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Research on Environmental Adaptation and Personalized Development of Visually Impaired Students in Colleges and Universities

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Abstract: *As the main participants of higher inclusive education, the adaptation of visually impaired students to the barrier-free environment and individual development in colleges and universities are extremely important to promote the development of higher inclusive education. This article selects three visually impaired college students from a university in Nanjing to conduct interviews to understand the adaptability and personal development experience of the visually impaired students to the school's barrier-free physical environment, humanistic environment, and information environment. It is found that the university has achieved a stage in the construction of the barrier-free environment to results, but there are still shortcomings. This article puts forward the following suggestions in order to provide reference ideas for the further development of higher integrated education: improve barrier-free environment conditions; strengthen students' school adaptation training, especially psychological adjustment; and formulate personal development plans for visually impaired college students.*

Keywords: *visually impaired college students, barrier-free environment, adaptation; individualized development*

1. Introduction

Since the 1950s, some developed countries have taken freedom and equality as their educational purpose, and have begun to promote the development of inclusive education. Since its development, foreign countries have established integrated education support services including government, schools, communities, and families to provide an excellent educational environment for people with special disabilities and provide hardware guarantees to adapt to mainstream social life [1]. As a country with disabilities, a large number of students with disabilities have been rejected by higher education in specialized special education colleges due to restrictions on enrollment and educational resources. Therefore, inclusive education in ordinary colleges and universities is the basic way to solve the popularization of higher education for persons with disabilities. Since China first clarified the right of persons with disabilities to receive higher education in 1985, my country's higher integrated education has made great progress, and students with disabilities receiving higher integrated education are currently in the transitional stage from scale effect to quality improvement [2-3].

In 2012, the "Barrier-free Environment Construction Regulations" proposed for the first time to provide reasonable convenience for the visually impaired, stipulating that Braille or expanded test papers should be provided nationwide for visually impaired students during admission and qualification examinations[4]. The promulgation of the policy makes more and more visually impaired students face more university and professional choices, and makes it possible for them to leave the special education system and enter the general education system, which in turn affects the career choices and future lives of visually impaired students.

However, national-level policies not only support visually impaired students to receive higher education inclusive education, but also put forward requirements for the construction of barrier-free environments in higher education institutions. One by one, visually impaired students graduated from colleges and universities, leaving to colleges not only successful cases of higher integrated education, but also experiences worthy of summarization and reflection.

Therefore, this article takes three visually impaired students from a university in Nanjing as an example, summarizes the students' adaptation to the school's barrier-free environment, adaptation

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strategies, and students' individualized development in the context of disability and health integration, and summarizes the university as visually impaired students. The services and innovative measures provided by the development of learning.

2. The status quo of barrier-free environment construction and students' adaptation strategies

The barrier-free environment mainly includes physical environment, humanistic environment and information environment [5].

2.1 The status quo of barrier-free physical environment construction and students' adaptation

Combined with interviews with students and daily observations, students adapt well to the physical environment. Due to the simple roads of the school, most of the roads are equipped with blind tracks, and the daily travel of students can be guaranteed. The school arranges a barrier-free dormitory on the first floor for the visually impaired students, and arranges the students with normal vision to live with them according to the daily needs of the students, which solves the difficult problems in life. In recent years, the school has made further improvements to the elevator in the teaching building, adding voice reminders to allow visually impaired students to know the floor, which greatly improves the efficiency of elevator use.

In the interview, student W mentioned that some of the roads leading to the express delivery points in the school are due to potholes, piles of goods and heavy traffic, and there are more vehicles, which cause inconvenience to their travel and collection of express delivery. You usually need to ask students who are passing by. After the express delivery was successfully completed, the whole process was hindered and time-consuming from entering the road section to leaving. In addition, although students can accurately reach the teaching floor, due to too many classrooms, once they need to go to an unfamiliar classroom, it is difficult for students to identify the classroom number. Although the school has posted the Braille classroom number, the position is too high. It is difficult for visually impaired students to distinguish by touching the Braille. Generally, the method of inquiry is still used to solve the problem. Although there is still room for improvement in the physical environment, the interviewees all stated that they have been able to adapt to the environment well after studying and living at school, and are particularly familiar with the school. Classmate Z said that on most roads, there is almost no need to use blind tracks. There is no need to use blind sticks in the teaching building, and students W and F also expressed that they can travel freely in the school with blind sticks. In addition, three students participated in a summer camp for visually impaired students after enrollment, and trained in directional walking and other aspects, which further improved the use of blind sticks and travel skills.

2.2 The status quo of barrier-free humanistic environment construction and students' adaptation

The barrier-free humanistic environment mainly revolves around the four aspects of teacher professionalization, class atmosphere, school activities and volunteer service. The three visually impaired students are all students majoring in applied psychology, and their teachers are mostly experts in psychology and rehabilitation therapy. They can incorporate psychological adjustment and special education support in education and teaching to help students adapt better. Being in a class where the disability and health are integrated, the collective environment is also an important aspect of students' adaptation. The class of the three students has developed a detailed assistance plan for them. Designated classmates will lead them to the classrooms and cafeterias every day to help them connect with the teachers on the teaching materials of the day. Interviewees report that most teachers can satisfy them. The needs of teaching materials, such as obtaining PPT for self-study before class, exchange of questions after class, etc. The extensive participation of able-bodied students also made the class atmosphere harmonious and harmonious. The class had organized team building activities, and all three visually impaired students participated. In terms of participating in school activities, the interviewees stated that they have a fair opportunity to participate in student clubs. All three of them joined the school broadcasting agency and participated in campus activities with excellent voice conditions. Student Z has hosted large-scale campus activities several times, such as graduation party. The three have also teamed up with able-bodied students to perform psychological sitcoms and poetry recitations, and have won many commendations inside and outside the school. In the volunteer service, the three of them played their professional expertise, practiced in the school's mental health education center, provided peer psychological counseling, and received more than 20 visitors. Student Z also participated

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in public welfare activities for the visually impaired, assisted in training the Putonghua of the visually impaired group, and raised the putonghua level of the group to level 2 A.

2.3 The status quo of barrier-free information environment construction and students' adaptation

Information environment refers to a convenient media environment that can provide students with cognition and mastery of learning and living skills and knowledge [6]. Through communication with interviewees, the construction of the information environment in this article mainly includes teaching materials, examination arrangements and network functions.

In terms of teaching materials, the school has set up a special barrier-free library and Braille reading room to provide sufficient seats for the visually impaired students in the school. Barrier-free library staff will also provide students with Braille conversion and electronic scanning services for teaching materials, so that visually impaired students can obtain teaching materials that are easy to learn. In terms of examinations, the school's academic affairs office provides electronic examination papers and large-size examination papers for visually impaired students, and appropriately extends the examination time according to the situation. In terms of network functions, students can complete tuition payment, course selection and teaching evaluation, and campus card recharge and use according to their needs.

Despite this, students use screen-reading software to solve most of the needs of network use, but the school still has limitations in the construction of the information environment. Respondents pointed out that textbooks are updated quickly, some electronic textbooks are inconsistent with current textbooks, and conversion services cannot keep up. In addition, there are fewer Braille book resources in barrier-free libraries, and professional books are scarce, which restricts students' after-school study.

3. Personalized development situation

Among the three visually impaired students selected in this article, 2 took the single exam for the disabled, 1 took the general college entrance examination, and 3 had experience in schools for the blind. After entering the university, the three people set up different development goals according to their own different situations. The school also conducts "one grade for a lifetime" education management for each visually impaired student.

Student F hopes to be able to enter foreign universities and experience integrated education in different environments. The biggest difficulty is the "language barrier". She explored the experience of using English learning software for the visually impaired, and found a vocabulary memorizing app with barrier-free support. However, she believes that using mobile phones to recite vocabulary is inefficient. For the visually impaired, it is better to use a computer. There are English learning software and English voice library specially developed for the visually impaired on the computer, which can meet the daily needs of the visually impaired. Learn English while avoiding the high cost of Braille printing. Due to the relatively backward educational conditions in his hometown, student W hopes that after receiving higher education, he can devote himself to education and repay the society. Therefore, student W signed up for the teacher qualification exam and got the certificate before graduation. Student Z hopes to further study psychology and set himself a goal for the postgraduate entrance examination. Therefore, classmate Z devoted himself to studying in four years and maintained his good grades at the top of the professional class in the four years. In addition, classmate Z pays attention to the development of interest, adheres to the habit of reading and recitation, and also uses his expertise to where needed. In addition to participating in recitation competitions inside and outside the school, during the epidemic, he also recorded recitation videos with five other visually impaired students to fight against cheering for the epidemic, he won provincial commendations, and he himself has also won many awards.

4. Discuss

4.1 Thoughts on three aspects of environmental construction

Through field observations of the school's field environment, combined with interviews with visually impaired students, it is not difficult to see that the school's environmental construction is relatively complete in three aspects: physics, humanities, and information. This is related to the

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background of the school. The school is a university trained for the disabled in higher education and careers for the disabled, and it is the first batch of pilot schools for the integration of higher education for disabled students in the China Disabled Persons' Federation. Studies have shown that among the top ten support for visually impaired students in colleges and universities, the third is test support (43.1%)[7], and the school is also the Jiangsu Educational Test Support Research Center for the Visually Impaired. The school is supported by the Provincial Education Examination Institute's Proposition Center. Over the years, it has helped visually impaired students to successfully participate in many exams such as College English Band Four and Six, Putonghua and Teacher Qualification Certificate.

It can be seen that although the school has an urgent need for improvement in the physical environment, the humanities and information support is relatively sufficient to promote students' adaptation to the barrier-free physical environment. In the future, the school should continue to improve the construction of the physical environment on the basis of in-depth support of the humanities and information environment.

4.2 Thinking about the personalized development of visually impaired students in colleges and universities

Visually impaired students, like able-bodied college students, have individualized development needs. Schools should conduct a comprehensive assessment of the adaptability, learning ability, communication ability, collaboration ability, and psychological quality of visually impaired students, so as to meet the basic needs of visually impaired students in their study and life, so as to ensure that their development is not restricted. The three visually impaired college students in this article are majoring in applied psychology. They all expressed that they are not interested in massage and massage, nor do they agree with the public's inherent view that blind people can only engage in massage industry. On the one hand, the school must actively provide a barrier-free environment for student development. On the other hand, it also needs to provide psychological guidance to students, help students establish and maintain better cognitive abilities and psychological adaptability, and take a correct view of individualized development.

With the further development of higher integrated education, more and more disabled students yearn to become professional talents through university study. Taking the Nanjing colleges and universities in this article as an example, students with disabilities can not only complete professional courses with classmates, but also participate in extracurricular practice. In July 2021, visually impaired and hearing impaired college students will join the school's summer support teaching team, go deep into the western mountainous area, and use their professional expertise in art and music to make contributions to the education cause within their ability. It can be seen that college students with disabilities also have the ability to develop individuatedly. Colleges and universities should open up new ideas, be brave to innovate, and support students with disabilities to develop in a diversified direction.

4.3 Thoughts on adapting to college activities for visually impaired students in colleges and universities

The biggest exercise that integrated education brings to visually impaired students is the improvement of their adaptability. It puts forward the requirements for visually impaired students to voluntarily accept and adapt to environmental changes. Compared with non-integrated education that actively caters to students' needs, integrated education can promote students more cultivation of internal motivation, thereby forming psychological initiative [1].

Kyeong conducted a survey on the admission preparation work of visually impaired college students and found that psychological adjustment is the highest in importance, readiness, and satisfaction. Academic skill preparation and orientation walking skills preparation are also important aspects that affect the admission adjustment of visually impaired students [8].The research of Wang Mengmeng also proves that psychological adjustment as a strategy to adapt to the school's barrier-free environment will directly affect students' self-confidence [6]. Interviewee W also mentioned that the skill she most wants to share with other visually impaired college students is her mentality. In the process of mentality adjustment, she has experienced never wanting to do, not daring to do well, and go well. Far change. Student F also said that reasonable help is the guarantee for her to go out independently. The visually impaired must find a clear self-position, overcome the guilty and timidity

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caused by seeking help, treat help seeking in a correct way, and make reasonable use of public services. Therefore, colleges and universities should arrange debugging activities for visually impaired students, including academic adaptation, psychological adjustment, and directional walking skills, and formulate targeted debugging courses for the different needs of each visually impaired student.

5. Conclusions and recommendations

Based on the research in this article, it is proposed to propose suggestions for visually impaired students to adapt to the higher integrated education environment from the following aspects:

(1) Schools should combine school-based resources to actively improve barrier-free environmental conditions, adjust the details of the physical environment, supplement the deficiencies in the construction of the information environment, and combine the construction of the humanistic internal environment to positively affect the construction of the physical environment.

(2) Strengthen students' entrance adjustment training, especially psychological adjustment, guide students to face up to ask for help, and promote students' academic adjustment.

(3) Formulate the personal development plan of the visually impaired college students, explore the students' interests and specialties, and ensure the individual development of the students.

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