Research on the Construction of Social Retail Network Platform for College Students

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Abstract—**In order to promote the healthy and sustainable development of economy and guide young people to set up correct consumption concept, this paper takes the undergraduates of Hubei Institute of Fine Arts as the target group to conduct a survey on the second-hand transactions on campus, and finds that there are many problems existing among college students at present, such as the accumulation of idle goods, the large amount of purchases and the low utilization rate of goods, and tries to design a second-hand trading APP platform suitable college students. It is expected to guide college students to establish a scientific consumption concept and promote the rational use of resources. Through the analysis of strengths, weaknesses, opportunities and threats, it is pointed out that this attempt is feasible and has good economic and social effects.**

Keywords—second-hand trading; consumption concept; art college students; SWOT analysis

I. INTRODUCTION

Economic development has entered a new normal. Supply-side reform promotes the optimization and transformation of social and economic structure. The level of people's demand has undergone tremendous changes. It causes rapid rise in the consumer experience demand of users on the Internet, communications, e-commerce and other platforms. Therefore, the consumption mode and content of college students are facing unprecedented challenges and opportunities.

According to the Taobao Data Report in 2018 released by Taobao, the purchasing power of post-80s is gradually stable and there is only a small possibility of rapid growth. The turnover amount of post-90s is nearly 1/4 higher than that of post-80s, which gradually becomes the main consumer force, and the post-80s are in the second echelon. This change matches the increasingly important discourse power of the post-90s in the ever-changing Chinese business society. At the same time, the data also show that post-95 groups are more decisive in the decision-making and purchase behavior, spending more time on shopping platforms such as Taobao. The amount of purchases is also larger. [1] This also shows that young people have gradually become the main group of Internet consumption.

The reason why young people become the main force of consumption may be influenced by the development of the times. After all, the life of modern people cannot be separated from mobile phones. Mobile phones provide a more convenient platform for young people to consume and live, and "phubber" has become a common phenomenon. Growing up in the mature Internet era, the post-90s generation has been at the forefront of scientific and technological development since the beginning. In the context of global economic integration and world diversification, young people can quickly accept and use new things. Therefore, young people's thinking patterns and consumption habits are not the same as those of the post-70s and post-80s.

Consumer demand comes from the individual differences of each consumer, which will produce various preferences for different commodities. [2] Marlowe's demand theory puts forward that human needs can be divided into five categories, namely, physiological needs, safety needs, social needs, respect needs and self-realization needs. [3] The diverse forms of study and entertainment and personal social intercourse in the University stage produce more consumption demands of college students. The consumption demand of college students in first-tier cities will be much higher than that of other regions. Moreover, college students' online shopping will depend on the use experience of their friends and the evaluation information of online products.

TABLE I. DATA SHEET OF UNDERGRADUATES AND GRADUATES

Year / Index	2017	2016	2015	2014	2013	2012
The number of undergraduates (ten thousand)	1648.6320	1612.9535	1576.6848	1541.0653	1494.4353	1427.0888
The number of undergraduates in art (ten thousand)			148.9311	142.4925	134.4716	121.5535
The number of graduates (ten thousand)	384.1839	374.3680	358.5940	341.3787	319.9716	303.8473
The number of graduates in art (ten thousand)			31.7962	29.2591	27.1544	24.0957

a. Source: latest data from the National Bureau of Statistics [4].

As shown in "Table I", the number of college students is large and the growth rate is fast. With the increasing trend of population aging, the "Buddhist" state is the characteristics of consumption demand and purchasing power of post-70s and post-80s. College students have gradually become the backbone of expanding consumption demand. Therefore, it is of great significance for the sustainable development of our country's economy to help college students set up the concept of "shared economy" and practice green and economical consumption behavior.

Art college students need to prepare materials and tools for different courses each time because of different academic requirements. The surplus materials and tools after class will cause a lot of resources to be idle. Due to the lack of a good transfer platform (second-hand transfer platform), these idle resources often cause a waste, and ultimately the waste causes environmental pollution, which is not conducive to the optimal allocation of sources and the sustainable development of economy. Therefore, how to deal with idle resources and wastes reasonably is not only a problem that puzzles college students, but also a key issue to promote the effective use of resources and promote the development of green economy. Although there are some second-hand trading platforms trying to deal with this problem, the operation of these apps is mixed. Fake goods and micro-businesses are flooding, which often make the buyer and seller lose more than they deserve. The buyer will feel that the price is low and the cost cannot be recovered. The buyer will feel that he spent money but did not enjoy the same level of service.

Therefore, this study chooses college students in art as the research object. This is because college students in art have higher consumption demand and stronger purchasing power. It studies their demand for second-hand trading market, and tries to design and construct the second-hand social retail APP suitable for college students in art, hoping to provide college students in art a suitable and healthy second-hand social retail platform.

II. THE PRESENT SITUATION OF SECOND-HAND TRANSACTION OF COLLEGE STUDENTS IN ART ON CAMPUS

In order to understand the current situation of second-hand transactions on campus among art college students, 100 questionnaires were sent out to students of Hubei Institute of Fine Arts with a recovery rate of 100% and an efficiency of 98%. All the questionnaires adopt closed questions, aiming at mining the behavior patterns of the respondents and avoiding the problem of guidance. The content of the questionnaire includes the basic information, consumption concept, consumption needs and consumption behavior of the respondents.

In this survey data, 33% are boys and 67% are girls. The sex parameters are basically in line with the proportion of boys and girls in the school.
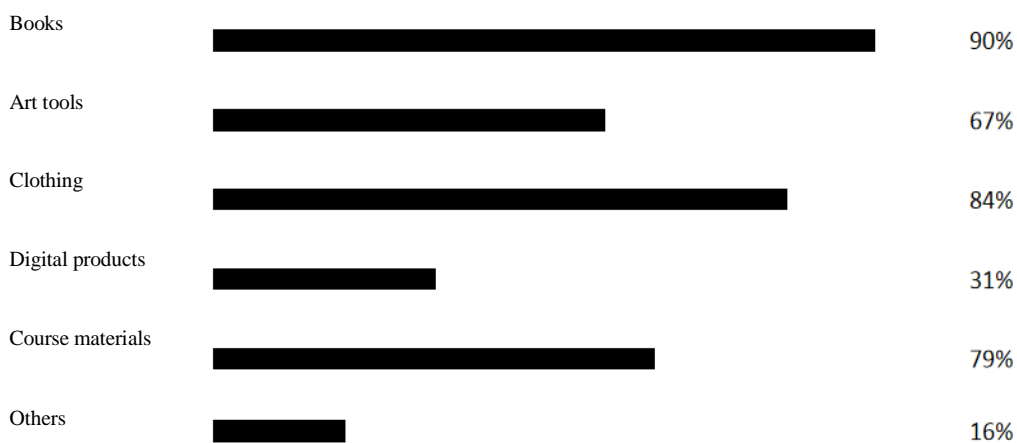

Fig. 1. Secondhand items for major transactions.

"Fig. 1" shows the second-hand goods mainly traded by art college students. 90% of the respondents chose books, because many college students have a large number of books and other learning materials to deal with after graduation or postgraduate entrance examination. Clothing was the second most important item, accounting for 84%. College students like street photography or COS play, so they will buy a lot of clothes. However, after wearing once, these clothes will be idle, and a large number of clothes will accumulate. Accordingly, 67% of the respondents chose art tools,

because of the professional characteristics of art colleges and universities. College students will generally buy a large number of art tools such as pigments, pencils, paper and so on, so there will be idle or waste of resources. Finally, 79% of the respondents chose course materials. Because of elective courses or creative reasons, they need to buy some non-professional items. It is not easy to purchase a small volume, so they will buy a large volume to reduce unit costs. But in the end, it will cause waste.

Necessary — 91%

Do not care — 6%

Unnecessary — 3%

Fig. 2. Questionnaire result on the necessity of establishing second-hand trading platform in colleges and universities.

"Fig. 2" reflects the attitude of art college students towards "whether it is necessary to establish a second-hand trading platform in colleges and universities". In view of the drawbacks of existing second-hand trading APP and the demand of art college students for second-hand trading APP, 91% of the respondents thought it necessary to establish a second-hand trading platform in colleges and universities, while only 3% of the respondents thought it unnecessary. This reflects the strong demand of college students to build a healthy and orderly second-hand trading platform, but the number and operation of platforms in reality cannot meet this demand.

In summary, data analysis shows that most art college students have a demand for second-hand trading platform, and most of the idle resources can be used for second-hand trading. Therefore, it is necessary to design and construct a second-hand online trading APP for art college students to meet the strong demand of art college students.

III. PLANNING AND DESIGN OF APP

A. Overall Planning of the System

Integrating the current needs of art college students, Circle, a more suitable second-hand trading platform for art college students is created after the upgrade and transformation of the existing second-hand trading APP.

Circle, the second-hand trading platform uses mobile phone number registration form, and can bind QQ, Wechat, Microblog and other social accounts. After login, there are

five levels of interface: home page, information, release, news and mine. This platform can be used to identify users and ensure the authenticity of the identity of buyers and sellers. If there is any dishonest behavior, it will be feedback to personal honest platform.

B. Structure Design of the System

Circle uses MVVM mode, namely Model-View-ViewModel. Model refers to the data transferred by the back end; View refers to the interface users can see; ViewModel is the bridge between view and model, and it can transform view and model in two directions. ViewModel communicates with Model to update it to feed back the UI interface. [5] Structure design of Circle is shown in "Fig. 3".
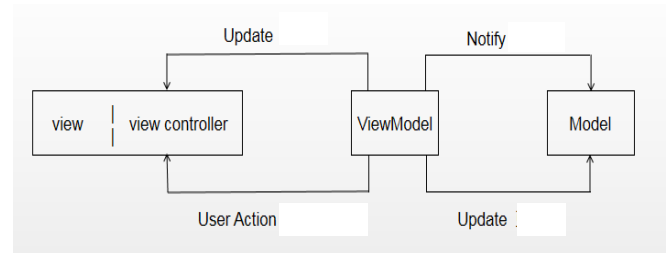
Fig. 3. Structure design of the system.

Compared with the previous MVC mode, the low coupling, reusability, independent development and testability of MVVM mode make it more suitable for the development and use of mobile APP.
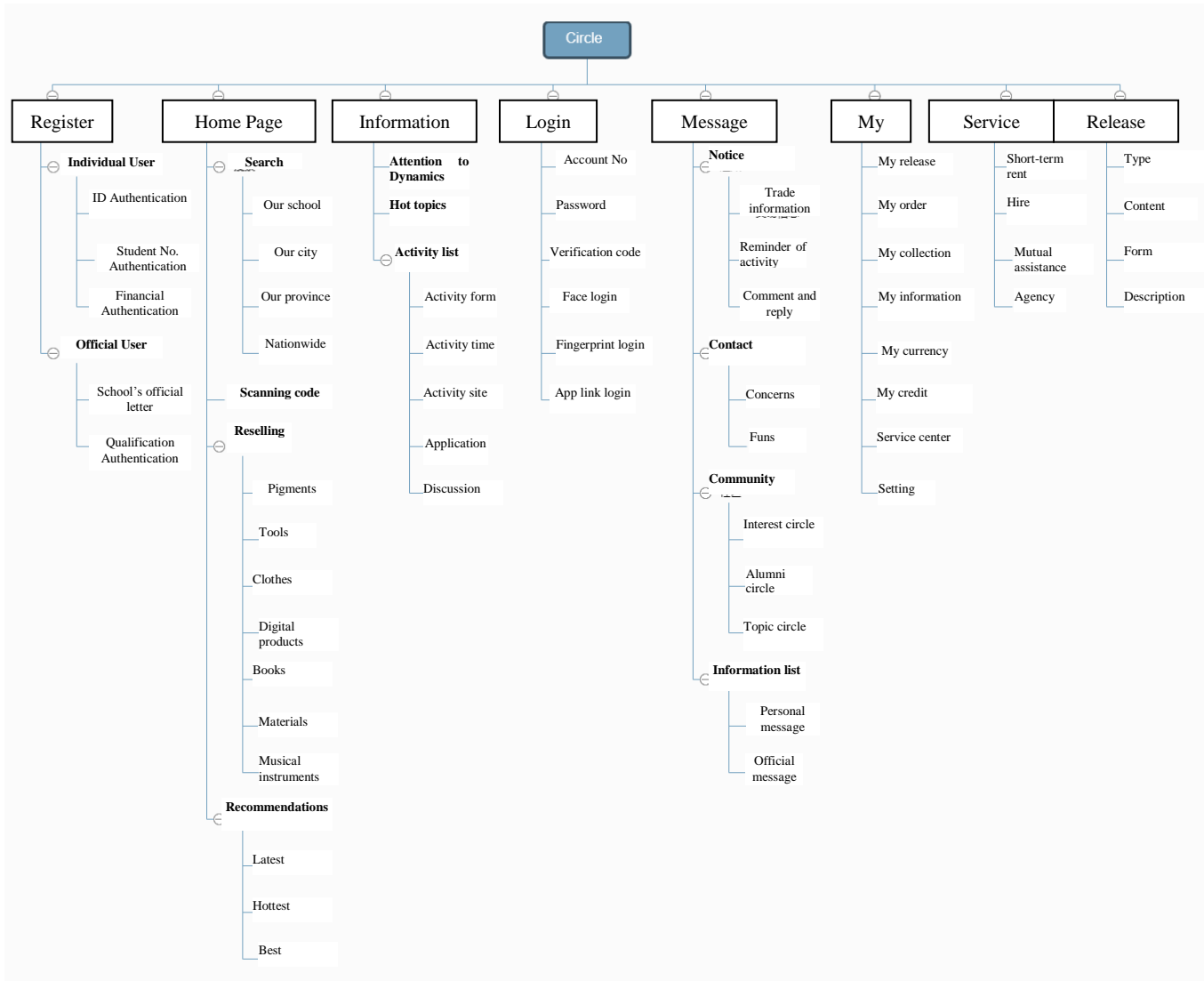
C. Functional Description

Fig. 4. The front-end functional framework of APP.

As shown in "Fig. 4", in the home page interface, users can directly search for the information of required items, but also search for the required items according to the provincial, national and other geographical areas. Users can use the hottest and latest sections to understand the products on the current platform. In the information interface, users can pay attention to and participate in discussing the parts they are interested in, such as the news of various national art exhibitions, VR exhibitions, learning exchanges, etc. In the release interface, users can quickly publish the second-hand transaction information they want to sell. In the message interface, price and transaction issues can be discussed between buyers and sellers in a series of ways, and they can chat with friends. In my interface, users can set up and edit their own chathead and profiles, and include users' concerns and collections into this interface.

D. Interface Design

Based on the model of social retail platform accepted by college students, the product information is simplified with minimal and label-like content, which makes the selection of items more convenient. Reduce the tedious operation process in order to bring better user experience.

IV. SWOT ANALYSIS

As shown in "Table II", S represents strengths; W weaknesses; O opportunities and T threats. SWOT analysis objectively and effectively analyses the strengths, weaknesses, threats and opportunities of the internal and external environment of the project. [6]

TABLE II. SWOT ANALYSIS

S: Combine with study
  Accurate positioning of users
Reasonable pricing
Policy support
	T: Strong competitors
	  Slow return of fund

W: The third-party payment platform
  Limited market
	O: Cater to the demand of art college students
	  Provide many value-added services

A. Strengths

- It is more suitable for the actual demand of art college students for second-hand trade.

- The identities of buyers and sellers are all college students, so there is no counterfeit and increase of micro-businessmen, but reasonable pricing and convenience for users.

- In recent years, China is setting off a wave of shared economic development with the participation of the whole people. The government's work report in 2019 put forward in particular to "support the development of new formats and new models, promote the healthy growth of platform economy and shared economy". [7] Therefore, the second-hand trading market platform is an APP that conforms to the national conditions of government policies and the needs of social development.

B. Weaknesses

- Limitations of target groups. At present, the target group of the survey is the students of Hubei Institute of Fine Arts, which has some limitations in verifying the disposal intention of art college students to idle resources and their consumption demand for second-hand trading platform.

- Cooperation with third-party payment platforms shall be achieved first.

- On-line second-hand transactions may lead to the defect or scratch of second-hand goods in the process of transportation.

C. Threats

- The existing second-hand trading platforms such as Idle Fish and Transfer have a certain user base and market share.

- Because this project is dominated by second-hand transactions, the return of funds is relatively slow.

D. Opportunities

- Users are positioned as art college students, so they are more in line with the consumption concept and demand of art college students.

- In order to meet the learning needs of art college students, a series of value-added services of learning will be added.

V. CONCLUSION

With the development of the second-hand trading market in recent years, people's acceptance of the second-hand trading is getting higher and higher. Secondhand goods transaction on campus not only solves the problem of large amount of storage and occupying space of useless goods, but also makes effective secondary use of idle resources. Therefore, the construction of second-hand trading platform for art college students is very necessary and meaningful. More importantly, the construction of second-hand trading platform is quite feasible, as follows:

A. Technical Management

This platform adopts C2C mode, so the buyers and sellers can talk directly and negotiate the details of the transaction directly. It solves the problem of space occupation in second-hand trading mode such as flea market and the problem of high price difference between second-hand stores. MVVM is used in the technology, which can achieve the cooperation of many people when building the system and improve the testability of APP aiming at ViewModel. It is more convenient to test the data processing logic and check the causes of bugs in the later maintenance. Because of bi-directional binding between View and Model, developers do not need to modify UI data manually and users can use it more conveniently.

B. Economic Effects

There are lots of overlapping demand types for art college students, whose trading items mainly focus on books, art tools, digital products, etc., so the items to be sold will not be too unsalable. Both buyers and sellers are college students with simple identities, and the prices are more affordable.

C. Social Effects

College students, as a new generation, are pillar of a country. Therefore, it is important to help them form the idea of resource reuse early, which is conducive to reducing the waste of idle resources, and also to restraining the waste of resources caused by impulse consumption to a certain extent. At the same time, it promotes the healthy development of platform economy, shared economy and the maturity of social credit system. College students' social retail network platform makes full use of modern information technology to improve the utilization efficiency of social idle resources and high-quality resources, to benefit all participants, and to create greater value for economic and social development.

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