

Construction and Application of WeChat Learning Platform in “Folk Literature” Teaching

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Abstract—WeChat as a type of mobile software with social communication attribute and platform function can offer a new platform and application mode for distance education. Real-time communication and good use experience of WeChat can make students have high use ratio and degree of tackiness. WeChat learning platform makes distance education more feasible, convenient and efficient. This paper takes Folk Literature as the experimental course and adopts interview and statistical data methods to contrastively analyze classroom effect differences before and after application of WeChat learning platform through design of WeChat learning platform of Folk Literature distance education, teaching design and case design and application effect analysis of WeChat learning platform application. This paper provides theoretical support and data support for Folk Literature distance education and its application in college education.

Index Terms—WeChat learning platform, Folk Literature, distance education

I. INTRODUCTION

WeChat is internet-based mobile chatting software which was launched by Tencent in early 2011. It can send characters and photos fast and support voice intercom [1]. Due to its powerful functions and use convenience, WeChat popularizes in China rapidly. In particular, its popularization scope among college students is quite wide. Under such trend, mobile learning and micro-learning become available [2]. As of December 2015, the scale of Chinese netizens had reached 688 million, and Internet penetration rate had reached 50.3%, where the scale of mobile netizens had reached 620 million, accounting for 90.1% of the whole scale of netizens. 110 million of netizens achieve online education via internet, and mobile internet shapes a brand-new mode of social life [3]. With the development of intelligent terminal and mobile internet, the researches on design of WeChat, other mobile applications and platforms drive innovation and progress of distance education. Communication function and social attribute of WeChat achieve interactions among users, and platform function provides a new distance education mode.

At present, some drawbacks exist in the study of liberal arts specialty. For example, teaching content is single; learning method lags behind; teaching is based on textbooks and practical activity is ignored. Hence, distance education is urgently needed to change learning method and update teaching method [4]. Under such trend, there is very large development space for distance education. Currently, many scholars start to discuss the application of internet and WeChat technology in distance education and there have been some reports on theory and practice teach-

ing. Some researchers believe that microcontrollers can be effectively applied in various kinds of computer science and engineering courses, and they put forward a micro-controller-augmented course and describe various existing course implementations [5]. Thomas and O’Bannon explored behavioral, normative, and control beliefs of pre-service teachers in liberal arts specialty about their intentions to use Web 2.0 technologies in their future classrooms. The survey results show that they advise teacher educators should aim at these beliefs in teacher development programs so as to make pre-service teachers successfully apply Web 2.0 technologies in their future K-12 classrooms [6]. In 2015, Liu and Jiang published College English Teaching Design and Practice Based on WChat Platform in which they systematically analyzed the application of WeChat platform in college English teaching, designed college English WeChat platform and gained good practical effect [7]. Xu et al. published Construction of Blended Learning Mode Based on WeChat Public Platform in Distance Education in China, where they discussed a new learning mode based on WeChat public platform under guidance of constructivism and teaching theory as well as first principle of instruction and individualized learning theory, analyzed and summarized the preliminary effects [8].

As WeChat is popularized and concerned in teaching, WeChat offers more learning options and richer exchange ways for distance education. However, some restrictions still exist such as intelligent terminal popularization and wireless access cost [9]. Meanwhile, some users expressed they could not receive WeChat classroom content in time [9]. The innovation of this research is as follows: this research aims to provide a WeChat-based teaching resource pushing system and pushing method so as to push teaching resources to users in a timely and effective way. Besides, low-cost treatment is also conducted. Thus, this paper tries to systematically study the application of WeChat learning platform in distance education from such perspectives as information communication, learning support, distance learning and platform construction, and design WeChat learning platform which conforms to learning features of liberal arts specialty.

II. DESIGN OF WECHAT LEARNING PLATFORM APPLIED IN FOLK LITERATURE DISTANCE EDUCATION

WeChat learning platform is designed on the basis of platform function of WeChat and adopts light-weight development mode, without the need of technological base [10]. The design of WeChat learning platform applied in Folk Literature distance education starts from structural design and functional design, and is based on feasibility analysis and demand analysis. Besides, it is

achieved on the basis of WeChat platform architecture by combining features and problems of liberal arts learning.

A. Structural design of WeChat learning platform

WeChat learning platform is applied distance education through WeChat-based teaching resource pushing system. This pushing system includes client device equipped with WeChat software, WeChat server and teaching resource bank server. The client device is mobile phone or tablet PC etc. WeChat server involves column management, content management, template management and user management. Teaching resource bank classifies learning resources according to their features and can manage and release various resources conveniently. The pushing method is to classify and store original teaching resources; the WeChat account number is bound with resource bank use number; judge order type (video-on-demand, appointment or subscription); different types of learning resources are classified and disposed. This system can push educational resources to learners in a timely and

effective manner, and excellent teaching resources will be further popularized. Structure diagram of pushing system of WeChat learning platform is shown in Figure 1.

WeChat learning platform should follow such design principles as clear orientation, reasonable function, scientific content, rich interaction, flexible learning and inter-connected service and integrate WeChat learning support function in course learning and teaching design. WeChat learning platform offers the following interfaces: public number attention, friend and group interaction and friend circle browse etc. After students pays attention to the public number, they can receive automatic pushing of the system and achieve interconnection of other service functions, personal WeChat learning and knowledge management by the public number.

Design frame diagram of WeChat learning platform which is based on WeChat function analysis and platform support, combines design principles and is applied in Folk Literature distance education is shown in Figure 2.

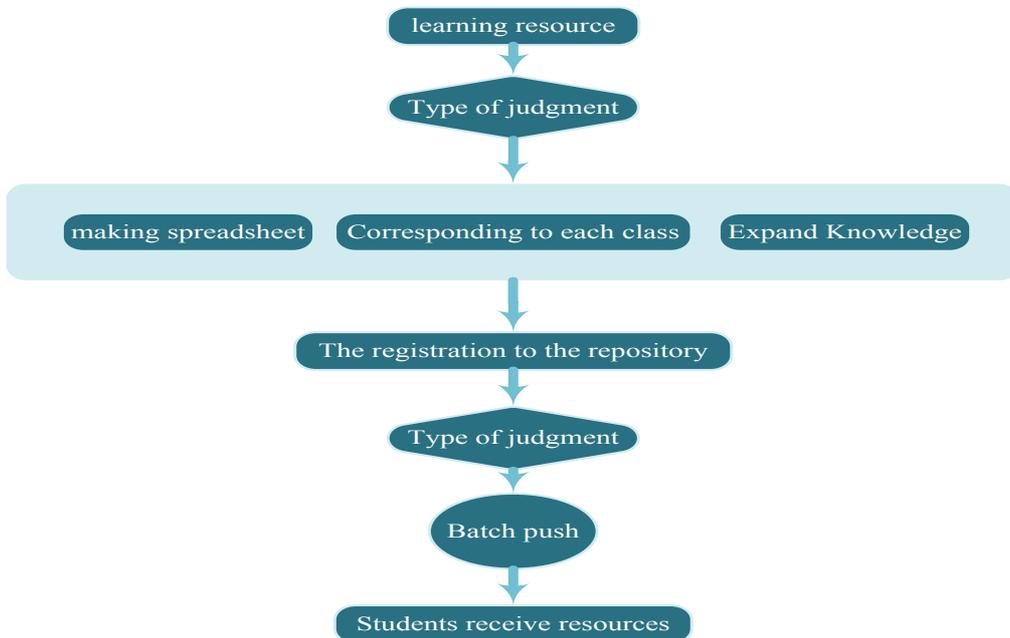


Figure 1. Structure diagram of pushing system of WeChat learning platform

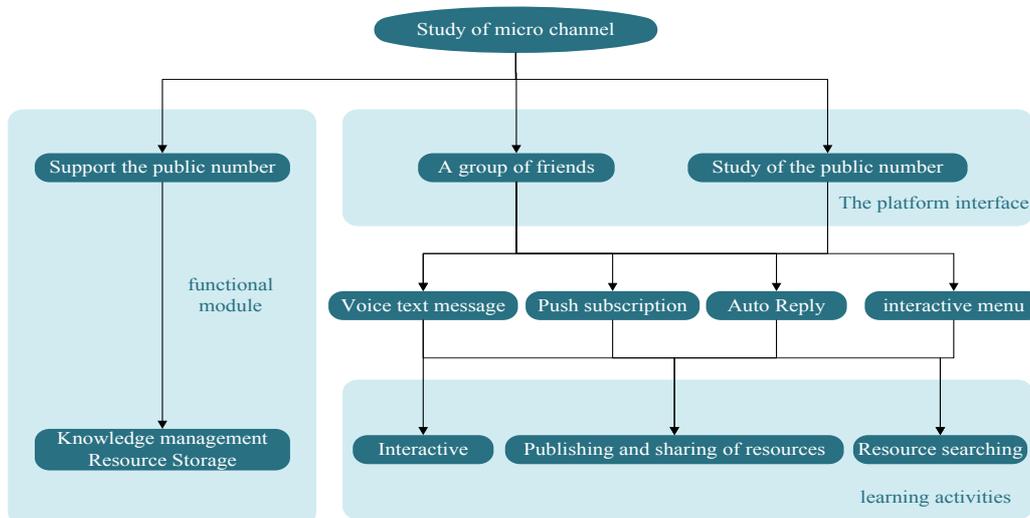


Figure 2. Design frame diagram of WeChat learning platform

B. Function design of WeChat learning platform

According to Figure 3 and Figure 4, based on WeChat platform function, WeChat learning platform can achieve interaction, resource release, resource sharing and resource search etc. in learning process.

(1) Interaction: basic functions of WeChat include text and voice interaction mode, WeChat friend, group and public number can carry out voice and text information interaction conveniently.

(2) Resource release and sharing: users can release and share learning resources through WeChat group, friend circle and public number. WeChat public platform can actively release learning content in the form of pushing. The administrator can check information quality, limit the quantity of messages pushed and plan the content. In distance education, pushing mode can be adopted to release learning content. Meanwhile, students can achieve independent study under various environments and guarantee learning quality.

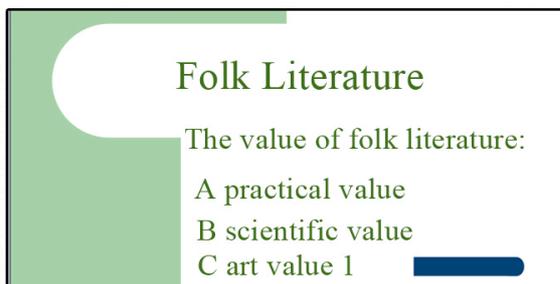
(3) Resource research: automatic reply function of WeChat offers “pulling-type” search as required. Information navigation and search can be designed for the content search based on key words to achieve automatic answering of students’ questions, classified response to learning content and statistics of data searched etc.



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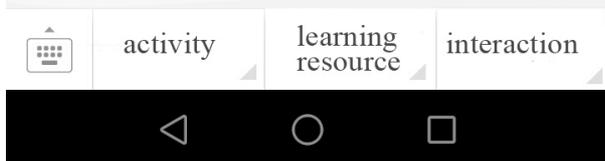


Figure 3. Interface diagram of WeChat learning platform

III. LEARNING MODE DESIGN OF WECHAT LEARNING PLATFORM IN FOLK LITERATURE DISTANCE EDUCATION

A. Learning process design

Learning process design of WeChat learning platform in Folk Literature distance education is as follows: interaction; content pushing; content search; independent study.

WeChat learning platform provides multiple interaction ways: one-to-one interaction, course WeChat interaction and group chatting interaction etc. In the interaction process, students acquire relevant learning requirements and learning resources and achieve mutual effective connection.

The content pushing process offers information notice for students, including course requirement, task arrangement, key chapter, question answering, knowledge expansion and resource sharing etc. This step involves each stage of distance education.

The administrator presets key words and sets schedule, course task, examination information and help information as well as other modules. Students achieve self-help query through digitized and key-word “conversation” interactive query method.

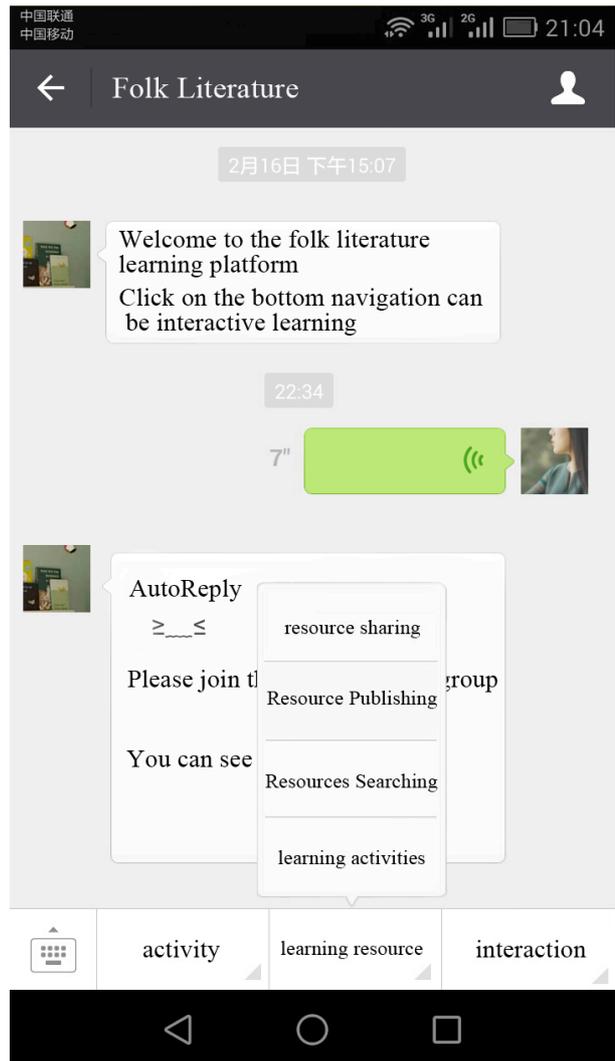


Figure 4. Interaction diagram of WeChat learning platform

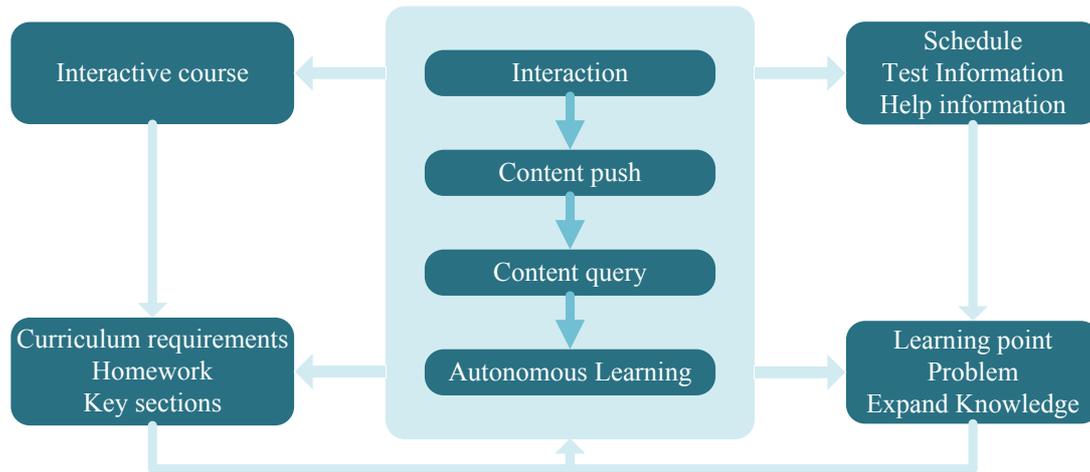


Figure 5. Learning process design diagram

Students' independent study is the foundation of distance education. Students understand course resources through independent study, complete the task and propose questions. Then, they handle problems through interaction and content query. WeChat learning platform well facilitates students' independent study, helps students grasp schedule and learning emphasis, and provides richer resource expansion for students. Learning process design is shown in the figure 5.

B. Learning mode design

WeChat learning platform assist learning in Folk Literature distance education through digital mode. There are various forms of Folk Literature, including verbal words and phrases in people's life. WeChat teaching platform of digital mode fully considers artistry and richness of Folk Literature, enhances learning effect through audio, video and pictures and stimulates students' learning interest. Students can share and discuss learning content by WeChat platform, analyze and summarize discussion results.

C. Learning assessment design

Distance education owns the feature of high autonomy. Learning effect feedback should be short-term and individualized. The administrator may regard class hour or chapter as the unit and adopt questionnaire survey to evaluate students' learning effect, grasp their learning state and regulate the course schedule in time through interaction function of WeChat.

IV. EXPERIMENTAL DESIGN AND EFFECT ANALYSIS OF WECHAT LEARNING PLATFORM IN FOLK LITERATURE DISTANCE EDUCATION

WeChat has very high population rate among college students. The experiment of WeChat learning platform has wide foundation. The survey finds that students' demand for WeChat in daily life comes from entertainment and communication. Students basically understand friend circle and public function. This experiment mainly adopts interview and questionnaire survey to collect experimental data, and the data are processed with statistical survey method.

A. Objects of experiment

This paper takes college Folk Literature as the experimental course, and total class hours of the course is 32h. The sophomores majoring in liberal arts were chosen as the objects of experiment. The learning contents include theoretical and practical contents. After the course was finished, comparative analysis was carried out for the students in experiment class and the control class. The cooperation between researchers and practitioners is the foundation of this experiment.

B. Experimental scheme design

The investigation result shows students in the experimental class apply WeChat in daily life and frequently use interaction and friend circle. Some students with close relations will use group chatting function.

In the experimental process, the major tools for class group interaction include WeChat group chatting and sharing function. The discussion group can be established for different demands to assist distance education, promote students to actively share learning materials and learning experience, facilitate them to gather course materials in group form and expand independently.

Distance education is achieved mainly through WeChat learning resource pushing. The administrator stores various learning resources in teaching database server in advance, regularly pushes teaching database by WeChat server and guides students for learning. In addition, students can apply resource search and content query functions of WeChat learning platform to propose questions and solve them so as to get rid of learning barriers.

Students feedback learning effect via WeChat learning platform after each class hour is finished. In the middle term and the end of the term, students should fill in questionnaire survey according to actual conditions and ensure effectiveness of survey results. The problems in the questionnaire survey include function use frequency, category of query key words, timeliness of checking the information pushed, frequency of actively accessing to WeChat platform, advantages and disadvantages of WeChat learning platform as well as satisfaction survey etc.

C. Application effect of WeChat learning platform in Folk Literature distance education

After learning for some time, WeChat learning platform plays a great role in Folk Literature distance education. During learning professional courses, students received audio, video and pictures as well as other learning resources, effectively communicated with each other and fed back in time. Student satisfaction analysis was conducted by questionnaire survey and interview. The results show that students in experimental class are satisfied with WeChat learning platform, and the satisfaction degree of learning effect reaches 85%. Questionnaire survey result of WeChat learning platform application is shown in Table I.

It is seen from Table I, interaction and content pushing functions are most frequently used ($P < 0.01$), and other functions are applied rarely. The key words which are inquired most are learning resource and course arrangement ($P < 0.01$). Except information pushing, the frequency of actively accessing to WeChat platform is generally 2-3 days ($P < 0.01$). Students generally check content pushing information in time, accounting for 70% ($P < 0.01$). Students consider that the major advantage of WeChat learning platform is strong interaction (accounting for 46.7%), followed by convenience for information acquisition (accounting for 14.3%) ($P < 0.01$). The disadvantages of WeChat learning platform mainly include single function and complex operation, accounting for 38.3% and 35%, respectively.

It is seen from table II, the students in experimental group show high satisfaction degree for WeChat learning platform in 5 aspects: learning effect, interaction, operation easiness, knowledge expansion and learning form ($P < 0.01$).

The table I, table II and figure 6 shows that students widely believe WeChat learning platform has significant enhancement effect in Folk Literature distance education and greatly promotes students' independent study and comprehensive improvement. Meanwhile, their practical ability also improves, most students are satisfied with WeChat platform and will regularly browse and check content pushing of WeChat platform.

V. CONCLUSIONS

The practice proves that WeChat learning platform has significant enhancement effect in Folk Literature distance education. Interaction, platform and digitization of WeChat greatly facilitate development of distance education and provide technical and theoretical support for distance education.

(1) In terms of support function, WeChat learning platform is dominated by resource pushing and covers such functions as text and voice interaction, WeChat group exchange, automatic reply response, subscription pushing, content sharing and immediate feedback. Such diversified teaching method increases interactions between students and teachers and among students.

(2) In the aspect of learning application, WeChat learning platform supports interaction, resource release and sharing as well as resource search etc. With regard to platform construction, it makes the best of extensive mobile devices and achieves distance education with good experience, abundant function and convenient operation by platform feature of WeChat. Students frequently apply one-to-one interaction and WeChat group. The key words they mainly inquire are learning resource and course arrangement. Through WeChat learning platform, students interact and exchange more, contact richer resources and gain information more conveniently. Besides, their learning effect improves significantly. Content pushing of WeChat learning platform can guide students' independent study, fully mobilizes their enthusiasm. Hence, its advantages of strong interaction and convenience for information acquisition are widely approved.

In one word, we realize from this experiment that to enrich learning resource content and simply operation steps is the core of WeChat learning platform construction, while to improve platform functions is the foundation of platform construction. The application of WeChat learning platform in Folk Literature can facilitate implementation of distance education and gives play to positive influence and effect in education and teaching.

TABLE I.
SURVEY OF WECHAT LEARNING PLATFORM APPLICATION [NUMBER OF STUDENTS (%)]

Question	Option				Chi-square test (P)
Which function is used most frequently?	Interaction 27(45)	Content pushing 21(35)	Information retrieval 7(11.67)	Others 5(8.33)	<.0001
Which key word category is most inquired?	Learning resource 29(48.33)	Course arrangement 22(36.67)	Others 9(15)		0.0058
Except information pushing, how often do you actively access to WeChat platform	2-3 days 41(68.33)	4-5 days 12(20)	Every day 7(11.67)		<.0001
Whether do you check content pushing message in time?	Yes 42(70)	No 18(30)			0.0019
What do you think the advantages of WeChat learning platform?	Strong interaction 28(46.67)	Convenience for information acquisition 14(23.33)	Resource richness 12(20)	Others 6(10)	0.0006
What do you think the disadvantages of WeChat learning platform?	Single function 23(38.33)	Complex operation 21(35)	Contents lack characteristics 12(20)	Others 4(6.67)	0.0016

Note: 60 questionnaires were distributed and 60 effective questionnaires were recovered

TABLE II.
SATISFACTION SURVEY OF WECHAT LEARNING PLATFORM [NUMBER OF STUDENTS (%)]

Item	Learning effect	Interaction	Operation easiness	Knowledge expansion	Learning form
Dissatisfied	9(15)	7(11.67)	18(30)	12(20)	8(13.33)
Satisfied	51(85)	53(88.33)	42(70)	48(80)	52(86.67)
Chi-square test(P)	<.0001	<.0001	0.0019	<.0001	<.0001

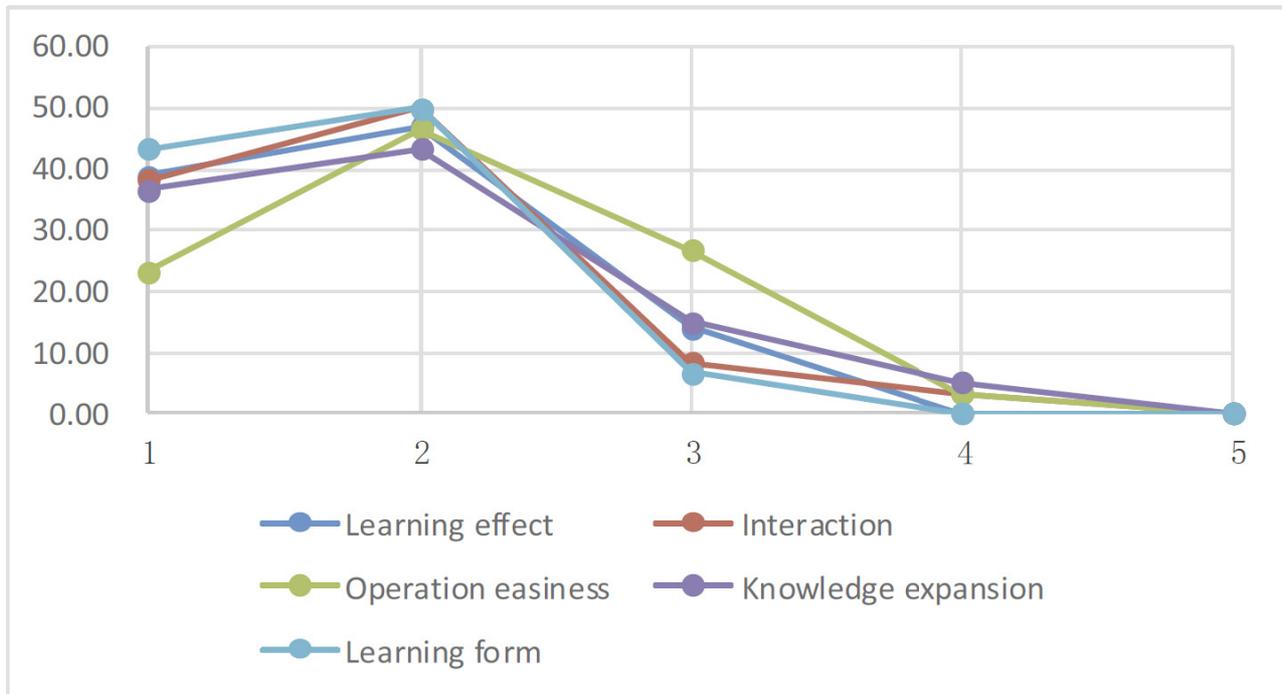


Figure 6. Statistics of WeChat learning platform satisfaction

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