



# The Design Study of High-Quality Resource Shared Classes in China: A Case Study of the Abnormal Psychology Course

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**Abstract:** The construction of High-Quality resource shared classes in China is an important part to develop open education around the world. It helps spread of High-Quality resources and foster education equality. As resources construction have become increasingly popular, how to construct High-Quality resource shared classes, how to design the curriculum resources, have become urgent problems for both researchers and educators. In this paper, we took the example of a Chinese national High-Quality course “abnormal psychology”, as a study case, and conducted a survey of High-Quality resource shared classes from the aspects of application status, existing problems and improvements. Based on the results, we proposed a system framework on curriculum structure design, concept design and teaching design, aiming to improve the quality of High-Quality resource shared class, and provide a guideline for the construction of future open courses.

**Keywords:** High-quality resource shared class, Design, Case study

## 1. Introduction

With the increasingly popularity of internet interaction platform, High-Quality resource shared classes (referred to as shared classes) based on the concept of “open and sharing”, has become one of the most effective way to promote and realize online learning. The construction of shared classes is an important method to promote High-Quality course resources sharing among universities, deepen the reform of higher education, and build a learning society. From 2011 to 2015, there will be 5000 shared class to the public in China, and now 1033 shared classes have been launched on the website of “E-course”, covering 28 provinces, cities, and autonomous regions. But with the rapid growth of “MOOCs”, many new learning styles emerged, such as “Small Private Online Courses (SPOC), Distributed Open Collaborative Course (DOCC), and Massive Open Online Research (MOOR)”, which bring new insights to the construction of shared classes (Zhu, Yan, & Wei, 2013). Therefore, how to design the shared classes, how to ensure the advancement and demonstration of High-Quality resource, have become the focus and hot issue in this area of research.

Shared classes includes all kinds of network courses, based on the requirement of complete curriculum resources, taken the college teachers, students and social learners as service main body, changed education teaching idea, updated teaching contents, and reformed teaching methods. From the previous literature, we know existing research on shared classes mainly focuses on following aspects, such as learning activities design (Y. Liu, 2014), technical analysis (Yin, 2014), the enlightenment from flip classroom, micro lesson, and MOOCs (Yu, 2013; Zhen & Lin, 2014), construction strategy (Hu, 2013), platform application (M. Chen & Yu, 2013), and etc. The design study on shared classes is little, especially the design of course resources and course structure is less. This study will fill the research blank of shared lessons, from the application status to system design.

So in this paper, we will focus on students learn shared class, and their satisfaction about the courses, and put forward the corresponding design plan to develop courses, aiming to optimize curriculum quality, makes High-Quality resource, and provide guidelines for the construction of open courses. We aimed at exploring the following research questions:

- What are the application status and existing problems of shared class?
- What is the ideal curriculum structure of shared class?
- How to help teachers/designers design shared class?

## **2. Methods**

### *2.1 Design*

This research adopts the methods of case study and survey research. According to principle of “purposeful sampling” in qualitative research (X. Chen, 2004), a national High-Quality course “Abnormal Psychology” taught at one of highly ranked universities in Shanghai was selected as research object. The factors such as course institutions, production team, teachers and curriculum content were taken into consideration when sampling. The choice reasons of sample are as follows.

Initially, the university selected is a top university in China, and the course teacher is “the most popular with the students”. Additionally, the curriculum content is closely related to our life, work, and study, it is practical, so learners’ interest is higher. Furthermore, the course followed the rule of network education, especially in light of the characteristics of distance learning. Moreover, the course is a professional course of psychology subject and the second minor courses in east China normal university. It has a reasonable audience population both inside and outside the university.

A mixed method with both quantitative and qualitative analysis was used in the study aiming to investigate the effects of the implementation of online course, problems existed and the ways to improve the shared class. An online survey and interviews over the phone were used.

### *2.2 Data collection and analysis*

The study period spanned over 4 months. All survey data are obtained from junior students of the Network Institute from east China normal university. All students’ age are between 24 and 30, who are learning the national High-Quality course “Abnormal Psychology”. The research is divided into two stages.

In the first stage, we conduct a survey and it was performed through questionnaire survey and telephone interview. As questionnaire survey, its compile is completed with the help of course production personnel, the compiling time lasted two weeks. After the completion of initial questionnaire, we make a test of part learners, and according to the results, we revised and form the final questionnaire. Distance learning is online learning and teaching. So the research is done by online questionnaire. The effective sample volume of survey is 72 (52 girls and 20 boys). Survey questions were semi-structured, and focusing on the issues such as “Do you often use shared course”, “What are the problems of shared

course” and “How to design shared course” etc. As for telephone interview, 14 students (7 girls and 7 boys) were interviewed and each interview is about 15-20 minutes. The interview questions were focusing on the issues such as “Are you satisfied with shared course”, “How to improve the design of shared course” and “What is the ideal curriculum structure of shared class”. When selecting the interview sample, we chose the learners of good learning attitudes. Before the interview, we gave an email to every sample to make an appointment time.

After the design completion of shared class, we called the second stage. We performed an evaluation on the concept of curriculum design, style, and etc. Namely we make a survey on course satisfaction from teachers, content, page style, interactive media, activity design, and feedback. We received 50 effective questionnaires, which the responders are learning the designed shared class of “Abnormal Psychology”.

We summarize and sort out each survey sample into the four aspects: application, problems, ideal structure, and improvements.

Descriptive analysis was run on the survey data. Interview data were transcribed and analyzed using bottom method. For curriculum design, we combined the description on curriculum design concept, design style, and design module (Lanzilotti, Ardito, Costabile, & De Angeli, 2011), from Chinese and foreign scholars, then we make an analysis and classification of ideal curriculum structure and design.

### **3. Results and Discussion**

#### *3.1 Application*

From the questionnaire survey, we know, the use frequency of shared class is low. The learners often use the shared classes accounts for 33.3%, occasional use accounts for 50%, never use accounts for 16.7%. Some learners only use the shared class before an exam, and they only use once or twice. Very few learners use frequently.

#### *3.2 Problems*

##### *3.2.1 The System Design of Shared Classes Is Poor*

From the questionnaire analysis, we discover the shared course has many following problems: namely, the navigation structure is unclear, the users cannot find the resources needed, the video quality is low, teacher lecture is too theoretical, less interaction unreasonable teaching evaluation and less interaction and teachers’ teaching style is the most prominent problem.

And 66.6% of the learners think “electronic notes, teacher lecture and exercises” are the important navigation section, and 77.8% of the learners think “teachers lecture, case analysis, electronic materials, situational experience” are the indispensable navigation section, and they hope to increase case analysis, online testing, interactions between teachers and students, perfect curriculum evaluation and learning process monitoring, provide resource shared platform, and the resource size should be easy to split and restructuring to facilitate mobile learning.

##### *3.2.2 The Design Style of Shared Classes Is Not Good*

At present, some researchers according to the design induction of China national High-Quality courses, developed seven online instructional design styles, based on “content design, technical design, problems design, situation design, case design, explore design and experimental design”. From the survey, we found 75.2% learners hope the design of shared class should follow a certain teaching style. Because the “Abnormal Psychology” course pays attention to the knowledge system and inherent logic structure, so essentially it belongs to the teaching style based on “content design”, and this teaching style is well accepted by the learners.

### 3.3 Ideal structure

#### 3.3.1 The Resources Structure of “Atomic Unit - Knowledge (Activities)” Is more Reasonable

Shared courses mainly consist of three layers, course/module, atomic unit and knowledge (Zhu & Liu, 2011). Atom is in the bottom of knowledge system, it is knowledge or skills characterized through technology, and it can adopt the way of learning organization. Atomic unit means a small particle size, including content, activity, practice, interaction and research method, and it has teaching properties such as activity, test and evaluation. At least one unit contains a knowledge atom and a course, or a course module should contain at least one unit. Course can be directly composed of unit, and can be composed of different levels of curriculum modules, polymerized by learn units (as shown in Figure 1). This kind of structure design is easy to arouse the enthusiasm of learners and freedom degrees, and improve the sharing and reuse effect of resources.

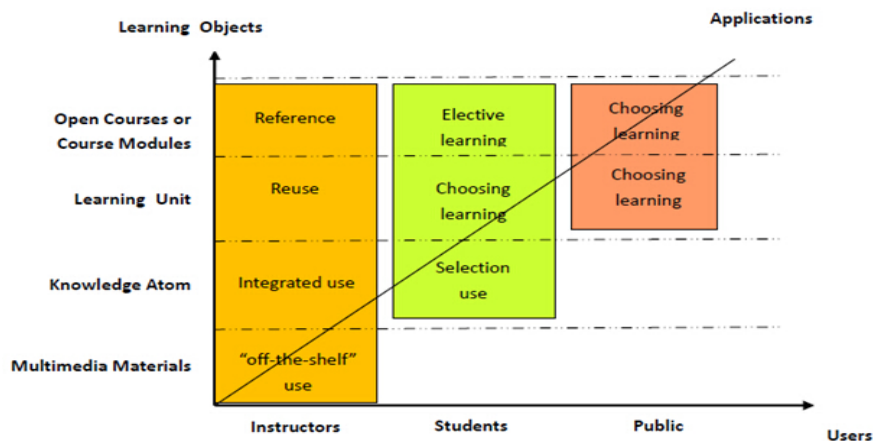


Figure 1. Components of course and sharing for different type of users

#### 3.3.2 The Framework Structure of “Teaching Style” Is Easier for Learning

Teaching style belongs to the teaching design at the medium level, its essence is to provide a successful paradigm and methods of teaching practice, it has strong operability. How to promote fast and efficient online learning of learners, how to sort the learning resources and unit activities, shared class in pursuit of personal degree should be moderate. Therefore, the research put forward the information framework of shared class, and its teaching style is based on “content design” (M. Liu & Zhao, 2013).

Table 1 shows that the total module (level 1) of the course: Homepage, teachers, course learning, introduction, characteristic resources, operation test, interactive and learning evaluation. Learning module is to present learn target, the difficult and key words. Unit adopts 5-7 link, such as “study guides, problem introduced, teaching lecture, electronic notes, case analysis, expansion resources, and self-test”. This layer structure is optional. Unit mainly shows course content and related resources. This structure is more clear, and easy to learn.

Table 1. The information architecture diagram of shared class

The organizational structure of sharing course	Home page	teachers	guidance	induction	learning	features resources	homework test	interactive	learning evaluation	
	This chapter/learning modules									
	This chapter overview/modules		Learning goals		Key and difficult		keywords			
	Chapter \ module structure	The organizational structure of learning unit	learning guidance							
			Problem introduced							
			Teacher lecture							
			Electronic notes							
			Case discussion							
			Expanded resources							
	Self-test problem									
This chapter/operation module										
case store	Examination database	Expanded resources	Topic discuss	FAQ	homework					
This chapter/learning support module										
answer questions	search	bookmarks		notes	... ..					
Courses users	Version information	operating environment		other	... ..					

### 3.4 Improvements

From the interview, we found, as the design of shared class, we should make a system framework of curriculum structure on the aspects of curriculum resources, navigation, content module, knowledge, video, and interaction. And teaching design systematically helps to improve the sharing effect of the course.

Teaching system design includes teaching content, learning navigation, interaction, teaching environment and evaluation (Zhang, 2008). Through modular curriculum content, diversity important knowledge, clear navigation and open organization structure, the whole style of course is unified, text is refining and accurate, color layout is reasonable and harmonious, page volume is moderate, all conform to learners' cognitive habits (as shown in Figure 2).

At present, the course of “Abnormal psychology” has been incorporated into Shanghai public library, completely open to learners of different colleges and universities, such as Shanghai Jiaotong University, Tongji University, Donghua University, China university of Political Science and Law, China’s public security university, Capital Normal University, Sun Yat-Sen University, and etc, and even high school teachers can also take the course if they have interests, the sharing effect of the course inside and outside the campus is perfect.

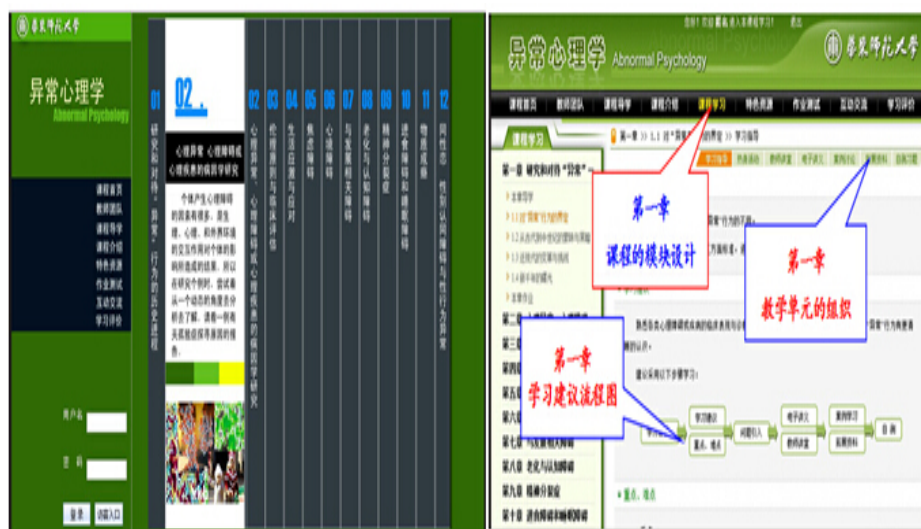


Figure 2. The webpage of “abnormal psychology” course

### 3.5 Future Work

This study based on system design of shared classes. In terms of interactivity, it provides online FAQ, interactive communication, and E-mail, the feedback is timely. In terms of learning support, it provides many personalized learning support tools, such as learning behavior records, learning notes, and learning content retrieval. As curriculum evaluation, it uses formative evaluation and summative evaluation. The deficiency of the study is the limit of time length, and the lack of survey research on course sharing.

In the next few years, we will track the sharing and application of the courses, and apply the course style and design concept into 3-5 open courses, and optimize the curriculum design (Wang, 2013), according to learners' feedback, eventually create real superior resources, and construct effective an online learning environment for majority of learners.

### 3.6 Support

In recent years, Chinese ministry of education has provided a lot of supports on the construction of shared class. For example, policy support, fund, platform, and etc. Now Chinese ministry of education issues the documents on shared class regularly, and provide financial support for every course. This work is supported by Young Fund on social science from Chinese ministry of education, named "The development research of National High-Quality Course under the perspective of information dissemination" (project approval No: 12YJC880101).

As the teachers of universities, including managers, instructors and technical personnel, they all support the construction of shared class, and actively provide the supports of technology and resources.

In this study, the shared class is supported and developed by a third production company, namely E-learning, it provide platform and management service, complete course release, user management, rights management, and statistics and evaluation. The developed resources, according to the SCORM standard, can be deployed to any standard learning platform.

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