professor, expert, teacher/senior/educated lecturer), salary regime and scale, salary table of lecturers, and other areas based on university autonomy. Lecturers are guaranteed the right to study, conduct scientific research, and engage in economic and social activities, as well as preferential policies on housing, modes of transportation, social insurance, health insurance, and other remuneration regimes by the law.

The interest in vocational training for high-quality workers has been a significant experience in the process of industrialization and modernization in many nations throughout the world, and it has actively contributed to structural transformation and
increased labor productivity. Japan's experience, as a country with non-preferential natural conditions and limited natural resources that knows how to boost the role of vocational training in the process of industrialization and modernization, is a clear example.

By absorbing, inheriting, and developing the theory of vocational training for employees along with summarizing the practical experience of vocational training in other countries (Japan, Korea, and China ...) as well as awareness Clearly stating the role of vocational training in the process of industrialization and modernization, Vietnam has determined: “Education and training together with science and technology is the leading national policy, the foundation and driving force for promotion. promote industrialization and modernization of the country” (Communist Party of Vietnam, 2006, p.37); Because "education and training have the mission of raising people's intellectual level, developing human resources, fostering talents, making an important contribution to the development of the country, building the culture and people of Vietnam. Developing education and training together with science and technology development is the leading national policy; investment in education and training is an investment in development” (Communist Party of Vietnam, 2011, p.77).

Providing human resources for development, increasing worker productivity, and supporting Vietnam in avoiding the "middle-income trap" are all priorities. During the processes of industrialization, modernization, and worker vocational training, many innovative inventions have happened. Most vocational schools, particularly in important economic regions and urban centers, have avoided the difficult enrollment situation and are reorganizing, improving training quality, and growing their scale. Internationalization and Industry 4.0 are rapidly hurting vocational education. Factors such as the region's large and high-standard international market, the region's free movement of skilled labor, the emergence of unprecedented new industries and occupations, the automation of many jobs at the production stage, job pressure for young people, low labor productivity in comparison to many other countries in the region,... have been, are being, and will be directly impacted, necessitating ground-breaking solutions in vocational training.

On May 23, 2014, the Prime Minister issued Decision No. 761/QD-TTG approving the Project to develop high-quality vocational schools until 2020 (Project 761). Accordingly, 45 public schools have been selected to prioritize concentrated and synchronous investment according to the criteria of high-quality schools, capable of training several occupations recognized by advanced countries in the ASEAN region or internationally recognized. Exceptional outcomes were obtained by high-quality vocational training from 2014 to 2019: In terms of professional skill development, vocational training for skilled workers increased from 2007 to 2018. Higher education is growing at a rapid pace, with an average annual growth rate of 11.67 percent for colleges and 8.54 percent for universities and beyond; enrolment is increasing every year. In 2017, the number of students enrolled virtually doubled compared to 2015, and the majority of graduates were hired in the right profession before and after graduation.
The State has chosen 251 occupations in 49 key industries and occupations at all levels from 45 universities to support investment, including 154 turns in 27 international-level occupations, 60 occupations in 18 industries, occupations at the ASEAN regional level, and 37 times in 28 national occupations and occupations; schools that meet domestic quality accreditation standards; and schools that meet domestic quality accreditation standards. Most large corporations and enterprises, such as Vingroup, Subgroup, FPT, Samsung, Muong Thanh, Thaco, FLC, and others, have expressed interest in and have directly participated in vocational training; investment projects requiring high-quality human resources have been met; the schools that have been invested to provide high-quality vocational training have a mission to lead, spread, and influence the entire system, while the system needs to focus on developing the quantity ...In the World Economic Forum's 2018 Global Competitiveness Report, Vietnam was ranked 77th out of 140 economies in terms of overall competitiveness and 97th out of 140 economies in terms of skills pillar (in which, in terms of The index of the company's investment in staff training and development ranks 81/140, the quality of vocational training ranks 115/140, and university students' skills rank 128/140). Khoi (Khoi, 2020). The focus on investing in creating vocational training for workers in the integration process has helped Vietnam improve its vocational training quality, which now ranks 102/141 nations...

Vietnam has evolved from one of the world's poorest countries to a low-middle-income country with a GDP per capita of around US$2,800 in 2019, with over 45 million people rising out of poverty; it is one of the region's fastest-growing and most dynamic economies.) In terms of gross domestic product, Vietnam is the world's 46th largest economy. Vietnam's GDP has overtaken that of Singapore and Malaysia, putting it in fourth place in the region, according to the International Monetary Fund (IMF) (Vietnam Business Insider, 2020). Vietnam is the most competitive country in the world, according to the World Economic Forum's Global Competitiveness Report, out of 140 countries ranked in 2018. 2020 (Trading Economics). Vietnam's economy has become one of the most open in the world (accounting for about 200 percent of GDP). Participation in new-generation free trade agreements (FTAs) will have a direct impact on the Vietnamese economy, helping the country become more competitive and innovative. increased levels of creativity. Despite the setbacks and difficulties brought on by the COVID-19 outbreak, numerous international analysts believe Vietnam can become one of Asia's most important economies. According to Japanese economist Hamada Kazuyuki (Hamada Kazuyuki, 2020, p.74), Vietnam will become a great power in the future.

In recent years, the practice of vocational training for workers to satisfy the demands of industrialization and modernization in Vietnam has shown positive results. The government and functional departments must rethink and raise awareness about developing professional skills based on a focus on young human resources to ensure the country's growth and long-term development. In the direction of the international standard approach, a system of assessment and certification of national vocational skills
in the direction of specialization, professionalism, and modernity. Formulate and issue quality assurance conditions in vocational training to meet ASEAN and G20 regional standards; create an asynchronous, complete, and reliable database on vocational training to support research and statistics on the quality of vocational training and vocational human resources; encourage and support vocational training institutions to pilot training programs that will be transferred from one institution to another.

High-quality vocational training institutions have been established across the country, as have industries and occupations that will be in high demand in the future, such as information technology, tourism and hotel management, and high-tech agriculture. Some vocational training institutes create training programs that attract good and good learners, resulting in high-quality human resources and a reduction in resource wastage. Many people study hard and graduate from university, yet they are forced to work in fields outside of their expertise, forte, industry, or vocation. To continue to radically liberate labor power, the government continues to improve institutions and develop a labor market capable of connecting labor supply and demand, creating a level playing field and healthy competition for workers., removing administrative barriers for workers to move freely in space and occupation; develop the labor market throughout the country, especially in underdeveloped areas and ethnic minority areas; step by step develop hi-tech industries. Expanding international cooperation on young people's vocational skills development through policies that encourage foreign investment in youth vocational training and education institutions; cooperating in the development of a system for assessing and issuing national occupational skill certificates, and supporting the computerization of the national vocational skill assessment and certification system.

**CONCLUSION**

High-quality human resources have been and continue to be a "survival" factor in the country's economic development, playing a particularly vital role in the country's industrialization and modernization. As a result, the objectives, scale, roadmap, and overall mechanisms and policies for developing high-quality human resources comprehensively and synchronously have been clearly defined in the Party and Government's development strategy; at the same time, it has been determined that building high-quality human resources to meet the requirements of industrialization and modernization in Vietnam is a central political task of the entire political system in the context of the strong The network for Industry 4.0.

Vietnam's policy of closely connecting the training process with cultivating and using high-quality human resources is most effective in developing high-quality human resources to fulfill the demands of industrialization and modernization. Training institutions must constantly place a high priority on good management of "outputs" - assuring output standards - using methods such as assessing learners' capabilities during the training process and reviewing training results. To ensure a close connection between training and use, training institutions have made great efforts to equip students, trainees, and doctoral students with necessary skills such as communication, the study of foreign documents, use of technology information technology, creativity, adaptation, grasping
The state has established payment methods and policies that effectively utilize high-quality human resources, reducing the phenomena of "brain drain," and increasingly serving the cause of industrialization and modernization.

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