



Study on the Barrier-free Service Optimization of Guiyang Airport

Yao Shen (Stella)

Haaga-Helia University of Applied Sciences

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Abstract

Author(s) Yao Shen (Stella)
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<p>Since the reform and opening up, China's civil aviation industry has ushered in vigorous development, with the number of civil aviation passengers growing steadily and the size of the special passenger group also expanding. In this context, strengthening and improving special passenger services has become an important measure to enhance the core competitiveness of airports. Taking Guiyang Airport as the research object, this paper uses SERVQUAL model to optimize and analyse the accessibility service of Guiyang Airport based on service quality theory and process reengineering theory. Firstly, the current accessibility problems and their reasons in Guiyang Airport are analysed by combining domestic and international literature review and questionnaire survey, and conducting interviews with passengers and employees. Finally, suggestions to improve the current problems are put forward. It aims to provide suggestions for improving the accessibility of existing airports, as well as providing references for the accessibility of future newly built terminals in Guiyang and other second-tier cities.</p>
Key words Quality of service, Accessibility, Optimisation

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1 Introduction

For the research on accessibility service optimization of Guiyang Airport, this chapter will first introduce the background and significance of the topic selected in this paper, then explain the purpose and research problems of this paper, introduce the research methods used in this paper, and finally list the overlay matrix and research flow chart.

1.1 Background and significance of the selected topic

As society's demand for barrier-free services continues to increase, it has become necessary for airports, as important transport hubs, to provide efficient and comprehensive barrier-free services. Guiyang Airport, as an important transport node in the western region, the quality of its services is crucial to promoting local economic development. However, the current accessibility services at the airport may have deficiencies, such as inadequate facilities and unsmooth service processes, which may affect disabled people and travellers with special needs. Therefore, researching and optimising the accessibility services of Guiyang Airport will not only help to solve the existing problems and improve the service level of the airport, but also promote tourism and economic development. The construction of barrier-free facilities is crucial to ensure that all members of society can equally integrate into social activities and enjoy the fruits of social progress, which not only highlights the values of human care and social justice, but also maps the civilisation level and overall strength of a country. By creating a high-quality barrier-free environment, people's sense of fulfilment, happiness and security can be significantly enhanced.

1.2 Aim and research question

This study takes special passengers of Guiyang Airport terminal as the core, and deeply discusses the current barrier-free service challenges encountered by them. The research aims to achieve the following objectives: first, clearly identify the significant obstacles encountered by special passengers in the airport environment; Secondly, based on the research results, the paper provides feasible improvement suggestions for the optimization and upgrading of barrier-free service facilities of Guiyang Airport; Finally, from a broader perspective, it provides valuable reference and reference for improving the barrier-free service level of new airport terminals in other second-tier cities in China.

The research question of this paper is to investigate the status quo of barrier-free service in Guiyang Airport.

1.3 Research methodology

1.3.1 Bibliographic analysis

Information related to wheelchair users, deaf travellers, airport facilities and equipment, and accessibility is analysed and summarised by searching relevant literature from experts and scholars to provide reference for the research of this paper. With the continuous development and popularity of the global aviation industry, airports, as an important node connecting the world, are increasingly concerned about the quality of their services and the improvement of their accessibility facilities.

Firstly, the importance of airport accessibility services has been recognised by many parties. Federal Aviation Administration (FAA) had released Airport Accessibility for People with Disabilities in 2016, which emphasised the necessity of airport accessibility facilities. It is also one of the growing focuses of the International Civil Aviation Organisation (ICAO). And Japan's Tokyo International Airlines was even recognised by Skytrax as the number one in several accessibility service areas in 2019, providing experiences and references for other airports to learn from.

Secondly, academic research on airport accessibility services is also growing. smith et al. (1987) have studied the leisure activities of disabled travellers and found that there are various barriers to participation. douglas et al. (2003) have explored the travel constraints faced by disabled travellers. These studies provide direction for airports to improve their services and point out the issues that need to be focused on.

Meanwhile, some domestic dissertations have also conducted in-depth studies on airport services. For example, Zeyu JU (2023) conducted a study on landside entrance and exit design for small and medium-sized airports in Northwest China, providing practical suggestions for airport design. And Xue Kang (2022) explored the barrier-free intelligent interaction system for special populations from a technical perspective. These studies provide technical support and practical experience for airports to improve their services.

In addition, airports have made a lot of efforts to cope with the impact of epidemics and improve service quality. Zhang Haobo and Xia Yukun (2022) analysed the transformation and upgrading practices of airport passenger services under the epidemic, which provided insights for coping with emergencies. Liang Dong (2021) and Hao Ling (2021) discussed the accessibility practices of Zhengzhou and Daxing airports respectively, sharing successful experiences and challenges.

Finally, art and design also play an important role in airport accessibility services. Cui Qingzhou (2023) studied the humanised artistic design of public spaces in terminals, providing ideas for enhancing passenger experience and integrating into local culture.

In summary, the research on airport accessibility services and special passenger needs covers a wide range of aspects, from policies and regulations to academic research, and from technical support to practical experience, all of which have played a positive role in promoting the improvement of service quality and meeting the needs of different passengers in airports. However, further in-depth research and continuous improvement are still needed to achieve the goal of a higher level and wider coverage of airport services.

1.3.2 Interview method

By communicating with special needs passengers and service personnel at Guiyang Airport, the authors collected their views on the current status of accessibility service implementation, their understanding of service content, and their opinions on service process improvement. Based on these survey responses, a series of recommendations aimed at improving the quality of accessibility services at Guiyang Airport are proposed.

1.3.3 Questionnaire method

This research methodology is primarily used to create a solid foundation for strategy development. The authors have thoroughly researched and analysed the accessibility of Guiyang Airport to identify the key factors that influence passengers' experience in this environment. These factors are crucial to understanding and improving airport accessibility and can help to increase overall passenger satisfaction, which in turn can contribute to the optimisation and improvement of airport services.

1.4 Overlay matrix

Table1. Overlay matrix

Investigative questions	Theoretical framework (chapter)	Results (chapter)	Questionnaire questions
What do passengers think of the accessibility facilities at the airport?	3.3.1	4.4.1	6-9
Whether the passengers are getting the service they deserve?	3.3.1	4.4.1	10-14

What do passengers think of the staff's motivation?	3.3.2	4.4.1	15-18
Do passengers trust the staff?	3.3.2	4.4.1	19-22
What do travelers think of personalized service?	3.3.2	4.4.1	23-27

1.5 Research flow chart

This paper takes "analysing the current situation - posing problems - solving problems" as the logical main line, combines domestic and foreign literature research, questionnaire survey and theoretical practice, analyses the current situation, problems and causes of accessibility services in Guiyang Airport, and finally puts forward suggestions and countermeasures. The research technology roadmap is shown in Figure 1 below.

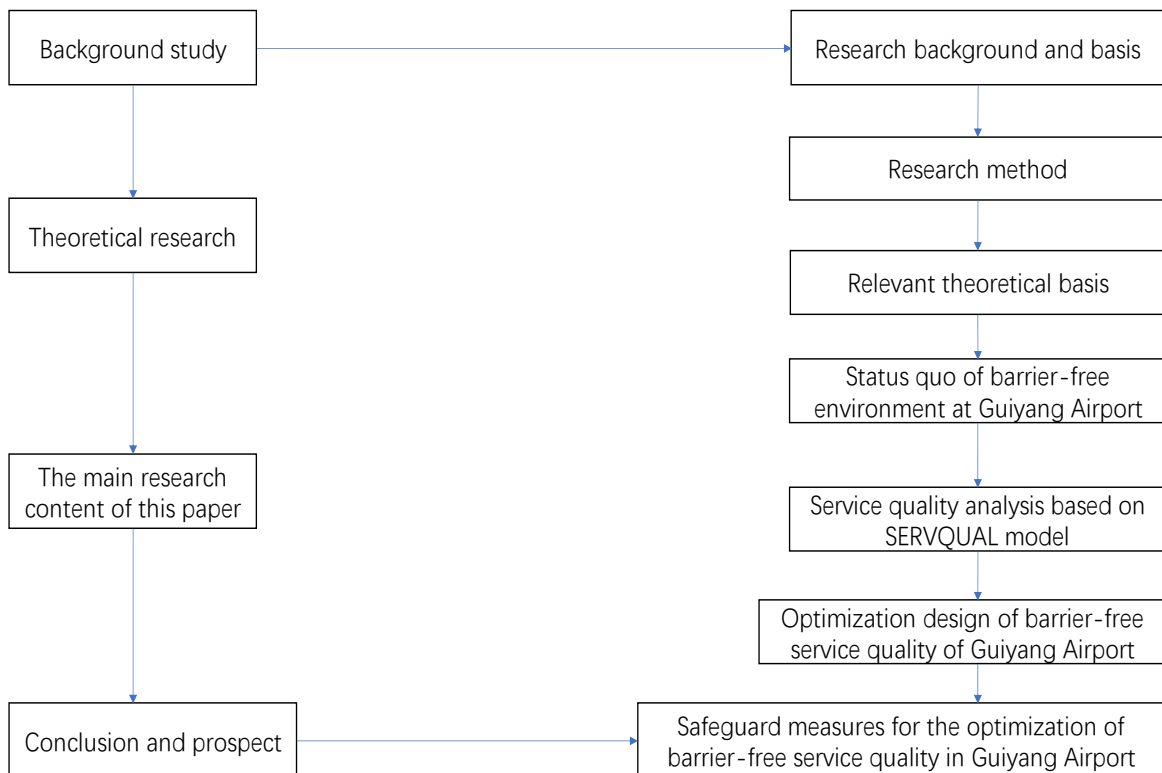


Fig. 1 Thesis research flow chart

2 Relevant concept definition and rationale

The research of Guiyang Airport barrier-free service optimization involves the definition of barrier-free environment, the relationship between airport and barrier-free environment, the theory of service quality and the theoretical basis of process reengineering. In this chapter, the concept of barrier-free service and related theories will be combined to define the meaning and significance of barrier-free service of Guiyang Airport and the optimization path from the overall perspective.

2.1 Definition of relevant concepts

2.1.1 Accessibility

Accessibility is really the absence of barriers, including the physical environment, information and communication. A barrier-free environment refers to an ideal environment that is free of obstacles for anyone and can be freely travelled and used by anyone. As a design method to eliminate differential treatment, barrier-free design is an important embodiment of the humanitarian spirit of society (Cao,2022).

The main requirements for a barrier-free physical environment: The planning, design and construction of public facilities, living quarters and transport roads should take into account the needs of people with disabilities. For example, roads in cities should be flat and spacious so that wheelchair users and people on crutches can pass through them easily; at the same time, adequate guidance and assistive facilities should be provided for the visually impaired. Inside public buildings, we need to provide facilities such as entrances, floors, lifts, handrails, toilets, rooms and counters suitable for persons with disabilities to ensure that they can enter, exit and use these spaces freely.

Key requirements for accessibility of information exchange: Efforts should be made to remove barriers so that people with hearing, speech and visual impairments can access information and participate in communication on an equal footing. For example, film and television programmes should be subtitled and narrated so that persons with hearing impairments can understand the content; television programmes can also feature sign language anchors to facilitate access for hearing-impaired viewers. In addition, for the visually impaired, audio books and other materials in Braille can be provided to help them access information.

2.1.2 Links between airports and accessibility

Airports, as key nodes in our transport network, provide important avenues for travellers seeking efficient spatial transfers. For those with limited mobility, such as wheelchair users, the hearing or speech impaired, and the elderly, travelling alone can be challenging. For this reason, accessibility

design in airports is particularly important, not only to facilitate the travelling of these groups, but also to help them better participate in social activities and have easy access to a diverse range of social resources. The implementation of such design has a positive impact on the overall development of society, contributing to inclusive growth and creating more value for society.

2.1.3 Objects of application for accessibility

Accessibility services are targeted at a wide range of groups, including the elderly, pregnant women, travellers with infants, and children and the elderly travelling alone.

Behavioural habits vary among different groups: healthy adults often have simple and easy routes to their destinations; children may take detours out of curiosity, and their routes are often interrupted by other things on the way; and people with physical disabilities may need to make frequent stops to assess the condition of the road surface and take rest breaks due to their physical limitations, which may affect their mobility. The special needs of the visually impaired, who rely on blind canes to perceive their environment, and the hearing impaired, who rely on auditory information to navigate, make their journeys even more complex. A study presents the first systematic evaluation posing BLE technology as a strong approach to increase the independence of visually impaired people in airports (João Guerreiro,2019).

Wheelchair users change into airport-provided wheelchairs at airports, while travellers who are completely unable to walk can use specially designed narrow wheelchairs to move around the cabin. Wheelchair users are highly dependent on their wheelchairs and their mobility is limited once they are out of their wheelchairs, especially when faced with obstacles such as stairs. Therefore, the design and distribution of accessibility facilities and the quality of the services they manage are critical to the travelling experience of these passengers (Feng,2019). At Guiyang Airport, site conditions may limit the extent to which services can be provided, making visually impaired and hearing impaired travellers even more reliant on staff assistance to ensure a smooth journey.

2.1.4 Specific research subjects

1. External environment: including the traffic environment and car parks around the terminal.
2. Internal barrier-free facilities:
 - A. Low-position call device: to facilitate telephone communication for wheelchair users or people of shorter height.
 - B. Orientation system with Braille and voice-assisted features: including blind alleys, handrails, and voice prompts to help visually impaired people navigate safely.

C. Low-position window: Adapt to the height of wheelchair users so that they can easily communicate with staff.

D. Accessible Toilet: Designed with the needs of persons with mobility impairment in mind, including sufficiently spacious areas, grab bars and emergency call buttons.

E. Accessible water facilities: Ensure that drinking water is easily accessible to all.

F. Barrier-free access: unobstructed paths that allow free movement for all, especially for persons with reduced mobility.

G. Accessible lifts: are of a size and function suitable for wheelchair users and other persons with reduced mobility.

H. Roadside helpline pagers: to provide immediate contact for pedestrians in need of assistance.

I . Boarding Gate Warning Signal Lights: Use flashing lights to provide flight information for the hearing impaired.

3. Accessibility-related personnel: special passenger service personnel, accessibility maintenance personnel.

2.2 Relevant theoretical foundations

2.2.1 Service quality theory

Airport service quality reflects a combination of customer satisfaction and service characteristics specific to the industry, and involves the gap between the level of service passengers expect and the service they actually experience.

The service quality evaluation system contains a number of interrelated and constrained evaluation indicators, which not only facilitates managers to accurately analyse, measure, monitor and evaluate service levels, but also supports and guarantees the comprehensiveness of service quality management.

This paper mainly adopts the SERVQUAL model to evaluate the accessibility service quality of Guiyang Airport. The model divides service quality into five dimensions: tangibility, reliability, responsiveness, assurance, and empathy. Each dimension was further refined into multiple evaluation questions. A questionnaire was distributed to collect passengers' expectations, actual experience, and minimum acceptable values for these questions. In addition, service quality was analysed in

depth in relation to 22 specific factors. Finally, the evaluation scores of the accessibility service quality at Guiyang Airport were derived from the questionnaire, customer ratings and a comprehensive algorithm.

2.2.2 Process re-engineering theory

In today's business and management field, the theory that attracts much attention is Business Process Reengineering (BPR). In order to maintain competitiveness, enterprises should analyse and identify the deficiencies and challenges in their business processes. Through comprehensive redesign and optimisation of processes, companies can significantly improve cost-effectiveness, service levels, product quality, operational efficiency and responsiveness, thus promoting overall performance. Leaders must champion the BPR initiative and provide the necessary resources, support, and direction to enable meaningful change. Also, organizations must invest in change management strategies to mitigate resistance and ensure that employees are engaged and empowered throughout the process (Matthew Finio,2024).

Enterprises should shift from function management to business process management and adopt systematic thinking. Through BPR theory, flatten business processes, optimise organisational structure, and reduce the number of middle-level leadership layers in order to reduce costs and improve efficiency. At the same time, pay attention to the potential of employees, give full play to their value, and integrate business processes centred on customer needs. Computer network technology is used to co-ordinate resources, share information and parallelise work so that flexible adjustments can be made when conflicts arise.

This paper synthesises the concepts of process management and reengineering and integrates cutting-edge management ideas to provide an in-depth analysis of accessibility and process optimisation in Guiyang Airport in particular. When improving processes, it is important to focus on their practicality and efficiency enhancement to ensure that reform measures are both feasible and efficient.

3 Guiyang airport accessibility status

This chapter will introduce the status quo of barrier-free environment of Guiyang Airport from the general situation of Guiyang Airport, the general situation of special passenger service group and the existing problems of barrier-free service environment.

3.1 Guiyang airport overview

Guiyang Airport, located in the eastern part of Guiyang City, the capital of Guizhou Province, sits at an altitude of about 1,139 metres above sea level, about 11 kilometres away from the city. It is classified as a Class 4E civil international airport and is one of the major aviation hubs in Western China, as well as a key transport hub in the region and a key member of the Southwest Airport Cluster.

In December 2021, Guiyang Airport celebrated its new milestone - the opening of its T3 terminal. This new terminal has a floor area of 167,000 square metres and is equipped with 38 parking spaces. The airport also includes Terminal T1, which has an area of 80,000 square metres with 32 parking spaces, and Terminal T2, which has 25 parking spaces and covers an area of approximately 130,000 square metres.

By 2023, Guiyang Airport had achieved high-quality growth in all aspects of its business, successfully completing the set annual targets. In that year, the airport handled a staggering 19,470,600 passengers and 91,300 tonnes of cargo and mail, while the number of flight movements was a whopping 144,000. It is worth noting that the airport also set a new record for passenger throughput in a single day, first setting the record with 71,758 passengers and then raising the figure to 74,125.

3.2 Overview of Guiyang airport passenger service department special passenger service unit

Guizhou Airports Group Co., Ltd. launched a special service programme called "Special Passengers - Warmth for You" in 2021. By posting "Love Sign Stickers" in prominent locations at airports, the Group ensures that staff can quickly and accurately identify passengers in need of special care, and proactively provide necessary assistance and guidance. Whether arriving or departing from the airport, the full service and smooth handover of special travellers is regarded as one of the core responsibilities of the service team.

In order to further enhance service quality, the group has set up a special passenger service team comprising interns. This team is not only responsible for daily passenger service work, but also undertakes a series of professional training tasks organised every month. These trainings cover

rules and regulations related to special travellers, the process of protecting the rights and interests of people with disabilities, service skills enhancement, precautions for security checks, the correct use of assistive devices for people with disabilities, and how to cope with various emergencies. Through this training mechanism, members of the service team are able to continuously enhance their professional abilities and provide a more considerate and detailed service experience for special passengers.

3.3 Existing problems of Guiyang Airport's barrier-free service environment

3.3.1 Existing problems with accessibility at Guiyang Airport

a) Inadequate accessibility

There are areas within Guiyang Airport that cannot be fully covered, particularly around boarding gates and in areas such as shops and restaurants. The lack of barrier-free facilities in these areas, such as ramps, lifts or accessible toilets, causes inconvenience to travellers with mobility impairments. Some of the existing barrier-free facilities are also inadequate, such as insufficient or poorly located, making some areas still unable to meet the needs of special needs travellers. Barrier-free signage is not reasonably designed

The barrier-free signs inside Guiyang Airport are not well-designed, making it difficult for travellers in need of barrier-free facilities to find them accurately. The design of the signs is not clear and eye-catching enough, or the text descriptions are not clear and concise enough, which affects the effectiveness of the information conveyed. This makes it difficult for travellers with mobility impairments to navigate within the airport, making it more difficult to use the barrier-free facilities.

b) Passengers waiting to enter the terminal unconsciously occupy the barrier-free facilities.

Guiyang Airport has a problem with passengers waiting to enter the terminal unconsciously occupying the barrier-free facilities. In the arrival and departure areas, passengers often gather and wait near the barrier-free facilities, making it impossible for passengers in need to use the facilities. The lack of effective management and reminder measures makes it difficult to effectively alleviate this situation.

c) Unclear route instructions

There is a problem of unclear route instructions within Guiyang Airport. Missing signage or insufficiently clear guidance routes, especially for the visually impaired, and the lack of facilities such as ground guide lines or blind corridors create the problem of insufficient route instructions. This

makes it difficult for travellers with mobility impairments to find accessible facilities or destinations accurately and quickly.

d) Unreasonable distribution of accessible facilities

Some of the barrier-free facilities at Guiyang Airport are arranged in inconvenient locations, such as away from major access routes or transport hubs, or there is overcrowding of the facilities during peak hours, which affects the experience of travellers.

3.3.2 Current status of accessibility service personnel at Guiyang Airport

I . Airport special passenger service personnel

① Low number of barrier-free service personnel

Nowadays, the staff who pick up and drop off special passengers are off-site service staff, who not only have to undertake the duty of picking up and dropping off passengers, but also have to be in charge of the service for special passengers, and sometimes the flight is delayed or the baggage handling has to be serviced by the off-site staff. The number of existing staff is not enough to meet all the service needs, so it leads to the problem of manpower shortage.

② Lack of mobile service staff

After a passenger applies for special passenger service, the staff will provide one-on-one attentive service. However, in a busy airport environment, there are also passengers who have not applied for special passenger services but need to seek assistance, when they cannot find staff to help them because Guiyang Airport does not have the flexibility and mobility of staff to meet the needs of different areas and time slots.

II. Airport accessibility maintenance personnel.

① Insufficiently rigorous inspection of barrier-free facilities

In the process of using the barrier-free facilities, the staff's inspection work lacks sufficient care and rigour. They cannot do a thorough inspection of every part of the barrier-free facilities in strict accordance with the prescribed steps every time. As a result, seemingly minor problems are often overlooked, and it is only when these problems gradually accumulate into serious faults that a lot of time is needed to repair them. This situation not only affects the normal operation of the facilities, but also brings unnecessary trouble to travellers with special needs.

② Barrier-free facilities maintenance cycle is long

When the facilities are found to be faulty, the first thing to do is to report it, and then send maintenance staff to repair it, and if the damage is serious, it has to be sent back to the factory for major renovation, or better yet, sent back again, which will take at least a month. Even if the airport has a maintenance team, passengers with disabilities may face a long wait if their maintenance cycle is long. This will add to their inconvenience and may even affect their travel plans.

4 Service quality analysis based on the SERVQUAL model

This chapter will explain the concept and significance of SERVQUAL model, and then elaborate the research scheme design and data analysis of Guiyang Airport barrierfree service quality. Based on these data and SERVQUAL model, the status quo of Guiyang Airport barrierfree service is analyzed, and the existing problems and causes of these problems are analyzed.

4.1 SERVQUAL model

Through the SERVQUAL model, companies can objectively assess the gap between customers' perceptions and expectations of their services, so as to determine the direction and focus of improvement. By understanding the difference between customers' expectations and their actual perceptions, companies can target improvements in service quality, thereby increasing customer satisfaction and loyalty. Moreover, the SERVQUAL model provides a systematic framework to help enterprises identify and solve problems in service and guide the continuous improvement of service quality. By continuously improving service quality and enhancing customer satisfaction, enterprises can establish a good reputation and brand image in the market and enhance their competitiveness.

The SERVQUAL model is divided into two sections, each containing 22 items. The first part deals with customers' perceptions of the quality of service expected by the industry in which the company being evaluated operates, while the second part presents consumers' feedback on how they actually feel about the company being evaluated. The model covers a total of five dimensions: tangibility, reliability, responsiveness, assurance and empathy. The article designed a questionnaire based on these five dimensions, containing a total of 22 questions:

Tangibles, involving specific physical facilities, available equipment and staff directory. It involves: 1. Whether the overall environment of the terminal at Guiyang Airport is kept tidy and clean, and whether the cleaning staff maintains it on a regular basis; 2. Whether the accessibility service facilities at Guiyang Airport and the signage in the station still need to be improved; 3. Whether the airport staff's attire is neat and tidy, and whether their attitude is friendly; 4. Whether the accessibility service facilities provided, including the special access roads, lifts, and toilets, etc., are modernised.

Reliability, which is reflected in the ability to fulfil service commitments in a stable and accurate manner. It involves the following: 5. Whether Guiyang Airport provides check-in services for special passengers to ensure efficiency, speed and convenience; 6. Whether the security check process for special passengers is adequate and reasonable, and whether the service staff will give meticulous care; 7. Whether the security can be relied upon in the process of special passenger services, and whether the airport will take measures to ensure the safety of the passengers; 8. Whether the airport

provides the services it should; 9. whether the facilities in the terminal building and the accessibility of the corridor bridge ferries are complete and convenient for travellers.

Responsiveness, which reflects the service provider's responsiveness to customer needs and its motivation to improve service efficiency. It involves the following: 10. Whether the airport tries to make reasonable arrangements for special travellers when flights are late and delayed; 11. Whether flight update information is timely and accurate; 12. Whether staff are willing to take the initiative to help travellers in need of assistance; 13. Whether staff are unable to provide assistance in the course of special traveller services due to busy schedules.

Assurance, covering staff expertise, courteous behaviour and demonstrated confidence and trustworthiness. It involves the following: 14. whether you trust the staff; 15. whether you feel reassured during the service of special travellers; 16. whether the staff maintains a courteous working attitude during the service; 17. whether the airport staff can receive appropriate support from the airport group of companies in order to provide a better service.

Empathy refers to the ability of service staff to care for customers and provide personalised service. It involves the following: 18. Whether the airport is able to provide personalised services according to the different circumstances of special travellers; 19. Whether the protection services for special groups of people are in place; 20. Whether the channels for travellers to lodge complaints are complete and diversified; 21. Whether the airport gives priority to the interests of the travellers in the process of special travellers' services; 22. Whether the airport can provide services for a period of time which can satisfy most of the travellers' needs.

4.2 Research programme design

4.2.1 Purpose of the research

In designing the questionnaire, careful consideration was given to the whole process of travellers from booking their flights to arriving at their destinations, including the various stages of booking a flight, boarding the plane, arriving at the airport, receiving follow-up services, and lodging a complaint or giving feedback. Special attention was paid to the accessibility of Guiyang Airport's services for special travellers, with an in-depth study of their service choices and the way they interact with passengers. Through such a survey, the aim is to better understand the needs of special passengers and to optimise special passenger services to meet their expectations.

4.2.2 Sample selection and description

This research focused on special travellers and their families travelling at Guiyang Airport.

The questionnaire was designed in two parts (see Appendix 1), covering basic information about special travellers' trips and the five dimensions of the SERVQUAL model: safety, tangibility, reliability, empathy and responsiveness. In order to accommodate the differences in the degree of use of electronic devices by different travellers, two methods of distributing the questionnaire were used in this research: electronic form and paper form. In the end, a total of 110 questionnaires (55 electronic and 55 paper) were distributed and 104 were successfully returned, of which 91 were valid.

4.3 Survey statistical analysis

4.3.1 Data processing

A detailed survey was conducted over a period of two months and 91 valid questionnaires were collected. Preliminarily, these data were subjected to frequency statistics and basic aggregation to reveal the basic characteristics of the sample. Based on the SERVQUAL model, we designed 22 questions aiming at a more in-depth assessment of service quality. On this basis, we not only conducted conventional frequency analysis, but also used the SERVQUAL model to dig deeper into the data. The formula of SERVQUAL service quality evaluation model:

$$SQ = \sum_{i=1}^{22} (P_i - E_i)$$

In this model, SQ stands for perceived service quality, while P_i and E_i denote the traveller's perceived score and expectation score on the i th factor, respectively (where i takes values ranging from 1 to 22, for a total of 22 factors).

4.3.2 Descriptive statistical analysis

The base case of the sample in Table 2 shows that there are slightly more men than women in this questionnaire, 52%, and 48% of female travellers, which is a relatively reasonable situation. In terms of age, passengers over 60 years old are the least, accounting for 5% of the total, perhaps older travellers rarely travel. 18-30 year olds are the most numerous, accounting for 25% of the total. In terms of the means of transport chosen by passengers for travelling, aeroplanes were the most popular, accounting for 54%, trains 24% and cars 22%. Since the questionnaire was placed in the terminal, it is reasonable that the largest number of people chose to travel by plane, and then travelling by ship is limited by the region, so the travellers in the sample did not choose this mode of travel. In terms of the number of flights in a year, the majority of travellers flew 3-5 times with 41%, followed by 1-2 times with 36%. Passengers who chose to fly alone accounted for 23 per cent of the

sample, while more passengers travelled with 1-3 people (74 per cent), and 3 per cent travelled with more than three people, basically for training activities of the unit or for family travel and holidays.

Table 2. Fundamental question

Question	Option	Percentage (%)
1. Your gender is	male	52
	female	48
2. Your age	Below 18 years old	21
	18 to 30 years old	25
	31 to 40 years old	24
	41 to 50 years old	17
	51 to 60 years old	8
	60 years old and above	5
3. What kind of transport do you often use when travelling	Aeroplane	54
	Train	24
	Ship	0
	Car	22
4. How many times a year do you fly	1-2 times	36
	3-5 times	41
	5-10 times	10
	more than 10 times	13
5. How many people accompany you when you fly	0 persons	23
	1-3 persons	74
	more than 3 persons	3

In applying the SERVQUAL model to service quality assessment, participants were asked to rate two different service standards: their expectations of the service and their perception of the service. The ratings ranged from "7" (indicating extremely satisfied) to "1" (indicating extremely dissatisfied) and included "very satisfied", "satisfied". The scale includes "Very Satisfied", "Satisfied", "Fair", "Unsatisfied", and "Very Unsatisfied" as transition options, each of which corresponds to a decreasing score. With regard to the ratings of service expectations, it was found that the majority of travellers did not have particularly high expectations of service, and considered that staff providing assistance without extra charges had reached their satisfaction point. Therefore, in order to simplify the analysis process, all the service expectation scores in this study were uniformly set at a medium level, i.e., a score of "4" corresponding to "average".

The tangible part of the survey was conducted by focusing on four key questions aimed at comprehensively assessing passengers' actual experiences and perceptions of the internal environment of Guiyang Airport, the facilities and amenities provided, and the overall appearance of the staff. Of the four questions, passengers perceived the highest quality of service to be the overall appearance of the staff, with an SQ of 2.24, and the internal environment of the terminal was also highly satisfactory, with an SQ of 1.17, while the lowest score was given to the modernisation of the airport's accessibility facilities, with an SQ of 0. In addition, the standard deviation of the question was the largest, reflecting the wide variation in the passengers' perceptions of Guiyang Airport's accessibility facilities.

Table3. Tangibles

Number	Question
Q6	Is the overall environment of the terminal at Guiyang Airport kept tidy and clean, and is it regularly maintained by cleaning staff?
Q7	Are the service facilities of the barrier-free environment at Guiyang Airport and the signage in the station still in need of improvement?
Q8	Are the airport staff dressed neatly and in a friendly manner?
Q9	Are the barrier-free service facilities provided, including special access routes, lifts, toilets, etc., modern?

Table4. Data Collation of Tangibles

Number	N	Max	Mini	Average	SQ
Q6	91	7	2	5.17	1.17

Q7	91	6	1	4.34	0.34
Q8	91	7	4	6.24	2.24
Q9	91	7	1	4	0

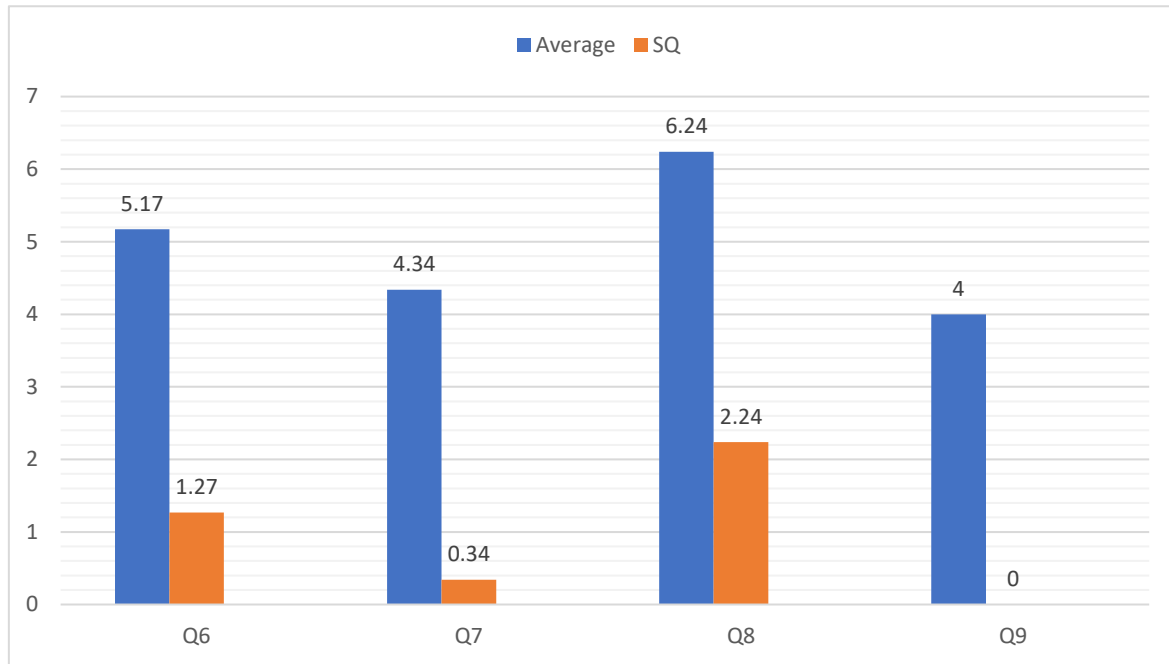


Fig.2 Data Collation of Tangibles

In conducting the reliability assessment, five main dimensions were focused on: check-in efficiency, security check process, safety of equipment and facilities, security measures in the terminal building, and professional skills of staff. By analysing the results of the questionnaire survey, it is clear that Guiyang Airport is generally recognised by passengers in these areas, especially in the four dimensions of check-in, security check, overall security and service trustworthiness, all of which scored more than 2.6 points. Nonetheless, passengers gave more average and fluctuating ratings for the airport's accessibility facilities, especially those related to the interior of the terminal building and connecting corridors, which can be clearly analysed from the higher standard deviation. This phenomenon reveals the variability in passengers' experience of accessibility.

Table5. Reliability

Number	Question
Q10	Does Guiyang Airport provide check-in services for special travellers to ensure efficiency, speed and convenience?
Q11	Is the security screening process for special travellers

	adequate and reasonable, and do the service staff give meticulous care?
Q12	Is the security during special passenger services trustworthy and does the airport take measures to ensure passenger safety?
Q13	Does the airport provide due services?
Q14	Are the facilities in the terminal building and the barrier-free facilities of the corridor bridge ferry perfect and convenient for travellers?

Table6. Data Collation of Reliability

Number	N	Max	Mini	Average	SQ
Q10	91	7	5	6.91	2.91
Q11	91	7	4	6.72	2.72
Q12	91	7	2	6.84	2.84
Q13	91	7	3	6.61	2.61
Q14	91	7	1	4.82	0.82

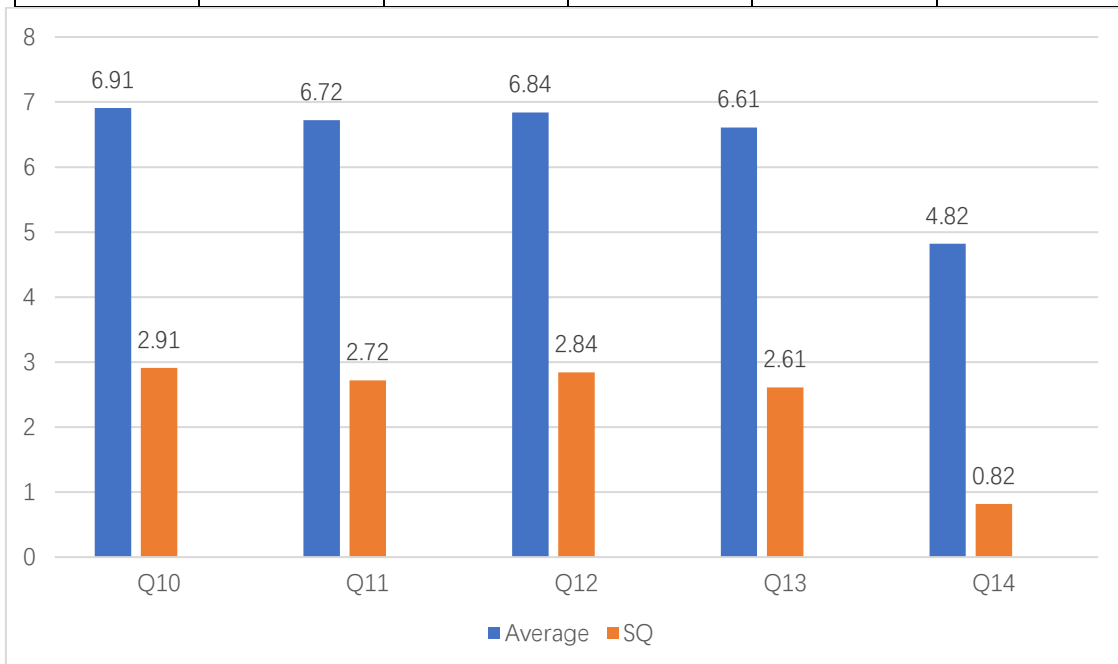


Fig.3 Data Collation of Reliability

When responsiveness was assessed, four main aspects were included, which were the staff's eagerness to care when flights were delayed, the timely updating of information, the staff's initiative,

and the efficiency of the service. In terms of staff's initiative, travellers' perceived service evaluation is relatively high with an SQ value of 2.71. However, the staff's service efficiency aspect scored negatively with an SQ value of -0.86, which is due to the fact that the staff is sometimes too busy.

Table7. Responsiveness

Number	Question
Q15	Does the airport try to make reasonable arrangements for special travellers when flights are late and delayed?
Q16	Is flight update information timely and accurate?
Q17	Are staff willing to take the initiative to help travellers in need?
Q18	Are the staff unable to provide assistance during special passenger services due to busy schedules?

Table8. Data Collation of Responsiveness

Number	N	Max	Mini	Average	SQ
Q15	91	7	1	5.48	1.48
Q16	91	7	2	4.78	0.78
Q17	91	7	4	6.71	2.71
Q18	91	7	1	3.14	-0.86

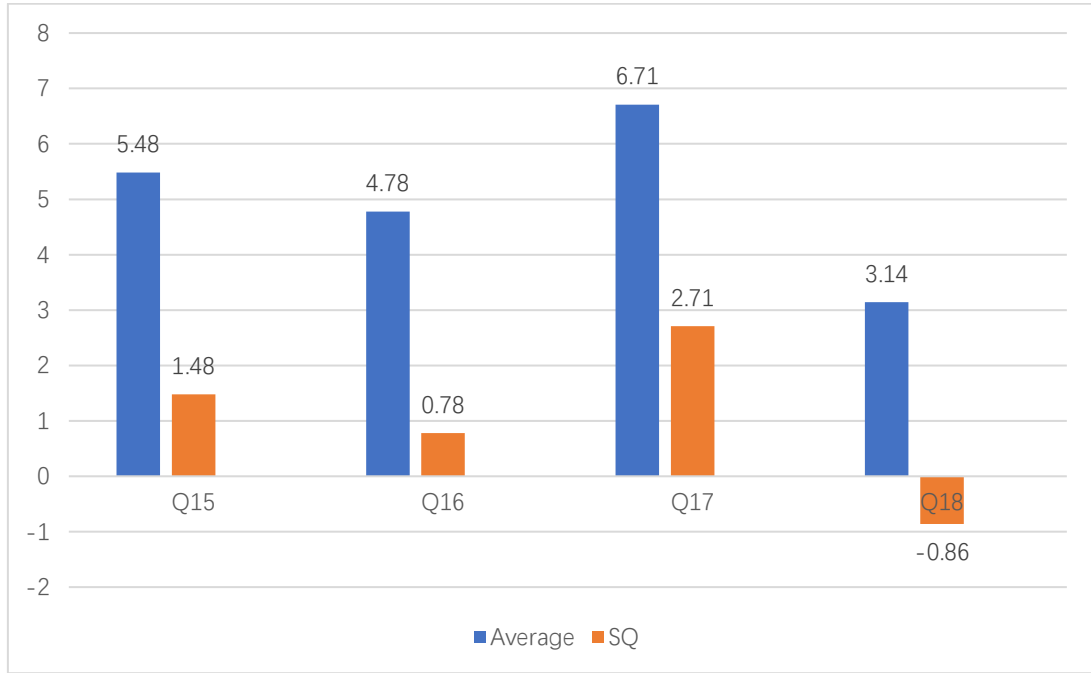


Fig.4 Data Collation of Responsiveness

The assessment of the assurance component was explored in terms of five key issues covering the professionalism of the service staff, their ability to do their job, and the level of support provided by the company to its employees. Across these dimensions, travellers rated the professionalism and work competence of service staff close to a 3, showing a relatively stable level of satisfaction. However, the evaluation in the area of company support for employees showed a significant minimum, obtaining the lowest score in this questionnaire, with an SQ of -1.09 and the largest standard deviation. This result reveals a wide variation in travellers' perceptions of airports in the area of employee support, suggesting that there is still much room for improvement in this area.

Table9. Assurance

Number	Question
Q19	Do you trust the staff?
Q20	Did you feel at ease during the special passenger service?
Q21	Do the staff maintain a courteous working attitude during the service?
Q22	Do airport staff receive appropriate support from the airport group companies to provide better service?

Table10. Data Collation of Assurance

Number	N	Max	Mini	Average	SQ
Q19	91	7	6	6.97	2.97
Q20	91	7	6	6.92	2.92
Q21	91	7	6	6.98	2.98
Q22	91	7	1	2.91	-1.09

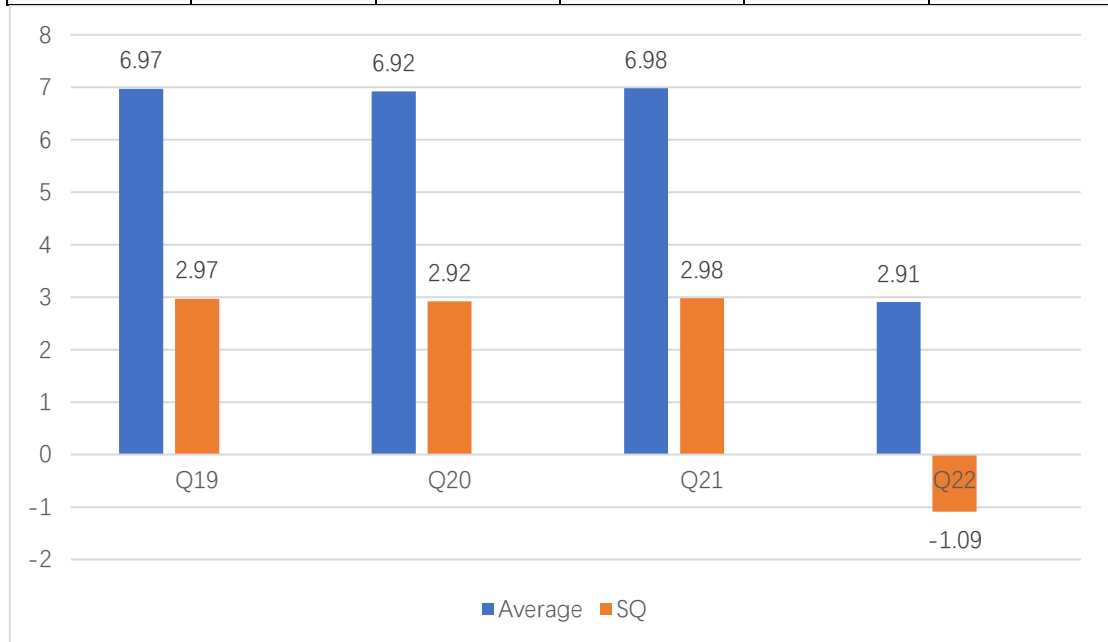


Fig.5 Data Collation of Assurance

The empathy section covers five related issues on personalised service, protection of special groups and complete plurality of complaint channels. In this series of issues, the SQ values show a balanced state. In particular, travellers' opinions are more consistent in terms of providing personalised services, ensuring the rights and interests of special groups, and establishing complete and diversified complaint channels, reflecting a lower standard deviation. However, for the two areas of meeting travellers' needs during service hours and prioritising travellers' interests, travellers' views diverge markedly, suggesting that more attention and improvement may be needed in these areas.

Table11. Empathy

Number	Question
Q23	Can the airport provide personalised services according to the different circumstances of special passengers?
Q24	Are the safeguard services for special groups of people in place?
Q25	Are the complaint channels for travellers complete and diversified?

Q26	Does the airport give priority to the interests of travellers in the course of special passenger services?
Q27	Can the airport provide services at a time that meets the needs of the majority of travellers?

Table12. Data Collation of Empathy

Number	N	Max	Mini	Average	SQ
Q23	91	7	5	6.82	2.82
Q24	91	7	4	6.92	2.92
Q25	91	7	5	6.85	2.85
Q26	91	7	1	6.23	2.23
Q27	91	7	1	6.56	2.56

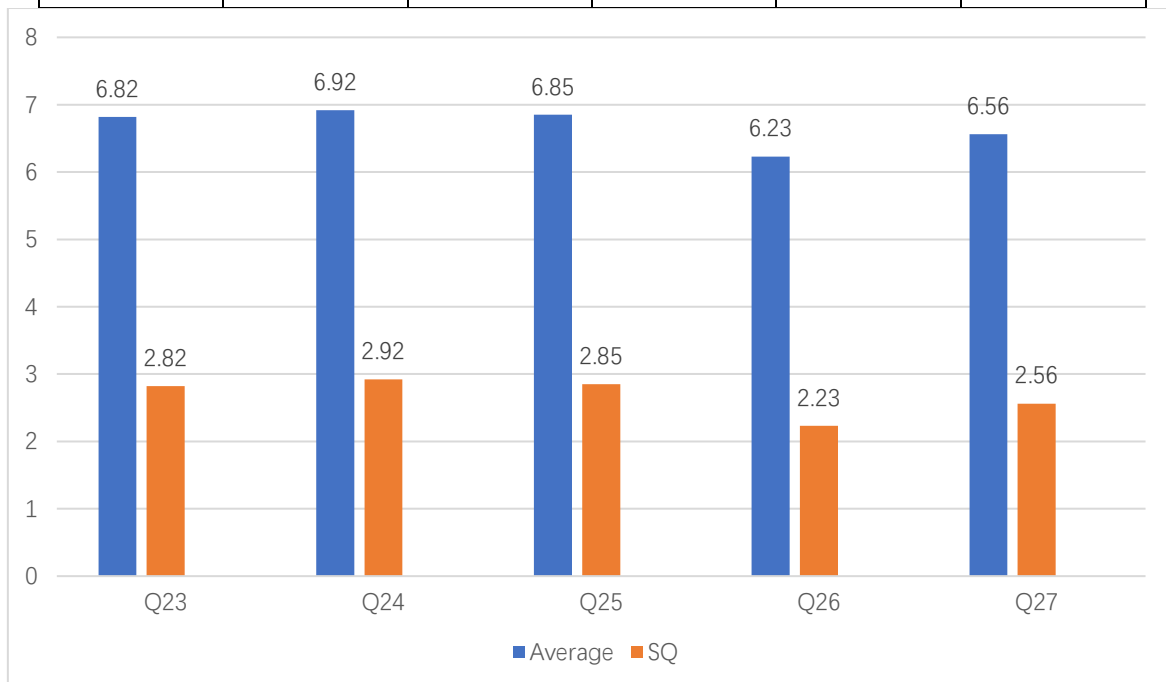


Fig.6 Data Collation of Empathy

In reviewing the 22 questionnaires covering the SERVQUAL model, it was observed that the majority of travellers rated the quality of airport services as relatively high. Nevertheless, there are still some significant gaps between the level of service perceived by travellers and their expectations, mainly in the following areas: modernisation of accessibility, accessibility of terminals and ferries for special needs travellers, staff overloaded with work which makes it difficult for them to provide services in a timely and expeditious manner, flight information is not updated in a timely manner and is not sufficiently accurate and staff do not receive enough additional support from the airport company to

provide better service to travellers. additional support from the airport company to provide better service to travellers.

In contrast, there are a number of service areas that are highly recognised by travellers and fall short of their expectations. For example, airport staff, who are neatly dressed and friendly to travellers, are able to offer special travellers the assistance they deserve, thus enhancing their sense of trust. The check-in and security process for special travellers is both meticulous and efficient, with a high degree of convenience. In addition, Guiyang Airport is able to provide appropriate and efficient personalised services according to the different specific needs of different special passengers. Passengers can lodge their complaints in a variety of ways, including paper mailboxes, public numbers, telephone calls, email addresses, and direct feedback at the front desk. Finally, the accuracy and effectiveness

4.4 Service status analysis combined with SERVQUAL model

By analysing the resultant data in the previous section, this subsection can summarise the existing problems of service quality at Guiyang Airport and analyse the causes of these problems.

4.4.1 Problems with the Quality of Accessibility Services at Guiyang Airport

① Tangibles

The passenger experience is largely dependent on the infrastructure and services provided by the airport. One of the challenges faced by Guiyang Airport in terms of service enhancement is to cope with the ever-increasing passenger traffic. Despite the airport's efforts to improve facilities such as toilets, these improvements still do not fully meet passenger needs. For example, despite improvements in the number and condition of accessible toilets, these dedicated spaces are often occupied by ordinary travellers or staff, making it difficult for travellers with limited mobility to use them. In addition, the insufficient number of check-in and security check lanes is also a problem. Although there are counters for special passenger services, these are not dedicated but shared with first class passengers or military passengers. During peak hours, it is difficult for staff to provide timely service to special travellers. The rest areas for special travellers are equally problematic and these are often occupied by non-special travellers. Although some modifications have been made as a result of staff suggestions, there are not many improvements that can be implemented due to space constraints.

② Reliability

The staff at Guiyang Airport has been recognised by many passengers for their public service, but there are still some shortcomings, especially when compared to leading airports in the industry. For example, the check-in and security areas face staff shortages, resulting in the closure of some counters, which not only lengthens the waiting time for special needs travellers, but also affects the efficiency of the overall process. Due to the limited number of lanes, travellers often have to wait in queues. Elderly people, due to hearing and mobility constraints, may need more time and assistance, but sometimes the staff may show impatience and rush them frequently, which in turn affects their overall evaluation of the service and their willingness to co-operate. In addition, staff in the cargo department are under tremendous work pressure, travelling long distances to and from the warehouses and terminals, while during peak flight periods there is often a backlog in the baggage sorting area. The combination of these factors makes it more difficult to handle baggage, sometimes resulting in damaged or lost baggage or passengers waiting a long time to claim their baggage. For passengers who need special attention, such as those checking in wheelchairs, these problems pose additional challenges. Finally, the quality of airport services sometimes fails to meet the standards they promise. For example, despite promotional claims of personalised one-to-one service for special needs passengers, the reality may be that a single staff member is responsible for a number of such passengers at the same time, resulting in a discrepancy between the content and quality of the service and the original promise, with many of the promised details not being delivered. All of these issues require attention and improvement in Guiyang Airport's future operations.

③ Responsiveness

In the face of unusually late flight delays, the airport side usually needs to coordinate with a number of different departments and airlines, which can result in information not being transmitted quickly enough. For those special travellers, they cannot ask for flight status updates from airport staff as easily as other travellers. As staff are busy dealing with the large number of anxious waiting passengers, they fail to pay adequate attention to the emotions of these special needs travellers. Although there have been touching cases of airport staff taking good care of unaccompanied children for two days and one night, such situations are rare exceptions. In most cases, airports are faced with insufficient human resources to meet the needs of all special travellers. In cases where flights are delayed for a short period of time, airlines are unable to provide meals. Only when flights are delayed for more than a certain period of time is it possible for passengers to receive catering services provided by the airlines, such as dinners or midnight snacks. Particularly during peak flight periods, airports often lack suitable facilities for passengers with special needs to rest, which adds to their inconvenience and causes dissatisfaction. To improve the situation, airports and airlines could consider additional measures to optimise services and support for special passengers.

④ Assurance

Guiyang Airport faces a number of challenges in providing services to special travellers. Currently, those responsible for this work are not an independent team of professionals, but are made up of a variety of roles, including volunteers in red waistcoats, check-in, security, cabin service and ground staff. As their daily duties cover a large number of passenger groups, these personnel are often under tremendous work pressure once the peak passenger flow hours are reached, which leads to the problem of not responding in a timely manner to passengers with special needs. In addition, the procedures involved in special passenger services are relatively complex, and the staff who provide the services are scattered in different departments, and this structural segregation sometimes leads to a situation in which each department shirks its responsibilities to the other.

⑤ Empathy

There are some problems with service staff for special travellers, such as deficiencies in service level, motivation and personalised service. Special travellers usually need more attention and they have higher expectations of staff's professional competence and service attitude. It has been observed that the staff directly facing passengers at airports are often newly recruited or dispatched through labour companies, and the mobility of these staff is high, which can affect their service quality. Moreover, the professional training, assessment criteria and remuneration system of special passenger service staff are not significantly different from those of other ordinary staff, which may lead to a lack of sufficient motivation for them to improve their service performance. In addition, airports currently offer a limited choice of customised services for special passengers, and service staff do not often take the initiative to enquire about passengers' special needs.

4.4.2 Causes of service quality problems at Guiyang Airport

① The service management concept is backward

Guiyang Airport has some lagging phenomena in service standards and processes. Firstly, they fail to take into full consideration the actual needs of passengers, especially those special passengers with special needs, when they formulate these standards. Secondly, they lack a comprehensive and effective mechanism for assessing the quality of their services, so they are unable to accurately know how passengers really feel about the services they provide. In addition, due to the monopolistic nature of Guiyang Airport, some employees lack a sense of crisis due to the stability of their jobs, which also has an impact on their attitudes. At the same time, staff shortage is also a serious problem, it increases the work pressure of the staff, and when flights are delayed resulting in passenger congestion also puts great pressure on the staff. Finally, the airport company is too conservative in cost management and lacks sufficient funds to improve their service management. The training time

for staff is also insufficient and not comprehensive enough, which makes the overall quality of the workforce vary.

② No comprehensive service evaluation and assessment system

In order to improve service quality evaluation, airports must pay attention to and improve the service supervision system. At present, although airports have safety and quality departments to conduct regular assessment and inspection of front-line sites, such formal inspections are often superficial and lack in-depth and continuous on-site supervision, resulting in some potential problems that cannot be detected and solved in time. In addition, the means of inspection also appear to be too outdated and homogeneous, and the fixed pattern of inspectors tends to be detected in time by those being inspected, who develop strategies to cope with the inspections, thus weakening the real practical effect of the inspections.

③ Weak service innovation concept

In recent years, China's high-speed railway network has developed rapidly, becoming one of the transport projects that have attracted much attention domestically and even internationally. For short- and medium-distance travelling needs, although air travel has certain advantages in terms of speed, it is much higher than high-speed rail in terms of ticket price. Therefore, for more and more travellers who pay attention to cost-effectiveness, high-speed rail has become their preferred means of transport. Against this background, travellers' demand for service quality has also increased. They expect to enjoy more considerate and meticulous services during their journeys, especially when there is an obvious advantage in terms of price. However, at present, ground service personnel have to deal with a lot of repetitive and heavy work every day, which makes it difficult for them to think about how to innovate service products. In addition, the company currently follows a single, rigid service process that all passengers must follow. Not only does this one-size-fits-all approach fail to meet the individual needs of different passengers, it may also lead to dissatisfaction and complaints. Worse still, the company's management is not fully aware of the importance of service management innovation. They tend to focus only on immediate benefits and neglect long-term development. This short-sighted approach not only limits the company's room for development, but may also cause it to lose its edge in the fierce market competition.

5 Safeguard measures for the optimization of barrier-free service quality in Guiyang Airport

Before exploring the strategies for enhancing accessibility services at Guiyang Airport, we first understood the importance of service quality and accessibility design, and studied them in depth. This is fully elaborated in Chapter 1, which lays a solid foundation for our subsequent discussion. Moving into Chapter 4, we introduced the SERVQUAL model, a model that comprehensively analyses the current status of accessibility services at Guiyang Airport from five dimensions: responsiveness, empathy, reliability, assurance and perceivability. Through in-depth research and empirical investigation, we provide strong support and guarantee for the improvement of accessibility service quality in Guiyang Airport.

① Improve the flight delay dispute resolution strategy.

Guiyang Airport has a service team specially responsible for flight delays, whose main responsibility is to coordinate airlines to provide meals and accommodation arrangements for passengers. However, the detailed explanation of flight delays, assistance for passengers' check-in and other related services are usually performed by the staff at the check-in counter. In order to better manage these situations and optimize the service process, Guiyang Airport should consider a clear division of labor between the flight delay service team and the staff at the check-in counter.

In order to achieve this goal, the airport needs to improve the service system during flight delays, including establishing an effective emergency response mechanism. This mechanism should be able to ensure that passengers can get the latest flight status updates through various channels, such as airport broadcast, check-in counter staff, information desk, airport official WeChat WeChat official account and self-service inquiry terminal. In addition, the flight delay service team should also maintain close communication with airlines, so as to respond quickly and properly handle passengers' reasonable demands, such as ticket refund or change. When necessary, the team should set up a temporary workstation in the waiting area to provide help and information directly to passengers, especially for those special passengers who need extra care, such as the elderly, children or the disabled. This service is particularly important. Finally, airport management should realize that passenger feedback is a valuable resource to improve service quality. Therefore, passengers should be encouraged to put forward opinions and suggestions through various channels, so that the airport can find and solve the existing problems in time and ensure that passengers can feel a satisfactory service experience even if the flight is delayed. The implementation of these measures will help to improve the overall service quality and passenger satisfaction of Guiyang Airport.

②Vigorously promote service innovation.

With the economic growth and the improvement of people's living standards in China, consumers' demands for air travel are no longer limited to the ticket price, but pay more attention to the service quality. This trend is both an opportunity and a challenge for low-cost airlines, because they must improve their service level to meet the expectations of passengers while maintaining low costs. One of the problems faced by many airports in China is that with the increase of passenger flow, the operational efficiency and service quality of airports are exposed. In order to solve this problem, Guiyang Airport and other facilities need to adjust their service mode to meet the diverse needs of passengers. Traditionally, airport services are "one size fits all", without considering the special needs of different passenger groups. For example, disabled people, the elderly or families traveling with children may need extra help and facilities. Guiyang Airport can improve the experience of these passengers by providing personalized services, such as special wheelchairs, baby carriages and nursing areas. It is becoming more and more common for fathers who travel alone to take care of their babies. The airport should consider upgrading the existing "mother-baby room" to a "nursery room". This space is not only suitable for mothers and babies, but also should take into account the needs of fathers when taking care of their children. In addition, for unaccompanied minor travelers, a special service area can be set up to provide books, toys, snacks, movies and safe entertainment space, so that they can be safe and comfortable while waiting. Through these measures, Guiyang Airport can not only improve the overall satisfaction of passengers, but also stand out from the fierce market competition and attract more passengers to choose this airport.

③Create a professional service team and improve the assessment system.

In order to ensure that special passengers can get thoughtful and caring service at the airport, we really need to set up a special service guarantee department. This department is not only responsible for the daily service work, but also continuously optimizes the service process to ensure that every special passenger can be properly taken care of. First of all, we can divide the special passenger service into several sub-posts, such as wheelchair shuttle, deaf-mute passenger translator, pregnant woman and child care worker, etc. Each post has clear responsibilities and requirements, which can ensure the professionalism and efficiency of service. At the same time, these employees need to undergo strict selection and training to ensure that they have enough affinity, empathy and adaptability. For those employees who already have certain first aid knowledge or experience, we can give them more training opportunities, so that they can play a greater role at critical moments. In order to motivate employees to continuously improve their service level, we can formulate a fair and transparent salary and promotion system. For those outstanding employees, we should not only give them material rewards, but also provide more promotion opportunities and career development

space. This can stimulate the enthusiasm of employees and make them more actively participate in the special passenger service. In addition, we can create a good working atmosphere by regularly collecting and publicizing advanced deeds and service stories. When employees see that their efforts have been recognized and praised, they will be more proud and confident, and will be more willing to provide better services for special travelers.

While optimizing the service process, we also need to strengthen the training and management of employees. In addition to regular service skills training, we also need customized training for the needs and characteristics of special passengers. For example, we can teach employees how to communicate effectively with deaf-mute passengers and how to take good care of pregnant women and children.

In addition, we need to establish a perfect learning and feedback mechanism, so that employees can know the latest service concepts and methods in time and make adjustments and improvements according to the actual situation.

In order to ensure the continuous improvement of service quality, we also need to strengthen external and internal quality supervision. External quality supervision mainly collects passengers' feedback through complaint hotlines, official websites and other channels, and makes targeted improvements. Internal quality supervision can be carried out through regular third-party quality surveys and security inspections, and corresponding improvement measures can be put forward according to the inspection results, thus promoting the continuous improvement of the service quality of special passengers.

④Add special passenger counters and passages.

For Guiyang Airport, the counters for special passengers and military passengers are the same counter. During the peak period of passenger flow, this check-in desk is often overcrowded, which seriously slows down the check-in speed of those passengers who need special care. Similarly, in the security inspection area, the situation becomes more complicated because special passengers need to share the same security inspection channel with the staff and crew members. Especially in the morning rush hour, a group of crew members need to complete the security check every 20 minutes in order to enter the isolation zone. However, because the security procedures of special passengers are relatively complicated, they often need to spend more time waiting. Sometimes, a special passenger may have to wait until the third flight crew passes before going through the security check. This waiting time is far more than 20 minutes, which seriously affects the boarding process and the overall travel experience of special passengers. Therefore, we suggest that Guiyang Airport can set up special service counters and passages in the check-in and security inspection

areas respectively, so as to better meet the needs of special passengers. This improvement can not only improve the waiting efficiency of special passengers, but also make them have a higher evaluation of the service quality of Guiyang Airport.

⑤Broaden passenger complaint channels

Guiyang Airport currently provides a variety of complaint channels, including on-site information desk, telephone, WeChat and other online platforms. In order to further optimize the service experience, we plan to build a brand-new passenger service center, which will become the core of future services. In the new passenger service center, we will set up six specialist posts, and each specialist will become a bridge between passengers and the airport. They not only have to answer the telephone inquiries of passengers, deal with all kinds of online problems, but also record every consultation in detail to ensure that the information is accurately conveyed to relevant departments. Commissioners will give clear answers to passengers in a timely manner in accordance with established procedures. In addition, the commissioners will also undertake the important task of collecting and sorting out passenger problems on a regular basis. They should make an in-depth analysis of these problems, find out the potential service shortcomings, and provide strong support for improving services. At the same time, they should also do a good job of summarizing and archiving relevant information to ensure the integrity and traceability of the data. Commissioners will be the first responsible person in handling complaints. They should seriously receive every complaint, quickly determine the responsibility and conduct a preliminary investigation. For complaints that need further follow-up, they should hand them over to relevant departments in time, and follow up the progress of handling all the time to ensure that the problems are properly solved. After the treatment, they should pay a return visit to the passengers in time to find out their satisfaction, and record the results on file to provide valuable information for future service improvement. In addition to the above work, the commissioners are also responsible for the collection and analysis of passenger opinions from various channels, and use these opinions to optimize our service process and quality. At the same time, they should also participate in the analysis of terminal operation data in order to better understand passenger demand and market dynamics.

6 Conclusion

Based on the research tool designed by SERVQUAL model, this paper distributed questionnaires to passengers and airport employees in view of the five core dimensions of the model, and collected their views and suggestions on the barrier-free service environment of Taiguiyang Airport through face-to-face communication. Through these treasures, a set of feasible improvement strategies has been worked out, so as to improve the barrier-free service quality of the airport and create a more convenient and comfortable travel environment for all passengers.

China's high-speed railway system has made great progress in recent years, and its rapid growth poses a severe challenge to civil aviation in the field of short-distance travel. In the face of the fact that the fare is usually higher than the high-speed rail, passengers are more inclined to choose the high-speed rail with higher cost performance. Therefore, improving the service level of civil aviation has become the key to maintain the competitiveness of the civil aviation industry, which is also an inevitable choice to meet passengers' demand for high-quality aviation services.

As the starting point and end point of travel, the barrier-free facilities provided by civil aviation airport are directly related to passengers' travel experience. Especially for passengers with mobility difficulties, a well-designed barrier-free environment can not only reduce their travel difficulties, but also have a positive impact on their physical and mental health. The society has generally realized the difficulties that disabled people encounter when traveling, and building a high-quality barrier-free environment is not only a help to individuals, but also a manifestation of the country's social responsibility and historical mission. Therefore, in order to improve the satisfaction of all passengers and ensure that everyone can enjoy travel equally, the civil aviation industry needs to constantly optimize services and improve facilities to meet the changing market demand.

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Q6	Is the overall environment of the terminal at Guiyang Airport kept tidy and clean, and is it regularly maintained by cleaning staff?							
Q7	Are the service facilities of the barrier-free environment at Guiyang Airport and the signage in the station still in need of improvement?							
Q8	Are the airport staff dressed neatly and in a friendly manner?							
Q9	Are the barrier-free service facilities provided, including special access routes, lifts, toilets, etc., modern?							
Q10	Does Guiyang Airport provide check-in services for special travellers to ensure efficiency, speed and convenience?							
Q11	Is the security screening process for special travellers adequate and reasonable, and do the service staff give meticulous care?							
Q12	Is the security during special passenger services trustworthy and does the airport take measures to ensure passenger safety?							
Q13	Does the airport provide due services?							
Q14	Are the facilities in the terminal building and the barrier-free facilities of the corridor bridge ferry perfect and convenient for travellers?							
Q15	Does the airport try to make reasonable arrangements for special travellers when flights are late and delayed?							
Q16	Is flight update information timely and accurate?							
Q17	Are staff willing to take the initiative to help travellers in need?							
Q18	Are the staff unable to provide assistance during special passenger services due to busy schedules?							
Q19	Do you trust the staff?							
Q20	Did you feel at ease during the special passenger service?							
Q21	Do the staff maintain a courteous working attitude during the service?							
Q22	Do airport staff receive appropriate support from the airport group companies to provide better service?							
Q23	Can the airport provide personalised services according to the different circumstances of special passengers?							
Q24	Are the safeguard services for special groups of people in place?							
Q25	Are the complaint channels for travellers complete and diversified?							
Q26	Does the airport give priority to the interests of travellers in the course of special passenger services?							
Q27	Can the airport provide services at a time that meets the needs of the majority of travellers?							

Thank you for your co-operation and have a safe and pleasant journey! ❀