

## Research on Fragmentation Learning Content Design Framework Construction Based on the WeChat Platform

Huanle Zhu<sup>1,a\*</sup>, Jinfeng Li<sup>1,b</sup> and Wenjie Zhang<sup>1,c</sup>

<sup>1</sup>Nanchang Institute of Science & Technology, Nanchang, China

<sup>a</sup>516582291@qq.com, <sup>b</sup>524892454@qq.com, <sup>c</sup>568740355@qq.com

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**Abstract.** The typical feature of the information age is the rapid development of data in various fields. In the field of education, "let data promote teaching and data promotion learning" also become a development trend. With the popularity of the 4 g network, college students using WeChat fragmentation learning has become a popular. How WeChat platform based design quality the fragmentation of learning resources and applied to daily teaching become a problem to research and solve. This paper first analyzes the structure characteristics and connotation of fragmented learning platform for WeChat, and then to 2016 grade matriculation students "EXCEL part of computer foundation" in the course of design basis, design content of the fragmentation of learning, establish fragmented learning content design framework, the formation of fragmented learning content repository, which lays the foundation for further practical operation.

### Introduction

The society is progressing. The Times are developing. The new technology is changing people's life in every aspect. Work performance, life and learning outcomes of digital also gradually become a trend, such as company year-end summary reports, monthly life of all kinds of listing, students after the final examination in the mid-term report card, etc. "Let the data in the field of education to promote the teaching" has been gradually recognized by education workers, more and more teachers try to some media (WeChat, QQ, weibo) applied in the daily teaching and combines the fragmentation of students learning habits to improve the teaching effect. It is the main problem of this paper to design the content of the shards learning.

### Summary of Learning from Fragmentation

Relevant theories of fragmentation, as can be traced back to the late 1980 s, some studies of "postmodernism" documented in the literature, it mainly refers to the complete things break into pieces or broken pieces, from the full deduction for broken phenomenon. [1] This explanation can be understood from the Chinese meaning of "fragmentation" itself. In recent years, scholar huang shengmin has introduced the "fragmentation" into the research of communication studies, and defined it as the plurality of social strata, the consumers being subdivided, and the media niche. [2] the spread of the fragmentation speed, main body diversity, wide audience and cycle short, these characteristics influence the learners' learning process, and then the "fragmentation" of new learning style.

Of course, this learning style is inseparable from the changing new technologies and concepts. The definition of "fragmentation learning" : the convenience of new media in the data age, the dispersion of mass information and the randomness of the way of reading, so that learners can acquire knowledge fragmentation; Definition 2: short, flat and fast learning by means of spare time, i.e. knowledge fragmentation is caused by the discontinuities of time. [3] This article mentioned the fragmentation refers to let the students use their spare time to study, the content of learning teachers regularly push, although these learning capacity is small, but the goal is clear and has a certain relevance. Therefore, the process of fragmentation learning is that students "construct" the learning content of teachers' "deconstruction" into their own knowledge system, thus completing the internalization of knowledge.

## the Structure Characteristics of WeChat Platform

**WeChat Profile.** WeChat (wechat) is on January 21, 2011, tencent company launched a instant messaging service for the intelligent terminal of the free application, WeChat support across different communication operators, operating system platform fast send free voice messages through the network, video, images and text. WeChat provide public platform, circle of friends, news feeds, and other functions, the user can through the "shake", "search number" and "near", qr code way add buddy and focus on the public platform, at the same time WeChat share content with friends and share the contents of the user sees to WeChat circle of friends. As of December 2014, the number of mobile Internet users in China reached 557 million, [4] and in December 2016 has reached 889 million monthly active users, which is the mobile messaging software for the largest user group in Asia.

**WeChat Platform Structure.** WeChat platform is divided into two main categories: communication function and public platform. Communication function is mainly used for daily communication, which can be used as a one-to-one chat between friends and friends. It can also form group chat or friend circle, which is similar to QQ. WeChat public platforms are generally divided into three categories: service number, subscription number and enterprise number. The three types of accounts have roughly the same functionality, but the specific objects, message Settings, and account Settings are slightly different. The structure of the WeChat platform is shown in figure 1.

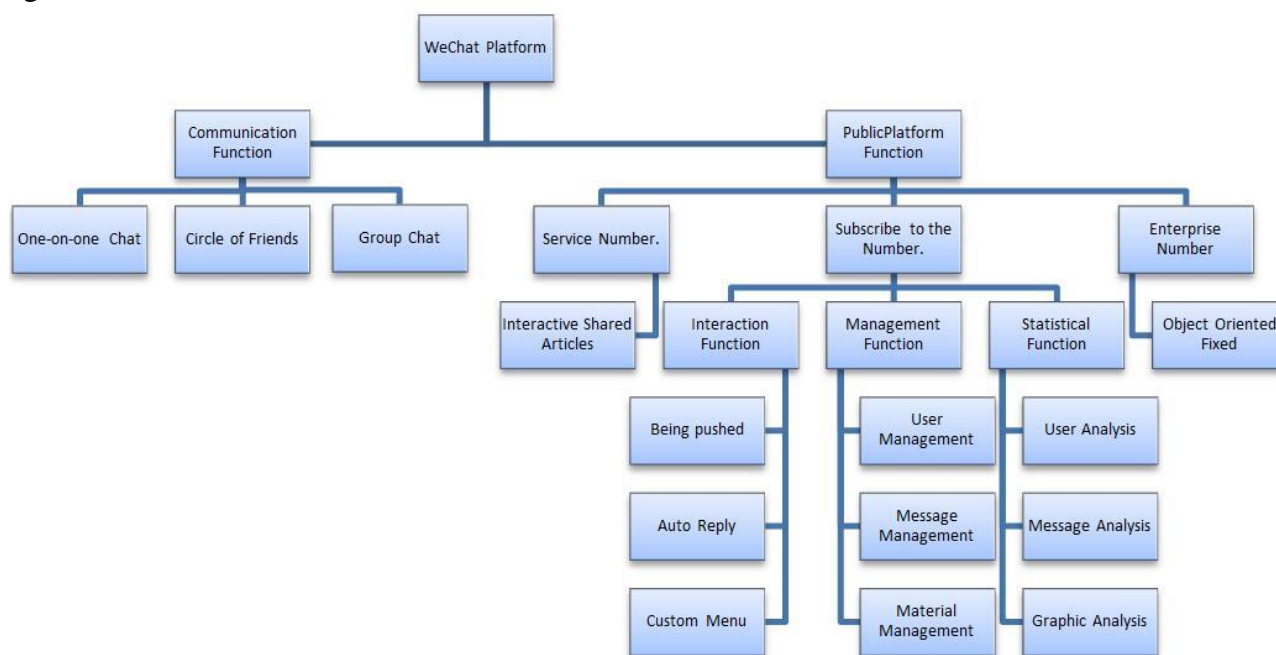


Figure 1.The Structure of the WeChat Platform

**Function Analysis of WeChat Platform.** Belong to the basic function of WeChat communication communication function, users can connect to the Internet under the status of text, pictures, audio and video information, support real-time voice, video intercom and group chat, to achieve the goal of low-cost communications. The function of public platform mainly provides information and information for users, in which the management function module can manage uploaded material resources, concerned users and messages sent. The statistical function module is mainly used to collect the user's activity level, the relevancy of the message and the relevant data of the text message. Interactive function module mainly refers to the manager's message push, automatic reply and custom menu Settings.

## Fragmentation Learning Content Design Process

**Main Theoretical Basis.** Distributed cognitive learning theory is a considering all the factors involved in cognitive activities analysis unit, and it is refers to the cognitive distribution within individuals, between individuals and the media, environment, culture, society and time, etc. [6] Distributed cognition jump out the limitations of the traditional emphasis on individual cognitive function system to the new analysis unit, thought learning environment, learners use of the intelligent tool, the interaction between learners and all learners. It has important inspiration significance to the design of course learning community, and it has a certain influence on fragmentation learning content design.

Multimedia learning cognitive theory is a contemporary American education psychologists, a cognitive psychologist Richard E • Meyer in his book "the multimedia learning", he thought the multimedia learning can make full use of learners' language channel and visual processing and learning materials, thus improve the learner's memory and the ability to understand the material. Meyer has made a lot of experiments on the principles of multimedia design, involving the combination of words and pictures, the influence of irrelevant materials and individual differences. [7] The theory of points out that in the design of fragmented learning content, the consistency of content and expression form should be paid attention to, and the learning resources should be concise and clear, learning time and spatial distribution.

**Fragmentation Learning Content Design.** The design process for the fragmented learning content is shown in figure 2.

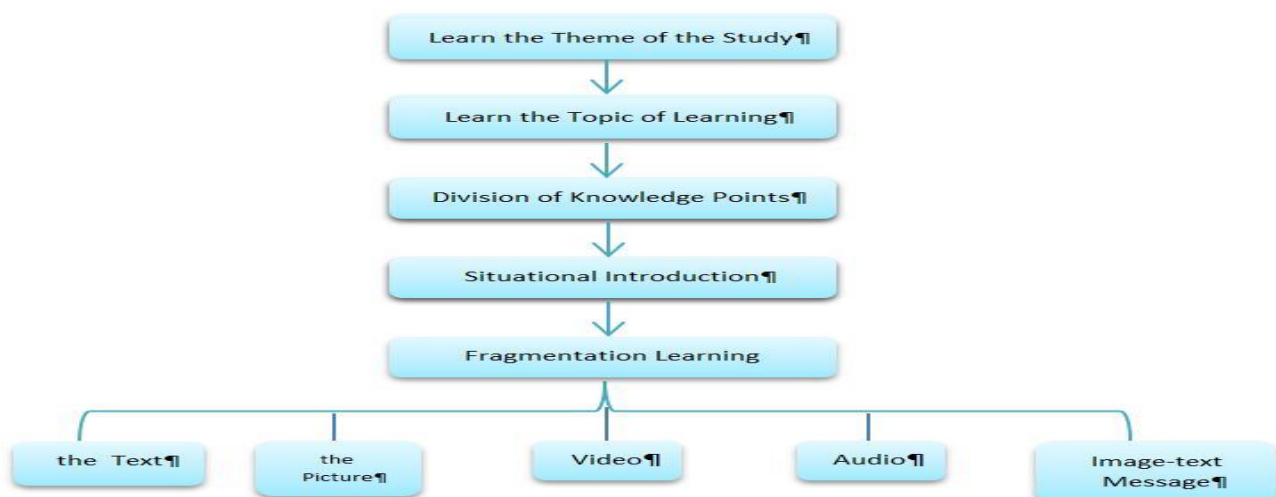


Figure 2. Fragmentation Learning Content Design Drawing

According as shown in figure 2, the author will EXCEL part of the content of the basic computer courses, in accordance with the principle of minimum size is divided into relatively independent but a contact of knowledge, from theme - topic - knowledge point to design three different levels of knowledge, each knowledge point design scene type guide language, and try to be knowledge with practice, so can effectively improve the efficiency of the fragmentation of learning. [8]

Themes range from theme to topic, and different themes can be divided into different topics, depending on the difficulty and depth of knowledge in different topics. Each theme, topic, or knowledge point can be designed in the form of text, pictures, audio, video, or graphic messages. Although the WeChat platform supports a pure text upper limit of 600 words, the description is as simple as possible to reduce the cognitive load of learners. The image is more graphic than text, but the size can't exceed 20M, and the image format can be: bmp, png, jpeg, jpg, gif, etc., suggesting that the image pixel is 900 \* 500 pixels. The video is more direct and personal, and the speech size can be uploaded by the platform no more than 5M and the length is not more than 60 seconds. According to this thinking, I divided the contents of EXCEL in the computer foundation course into 8 themes, 16 topics and 35 knowledge points, as shown in table 1:

Table 1 The Matic Fragmentation Learning Content Design Script

Theme	Topic	Knowledge Point
1. Tabulation based	1.1 Edit the form	1.1.1 frequently used terms
		1.1.2 Input data method
	1.2 Format table advanced skills	1.2.1 auto formats
		1.2.2 custom or use themes
2. Workbook and Worksheet	2.1 Workbook	2.1.1 Basic operation of workbook
		2.1.2 Create a workbook template
		2.1.3 The workbook is hidden and protected
	2.2 Worksheet	2.2.1 Basic operation of worksheet
		2.2.2 Worksheet protection Settings
		2.2.3 Multiple worksheet operations
3. The formula	3.1 effect of formula	3.1.1 The basic concept
	3.2 Use of formula	3.2.1 The reference of the cell
		3.2.2 Formula editing
4. The function	4.1 Introduction to functions	4.1.1 Use of functions
		4.1.2 The difference between a function and a formula
	4.2 Use of functions	4.2.1 The syntax of a function
		4.2.2 Use of common functions
		4.2.3 Use of complex functions
	4.3 Common problems of functions	4.3.1 Function errors and solutions
5. The chart	5.1 Create a chart	5.1.1 Classification of the chart
		5.1.2 The way to create a chart
	5.2 Edit chart	5.2.1 Modify the chart
		5.2.2 Printed chart
6. Data analysis and processing	6.1 Methods of data analysis	6.1.1 The sorting
		6.1.2 The filtrate
		6.1.3 Collect classified
		6.1.4 PivotTable
		6.1.5 Data perspective
	6.2 Arithmetic of data	6.2.1 The combined
7. EXCEL Co-sharing with other programs	7.1 Shared data	6.2.2 Simulation analysis and calculation
		7.1.1 Share, revise, comment
	7.2 Simple application of macros	7.1.2 Share data with other programs
		7.2.1 The use of macros
8. EXCEL Integrated case	8.1 Comprehensive case analysis	7.2.2 The use case of macros
		8.1.1 Comprehensive case analysis demonstration

As mentioned above, the voice format can be: mp3, wma, wav, amr, etc. Video is on the basis of the former three more abundant resources directly. It can be used to demonstrate the operation,

video recording using "111 model" about a case, using a principle, and it is concluded that a summary, at the same time pay attention to the knowledge transfer between. [9] WeChat platform allows video no more than 20M, video format: rm, rmvb, wmv, avi, mpg, mpeg, mp4, etc. Graphic message is fusion of images and text, graphics and text can be divided into single and multi graphic two types, structure of graphic messages for general title author - cover text, single step extraction of the increase of graphic, graphic message text is not more than 600 words.

## Conclusion

WeChat not only can be used for communication, entertainment communication, and can be used for auxiliary teaching practice, compared to Moodle, Blackboard and other conventional network teaching platform is more easy to operate, and good for learners to fragmentation and mobile learning. This article mainly analyzes the fragmented approach to learning, WeChat platform structure, in order to EXCEL in the computer basic course part of contents as sample, this paper expounds the fragmentation of learning content design method, and the fragmentation learning resources how to push through WeChat platform and application process design. In order to integrate the learning contents with the existing knowledge, the learners should form a new knowledge system, and the value of the knowledge can be reflected. [10] The author will be used to measure and study the learning effects of learning content based on WeChat platform.

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