

## Research Article

# Research on the Impact of Optimal Configuration of University Library Layout on Students' Academic Literacy Development Based on 5G

Jing Xiao 

HanDan University, Handan, Hebei 056000, China

Correspondence should be addressed to Jing Xiao; xiaojing@hdc.edu.cn

Received 18 July 2022; Revised 21 August 2022; Accepted 23 August 2022; Published 6 September 2022

Academic Editor: Gengxin Sun

Copyright © 2022 Jing Xiao. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

This paper provides an in-depth study and analysis of the relevance of adopting the idea of 5G for the optimal configuration of university library layout to the development of students' academic literacy. It also analyzes the benefits of 5G on the digital governance of libraries together with the convenience that the application of 5G can provide to smart libraries and helps to realize the research on the service innovation model of smart libraries under 5G. The survey mainly focuses on four indicators: the development of physical space services in university libraries; facilities and equipment for physical space services; the content and form of physical space services; and it presents the current problems of physical space services, including the overall convergence of physical space services in university libraries. When different libraries are co-constructed and shared, there will be incompatibility problems, and if the library is required to develop its own management system, it will waste resources. The library space layout is arranged by highlighting the elements of the cognitive map to improve the lending efficiency; using a more continuous and transparent interface in terms of color and material to increase the experience of spaciousness; using more wood elements and green to add a natural atmosphere to achieve the purpose of relaxing the readers' heart; and finally increasing the light source in the reading area to complement the illumination in the shaping of the light environment. In terms of spatial functions, more attention is paid to the design of public interaction and leisure spaces so that readers can rejuvenate themselves and devote themselves to the next learning tasks. The interior design is considered in terms of the relationship between arousal theory and task performance, and a moderately complex interface is designed to improve readers' efficiency in the space. Finally, the paper concludes with a summary of what has not been thoroughly researched and an outlook on the future of university library interior design.

## 1. Introduction

With the development of the information age, the functional change of university library space service in the digital environment is based on the humanistic concept of freedom and equality, and the transformation of multifunctional space service to integrate knowledge service, learning support, and recreation [1]. The multifunctional space includes not only paper books but also the spiritual lives of readers, and it is a comprehensive space for learning, communication, and thinking activities. In addition, the resources of the university library collection, the use of space, and various services are a trinity. The physical space provides services in

reading, exhibition, seminar, and communication; the library provides virtual space services through the digital platform; the readers form the corresponding spiritual space in the process of obtaining information and services and interacting with the librarians. Different colors give people different psychological feelings, so the reasonable use of colors in the indoor environment can affect the psychological state of users. The space service in this paper mainly deals with the physical space service. Due to the development of information technology and the diversification of readers' needs, the physical space service of traditional university libraries can no longer meet the diversified needs of readers, so the optimization of library physical space

service has become one of the important works of libraries [2]. Readers can not only read and study in the library but also enjoy digital information and physical space services with various characteristics such as academic seminars, education and training, and creative displays.

The development of 5G is now in full swing, and many countries around the world are accelerating the application and innovation of 5G, and the industries combined with 5G are also emerging. 5G is slowly integrating into our lives, gradually improving our lives, promoting the consumption of information, and providing a solid foundation for the realization of a digital economy and society in smart cities. This technology has the characteristics of ultra-high network speed and low delay, will realize the interconnection between people, between people and things, between things and things [3]. The 5G, new technology and standard, will bring great changes and impacts to the organization and delivery of information in libraries. It will further bring about changes in the organization and content of library information, and ultimately in the behavior of library users using terminals. Based on 5G, the services provided by smart libraries will be better and more innovative. In terms of the amount of information to be undertaken at the terminal, due to the large capacity and low latency of 5G, it will realize the rapid docking of information to the server terminal and the real-time circulation between data, realizing the value of data and greatly improving the quality of the past [4].

It will improve the education mode and learning mode of academic master of education students, enhance the comprehensive quality of academic master of education students and the cultivation quality of talents, show the character and ability that a professional in education should have, form the characteristic core literacy of academic master of education students, improve the system of core literacy of students in different stages, different disciplines, and different majors in China, and provide lay a good foundation for the reform of education teaching under the new situation. The main task of pedagogy is to study education and help the reform and development of China's education. When the greenness of nature reaches 25% in people's field of vision, people's spirits are particularly comfortable, and their mental activities will be in the best state. As an important part of the discipline of pedagogy, pedagogical professionals should not only show the knowledge and ability they should have professionally but also take up the heavy responsibility of the development of pedagogical disciplines, and the study of core literacy puts forward new ideas and new ways for the cultivation of pedagogical professionals. The study of core literacy of academic master students in pedagogy, the establishment of the corresponding core literacy system, the cultivation of students' ability to adapt to personal development and contribute to social development, and the formation of the characteristic core literacy of master students in pedagogy are the way to build a first-class pedagogy discipline, to realize the take-off of Chinese pedagogy, and to improve the quality of high-level and high-level personnel training.

## 2. Related Works

Tong proposes that learning shared spaces integrate libraries, information technology, and other supportive services from a functional and spatial perspective, integrating librarians' knowledge and skills with experts' references, and are dynamic spaces that encourage learning problem solving through consultation, collaboration, and discussion [5]. Numerous university libraries are also fleshing out their understanding of learning in shared spaces in practice. For example, the Stover Library at Queen's University in Canada has added more areas, facilities, and staff to support learning activities based on information-shared spaces as collaborative learning environments [6]. The Library and Student Affairs Centre at the University of Guelph in Canada have jointly established learning shared spaces [7]. The learning commons model is defined as a "one-stop shop" for intellectual learning, writing, science research, and technical support. The University of Cincinnati's Library learning commons is a seamless learning environment defined by the university library in collaboration with the campus student support center as a student-centered, engaged learning environment. Scholars' research on the elements of creating urban spatial vitality has mostly focused on urban public spaces at the most-micro level [8]. For example, Petscher et al. analyzed two case studies of spatial creation in urban centers and summarized that urban public space vitality is related to accessibility, environmental quality, and public facilities elements [9]. Starting from the nature of the city and the purpose of urban research, Smith proposed the principles of functional mixing, scale creation, transportation system organization, individualization, and driving elements as the principles for the creation of urban public space vitality [10]. Increased students, who apply for postgraduate studies in education, enter the field of education, but their self-awareness ability in this field has not increased proportionally. Although many design theories aiming to create urban space vitality have been proposed, they all rely too much on designers' intuition and experience and need further empirical evidence and generalization, so increased number of scholars have started to verify and evaluate the principles of creating urban space vitality [11].

Dai et al. first published an article on smart libraries, and they first proposed that smart libraries are mobile libraries that are not limited by space or time like traditional libraries, and can help readers find the books and materials they need by providing personalized services to different readers' needs and fully implementing mobile networks and wireless services [12]. Allam et al. argue that a smart library should be treated as a social learning place and its service model should be informal and cooperative from the perspective of library users [13]. It not only has the service functions of a traditional library, but it needs to fully exploit the creativity and logic of users while presenting a collective and interactive form to users, and the library needs an online knowledge learning system to increase the number of users.

The questionnaire method was used to obtain users' satisfaction evaluation of the maker space service, and SPSS software was used to analyze the reliability of the scale data and rank the satisfaction evaluation of each service item, analyze the reasons for the low satisfaction level, and propose strategies to optimize the lack of service, to provide a new perspective for the study of maker space service in university libraries. The author conceptualizes the propaganda path, constructs models such as space alliance, virtual space, and evaluation system, and proposes countermeasures under public health events for creator spaces in the light of the current situation of normalization of epidemic prevention and control, which will provide reference significance for other libraries. Meanwhile, the all-around development of human beings also includes the development of human talents, aspirations, and moral qualities in many aspects. In short, the all-around development of human being includes both the all-around development of material level and the all-around development of spiritual level. Therefore, Marx's doctrine of comprehensive human development requires that in cultivating the core qualities of academic master students in education, it is necessary to think clearly about what core qualities educators should have and what core qualities are necessary for academic master students in education to achieve their development and promote professional development.

### 3. 5G's University Library Layout Optimization Configuration Design

Libraries put space services and their innovation in an extremely important position in library work. Library space service is the service of providing targeted knowledge products for the acquisition, sharing, and innovation of readers' explicit knowledge and tacit knowledge. In other words, libraries rely on different types of spaces to carry out document services, information services, knowledge services, and contextual services, and librarians apply cognitive, technical, and experiential tacit knowledge to process information at different levels according to readers' needs, to continuously improve the level of services and the quality of knowledge products and promote readers' better construction of knowledge. As a high-level skill, knowledge transfer mainly trains students to integrate knowledge and skills in other disciplines and related fields, and give full play to their thinking; information technology enables ubiquitous learning to be realized. This paper focuses on the physical space service of university libraries.

The physical space of the library mainly includes the physical building architecture, facilities, equipment, physical collection, decoration style, and space layout. The physical space is the physical place where the university library provides services and carries out readers' learning and communication activities. Some scholars also refer to the physical space of libraries as architectural space and building space [14]. Under the concept of resource sharing, scholars define university library space serves as a service that ultimately improves readers' cognitive level and comprehensive ability by providing suitable places, resources, and activities

for teachers and readers. In summary, the author defines the physical space service in this paper as the service aimed at improving the comprehensive ability of readers based on the physical space and various facilities and equipment of university libraries.

From the perspective of service composition and configuration, the physical space service of the college library includes not only the appropriate reading space, i.e., books, databases, and other literary resources in the collection but also facilities and equipment such as computers, tablets, interactive multifunctional electronic screens, miniature book readers and other professional reading tools, as well as the corresponding technical and business support librarians. From the readers' point of view, the most well-equipped facilities within the research space service of university libraries, readers can immediately carry out corresponding reading activities and research activities in this space without bringing their equipment, while the reading space service is the most typical service among the physical space services of university libraries. Promoting the realization of professional value and promoting social development and progress are the value pursuit and significance of academic post-graduates in education. College libraries provide a variety of physical space services for readers by creating a comfortable atmosphere for their reading space, from infrastructure equipment such as tables, chairs, lighting, and air conditioning to reading objects and reading tools such as books and computers.

Before the advent of the information age, old libraries often used paper tools such as library cards, loan information cards, and catalog cards to keep records of books checked out and returned, which was very inconvenient as it consumed a lot of work for the librarians and took up a lot of space for the library. Now, these operation processes have been digitized, and since most of the library management systems now use bar codes to identify books, only a reader's card, a scanner, and a computer are needed to quickly record the borrowing and returning information into the library management system, which greatly accelerates the speed of borrowing and returning books, and users can also do self-service borrowing and returning. But this does not solve the problem completely. Whether self-service or manual borrowing and returning, the shelves of literature resources still need to spend a lot of effort to complete, including the entire shelf, off the shelves, inventory, and other work that requires a lot of workforces. The intelligent library in this regard can use intelligent equipment to complete these tasks, through RFID, sensor networks, M2M, and other Internet of Things technology to achieve the application of intelligent shelves and purpose of automatic organization of literature resources and fast search.

Since the 5G network is not a complete replacement of the previous network, there are various wireless network standards for network devices that access the base station, and most of the 5G is used in scenarios that require high transmission speed, so its network bands will mainly focus on the high-frequency band, which in turn will increase the access of many different network devices and require many micro base stations to receive processing. In this case, only a

superdense heterogeneous network can meet the above-mentioned requirements and at the same time not lose the characteristics of fast speed, low latency, traffic density, and high capacity of 5G, so the key technology of superdense heterogeneous network technology cannot be missing in 5G, as shown in Figure 1.

Because of this, the resources in the library cannot be connected to other management systems outside the library more openly. When the library needs to provide resources to users, it is very inconvenient to provide services if the resources are under the authority of different library management systems [15]. The number of students, who go to the reading library for self-study, is as high as 60%. Furthermore, libraries do not store their metadata information locally in terms of electronic resources, which makes it difficult to perform value-added services such as knowledge mining. Finally, the traditional library management system is designed differently from the smart library, so the overall architecture must have its shortcomings for handling these new types of resources, and it is difficult to improve this problem even if it is constantly updated and optimized. The library management system in a smart library must consider the integrated management of many different types of resources, and it must be unified not only in terms of library management but also in terms of user needs so that it feels unified when users find and use it.

In the past, library management systems were generally outsourced to companies specializing in this area, and the companies must have several sets of templates for libraries to choose from to save R&D costs, and then make some technical adjustments according to the actual situation of the library. So on the one hand, because the architecture of the management system is determined, unless the library chooses to change the system, it can only be left to the staff of the outsourcing company to carry out some minor updates and optimization, which cannot fundamentally change certain problems; on the other hand, the library management systems of different companies may have different interface specifications and standards, and incompatible problems will occur when shared between different libraries [16]. On the other hand, if libraries develop their management system, it will be a waste of resources, and outsourcing can be mutually beneficial for libraries and companies. The best way is for the library consortium or library association to develop standards so that there will be no problems due to incompatible interfaces when sharing knowledge.

Services in library learning spaces include lending services, training services, and consulting services, with lending services concentrated in traditional reading spaces and electronic and audio-visual reading spaces. Training services are concentrated in the training space, and some of the libraries in the study also directly use electronic or multimedia reading rooms for training. On the other hand, consultation services are mainly provided in three types of learning spaces. Third, the processing and creation spaces of each library are also equipped with professional librarians to provide consultation services because they support students' practice and creation, as shown in Figure 2.

Documentary information resources are mainly concentrated in the traditional reading space and the electronic audio-visual reading space, in which the traditional reading space is classified according to the type of publications and provides resources corresponding to the type of publications, and users can borrow printed publications in the traditional reading room [17]. This is an important factor that distinguishes the campus library from the social library. The electronic audio-visual reading space mainly provides the borrowing of physical audio-visual materials and the reading of resources such as databases, electronic journals, electronic books, and network information.

Color is the design element with the strongest emotion, and the visual experience and visual stimulation will stimulate internal emotional changes after people receive color visually, and the psychological feelings of people vary greatly with different colors. The main activity of the library is reading, and the university library also assumes the function of providing space for students to study when they study their homework. Reading and self-study activities are influenced by reading materials, study contents, and students' psychology. The reasonable color scheme of the reading room can improve students' motivation to read and study, and ensure that students can study in a bright and comfortable environment.

In addition, the use of a more complex color design in the rest space and corridor can also activate the readers' thinking and make them more energetic when they return to the reading environment. Environmental psychology points out that people love natural elements, and any color and element that can awaken people's association with nature can increase people's comfort. Psychologists believe that green is the most calming color, which can bring the benefits of tranquility to exhausted people, and when the green color of nature reaches 25% of people's vision, people's spirit is especially comfortable and their mental activities will be in the best state.

#### **4. Impact of Students' Academic Literacy Development**

After systematically analyzing the relationship between core categories and primary and secondary categories, the study found that self-cognition, learning strategies, scientific thinking, humanistic cultivation, and innovative practical ability become the constituents of core literacy of academic master students in education. Among them, self-cognition and humanistic cultivation are the twin foundations of core literacy of academic master's degree students in education, and they are interrelated and promote each other, which are the foundation of core literacy development [18]. The top level is the ability of innovation and practice, and the ability of practice is the highest manifestation of learning strategies and scientific thinking. According to the abovementioned analysis, the model of core literacy of academic master students in education is established as shown in Figure 3. Therefore, the combination of seats in the reading room should be increased to obtain more space.

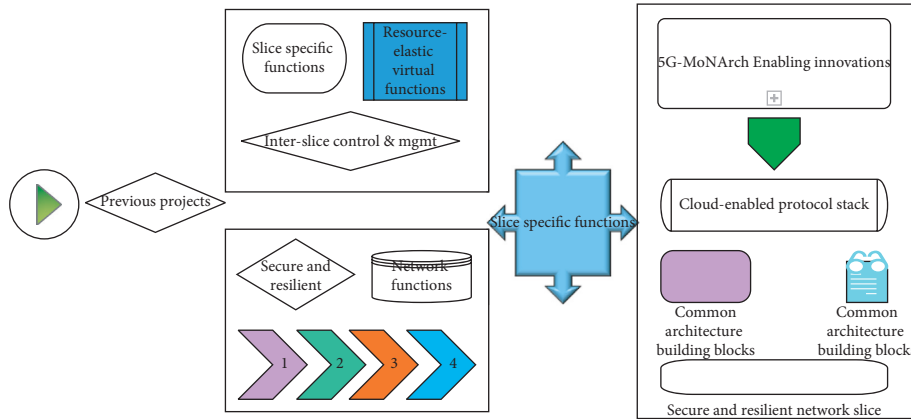


FIGURE 1: Layout framework of the university library for 5G.

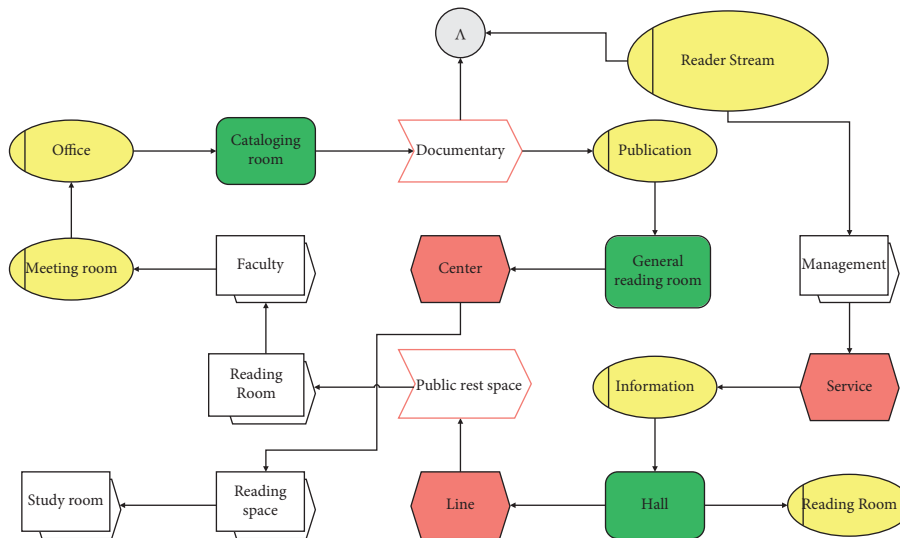


FIGURE 2: Library flow design.

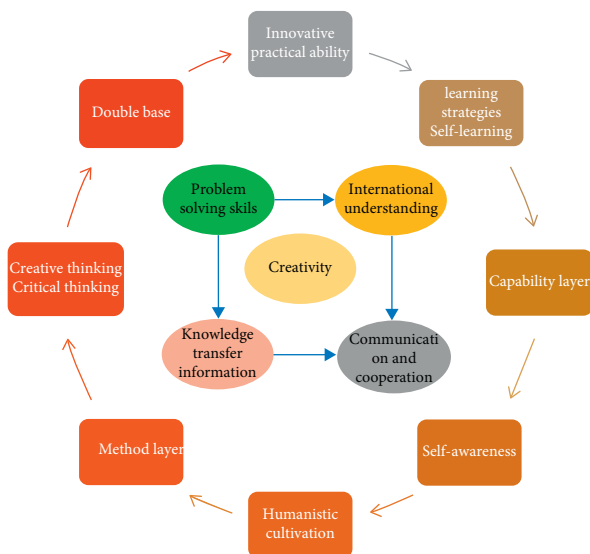


FIGURE 3: Model construction of core literacy.

Secondly, the two foundations that constitute the core literacy of academic master of education students are self-cognition and humanistic cultivation. Without these two elements as the foundation, it is impossible to develop upward. According to the interview data, with the increase of the craze and the number of examinations, more and more students applying for master's degree in education enter the field of education, but their self-cognitive ability for entering this field does not increase proportionally, and they do not have a correct understanding of the profession, which in turn leads to the inability to get their studies on the right track and the inability to drive their emotional cognition, and eventually makes their development concept contrary to that of the initial entrance stage.

Academic master's degree students in education are exposed to the relationship between education and people, which naturally involves whether pedagogues can hold a benevolent heart, whether they can put themselves in the position of contributing to the cause of education, and whether they can shoulder the important responsibility of

raising the country through education; at the same time, pedagogical research is a long and arduous process, and students have a persevering will and can abide by academic ethics for it is the foundation of research [19]. Formative evaluation and summative evaluation have not really started effectively, and the feedback received lacks normative requirements. The continuous improvement of self-cognition makes personal humanistic cultivation stronger; the strengthening of humanistic cultivation promotes self-cognition in the field of pedagogy, and the two are closely related and mutually reinforcing. Accordingly, it is the right thing to take self-cognition and humanistic cultivation as the “double foundations” of the core quality system of an academic master’s degree in education.

It emphasizes the ability of independent learning, which is a high stage, manifested in the planning and arrangement before learning, the monitoring and evaluation, and feedback during learning, and the adjustment and control after learning; communication and cooperation is a skill that runs through the activities of graduate students, including the communication between supervisors and students during daily learning and the cooperation between students and students among research team members; knowledge transfer as a high stage. The main skill is to cultivate students to integrate knowledge and skills from other disciplines and related fields to give full play to their thinking; information technology enables ubiquitous learning, which is the process of quantitative to qualitative change after the development of digital learning and mobile learning to a certain stage, as shown in Table 1.

Finally, the uppermost element that constitutes the core quality of academic master’s degree students in education is the ability to innovate and practice [20]. The formation of educational theory is based on educational problems, while the discovery of educational problems depends more on educational practice. As a public cause of human beings, education is related to the interests of the public and society in many aspects. It is the value pursuit and meaningful embodiment of academic master’s degree students in education to enhance the ability of educational practice, promote the realization of professional value and advance the development of society. The innovative practical ability of academic master students in education includes problem-solving ability, international understanding ability, and integration ability, which are based on learning strategies and scientific thinking. Most students only complete practice reports for credits, which do not meet the real training requirements for innovative practical ability. A good learning style and reasonable use of scientific thinking are the keys to solving practical problems, which are directly related to whether graduate students can use the knowledge and skills they have acquired to solve practical problems arising from social life.

First, in terms of teaching content, the observation of teaching content mainly focused on the teachers’ choice of reading materials [21]. In terms of content selection, the four teachers would independently choose the reading materials to be taught before the class, which were usually texts to be taught in the textbook or the reading training exercises. The

TABLE 1: Statistics of basic information.

Variable	Category item	Sample size	Percentage
Grade	Kenichi	32	50
	Kenji	50	54
	Kenzo	24	34
Gender	Male	60	38
	Female	49	49
Is it interprofessional	Do you love education	48	42
	Easy to postgraduate	45	41
Reason for study	Adjust	53	34
	Employment difficulties	59	20
Plan after graduation	Other	38	42
	Read a Ph.D.	49	32
	Employment	35	48

reading materials were generally determined by the teachers and were usually texts that contained knowledge points or expanded on the content of the text. Moreover, the teacher did not pay much attention to students’ interests when selecting the materials but rather chose reading materials that were related to the topic of the unit and contained relatively more knowledge points.

## 5. Analysis of the Results

*5.1. The Results of 5G’s College Library Layout Optimization.* Slightly more respondents use the Humanities and Social Sciences Chinese book library, the Foreign Language book library, and the Natural Sciences Chinese book library in the basic library. Meanwhile, the utilization rate of the periodicals reading room, the tools reading room, and the newspapers reading room is not high. Only 5 of the respondents in the library regularly use the specialized current periodicals reading room and the tools reading room, respectively, accounting for 5.10% of the number of respondents on the premises.

Among the traditional reading spaces built in the library building, they can be divided into 12 categories. The most built traditional reading spaces are humanities and social science reading rooms and Chinese science and technology reading rooms. The next most common ones are foreign language books reading room, periodicals reading room, back issues reading room, and newspaper reading room. The coverage rate of tool book reading rooms, preservation book reading rooms, antique book reading rooms, and dissertation reading rooms is significantly lower compared to the former. In addition, literature/art/history leisure books, and teaching reference books, are not separate publication types, but some of the premises in the statistical survey also have separate reading rooms for these materials.

Regarding the floor distribution of each learning space, traditional reading space and seminar space are relatively evenly distributed on the low, middle, and high floors, with traditional reading space slightly more distributed on the

middle floors and seminar space slightly more distributed on the low and middle floors, while there is an inverse relationship between the floor setting of seminar space and the scale of the space, with the larger the scale the lower the floor it is located. Libraries provide virtual space services through digital platforms; readers form a corresponding spiritual space in the process of obtaining information and services and interacting with librarians. The electronic audio-visual reading space and training space are mainly distributed on the lower floors of floors, while the public self-study space and processing and creation space are concentrated on the lower and middle floors, and the single-learning space is shown to be concentrated on the upper floors.

As shown in Figure 4, among the 250 questionnaires from readers, only 105 of them could find the books they needed in time, and 145 could not find the location of the books in time. Among the 30 staff questionnaires, 19 people could find the books in time and 11 people could not find them in time. This shows that it is very important for both readers and staff to find the location of books in time. For readers, not being able to find the books they need in time is very delaying and affects readers' mood, which brings bad service feeling. The 5G is slowly integrating into our lives, gradually improving our lives, promoting everyone's consumption of information, and laying a solid foundation for us to realize the digital economy and society of smart cities. This library will not be visited again. For the staff, the inability to find books in time affects the efficiency of the staff, when the intelligent library can realize the automatic search and borrowing of books, it will be a good experience for both readers and staff.

Through this issue, we can see that most people choose to prefer paper books, the least number is the library service is very good, so in the minds of most people, the reason that attracts them to the library is that although the electronic channel e-books are now very advanced and developed, many people still like to read paper books, and as for the library service is ignored by many people. The library service is not enough to be recognized by the public, and the intelligent library needs to improve the service and meet the needs of the readers. Based on 5G, the services provided by smart libraries will have better innovation.

The whole library space is divided into main function space and auxiliary function space, and the auxiliary function space is used to connect the main space. The original layout of the first floor is that the lending and returning office, the new book depository, and the first reading room are arranged on the left after entering the foyer, and each space is closed independently. In terms of the amount of information received by the terminal, due to the large capacity and low latency of 5G, information will be quickly connected to the server terminal. On the right side, the exchange book bar, machine room, and literature office are arranged, and in the middle is the rectangular atrium, as shown in Figure 5.

The borrowing and returning offices are separate rooms on the left side of the whole space, and such a layout is very inconspicuous. Readers cannot easily find the borrowing and returning office after entering the library without signs, which affects the efficiency of borrowing and returning

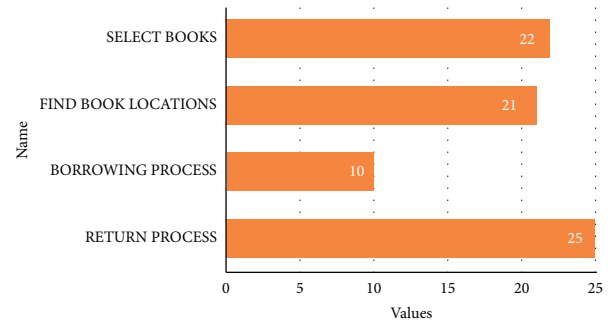


FIGURE 4: The most time-consuming steps.

books. The information retrieval equipment is placed on the right side of the entrance, directly opposite the original lending and returning office. Readers need to search for book information before borrowing books, and sometimes they need to ask the staff if they cannot solve the problem completely by themselves.

The original design separates the information self-help retrieval area from the lending and returning office. Since people will try to minimize contact and dialogue with people, such an arrangement will make readers more inclined to avoid problems when they encounter problems in the process of borrowing books without a specific purpose. It enables people to find the lending and returning office the first time they enter the library and facilitates readers to check out and return books more efficiently. Therefore, the information retrieval equipment and the circulation desk are combined in the middle of the whole first floor so that readers can find the circulation desk and the retrieval area the first time after entering the library, and improve the efficiency of consultation and circulation while saving the space of the original circulation desk. The original satellite aerial view of Shenyang city covers a large area and is generally beautiful, so it was removed during the renovation and replaced with the preferred indoor water feature, which can also play a role in purifying the environment.

In a previous survey, it was learned that up to 60% of students go to the reading room for self-study, which is an important factor that distinguishes campus libraries from social libraries, so the combination of seating formats in the reading room should be increased to gain more space. According to the needs of readers, librarians use tacit knowledge such as cognition, technology, and experience to process information at different levels, and continuously improve the level of service and the quality of knowledge products. At the end of the period, 40% of the students encountered a situation where there was no study space in the library and they needed to take a seat in advance. Therefore, the allocation of study space in the library should be adjusted and subdivided into open-shelf reading rooms and collection rooms according to the usage rates of different major categories of books, and some less frequently used and more outdated books should be managed by closed-shelf management and called when readers inquire about borrowing, to improve the efficiency of space utilization and alleviate the problem of insufficient study space for students at the end of the period.

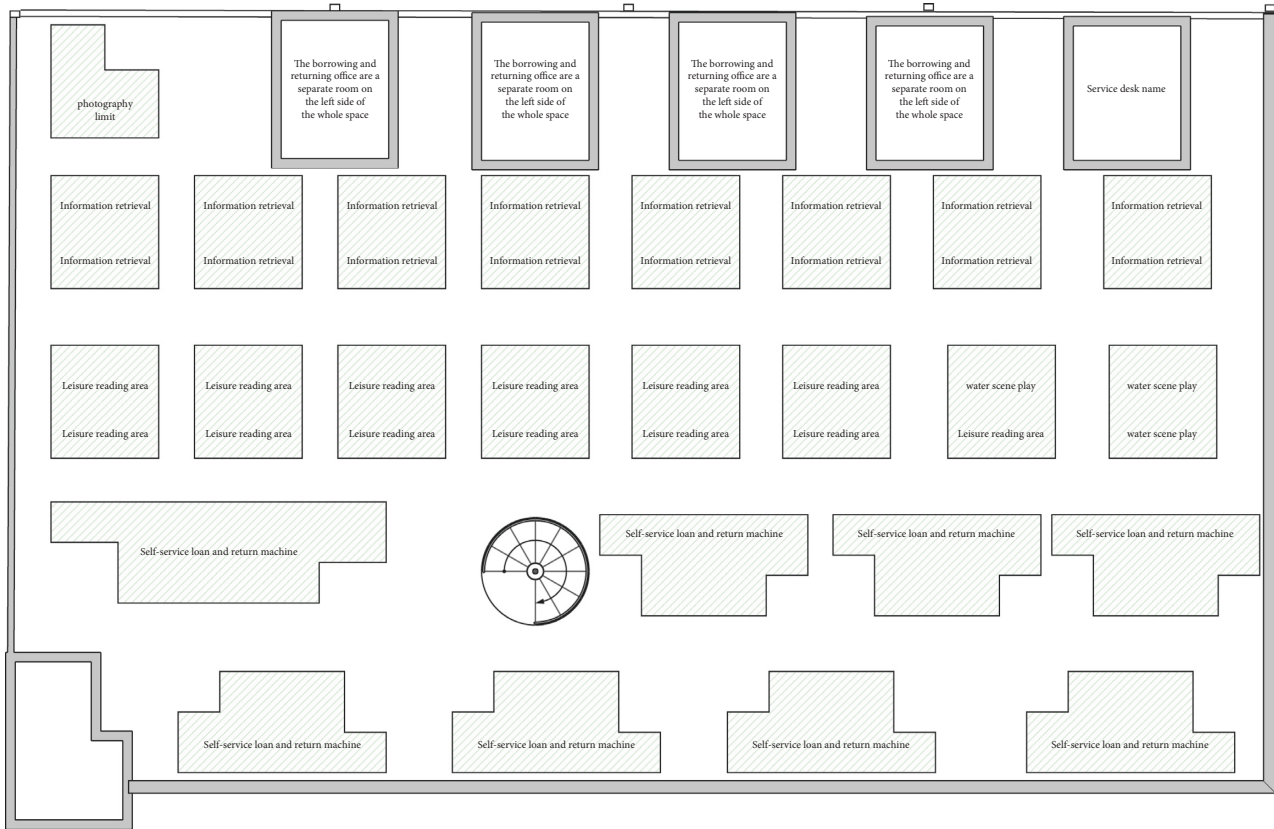


FIGURE 5: Layout of the university library of 5G.

**5.2. Analysis of the Results of Students' Academic Literacy Development.** For the cognitive element of learning, most students reflect that the current professional courses they study are conservative and old-fashioned in terms of course content, structure, organization, assessment methods, etc. It is difficult for students to exercise their autonomy to learn, and they do not know which appropriate learning method to adopt to meet their learning needs at this stage. They feel that they are constrained and suppressed in their professional learning, and it is difficult for them to take the initiative and be active in learning. At the same time, more than half of the students think that it is difficult to serve theoretical learning in practice, and there is a lack of discussion and research on educational problems, which makes it difficult to solve the practical problems in education, resulting in students' failure to achieve a satisfactory level of learning cognition.

For the element of emotional cognition, only a quarter of the students can identify with the philosophy and value of the subject of education emotionally, and more than a third of the students do not hold any emotion at all. Through the questionnaire survey, we found that some students have a complicated purpose of studying for the entrance examination, believing that it is easy to study for the education major, the review difficulty is relatively small, and it is easy to achieve self-satisfaction by passing the examination. Ultimately improving the reader's cognitive level and comprehensive ability of the service. The students, who succeeded in the examination, because they did not understand the major of education, found that the cognition of

the major before the examination was inconsistent with the cognition produced after the actual contact after the examination, and even deviated very far, and the students' study aspirations decreased, which led to the low emotional cognitive element of the students and the difficulty in finding a sense of belonging emotionally, as shown in Figure 6.

For the developmental cognitive element, the questionnaire survey found that less than one-third of the students thought they had better development by studying in education. The reasons for students' low developmental perception of themselves exist in three aspects. First, the employment channels of education majors are narrow, and the employment positions provided by society are related to teachers, which cannot meet the intrinsic needs of different students. Secondly, an academic master's degree cannot do as strong practice as a professional master's degree, nor can it do a deep research as a doctoral degree, and hovering between the two makes academic master's degree in education students confused about self-development. Thirdly, most of the graduates say that their employment pressure is too great, and only very few of them can find satisfactory jobs. This reality of difficulty in being accepted and recognized by society also leads to students' low awareness of self-development.

At present, more educational practices are carried out for professional master's degree students in education, while the educational practices established for academic master's degree students in education are not perfect. First, there are fewer educational practice platforms or bases provided to



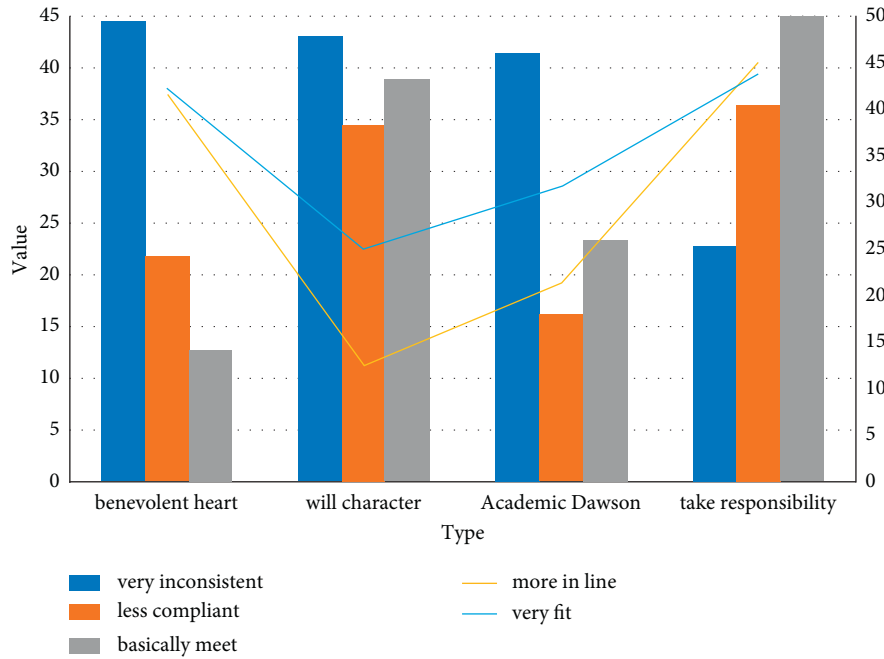


FIGURE 6: Histogram of the survey of cultivation elements.

students, and students have few opportunities to exercise their practical skills. To sum up, the author defines the physical space service in this article as a service based on the physical space and various facilities and equipment of the university library to improve the comprehensive ability of readers. The lack of students' practical experience and the single interpersonal relationship of social interaction makes them not have many channels and opportunities for social practice, and the forms of practice activities thus lack diversity, while the enthusiasm, attitude, and motivation of graduate students to participate in practice are not high, and the final feedback of practice is not done properly, and it is difficult to cultivate innovative practice ability, as shown in Figure 7.

Secondly, in the process of academic master's students in education participating in practice, the evaluation of formative and summative evaluation does not start effectively, the feedback received lacks normative requirements, and most students just complete practice reports for the sake of getting credits, which does not meet the requirements for the cultivation of real innovative practice ability. Corresponding reading activities and research activities can be carried out in this space immediately, and the reading space service is the most typical service in the physical space service of the university library.

In terms of the cultivation of multiple thinking, in daily English reading teaching, teachers give students less time to think about problems when discussing them; they lack hierarchy in the setting of questions and the exploration of the meaning of topics, which all lead to certain problems in reasoning, analysis, association, and induction. Secondly, in terms of developing reading fluency, teachers should pay more attention to students' reading aloud in daily teaching and arrange for students to

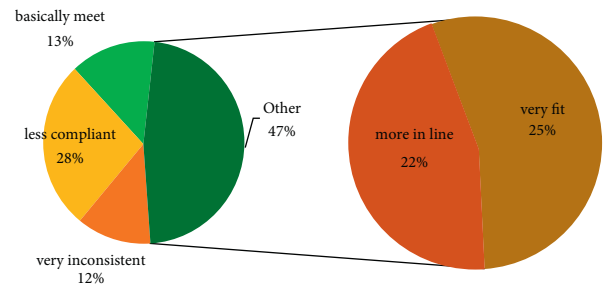


FIGURE 7: Elements of learning strategies.

read aloud in class, but they simply let students read aloud without teaching strategies and skills and evaluating students after reading aloud.

## 6. Conclusion

Although the development of 5G smart libraries has just begun, it is a qualitative leap for the development of smart libraries, and there are already 5G combined smart libraries in operation in China, and the number of readers' visits is increasing, and readers' demand for smart library services is also increasing. As 5G continues to expand research continues to be applied and integrated into all occupations in society, and how to provide better quality services will be the topic forever. A perfect service management system of creative space should include four aspects: its daily management system, creative team management system, funding management system, and creative project management system. It is proposed that the learning space of a college library mainly consists of seven types of spaces: traditional reading space, electronic and audio-visual reading space,

public study space, seminar space, single-learning space and processing and creation space, and the learning space of college library are the integration of space and services and resources within the space. There is also a lot of workforces required for the whole rack, take off the rack, and inventory. College libraries are generally concerned about the construction of learning space on the premises, and at the same time the library is also the most important after-school learning place for students, but there are still some problems in the specific use of library learning space by students, and there is room for optimization of learning space in the premises.

## Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

## Conflicts of Interest

The author declares that there are no conflicts of interest.

## Acknowledgments

This work was supported by the 2021 Hebei Social Science Funding Project, “Research on the Training of University Library to Students’ Academic Literacy in Internet plus Era” (no: HB21TQ006).

## References

- [1] T. Ahmad, “Student perceptions on using cell phones as learning tools: implications for mobile technology usage in Caribbean higher education institutions,” *PSU Research Review*, vol. 4, no. 1, pp. 25–43, 2020.
- [2] Z. Shi and S. Liu, “Intelligent learning environment and future development tendency,” *Scientific and Social Research*, vol. 3, no. 5, pp. 57–66, 2021.
- [3] A. Kundu, T. Bej, and K. Nath Dey, “Time to achieve: implementing blended learning routines in an Indian elementary classroom,” *Journal of Educational Technology Systems*, vol. 49, no. 4, pp. 405–431, 2021.
- [4] Y. Noh and J. Y. Ro, “A study on the service provision direction of the National Library for Children and Young Adults in the 5G era,” *International Journal of Knowledge Content Development & Technology*, vol. 11, no. 2, pp. 77–105, 2021.
- [5] L. Tong, C. Zhang, and R. Huang, “Research on intelligent logic design and application of campus MMTC scene based on 5G slicing technology,” *China Communications*, vol. 18, no. 8, pp. 307–315, 2021.
- [6] D. Murano, J. E. Sawyer, and A. A. Lipnevich, “A meta-analytic review of preschool social and emotional learning interventions,” *Review of Educational Research*, vol. 90, no. 2, pp. 227–263, 2020.
- [7] M. I. Furenes, N. Kucirkova, and A. G. Bus, “A comparison of children’s reading on paper versus screen: a meta-analysis,” *Review of Educational Research*, vol. 91, no. 4, pp. 483–517, 2021.
- [8] U. O. Matthew and J. S. Kazaure, “Multimedia E-learning education in Nigeria and developing countries of africa for achieving SDG4,” *International Journal of Information Communication Technologies and Human Development*, vol. 12, no. 1, pp. 40–62, 2020.
- [9] Y. Petscher, S. Al Otaiba, and J. Wanzek, “Study of the factor structure, profiles, and concurrent validity of the mindset assessment profile tool for elementary students,” *Journal of Psychoeducational Assessment*, vol. 39, no. 1, pp. 74–88, 2021.
- [10] S. Smith, K. Barajas, B. Ellis, C. Moore, S. McCauley, and B. Reichow, “A meta-analytic review of randomized controlled trials of the good behavior game,” *Behavior Modification*, vol. 45, no. 4, pp. 641–666, 2021.
- [11] J. M. Yap and A. R. Manabat, “Are we in-sync? Students’ virtual instructional experience and perceived information literacy skills in time of pandemic,” *Internet Reference Services Quarterly*, vol. 25, no. 4, pp. 169–184, 2021.
- [12] Z. Dai, M. Wang, S. Liu, and L. Tang, “Design and the technology acceptance model analysis of instructional mapping,” *Computer Applications in Engineering Education*, vol. 28, no. 4, pp. 892–907, 2020.
- [13] S. N. S. Allam, M. S. Hassan, R. S. Mohideen, A. F. Ramlan, and R. M. Kamal, “Online distance learning readiness during Covid-19 outbreak among undergraduate students,” *International Journal of Academic Research in Business and Social Sciences*, vol. 10, no. 5, pp. 642–657, 2020.
- [14] G. Papanastasiou, A. Drigas, C. Skianis, M. Lytras, and E. Papanastasiou, “Virtual and augmented reality effects on K-12, higher and tertiary education students’ twenty-first century skills,” *Virtual Reality*, vol. 23, no. 4, pp. 425–436, 2019.
- [15] M. Gunapala, A. Montague, S. Reynolds, and H. Vo-Tran, “Managing change in university libraries in the 21st century: an Australian perspective,” *Journal of the Australian Library and Information Association*, vol. 69, no. 2, pp. 191–214, 2020.
- [16] M. Muraszkiwicz, “The synergetic impact of AI, IoT, and 5G on information literacy and education[J],” *Zagadnienia Informatyki Naukowej—Studia Informacyjne*, vol. 57, no. 2, pp. 7–22, 2019.
- [17] Y. Liu, H. Ye, and H. Sun, “Mobile phone library service: seat management system based on WeChat,” *Library Management*, vol. 42, no. 6/7, pp. 421–435, 2021.
- [18] Y. H. Lin and M. F. Lou, “Effects of mHealth-based interventions on health literacy and related factors: a systematic review,” *Journal of Nursing Management*, vol. 29, no. 3, pp. 385–394, 2021.
- [19] K. T. Trang and D. M. Hansen, “The roles of teacher expectations and school composition on teacher–child relationship quality,” *Journal of Teacher Education*, vol. 72, no. 2, pp. 152–167, 2021.
- [20] M. Mielikäinen, “Towards blended learning: stakeholders’ perspectives on a project-based integrated curriculum in ICT engineering education,” *Industry and Higher Education*, vol. 36, no. 1, pp. 74–85, 2022.
- [21] B. Whalley, D. France, J. Park, A. Mauchline, and K. Welsh, “Towards flexible personalized learning and the future educational system in the fourth industrial revolution in the wake of Covid-19,” *Higher Education Pedagogies*, vol. 6, no. 1, pp. 79–99, 2021.