

# Research on Internet Employment Solution for Disabled People based on Big Data and 5g Technology ——A Case Study of Xiaoshan

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**Abstract**— According to the latest data, China has more than 85 million disabled people. How to solve their employment problem is a challenge that cannot be ignored. China has issued a series of policies including encouraging Internet enterprises to help the disabled obtain employment through big data and 5g technology. This paper takes one of the companies as the research object. Based on big data and 5g technology, the research object has launched the "Internet+ remote employment" mode, linking the labour demand of the developed cities in the southeast to customize and screen suitable jobs for different disabled. By linking the labour exporting provinces in less developed regions, and giving jobs to disabled people through remote employment, thus they can get employment opportunities at home. According to this mode, the research object creates a remote employment database.

**Keywords**- disabled people; employment problem

## 1 INTRODUCTION

There are more than 85 million people with disabilities in China, how to deliver care and help them over the next five years in the face of an ageing population is one of the most important issues. On July 24th, the State Council of China issued the 14th Five-Year-Plan for the protection and development of disabled people during the 14th Five-Year-Plan (2021-2025) period [1].

China has issued a series of policies to promote disabled obtain job opportunities, but it does not help, the problem is still serious because most disabled don't have working skills to match possible operating posts [1].

In such a background, with the popularity of the Internet and the development of 5g technology, Chinese enterprises should think about this question: how to help these disabled people by creating new entrepreneurial models. Not only give them some salary but also give them a sense of social identity and a sense of pride in the realization of self-worth

Xiaoshan is one such company. Hangzhou Xiaoshan Technology Co., Ltd, (Xiaoshan). It is a technology company that aims to create an employment and service ecosystem for the disabled. It is based on big data, cloud computing, blockchain and other technologies, through the layout of the underlying SAAS platform to help disabled people. On the one hand, it links the Disabled Federation and disabled organizations to provide a wealth of employment skills training for the disabled. On the other hand, it links the employment resources of developed coastal cities and major labour exporting provinces, customizes, and matches jobs for the disabled, realizes stable, reasonable, convenient, and flexible employment. Xiaoshan has cooperated with the Employee Employment Cloud Base and has jointly established and operated 17Employee Disability Employment Cloud Bases, helping more than 10,000 disabled people achieve high-quality employment.

Xiaoshan gives disabled people a new name: The New Talent. [2]

## **2 THE OPERATION**

### **2.1 The Operation of Xiaoshan**

Today, people's lives and companies' business and operations have been under significant and shift [11]. The fast development of information and internet technology enables disabled people to complete jobs fully. Technology gives chances for disabled people to compete with people with normal physical activity [3].

Based on the characteristics of different cities and combining the kind of characteristics of the new talent, Xiaoshan launched targeted solutions.

1. Urban talent structure plan-----urban positioning + remote integrated employment solution

#### *1) City cooperation goals*

In one year, support 10,000 local jobs opportunities to help the new talent.

#### *2) Urban positioning + remote integrated employment solutions*

Combining local urban characteristics and development plans, through the Internet + remote employment model, formulate a remote integrated employment solution based on "urban positioning to solve the problems of local education, retention, and attraction. Promoting the transformation of the talent structure.

#### *3) Promote the city's investment promotion plan*

Xiaoshan uses its leading position in remote labour and its advantageous resources and gathers remote labour companies that meet the characteristics of local development through industrial investment and quickly solve local job problems.

2. The characteristics of the training model and integrated employment labour force

Xiaoshan takes the workers as the core position and adopts the integrated employment model to train workers. That is: planning the career path of the workers according to their personality characteristics, abilities, and talents, combining the planning to customize a variety of Internet

jobs for the workers and cultivating the workers into "multi-professional and multi-capable" compound digital talents. Can be employed in a variety of positions, achieve multiple income generation, and fundamentally enhance the competitiveness of talents.

- A. Based on data, determine the career development direction and goals of workers
- B. takes the labourer as the core, the growth of the labourers as the goal, and the job is fixed according to the individual
- C. Workers have a variety of job skills
- D. Provide a variety of jobs for workers

To respect different wildlings, Xiaoshan has developed different kinds of jobs including dozens of jobs.

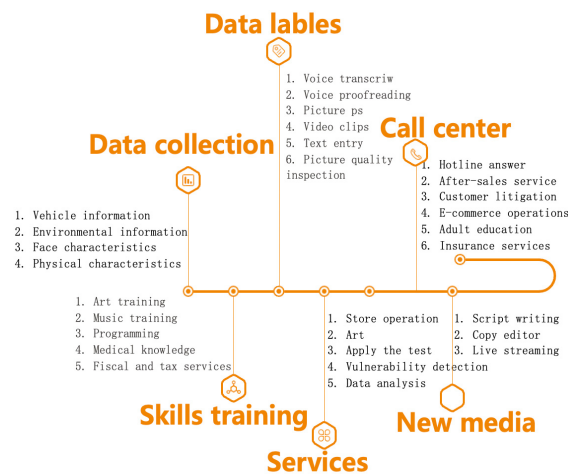


Figure 1 Multiple job options

For example, I interviewed a new talent, his last name was Zhang. Mr Zhang's left leg was crippled in a car accident when he was 6 years old. Because of that, he was unable to do normal work, so Xiaoshan trains him to do some basic writing work, such as writing articles, proofreading, and editing, planning copywriting. He says he has a stable job now, monthly income plus government subsidies are around 4,000 yuan, everything goes better.

However, Xiaoshan employees have identified an important problem, and people with disabilities are generally undereducated, so they need more patience and time to teach their skills.

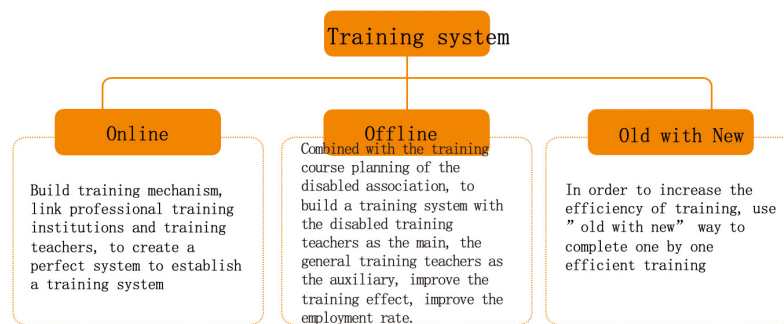
## 2.2 The Operation of the New Talent

Every new talent has a different situation; therefore, every individual deserves to be respected. Before they become a new talent, Xiaoshan will train them to obtain professional working skills, everyone's willingness is concerned.

Because of the physical distance, disabled people cannot work as conveniently as ordinary people. They confront more physical inconvenience and challenges than others. All these disadvantages make disabled people confront more challenges of working. Therefore, they need support not only from family and friends [4] but also from professional companies and organisations which help them get used to the working environment [2]. Some studies claimed the employment situation of disabled people and training skills is more important than offering employment opportunities in China [5]. The same as people without disabilities, disabled people's satisfaction is influenced by their work-life balance [6]. There are many studies showings training has a positive impact on employee satisfaction [7][8][9]. It is believed when the training is taken on disabled people, their work and life satisfaction can be both improved.

Therefore, there are three steps to help them.

- 1) Every new talent needs to choose their working intent, there are three options to decide. Such as paper working, writing working, online service and so on.
- 2) In the first two weeks, teachers will be teaching them how to process different apps, including windows office, Photoshop. Give them some tasks from real customers to let them have a try.
- 3) After finishing the training period, the new talent starts to work as a regular employee.



**Figure 2** Training system

There is one thing that needs to be pointed. Due to various unfortunate reasons, disabled people have different kinds of physical defects. In daily contact with normal people, they will always feel inferior [10], therefore some motivations from outside are important. This is called extrinsic motivation [11].

In this research, extrinsic motivation is focused. This is about the actions and activities that service companies do to make disabled people work and live in a happy state.

Konur states disabled people's dissatisfaction has a close relationship with the discrimination of disability from the surrounding people. When they feel discriminated against, they get hurt. Their job performance might be reduced due to the negative emotional feeling [12]. This is not just happening in China; some foreign learners interview the disabled people in Shropshire, and they found these people are not highly satisfied with the service offered by the service companies serving them because their needs are ignored [13].

### 3 THE APPLICATIONS

Some Chinese workers who have been working on the welfare of disabled people have identified an argument that is worthy of attention. They claim some organisations ignored the power and capabilities of disabled people. They suggest jobs for disabled people, but these jobs are at a low salary level. These organisations do not actively improve the power of disabled people [14]. Alternatively, Xiaoshan puts the rights and benefits of disabled people in the first position.

#### 3.1 Base Labour Training Model

Anderson et al. [2] claimed the modern economy is knowledge-based. Through providing training on disabled people, many disabled people can make money the same as ordinary people. Gao [15] also agrees that the work of training is more important than offering employment opportunities. Figure 3 shows how this model processes.

##### *1) Internet Remote Employment College*

Through the cooperation between the government and enterprises in the East and the West in China, establish an Internet remote employment college in the local area, carry out vocational skills training closely related to the Internet remote employment industry, cultivate, and transport the shortage of vocational and technical talents.

Advantage:

1. Curriculum system: Combining the general laws of vocational skills education and the special needs of the Internet professional field for vocational skills, construct and research a curriculum system with strong pertinence, sufficient conceptual depth, and sufficient practical applicability, and carry out teaching and practical training.
2. Faculty allocation: "shared" teachers through public courses + "full-time" special teachers in the Internet professional field + "part-time" teachers with rich practical experience in enterprises and institutions, forming a strong team of teachers.
3. Practical training characteristics: The core characteristic of the college is to combine practical training to the maximum extent to carry out teaching. The college establishes cooperation with enterprises and employers, realizes customized training of students and employees through the establishment of enterprise training bases, internships, and school-enterprise cooperation customized classes on campus.

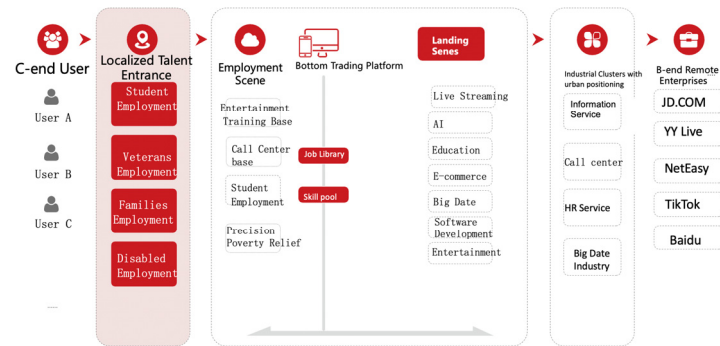


Figure 3 Multiple category selection

### 3.2 Artificial Intelligence Training Model

Combining the characteristics of the local labour force, through a rolling cycle of advancement, the skills of employees are enhanced, and business capabilities are strengthened, so that employees who meet the standards can be trained to work in batches [16]. The core advantage of the artificial intelligence training model is to train seed players through the hierarchical training and management of employees with different abilities, business competitions to stimulate the potential of employees, old and new, excellent, and low methods to cultivate seed players, to achieve the ability of employees from 0 to 1, and then from the improvement of comprehensive ability from 1 to  $\infty$ .

### 3.3 the value of cooperative society

#### 1) promote employment, promote the transformation of the talent structure

According to the local city positioning, the use of remote integration employment model, love employees for the local customized Internet job development and local talent training, the introduction of foreign talent, promote residents' employment increase income at the same time, the employment of people can support the local economic development of composite digital talent, optimize the urban talent structure.

#### 2) to stimulate GDP growth, increase fiscal revenue

Give full play to the position of the leading position and resource advantages of the remote employment of employees, while promoting the transformation of the urban talent structure, drive the development of cooperative enterprises in the local settlement, promote local GDP growth, and bring more than 100 million yuan of local fiscal revenue each year.

#### 3) optimize the industrial structure, promote digital economic development

Based on different cities' positioning, Xiaoshan trains the corresponding structural talent, the introduction of relevant industrial chain upstream and downstream enterprises, the development of the corresponding digital economy industry clusters, optimize the urban industrial structure, promote local digital economic development.

4) consolidate the achievements of poverty eradication, to help the revitalization of the countryside

Through the improvement of the service chain, to remote integration of employment to bring high-quality jobs to the last kilometre of rural areas, efficiently stimulate rural employment, while the development of live goods, to help local agricultural products sales, to help the local consolidation of poverty relief achievements, do a good job in rural revitalization relay.

### 3.4 The Result

For the result that Xiaoshan has done yet, I would like to split into two aspects to describe. The first part is to show a real contribution through data that Xiaoshan has not just helped the disabled people, but also for the country.

As for the second part, I interviewed several disabled people working in Xiaoshan, through communication with them, to feel the changes in well-being and self-development (Due to protect the privacy of the interviewees, all respondents use anonymity. All the information has been authorized by the interviewees).

#### 3.4.1 The result of Xiaoshan



Figure 4 Operating bases in China

(1) In 2020, the number of remote employment settlements was 22.28 million, with a turnover of 15 billion yuan and a contribution of 1.008 billion in tax revenue.

(2) Until May 2021, 17 employment bases have been operated. Figure 2 shows the 17 bases in China. These 17 bases have achieved more than 28,000 employments, integrated 63 kinds of remote jobs, a total of 100,000 reserve jobs, and realized 4,175 remote employment enterprises cooperation.

There are three cases for urban positioning



**Positioning: Silicon Valley**

**Solution:**

Combined with local national characteristics, the development of live broadcasting industry, to create a remote employment industry chain.



**Positioning: digital and economy city**

**Solution:**

Aggregation of multi-class remote jobs, the introduction of digital economy industry chain upstream and downstream enterprises, the formation of sustainable digital economic development



**Positioning: A model case of rural revitalization**

**Solution:**

Combined with different regional characteristics, the introduction of suitable diversified remote jobs, do a good job in industrial planning and development

**Figure 5** Samples

### 3.4.2 The Result of The New Talent

Satisfaction is one positive emotional feeling of people [15]. People's satisfaction has a positive impact on their behaviour. Generally, high satisfaction leads to high productivity [16]. For employers, they expect their employees have high productivity. Therefore, they would conduct various motivation practices to make them satisfied and improve job productivity [17]. Satisfaction is one positive emotional feeling of people [16] People's satisfaction has a positive impact on their behaviour.

In this paper, an interview is chosen to implement to collect data from the disabled people trained or served by Xiaoshan. It is quickly selected from the choices. Furthermore, an interview is a common choice of qualitative research [18]. Boyce and Wood [19] remind disabled people are different from each other and they accept disability situations differently. Some of them have accepted the truth, while some of them are still in a period of denial the selection of interviews is integrated with the interpretivism paradigm, qualitative design, and primary research. I choose three interviewees.

*Interview. 002 said, "Xiaoshan has organized disabled people in learning centres and guided us to motivate each other. Sometimes we would not easily accept ordinary people's advice because we do not think they understand our feeling. However, when the advice comes from the same people with the same disability, we can easily accept the advice from*



*them. Xiaoshan's service is like psychological guidance. I was one of the people who are helped by Xiaoshan and come out from the dark area."*

*Interview. 004 said, "Xiaoshan is more than a training company. The CEO and managers always encourage us. They tell us, when we are weak somewhere, we must be capable in other ways. Therefore, it helped many disabled people develop their potentials. I lost one of my legs in a one-car accident, and I could not accept this fact in the beginning. I tried to kill myself. One year ago, I met Xiaoshan. The leaders encouraged me and made me believe I still have a bright future. There are many jobs that are related to translation and digital picture computing. I got a training program about these practices. Although my education level is low, I got educated in Xiaoshan."*

*Interview. 007 said, "Xiaoshan's training system brings me a bright world that I never met before. The information technology and information analysis system would help us identify our potential and interest and guide us to learn fast. For instance, one of my friends has been identified with image edit talent. He never thought he can deal with the image issues in the computer so fast. Now he likes his job very much. His talent is developed by Xiaoshan. We can do many jobs more than being a massager."*

I was also authorized by three employees who worked at Xiaoshan to document their real names and experiences.



Entertainment live anchor at Alaer City Employment Base

Yuan Changhui, was a resident of LYuan town and had never been exposed to live broadcasting before, and was trained as an anchor. The first streaming income of only 4.4 yuan, the fifth day of live broadcast income exceeded 1000 yuan, opening up her new development path.



Standard staff at Alaer City Employment Base

Leng Feng, Mr. Leng had no Internet sense before. Since he joined Xiaoshan, Mr. Leng's income was raised from 48.1 Yuan to 85.85 yuan. He has been studying bill-working a long time and has become an expert in the collection of bills.



The new talent at Shangqiu at Henan Employment Base

Sun Xiangchang, Due to strong straight spinalitis, Mr. Sun has been at home for five years before joining Xiaoshan. In May 2019, beaome the first batch of the new talent in Shangqiu Henan employment base, has now worked for two years, mastered a number of Internet employment skills, relying on their monthly income of about 2500 yuan. It has greatly improved the living conditions of the family and rekindled the hope of life

Figure 6 Examples

## 4 CONCLUSION

This research has a major question to find answers to. The first question is how to make disabled people well-being and self-development. From the investigation into the disabled

people working in Xiaoshan, it is concluded that Xiaoshan is a case worth of study and learning by other service companies for disabled people. This company offers a similar service to other service companies. It trains disabled people and finds jobs for them. It also provides psychological services for these people. However, the significant difference is that Xiaoshan has done these practices based on information technology and it offers disabled people jobs that are more advanced and lead to more salaries. It established many training centres which meet the social needs of disabled people. Their self-actualization needs are also effectively met. Bai states service companies can offer community-based service to disabled people and help them interact with community members effectively [20]. Their potential is developed, and they become more confident and happier about their work and life. Xiaoshan's business model and services for disabled people are suggested to more organisations and the Chinese government. This model is suggested to copy in more service organisations to improve the satisfaction and life quality of the whole disabled people group in China.

As for the physical, Xiaoshan has offered these people better salaries to improve life quality. It has given them flexible working conditions. It has also organized disabled people together to give them social care and group feeling.

As for psychology, the level is not as high as the work satisfaction. This is because life inconvenience and family issues have impacted these people's life satisfaction. These issues are not the responsibility of Xiaoshan. Intrinsic motivation should be motivated. Only when these disabled people solve the life issues and accept the disability truth, they might gradually feel life happiness. There are still more practices that Xiaoshan and other service organisations can do to improve disabled people's life satisfaction [21].

At the end of this paper, there are two suggestions. One is to Xiaoshan. In this research, it is found that some interviewees claimed the New Talent platform does not work effectively for them. They have not gotten used to the work on this platform. It is suggested that Xiaoshan should offer training on disabled people so that they can use this platform more effectively. In the whole research project, the author identifies only this issue about Xiaoshan. It continues to develop, and it is believed this organisation will help more and more new talents in the future [22].

The second suggestion is to other service organisations in China. They are suggested to learn from Xiaoshan and make good use of the modern advanced technologies and information systems to help disabled people. Disabled people are talents in some areas as ordinary people and service companies should help them develop these potentials rather than treating them as weak people. Osman et al. state service companies can offer support of entrepreneurship among disabled people [23]. Here, Xiaoshan did not offer such a service to disabled people. Disabled people's self-esteem and self-actualization needs are as strong as ordinary people. Service organisations should meet these needs. When all the service organisations have developed and helped disabled people to develop their potentials, this group of people in China will improve their well-being and self-development. Furthermore, the whole society will become better. [24]

**Acknowledgment.** This is an independent study. The author thanks Mr. Huang huanqun and all new talents from Xiaoshan for their comments and suggestions. Mr. Huang is the co-founder of Xiaoshan.

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