# Research on APP Design for Art Design Postgraduate Entrance Examination Under Service Design Theory

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**Abstract.** By sorting out the current status of the APP and service design for the postgraduate entrance examination for the master of art design, the problems encountered by the current professional users of the master of art design in the learning process are summarized. And its main content is reflected through the application design, so that the service design in the teaching field is more perfect. Collect user information by means of questionnaire survey, competitive product analysis, etc., through data analysis, understand the potential needs of users, and propose new service strategies. Through the establishment of user road map, system map, service blueprint and other methods to build the design prototype of the art design postgraduate entrance examination APP, it provides a feasible solution for improving the existing application design. The service design method changes the existing educational APP service mode, which can not only improve the user experience, but also improve the user's learning efficiency.

**Keywords:** Service Design · Art Design · Postgraduate Entrance Examination · APP

## 1 Introduction

With the rapid development of society and the improvement of industry thresholds, under the influence of policy, economic, social and technological factors, obtaining a postgraduate degree has become the first choice for most college students and even some incumbents. Although since the 18th National Congress of the Communist Party of China, the state has issued a series of policies to expand the enrollment of postgraduates, and the total number of postgraduates in the country has grown at a faster rate than before, the competition for postgraduate entrance examinations is still extremely fierce for the rapidly increasing number of applicants. Therefore, this paper takes the design students for postgraduate entrance examination as the main research object, based on the service design theory and with the help of its theoretical guidance method, to expand a new research direction for service design in the field of education.

## 2  Overview of Service Design and Postgraduate Apps

Service design is a kind of system innovation that takes users as the center and cooperates with multi-stakeholders to realize service provision, service process and service contact points [3]. Service design first emerged in the 1980s, and this concept was first applied to the field of management [4], and later developed to related fields such as design. With the increase of business investment, service design is not only limited to enterprises, but also penetrates into other fields, such as public services, medical care, education, cultural institutions, social security, etc., and its value is also increasing. It has also brought a larger and broader development space for service design, the economic value of service design has become increasingly prominent, and service design thinking has received unprecedented attention [6]. In the "Design Dictionary" supported by the International Federation of Design Associations, service design is defined as: service design is to set the function and form of service from the user's point of view. Its goal is to ensure that the service interface is useful, usable, and desired by the customer; at the same time, the service provider feels effective, efficient, and recognizable [7]. As Mr. Huang Wei said in Service Design: In the post-product era, service is king [2]. In the current society, the standard of a good product should not only have good functions, but also have a good experience. The elements of service design are: stakeholders, touch points, services, and service processes [1].

According to "This is service design doing", six principles of service design are proposed:

1. User-centered: User-centered.Our products and services are designed to help users solve problems, and we should always be user-centric in the design process to meet user needs.
2. Co-creative: co-create. In the process of design, we need to design together with users. At the same time, because there are many related stakeholders involved in service design, and they are the target users involved in service design, so a good service design should try to meet the needs of all relevant stakeholders.
3. Iterative: Iterative. Our lives are changing all the time. When our lives change, the needs of users may change, so the services we design must also change. There is no best service design, only a more suitable service design.
4. Sequencing: ordered. The service is from the beginning to the end of a thing, and it is composed of the foreground, middle and background. During this period, attention should be paid to the coordination of the rhythm of the three to ensure smooth implementation, thereby improving user experience.
5. Real: Real. The needs of various stakeholders require us to actually investigate. The services we design are in line with the reality of life. The essence of services is invisible and cannot be perceived. We want to make invisible services tangible and prove their value in real life.
6. Holistic: the whole. Service design should think about the whole process of the service from a global perspective, sort out the needs of its stakeholders at different stages and meet them as much as possible to ensure the integrity of the service.

Postgraduate APPs belong to a major branch of part of the software market, mainly providing users with various learning products and services [5]. At present, the number of domestic postgraduate APP postgraduate examination software is increasing, and the product types are rich and diverse. According to the APPs mainly used by the postgraduate users, the author divides the content attributes of APPs into the following categories:

1. Tools
   This type of APP is mainly to help users achieve a certain purpose. For example, APPs represented by "Momo Memorize Words", "Hundred Words Cut", and "Scallop Words" are designed to help users recite words. Through the Ebbinghaus memory curve, users are reminded to memorize targeted words on time, replacing the pain points of irregular recitation and inconvenience of most of the previous paper books.
2. Courses
   This type of APP mainly provides users with online learning services, such as New Oriental, Kao Chun, Chalk Kaoyan, etc. This type of APP is mainly developed by education companies. With the development of digitization, the web terminal can no longer meet the needs of users. Such companies have developed mobile terminals and IPAD terminals in order to give users a good user experience.
3. Time planning category
   The purpose of this type of APP is to prompt the user to complete the specified task within the specified time, thereby improving the efficiency of the user's learning. The user can start the task according to the time, or start the task by counting down to start the task. When the specified time is up, the user will be reminded by means of ringtones and vibrations. This type of APP is mainly represented by "Todo Todo" and "Tick List".
4. Online study room class
   This type of APP is represented by "Timing", "Costudy", and "Same Desk". It mainly provides an online self-study room, divides the room according to the learning content, and can open microphone and video in the room to create a self-study room atmosphere and let like-minded people people learn from each other.
5. Comprehensive services
   This type of APP is represented by "Postgraduate Entrance Examination Help" and "Postgraduate Postgraduate School". The content includes courses, social networking, postgraduate entrance examination consultation and other services. The content of the service is relatively complete, but the service depth is short and the professional focus is not enough.

## 3 Design Analysis of Service Design Theory in the App for Postgraduate Entrance Examination for Art Design Masters

In 2020, the "13th Five-Year plan" of graduate education has been fully completed, and the state plans to build a high-level graduate education system by 2025.In the next few years, the number of postgraduate students will only form a major trend of college students' choice. As we all know, the postgraduate entrance examination is a long time of

preparation for the study, involving many related interests, and the art design postgraduate entrance examination due to its independent proposition and other characteristics, in the postgraduate entrance examination has more particularity. Service design is a whole process of design, through the whole design system. At present, there are still many problems in the postgraduate entrance examination of art design. By using service design, we can start from the service process and service touch point of the postgraduate entrance examination of art design, transform the pain point into service demand, combine with stakeholders, and innovate the service, which can greatly improve user experience. The innovation of this topic lies in that the thinking of service design runs through the APP of art design postgraduate entrance examination, escorting the students of art design postgraduate entrance examination with a new thinking mode and helping users get the maximum value with the minimum time cost.

## 4   Demand Analysis of Postgraduate Entrance Examination for Master of Art and Design

### 4.1   The Questionnaire Survey

Questionnaire is a quantitative analysis method that can help us determine the needs of users. The pain points of examinees in the process of user-designed postgraduate entrance examination are obtained through questionnaire survey, and the common problems in the process of postgraduate entrance examination are classified.

The content of the questionnaire is divided into two parts: the first part is the basic information of the respondents, the state of examination preparation and the motivation of postgraduate entrance examination; The second part is the influence of the problems encountered by the respondents in the process of postgraduate entrance examination, using the five-point scoring method. The questionnaire was structured with 16 questions. A total of 200 questionnaires were distributed and 180 were effectively recovered, with an effective rate of 90%. In the age, the state of preparation for the examination, the motive of postgraduate entrance examination and so on carried on the omni-directional coverage (Fig. 1).

According to the descriptive statistics of common factors, the top three factors are learning method and efficiency 38.24%, learning environment 35.29%, and the influence
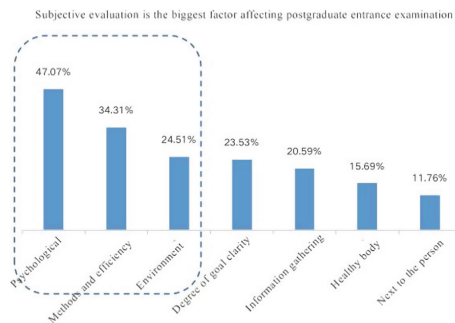


**Fig. 1.** Questionnaire.

of people around 32.35%. When the candidates are asked to subjectively choose the two factors that affect the most in the seven categories, nearly half of the candidates choose the psychology of postgraduate entrance examination 47%, ranking the first; Learning methods and efficiency followed with 34.31 percent. The third place is the learning environment, accounting for 24.51%. The negative influence that take an examination of grind psychology is not outstanding in single statistic, the likelihood is because psychological factor is subjective influence factor, other each factor can regard main body factor as indirect influence individual psychology, thus pure psychological influence is negative not outstanding.

Learning methods, efficiency and learning environment, as variables that directly affect the learning effect, are among the top three in both single statistics and comprehensive statistics, which are the pain points of examinees and need to be focused on.

## 4.2  The Questionnaire Survey

By searching the keywords "study", "efficiency" and "postgraduate entrance examination" in the APP Store, the following competitive products are selected based on comprehensive consideration of relevance, downloads and other factors: Forest, Timing, Tomato To Do, tick list, page-turning clock, small daily, block time, minimalist to-do, Achieve goals, graduate school help, graduate school, Test bug, all over the world.

Since we want To make an APP To improve the learning efficiency of design postgraduate entrance examination students, we continue To select "Tomato To Do", "Tick List" and "Timing" apps that are biased towards learning efficiency and learning records for step-by-step analysis.

Based on the comparison of APP's basic information, product functions, driving force of use, profit model, advantages and disadvantages, we can see that APP functions on the market are seriously homogenized, and product functions are replaceable, resulting in low user stickiness and difficulty in becoming loyal users. (1) In form: APP interfaces are simple, not vivid and interesting; User action path is deep; Lack of function guidance or difficult to understand the function name, easy to cause users to misoperate, causing some confusion to new users. (2) In terms of content: task completion rate or concentration time are taken as efficiency criteria, and the quality of completion cannot be assessed, which is relatively rough; Most of the plans are made by themselves, lacking systematic and scientific guidance and unattractive task reminders, resulting in insufficient motivation of users and user stickiness to be strengthened. Functional dispersion, lack of consistency, lack of system. (3) In terms of experience: Tomato-todo and tick List are less social, more self-disciplined, and less interesting. Tming is even more social than learning, resulting in lower learning efficiency or competition, and it is difficult to meet both fun and efficiency. Serious product homogeneity, product functions can be replaced, resulting in low user stickiness, it is difficult to become loyal users.

## 5   Construction of Postgraduate Entrance Examination Service Blueprint for Master of Art Design

The service blueprint is based on the flow chart of the service system to accurately describe the APP service system of art design postgraduate entrance examination in a visual way. According to the above research on the relevant theories of service design and the summary of users' needs and pain points, combined with the design method of service blueprint, the service blueprint is drawn.

In the art design postgraduate entrance examination APP, it is necessary to grasp the pain and itch points existing in the learning process of each user, and solve the common pain and itch points as much as possible, so as to improve user experience and brand service quality. The service blueprint is helpful to understand the overall process of the APP products and services of the art design postgraduate entrance examination. Users can download apps from APP Store and improve learning efficiency through functions such as registration, planning and efficiency (Fig. 2).

## 6   App Information Framework for Master of Art and Design

A good product's information architecture helps users quickly and accurately access content and improves the user experience. According to the preliminary research, summed up the information structure of the product. It is mainly divided into five level pages: home page, planning, My, Efficiency, community. The home page includes the functions that are in high demand at the beginning of the postgraduate entrance examination: countdown to the postgraduate entrance examination, details of institutions, senior help, tutoring institutions, self-study rooms and so on. The efficiency plate mainly put today's learning software monitoring, in the planning plate into their own learning planning arrangements. In the community section, there are functions to socialize with others, such as planning, tree holes, circles, etc. (Fig. 3).

### 6.1   Interface Design

The interface visual design of products requires complete visual design specifications, which can better help product optimization and iteration. The visual specifications of the research and design APP mainly include color specifications and font specifications. The color plan of the interface includes primary and secondary colors. Mass-tone attune chooses halcyon green and month white, cold green can make a user relax on state of mind, to take an examination of grind during anxious and impetuous have certain slow effect. Use yellow, orange, and purple as complementary colors to green. Not only can they enrich the effects of color, but warm colors can also bring positive and enthusiastic emotions.

Customization of learning plan: In the planning section, users can make their own learning plans, and the system records the learning efficiency and time.

Import function: You can view the shared learning plan in the community and institution details, and import the plan into your own learning planning section according to your actual situation to help improve your learning efficiency.
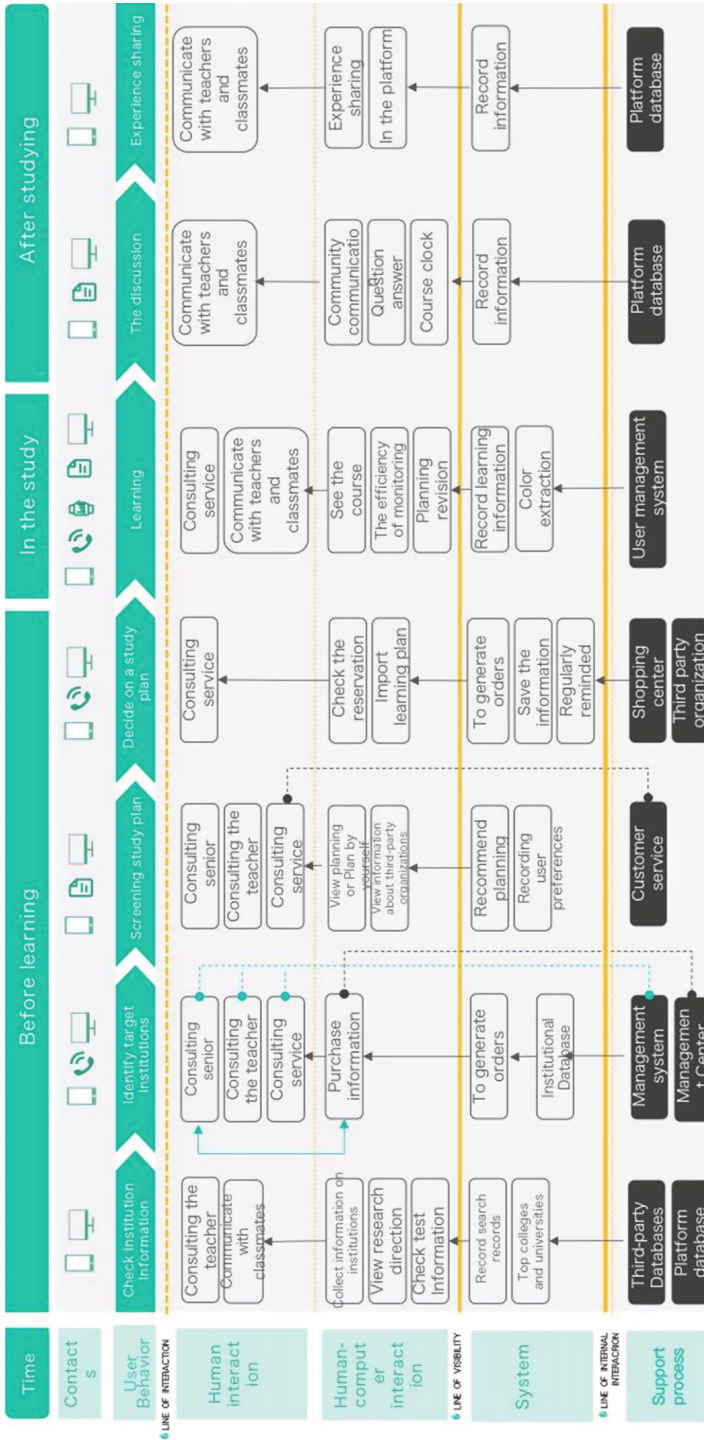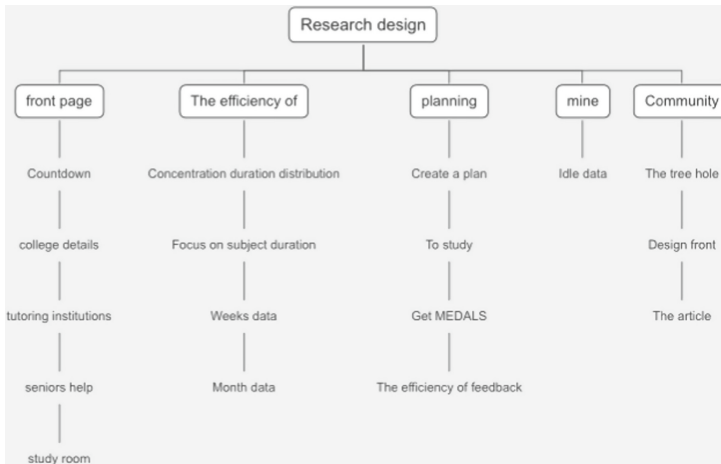
**Fig. 2.** Service Blueprint.

**Fig. 3.** Information frame diagram.

Efficiency monitoring: The software can monitor students' learning and generate reports so that students can make better learning plans according to their learning efficiency and create an immersive learning experience integrating planning, learning and efficiency.

Take photos and comment on drawings: professional teachers or institutions will evaluate students' drawings to help students get professional guidance in addition to intensive training in the postgraduate entrance examination.

Colleges and universities comparison function: can intuitively put the information of each college together for students to compare.

Functions of senior help, self-study room and hand-drawing organization: The APP will collect the materials of offline self-study room and hand-drawing class and transmit these information to students. You can also contact the senior students who sign contracts with the platform for professional guidance from the direct senior students.

Community: In the community interface, you can find like-minded research friends and view the sharing experience of postgraduate entrance examination. The treehole function can share mood anonymously. In the design frontier section, you can view the foreword about design to share information and improve the vision of design.

## 7   Conclusions

In the context of the rapid development of the world, China's demand for technical talents will continue to expand, and improving education will become a trend. The study of art and design from the perspective of service design one's deceased father grind for a comprehensive discussion, through to the existing one's deceased father grind class APP types are expounded and analyzed, in combination with service design theory to carry on the thorough research and analysis, designed a model based on service design idea and practice of art design one's deceased father grind APP APP - research design, In the design process of "Research design" APP, the thinking and methods of service

design are applied to pay attention to the priority order of service. From the perspective of users, it provides the whole process service of the postgraduate entrance examination of art design for the target. From the perspective of the industry, it integrates online and offline deeply together with multiple stakeholders such as hand-drawing classes, self-study rooms and straight-line seniors to provide service value.

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