

## Research on Utilization of Online Resources Among Kindergarten Teachers in Rural Areas

YU Xiaoguang<sup>[a],\*</sup>

<sup>[a]</sup>Key Research Institute of Humanities and Social Sciences at Southwest University, Center for Studies of Education and Psychology of Ethnic Minorities in Southwest China, Southwest University, Chongqing, China.

\*Corresponding author.

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### Abstract

After the entry into the online era, the Internet has grown up to be an indispensable part of people’s life and work. This research, through questionnaires and interviews, studies the employment of online resources among kindergarten teachers in rural areas from 12 districts and counties in Chongqing, China. Based on the results of the survey, suggestions will be proposed to improve online resources utilization among countryside kindergarten teachers.

**Key words:** Kindergarten teachers in rural areas; Online resources; Utilization

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### INTRODUCTION

Thanks to the rapid development of information technology, online resources have become more and more diverse and have also become an important part of modern educational resources. They are convenient and sustainable. And as a significant component of teachers’

lives and jobs, it is an important field of computer-assisted education. The promotion of online resources in the field of education is in line with the informatization and reform of education and pedagogy. In 2001, Chinese Ministry of Education issued *An Outline of the Curriculum Reform in Basic Education (in trial)*, which indicates greater efforts will be made for the integration of information technology and curriculum. Nan (2008) proposes both educational theory and philosophy are indispensable in the informatization of education. For instance, while boasting a relatively developed Internet technology, some Western countries like the U.S., U.K., and Germany attach great importance to informatized education as well. Their purpose is to avail their teachers with optimal teaching resources, enable students to learn the knowledge they need and to better the effect of teaching and learning at last (Nan, 2008). In recent decades, traditional education has been developed into multi-media education and online education successively. However, in this transformation, people are also faced with the low efficiency in the employment of online resources. Having studied the employment of online resources among teachers in rural China. Cheng, Wang, and Zhao (2007) discover that most of the interviewed teachers do not evaluate and analyze the online resources while using them. Online resources are used merely for playing the downloaded ones. Tong (2009) investigated the utilization of online resources among elementary and high school teachers in rural areas in China. This investigated group is found chaotic in the use of different media in teaching and out-dated in their educational thought. This is especially true of some senior-aged teachers, who tend to be conservative towards novel teaching resources and often clumsy in using Internet technology (Tong, 2009). Through their analysis of the status quo of utilizing resources of modern distance education in rural elementary and high schools, Wu and Fang (2006) also noticed their low frequency of Internet using in teaching. Most of them are accustomed

to traditional way of teaching, while online resources are only resorted to as an assistance (Wu, 2006). In addition, Zhang and Mou (2013) analyzed the motives of using online resources by empirical study. They conclude that the efficiency of the employment of online resources is determined by many critical factors, such as the advancement of Internet facilities, access to the Internet and teachers' familiarity with the Internet. In accordance with relevant studies, certain prerequisites are to meet before one can seize the opportunities arising from new technologies. Among those requirements, qualified teachers and their full participation shall count (Zhang, 2013). Nevertheless, what elements have influence on the utilization of online resource indeed? What is the relationship among them? Obviously, a clarification of these questions is of great significance to an effective application of online resources.

Online resources pose new requirements for teachers. It now is an essential sign for a qualified teacher and a necessary point of a teacher's competence. Wang and Lü (2006) investigates the utilization of computers among rural teachers in northwestern China and proposes online resources are essential to the improvement of a teacher's competence. However, due to remote geographical locations, under-developed economies and poor Internet facilities, the mastery of Internet technologies of kindergarten teachers in rural areas is of disparity (Wang, 2006). It is a fact that the development of pre-school education stimulates the use of Internet in rural kindergartens; traditional-styled teaching is gradually

converted into multimedia or digitalized teaching. Moreover, many websites specialized in preschool teaching are established and there is even cooperation between kindergartens in China and IBM. Obviously, the further development of informatization improves the utilization of online resources (Zhu, 2013). With Questionnaires, Ping Fan et al. studied the need for Internet training among rural pre-school teachers in Tianjin, China. It is concluded that those teachers are in need of such training, for they are in a low efficiency of using online resources (Ping, 2013). In order to learn their utilization of online resources, this research conducts preliminary exploration by means of interviews and questionnaires to see to it the motive, content, frequency and approach of their use of online resources. With reference to above aspects, I will focus on the following questions: a) Do kindergartens in the rural areas of Chongqing are well-equipped with online facilities? b) To what degree do these kindergarten teachers know about Internet technologies? c) Can they make full use of online resources?

## 1. RESEARCH DESIGN

### 1.1 Scope of Research Sample

650 teachers (see Table 1) from 94 kindergartens in 12 districts and counties in Chongqing are selected as research samples for the questionnaire. 72 of them are picked at random for the interview (see Table 2). The details are presented in the following Tables.

**Table 1**  
The Basic Information of Research Samples for Questionnaires

	Options	Number of people	Percentage point
Gender	Male	24	3.7
	Female	626	96.3
Age	18-29	240	36.9
	30-40	235	36.2
	41-50	175	26.9
Year of teaching	Less than 2 years	121	18.6
	2-5 years	286	44.0
	More than 5 years	243	37.4
Internet Skills	Competent	185	28.5
	Not skilled	298	45.8
	Incapable	167	25.7

**Table 2**  
The Basic Information of Research Sample for Interviews

Categories	Small-sized kindergarten affiliated to certain institutions	Independent public kindergarten	Independent private kindergarten	Total
Male	3	2	1	6
Female	26	31	9	66
Total	29	33	10	72

### 1.2 Design of Questionnaire

According to the analysis of relevant literature, it is learned that factors like the understanding of the Internet, awareness of and degrees to utilise online

resources, frequency of use and ability of online retrieval have impacted on the results (Feng, 2009). In light of these findings, I compiled a questionnaire entitled

“Questionnaire about the Utilization of Online Resources among Kindergarten Teachers in Rural Chongqing”. With factors like the motive, content, frequency and approach of their use of online resources as the first grade indexes,

the tested reliability is 0.92. There are 36 questions from the 4 sections in the questionnaire. For details of the questionnaire, please refer to Table 3.

**Table 3**  
**The Basic Structure and Second-Grade Indexes of the Questionnaire**

Dimensions	The number of questions	The second-grade indexes
Basic information about questionnaire takers	5	Basic information about kindergarten teachers in rural Chongqing and their mastery of internet knowledge and skills
Motives of employing online resources	6	The purposes of and interests in surfing the Internet, their purposes of utilizing online resources
Contents of online resources utilization	9	The form of online resources, the content of online resources employed frequently by teachers
Frequency of the use of online resources	8	The time and frequency of getting access to the Internet, the frequency of applying online resources
Channels of utilizing online resources	8	The modes, environments and approaches of implementing online resources

### 1.3 Process of Research

The theme of this study is “the utilization of online resources”. Initially, I interviewed kindergarten teachers in rural Chongqing, so as to collect preliminary information about their use of online resources. On this basis, questionnaires were offered to them for a further analysis. All the questionnaires were directly handed out to and collected from on-site kindergarten teachers in rural areas from 12 districts and counties in Chongqing. Altogether, 650 questionnaires were given out and the recovery rate was 100%. After sifting all these questionnaires and deleting unfinished ones, 621 pieces of questionnaires were kept as effective, with an efficient recovery rate of 95.5%.

## 2. STATISTICAL ANALYSIS

### 2.1 The Motives of Using Online Resources

Motive is a major factor of successful use online resources for kindergarten teachers in rural areas. It could give them strong interests or desires for knowledge to explore resources online and have them internalized. From a macro-perspective, motives can be divided into external and internal motives (Yao, 2012), that is, subject’s expectation and need. External motive refers to learner’s negative learning driven by external stress or expectation, such as the need of teaching, training, consultation, rural and urban communication, influence from colleagues, etc. Internal motive, in contrast, is a psychological condition to seek improvements after one realizing a lack of capability in certain aspects, namely learning proactively, including personal interests, horizon broadening and spiritual needs (Yao et al., 2012).

It is found that there is an inadequate motive to employ resources online among kindergarten teachers in rural Chongqing, most of which is under 50%. 76% of them have a need to utilize online resources for teaching. 52% of them have a need for training, and 80% for personal interests. However, the number of teachers who utilize

online resources to expand horizons and satisfy their spiritual demands is far less. Only 10% of them are rated for the broadening of horizons and obtain more knowledge, and 5% for spiritual comforts. A possible explanation for this could be that the underdeveloped economic conditions, teaching facilities and information technologies are backward and inadequate in rural areas. Thus, there is also a shortage of promotion for online resources, leading to teachers’ fewer interests in online resources accordingly, especially in terms of teaching and training. This exemplifies that, on one hand, kindergarten teachers in rural Chongqing hold a passive motive toward the application of online resources, only to meet the demand for teaching and training; on the other hand, the result implies that many teachers utilize online resources out of their individual interests. There is an obviously insufficient motive for them to enlarge horizons or to explore new knowledge through applying online resources.

### 2.2 Contents of the Use of Online Resources

The content of online resources is diverse, substantial and rapidly-upgraded. There are various types of online resources: website resources like texts, tables and pictures; audio resources like online music and other recorded materials; additional resources like video documents and multimedia courseware (Gao, 2012). In terms of kindergarten teachers in rural Chongqing, the greater part goes to the browsing of texts, pictures and websites, taking 65% of the total. 32% use the Internet to listen to music and watch videos. However, only 23% of them apply multimedia courseware. The ultimate reason is that there is a lack of well-equipped Internet facilities for kindergarten teachers in rural Chongqing. On the other hand, they are not versed in online technologies and resources. In view of this, it could be concluded that their low efficiency use of online resources might result from the singularity of the online content being utilized, that is, to use the Internet merely for browsing websites for teaching materials. In addition, the efficiency of

using the online materials found is low as well. Most of those materials are only used once unilaterally; and the materials retrieved might not be thorough, too. Therefore, kindergarten teachers in rural Chongqing need to change their values and perspectives toward online resources. They should learn how to apply online resources and expand their scopes of utilizing it, so as to employ online resources diversely and enhance kindergarten education rural areas.

### 2.3 Frequency of the Use of Online Resources

The frequency of online resources utilization among kindergarten teachers in rural areas refers to the times they get access to online resources within a certain period of time. It is discovered that their familiarity of Internet using is not enough. Only 28.5% of them are skilled at computer and online operations. And 25.7% of them are not even capable of using the Internet. For those who can implement online resources, the frequency of their online resources employment is low. Only 15% of these teachers make use of online resources frequently. Among the rest, 50% use online resources at times, 31% do this occasionally and 4% never. This means that kindergarten teachers in rural Chongqing are highly unfamiliar to computer, and their frequency of Internet using is low accordingly.

During the interviews, it is noticed that due to the inconvenient access to the Internet, many of them would search for a large pile of materials for a single time; and some of them may ask their colleagues to retrieve materials online and share them with one another. In light of this, we can decide that in a rapidly-evolving online epoch the frequency of online resources employed by rural kindergarten teachers in Chongqing is relatively low. On one hand, this is because some senior kindergarten teachers in rural areas, due to the relatively old-fashioned perceptions they hold, do not or are unable to employ online resources and are reluctant to accept new resources and technologies. On the other hand, technological constraints would prevent some of them from getting access to the Internet. In the meantime, poor Internet facilities, such as low network speed and no prompt repair for online bugs, may also prove to be a hindrance (Chen, 2007). In a word, a variety of factors, including technological constraints, lack of online facilities, scant understanding of the Internet and other factors, results in the low frequency use of online resources among kindergarten teachers in rural Chongqing.

### 2.4 Channels of the Use of Online Resources

It is found that main channels of educational resources for kindergarten teachers in rural areas are textbooks, televisions, radios, natural and online resources, among which online resources account for 1/3. Textbook proves to be the main source of their teaching. However, as online resources account for 31% in spite of its abundance

and rapid updating, it is safe to claim that online resources are not popularly utilized in rural areas. The channels for Internet use could not be said diverse and few of them can have access to the Internet in kindergartens. The fundamental reason for this is that online resources are scarce and infrastructures in these areas are not well installed. In the meantime, kindergarten teachers in rural areas have much reliance on textbooks. Hence a negligence of online resources. For instance, teachers of an independent kindergarten at a remote town in Chongqing rarely utilize online resources. All in all, channels for kindergarten teachers in the countryside to employ online resources need to be diversified. In addition, kindergartens also cannot provide well-equipped facilities for their teachers. These factors, resulting from backward online technologies, lead to an underemployment of online resources in rural areas. Incomplete equipments also hinder kindergarten teachers from a diverse access to the Internet.

## CONCLUSION

From the above analysis, we can conclude that the standard of online resources utilization among kindergarten teachers in rural Chongqing shall be enhanced, as online resources are abundant and diverse, yet these kindergarten teachers have inadequate motives and desires to use online resources; contents of using online resources are not diversified and the efficiency is low; and the frequency of the application of online resources needs to be increased and only a few channels are available for them.

Due to the present situation, some advices could be considered. a) Enhancing the network facilities in rural kindergarten by increasing the financial support from government agencies. b) Improving the awareness of utilizing online resources by promoting relative training. c) Strengthening Strengthening the capacities of ICT for rural kindergarten teachers.

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