

# Research on the Synergic Relationship Between Tianjin Higher Vocational Education and Xiong'an Economic Development

Dongliang Sun<sup>1,2,\*</sup>

<sup>1</sup>Tianjin University, Tianjin, China

<sup>2</sup>Tianjin Vocational Institute, Tianjin, China

\*Corresponding author. Email: 570422686@qq.com

## ABSTRACT

This article focuses on the analysis of the relationship between the factors of economic development human capital (applied and skill-oriented) in Xiong'an New District and higher vocational education. It elaborates on the relationship between the economic and industrial structure of Xiong'an New District and higher vocational education, the relationship between various science and technology parks (future industrial layout) in Xiong'an New District and higher vocational education, the relationship between the economic development differences of Xiong'an New District and higher vocational education as well as how to give full play to the resource advantages of Tianjin's higher vocational colleges and enhance specific measures to serve the economic development of Xiong'an New District.

**Keywords:** Tianjin higher vocational education, Xiong'an New District, economic development, synergic relationship

## I. INTRODUCTION

The establishment of the Xiongan New District in Hebei is a major national strategic decision and an important support for the coordinated development of Beijing, Tianjin and Hebei. As a demonstration zone for the reform and innovation of modern vocational education in the country, Tianjin's higher vocational education plays a decisive role. The indicators of Tianjin higher vocational education are in the forefront of the country in terms of school-running model, faculty construction, professional settings, course offerings, and social services, and are worthy of further development and promotion. Seven of Tianjin's vocational colleges are listed as high-level vocational schools with Chinese characteristics and professional construction plan proposed units. Giving full play to the unique advantages of Tianjin's higher vocational colleges and better matching the construction of the Xiong'an New District is an inevitable requirement for adapting to China's development strategy in the new era. And it is the first move to realize the positive interaction between Tianjin's higher vocational education and the economy of Xiong'an New District, to make the regional economy of Xiong'an New District and higher vocational education develop in a

coordinated manner, and to realize the coordinated development of Beijing, Tianjin and Hebei.

## II. TAKING ADVANTAGE OF THE CHARACTERISTICS OF TIANJIN HIGHER VOCATIONAL COLLEGES TO SERVE THE CONSTRUCTION OF XIONG'AN NEW DISTRICT

In 2017, the Party Central Committee and the State Council, with General Secretary Xi Jinping at the core, made a historic major decision to establish the Hebei Xiong'an New District. This is another strategic decision after Pudong New District of Shanghai and Shenzhen Special Economic Zone. It is not only a millennium plan, a major event of national significance, but also the last leap of China's strategic deployment in the past 100 years, and it is also related to the battle of crossing the river for the great rejuvenation of the Chinese nation. Higher vocational colleges in Tianjin should give full play to their own resource characteristics and geographical advantages to provide inspirational services to the economic development of the Xiong'an New District.

### A. Breaking through ideological barriers and enhancing service awareness

Li Hongzhong, Secretary of the Tianjin Municipal Party Committee, emphasize that it is necessary to take the idea of "a game of chess" as the general working

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principle, firmly support and fully support the construction planning of the Xiong'an New District. It is necessary to break the inherent thinking pattern of "their own small territory", take the coordinated development of Beijing, Tianjin and Hebei as the overall situation, and follow and obey the decision and deployment of the Party Central Committee. For the construction of the Xiong'an New District, Tianjin can play any role. Taking the command of General Secretary Xi Jinping as a guideline, no matter what to pay or adjust, no matter how hard it is, people will obey it resolutely. Zhang Guoqing, the Mayor of Tianjin, also said that in order to serve Xiong'an New District, Tianjin is building a dedicated freight channel connecting Xiong'an New District and Tianjin Port to build Tianjin Port into a "maritime gateway" of Xiong'an New District.

*B. Tianjin higher vocational colleges need to deepen the concept of running schools*

Transmitting high-quality, application-skilled talents for the Xiong'an New District is the primary task of Tianjin's higher vocational colleges. Tianjin's higher vocational colleges must "face the market, serve the localities, and develop characteristics". Taking "markets to decide majors, positions to decide courses, skills to decide teaching" as the school's philosophy, it helps the economic development of Xiong'an New District and cultivates application-oriented talents who can serve the front line. Schools should not only teach students hard skills, that is, the cultivation of students' professional skills, but also teach students soft skills, that is, the cultivation of humanistic qualities and professional qualities, to meet the needs of talents and positions in Xiong'an New District enterprises.

*C. Tianjin higher vocational colleges need to clearly define the service aim*

The Tianjin Municipal Education Commission signed a formal cooperation agreement with the Xiong'an New District Management Committee in 2018. Tianjin higher vocational colleges will actively give play to the advantages of the modern vocational education reform and innovation demonstration zone, with the goal of training high-quality technical talents for Xiong'an New District, and strive to enhance the development strength of vocational education in Xiong'an New District and help the development of high-end high-tech industries in Xiong'an New District. The Tianjin Municipal Education Commission will work with the Xiong'an New District Management Committee to vigorously develop vocational skills training, reach a consensus on lifelong in-depth cooperation, and create a new regional social training mechanism.

In 2017, the construction of the "Xiong'an New District Training Base of Tianjin Vocational Institute" was officially signed. The base will be jointly established by Tianjin Vocational Institute and the Xiong'an New District Management Committee's urban and rural coordinating team. Social training will be carried out in Xiong'an New District to help the establishment of vocational skill training system in Xiong'an New District, focus on systematic and targeted training for "entry, on-post, job transfer, laid-off, and no job" personnel and help students obtain the corresponding vocational qualification certificates.

**III. THE PROFESSIONAL SETTING OF TIANJIN HIGHER VOCATIONAL COLLEGES SHOULD STRENGTHEN THE INDUSTRIAL CONNECTION WITH XIONG'AN NEW DISTRICT**

The future industries of Xiong'an New District will mainly focus on electronic information, Internet +, biomedicine, high-end equipment manufacturing, and high-end service industries. Tianjin's higher vocational colleges should closely follow the economic development needs of Xiong'an New District, establish a benign interaction mechanism between college majors and industries in Xiong'an New District, be guided by improving the employment rate of students, strengthen the combination of work and study and the cooperation between schools and enterprises, and be committed to providing professional and applied talents for the construction, management, production and service of Xiong'an New District.

*A. Optimizing the professional layout*

Xiong'an New District will be a modern metropolis with complete systems. The industrial structure of Xiong'an New District is very complicated. After the completion of the Xiong'an New District, its demand for "high-grade, precision and advanced" technical talents is undoubtedly huge. At the same time, the Xiong'an New District also needs to retain and strengthen the original local characteristic industries, such as the garment design and manufacturing industry in Rongcheng County and the cultural tourism industry in Anxin County. These industries require high-quality skilled personnel to join to inject a strong impetus to the sustainable development of themselves. In addition, after the completion of the Xiong'an New District, as a modern metropolis, a huge number of tertiary industry service personnel, such as high-level and highly-skilled talents in the fields of logistics, catering, real estate, and housekeeping, are needed. Therefore, Tianjin's higher vocational colleges should set up majors according to the needs of Xiong'an New District's economic construction, timely adjust the school's professional structure and curriculum construction ideas, and build a talent training framework that adapts to the needs of

high-level and high-skilled talents in the economic and social development of Xiong'an New District.

#### *B. Creating characteristic majors*

In order to provide high-level and high-skilled talents and related technical services to Xiong'an New District, Tianjin's higher vocational colleges should implement high-quality professional construction, actively transform traditional majors, set up new majors, and give priority to the development of majors serving the development of leading and pillar industries in the Xiong'an New District. Higher vocational colleges in Tianjin should cultivate their own competitive brand majors, strengthen the management of various majors, and improve their self-improvement and ability to serve Xiong'an New District. Tianjin higher vocational colleges should optimize the training programs and syllabus of the corresponding courses of each major, effectively improve the quality of education and teaching of each major, and create a batch of high-quality and characteristic majors to become the school's brand.

#### *C. Improving the long-term mechanism of professional construction*

The school's professional construction includes six levels, namely professional setting, teaching staff, curriculum construction, practical teaching, teaching reform research and teaching quality monitoring. Higher vocational colleges in Tianjin should strengthen their work at these six levels to ensure the stability and long-term effectiveness of the construction. Tianjin higher vocational colleges should establish a guarantee system for professional settings and talent training programs, timely adjust old professions that can't keep up with social changes, regularly issue guiding opinions for the revision of professional training programs and set up professional training programs based on social needs to ensure the applicability of talents.

In order to improve the enthusiasm and creativity of teachers, Tianjin higher vocational colleges should start with the existing teacher management system, create double-position teachers, establish a new teacher guarantee system, and coordinate and reasonably arrange teachers of different specialties to visit companies in the Xiong'an New District from time to time for technical guidance or assuming a temporary post for personal training and development. On the one hand, it can train teachers' practical ability, understand market changes and contribute to teaching reform; on the other hand, teachers can be encouraged to cooperate with enterprises to promote the development of production, education and research.

Before establishing a guarantee system, higher vocational colleges need to investigate and analyze the occupational positions and social needs. They need to

carry out exchanges and discussions on the construction of quality courses, formulate development plans for the school's course construction, and carry out comprehensive construction and reform of the courses. They should establish a guarantee system to strengthen practical teaching, increase the hours of practical teaching, focus on professional post competence, include double-certification requirements in the teaching plan and combine the curriculum with the certification of professional qualifications. They should establish and improve mechanisms such as identification, guidance, incentives and withdrawal to establish a more realistic teaching quality and professional evaluation system to lay the foundation for the long-term construction of high-quality majors.

### **IV. INNOVATING TALENT TRAINING MODEL TO PROVIDE TALENT GUARANTEE FOR THE CONSTRUCTION OF XIONG'AN NEW DISTRICT**

The economic development of the Xiong'an New District is inseparable and requires long-term support from a large number of talents. Tianjin higher vocational colleges should explore and form a "the unity of knowing and doing" talent training model, and guide students to transform the theoretical knowledge and practical skills learned into the production practice of enterprises. In the process of talent training, Tianjin higher vocational colleges need to innovate mechanisms and promote the cultivation mechanism of collaborative education between government, schools and enterprises, and create various conditions for the cultivation of artisan talents in the new era. Tianjin higher vocational colleges should make full use of various resources to support students to carry out internships and practices in enterprises in the Xiong'an New District, and cultivate students' innovative practical ability and practical hands-on ability. Tianjin higher vocational colleges should integrate quality education and professional education to train high-quality talents with professional skills to provide sufficient talents for the development of industries at all levels in the Xiong'an New District.

#### *A. Innovating the mechanism of school-enterprise cooperation in educating people and implementing the "modern apprenticeship"*

Compared with the traditional apprenticeship system, the modern apprenticeship system incorporates the concept of modern vocational education. Its essence is to upgrade the model of school-enterprise cooperation and work-study integration, which is in line with the basic ideology of modern vocational education and the talent training model. Higher vocational colleges in Tianjin should change their educational philosophy as soon as possible, reform the original talent training methods, and realize that the school's

professional curriculum teaching requirements match the company's specific job skills. Schools should collaborate with enterprises according to the basic requirements of the training objectives of professional talents, around the requirements of the corresponding technical field and career position of the major. Schools should systematically design talent training objectives, highlight the practicality and professionalism of the courses students learn, and realize the unification of school curriculum content and enterprise professional qualification standards. Schools should give full play to their advantages in curriculum teaching and the advantages of job training in enterprises, and actively promote goal-driven teaching as an integrated teaching model.

*B. Giving full play to the role of Tianjin vocational education group and optimizing the vocational education resources of Xiong'an New District*

Tianjin higher vocational colleges should take advantage of the resources of the vocational education group to carry out the "3 + 2" secondary and higher vocational colleges connection, realize the cooperation between Tianjin higher vocational colleges and Xiong'an New District secondary vocational colleges, and optimize the secondary vocational education resources in Xiong'an New District. The purpose is to reach the professional docking of the secondary and higher vocational colleges through the docking of the courses of the secondary and higher vocational colleges. For the connection of course objectives, secondary vocational colleges are more able to reflect the operability and practicability, while higher vocational colleges show creativity and technicality. So it is necessary to integrate the two together and achieve the consistency of the course objectives of the secondary and higher vocational colleges. For the connection of course content, secondary and higher vocational colleges should formulate curriculum standards according to professional talent training objectives and jointly study mutually compatible teaching methods. It is necessary to avoid repetition and expand and extend the content of related courses, so as to realize the logic, continuity and integration of the course content of secondary and higher vocational colleges. It is necessary to build a bridge between higher vocational colleges and secondary vocational colleges through various forms such as individual enrollment, counterpart enrollment, direct professional connection and professional major connection, to assist the coordinated development of education in Tianjin's higher vocational colleges and secondary vocational colleges in Xiong'an New District, and optimize the secondary vocational education resources in Xiong'an New District.

Tianjin Vocational Institute has signed a strategic cooperation agreement with the Rongcheng County

Vocational Education Center in Xiong'an New District in order to give full play to the characteristics of Tianjin Vocational University and Rongcheng County Vocational Education Center, innovate the cross-regional cooperation model, carry out work on student skills training and identification, school teacher training and professional co-construction and work together to promote the reform of the enrollment model of higher and secondary vocational colleges and promote the construction of a talent training system for the connection between higher and secondary vocational colleges.

*C. Tianjin higher vocational colleges need to play a leading role in key professional groups*

Being able to proactively adapt to the development of the industry economy of Xiong'an New District and the demand for professional talents is the primary task of Tianjin higher vocational colleges. Tianjin higher vocational colleges should build key majors, lead the development direction of the school's overall majors in the form of professional groups, apply representative leading majors to drive the construction and development of professional groups, and gradually form a professional chain that can connect with the industry. While constructing the professional group, Tianjin vocational colleges should fully consider whether the industry chain and the construction direction of the professional post group should be taken as the premise. School's overall layout and adjustment of the professional group should focus on the service industry, and it is necessary for them to analyze and study the demand status of high-end skilled and technical talents connected with the professional group in the industrial chain to achieve the development direction of the industry consistent with the construction direction of the professional group system as well as the connection between the professional group and industrial group. On the other hand, Tianjin higher vocational colleges should build professional positions based on the establishment of enterprise positions, fully consider a series of professional positions related to an industry, and cover the professional groups to the industry position groups as much as possible to achieve the simultaneous development and docking of professional groups and industry post groups.

**V. TIANJIN HIGHER VOCATIONAL COLLEGES NEED TO ACTIVELY CARRY OUT TECHNOLOGICAL INNOVATION TO PROVIDE SCIENTIFIC AND TECHNOLOGICAL SUPPORT FOR THE CONSTRUCTION OF XIONG'AN NEW DISTRICT**

Education is an important way to transform science into technology and science and technology into

productivity<sup>1</sup>. The construction and development of the New District is inseparable from the support of a large number of advanced technologies, and it is necessary for Tianjin higher vocational colleges to actively carry out technological innovation and integrate them into the industrial chain of the New District's technology industry. Schools should improve the system to encourage teachers and researchers to actively participate in scientific and technological innovation and industry-school-research cooperation on the basis of doing their own teaching work well, establish cooperative relations with enterprises in the New District, and industrialize and scale the research results as soon as possible. In addition to improving the incentive system, qualified schools can also set up special service agencies to promote the transformation of teachers' achievements.

At present, although most Tianjin higher vocational colleges attach importance to scientific research and R & D work, the quality of relevant professional teachers' scientific research and R & D achievements is not high. Higher vocational colleges should improve the scientific and technological research and R & D management methods to reduce the teaching burden of relevant professional teachers, so that relevant professional teachers have time to concentrate on scientific research and development. Higher vocational colleges should arrange special time every semester to send relevant professional teachers to enterprises and government for business investigation, so that relevant professional teachers can understand the needs of enterprises, obtain research data, and improve the quality of scientific research and R & D, rather than doing research behind closed doors. The scientific and technological research and R & D management departments of higher vocational colleges should establish specialized agencies to be responsible for the transformation and application of relevant professional teachers' scientific and technological research achievements, contact their counterpart enterprises, promote scientific and technological research and R & D achievements, and enable more enterprises to understand scientific and technological research and development results.

*A. Tianjin higher vocational colleges need to strengthen scientific research on Xiong'an New District*

Tianjin higher vocational colleges have always attached great importance to the research of science and technology innovation and regarded it as an important

work<sup>2</sup>. Past research has mainly focused on basics and public welfare, and has focused on traditional fields. In order to meet the needs of the Xiong'an New District, in the future, Tianjin higher vocational colleges should change the subject research both in terms of quality and quantity, especially in horizontal subjects. In terms of planning, schools should closely focus on the deployment of the Party and the country, emancipate the mind, seek truth from facts, pay close attention to the requirements of education reform, keep a foothold in Tianjin and serve the great development of Beijing, Tianjin and Hebei. To be specific, the traditional project model needs to be improved, especially to meet the requirements of the construction and development of the Xiong'an New District. For example, the traditional project model needs to meet the needs of the Xiong'an New District government for regional economy, the needs of enterprises for their own development, and the requirements of brother schools for professional construction, etc. Different strategies should be adopted to deal with actual problems, which can provide real services and solve problems for the government and enterprises. In practice, in the direction of topic selection, Tianjin higher vocational colleges can work with governments and enterprises to aim at the direction that meets the national development strategy and the actual needs of the New District, which must be both cutting-edge, regional and operable. The research on horizontal topics is not easy and requires multiple cooperation. The school should encourage teachers and researchers to apply more and participate more in order to truly realize that knowledge serves the industry and serves the enterprise. It is necessary to give full play to the advantages of scientific research and technical personnel and the "dual subject" of teachers and students should serve the development of regional economic level. Tianjin vocational colleges should do a good job as a think-tank and adviser of enterprises, fully mobilize the enthusiasm of teachers, exploit school scientific research and talent advantages, build think tanks for enterprises and industries by integrating resources, forming teams, joint development, field research and other forms, and play its due role in solving the actual needs of the government and enterprises.

As a starting point and an important resource for technological innovation, higher vocational colleges in Tianjin should be an important supplement to the construction of the Xiong'an New District. Judging from the existing successful practical experience, higher vocational colleges should combine the industrial characteristics of the New District, establish a long-term cooperation mechanism between schools and

<sup>1</sup> Wu Shaofeng. Problems and Countermeasures of Higher Vocational Colleges Serving Regional Economic Development [D]. Northwest Agriculture & Forestry University, 2016.

<sup>2</sup> Li Xiaoming, Mai Ying. Research on Policies and Countermeasures to Promote Higher Vocational Education to Serve Regional Economic and Social Development [J]. Education and Career, 2014 (27): 22-24.

enterprises, and jointly build R & D bases and internship bases to use the advantages of talents to promote the reform of practical teaching in schools and the industrialization of enterprises. Efforts should be paid to use the support of policies and funds to encourage teachers of different specialties to go to enterprises, make suggestions for enterprises to solve problems, and encourage teachers to bring students to enterprises to completely break the traditional teaching model that deviates from traditional theory and practice, combine student teaching with the actuality of the enterprise, enhance students' practical ability in teaching, and realize the "dual subject" development of teachers and students. Enterprises can also benefit from it and realize the "three wins" of schools, students and enterprises.

*B. Tianjin higher vocational colleges need to carry out technological innovation for Xiong'an New District*

The state's positioning of the Xiong'an New District has placed special emphasis on the development of high-tech industries, which should become a new economic growth point in the New District and even the country. Tianjin's higher vocational colleges must firmly grasp the country's strategic guidelines and take this as an opportunity to use high-tech R & D and patent applications to promote the construction of New District.

In view of the large number of small and medium-sized enterprises in the Xiong'an New District, the reality of weak independent innovation capabilities, insufficient scientific research resources, weak talent reserves and relatively poor awareness of intellectual property protection, Tianjin higher vocational colleges should take the initiative to make the first move to solve problems for enterprises, give full play to the advantages of the school, and shoulder the heavy responsibility of transforming technological innovation and patent applications. Specifically, there are two ways. One is that the vocational colleges will transform and cultivate the various tasks undertaken into usable high-tech as soon as possible, and the school should carry out key technical research to develop high-tech; the other way is that Tianjin higher vocational colleges can directly participate in the development of high-tech industries in the Xiong'an New District that have been reserved and ready for use, and introduce supporting incentive systems to promote the development of patents.

**VI. TIANJIN HIGHER VOCATIONAL COLLEGES NEED TO INCREASE THE CONTENT AND BREADTH OF SOCIAL SERVICES IN XIONG'AN NEW DISTRICT**

Higher vocational education is an education system in which education and economy interact<sup>3</sup>. The most urgent task at the moment is the introduction and cultivation of talents in Xiong'an New District. This requires that the talent exchange platform and system in Tianjin's higher vocational colleges and Xiong'an New District need to be improved as soon as possible. On the one hand, teachers in schools now need to change their concepts as soon as possible, dare to innovate and expand, serve and work hard in the front line from Tianjin to Xiong'an. On the other hand, the government and schools should also provide a guarantee mechanism for talent exchange and do a good job of logistics for teachers to solve their worries. The establishment of a talent flow mechanism is two-way interactive. One direction is from Tianjin to Xiong'an. It is possible to arrange school teachers to assume a temporary post for personal training and development in the New District and go to the frontline of enterprises to learn, research, service and guide. The other way is from Xiong'an to Tianjin. It is possible to regularly organize entrepreneurs, employees and technicians of the New District to visit and exchange in schools in Tianjin. They can serve as special teachers and experts to give lectures to students and do technical exchanges with school teachers and so on.

*A. Tianjin higher vocational colleges should carry out consulting services*

Providing consulting services through the establishment of think tanks and idea banks is a common way to serve society in vocational schools. It is a simple and effective way to solve social and economic development and human activities through the use of related theories and methods. With the internationalization of global competition and the diversification of development, the economic situation is becoming more and more complicated. Enterprises can no longer just focus on development without looking forward to the future. The decision-making of enterprises has become more and more inseparable from the support of science and technology. This provides a stage and space for consulting services in vocational schools. Schools should give full play to their talents, set up horizontal and vertical research organizations within the school, and conduct research on Chinese and foreign development hot spots, especially basic research and big data research to lay the foundation for consulting services, which can not

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<sup>3</sup> Wang Heng. Research on the Countermeasures of Private Universities in Henan Province to Serve Regional Economic and Social Development [J]. *China Business Review*, 2018 (31): 143-144.

only serve the government's macro policy formulation, but also provide meso-level suggestions for the development of certain industry and provide micro-decision guidance for a specific problem of an enterprise. The consulting project covers a wide range and involves many industries. It requires the school to make overall arrangements for resources to play the role of subject leader.

*B. Tianjin higher vocational colleges should carry out practical technical training*

Higher vocational colleges can improve the comprehensive quality and labor productivity of workers by providing various technical training, which is an important way to reflect the school's mission and social services. Regional higher vocational colleges serve social and economic development, which is an effective way to enhance their own brand and popularity, and enhance the public welfare spillover effect of social services. In short, higher vocational colleges in Tianjin and Xiong'an New District have worked hard to develop technical training and cultivate a large number of qualified laborers for the industrial development of Xiong'an New District.

Higher vocational colleges in Tianjin and Xiong'an New District should meet the needs of the development of the times, aim to serve the construction of the New District, expand the content and depth of training, innovate training models, promote the combination of quality education and vocational education, establish service platforms such as relevant skill evaluation centers and examination centers to improve the society's awareness of the school and the mutual recognition of talents in the region.

Higher vocational colleges in Tianjin should make full use of their respective advantages, give play to their respective characteristics, complement each other, share resources, actively strive for government support policies, use the existing training hardware and software conditions reasonably and effectively and effectively match the government and enterprises' demand. They need to adhere to the principle of training as required and the combination of learning and use, do not make false, big and empty words, and effectively penetrate into the first-line enterprises and the first-line construction environment of the New District. According to the changes in market demand, they need to constantly sum up experience, immediately adjust the content and focus of the training, and customize training programs for the demand unit to improve the training effect. In terms of training methods, a variety of flexible modes can be adopted, such as on-site training, centralized training, decentralized training, school training, factory training, etc. so as to strive to combine theory and practice to provide trainees with more convenient training

methods, improve the quality of training in limited training time and strictly emphasize the training quality and the effect tracking in the post-training period.

## VII. CONCLUSION

Based on the exploration of the development of vocational education in Tianjin and the current situation of vocational education in Xiong'an New District, the coordinated development of vocational education in Xiong'an New District requires the integration of various vocational education resources. At the same time, it is necessary to strengthen policy guidance and cooperation of various departments, combine the characteristics of actual economic development, optimize the development model of vocational education in Xiong'an New District and lay a solid foundation for the construction of talent team.

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