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A Comparison of Media Literacy in Urban and Rural Middle School Students

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In this paper, the authors compared the media literacy ability of middle school students in urban and rural areas of Hunan, China. First, the authors designed a questionnaire, based on the scales of media literacy from Yasushi GOTOH (2006), and distributed it to an urban middle school and a rural middle school to identify the diversity in media literacy abilities of middle school students in these areas. Results showed that urban school students are better than rural school students in using media, skills utilization, attitudes and critical thinking skills. Moreover, the authors designed another questionnaire to identify the reasons why there is diversity from the characteristics of family and school. Based on the results, the authors recommend several proposals to improve the situation.

Keywords: media literacy, media education, middle school students, urban school, rural school

Introduction and Literature Review

Currently media literacy is a necessary and important ability needed to function in today's digital society. The definition of media literacy has changed throughout the years, depending on the situations related to media use in society. According to Mizukoshi (1999), media literacy is a complex ability where humans not only can critically read information, received from media, but also can output information precisely and communicate efficiently with others. Nakahashi (2014) stated that media literacy includes: media reusing ability, media understanding ability, media reading ability, critical thinking ability, expression ability by media, communication ability by media and ability to make proposals through media.

From these theories, media literacy is a necessary and significant ability for people living in the digital generation. To cultivate media literacy, students need to use media and receive media education.
In China, media education began in 1990. According to Shao (2006), media education is the progress of educating students on how to use media, which aims to cultivate media literacy. However, there is no clear requirement for curriculum for middle schools in China. At present, there is only "Information Technology" in middle schools, which teaches students how to use the computer.

In addition, students use many kinds of media to receive and transmit information in everyday life, not only in urban areas but also in rural areas of China. However, current research shows that there is a gap in media use based on economic factors. For example, according to the data from China Internet Network Information Centre, the number of IPv4 in the eastern areas is 1.6 times that of the western areas. Moreover, there are differences in teachers' views about media education. This results in different levels of media literacy ability when students use media in urban and rural schools.

In this paper, the authors will identify the differences, and why they are differences in media literacy of students in urban and rural areas.

Purpose and Methods

Gotoh (2006) designed scales to evaluate media literacy of students who are in different stages from primary to undergraduate students. He stated that media literacy is the ability where people can make flexible use of media and

use critical thinking skills based on their media knowledge. According to his proposal, media literacy has four component parts, which are the skills of media utilization, critical viewing while web browsing, preconception to media and positive attitude. In addition, he designed scales to evaluate each part of students' media literacy, in order to determine the development of students' media literacy.

However, in the authors' opinion, although in the same stage, students' media literacy may contain gaps due to the different media used. Therefore, while Gotoh's research focused on elementary to university undergraduate students, this paper will focus on secondary students in rural and urban areas.

The purpose of this research is to identify two issues related to the differences in media literacy, and why they are different. First, the authors designed a questionnaire, based on the scales from Gotoh (2006), and distribute it to an urban middle school and a rural middle school via a website in September 2016. The purpose of this questionnaire was to identify the diversity in media literacy of middle school students between rural and urban areas. Then, the authors designed a questionnaire to examine why there are differences from two characteristics: 1) the factor that every student's learning environment is similar, for example curriculum and the number of class; 2) the factor that every student's living environment is different. The content of the two questionnaires are shown in Table 1 and Table 2.

Table 1.
Component Parts of Questionnaire 1

Category	Content		Items
Target attribute	Location, grade, gender, student ID		1-4
Media using	Newspaper		5-8
	Radio		9-14
	Television		15-18
	Internet		19-25
	Telephone		26-28
Media literacy	Skills of media utilization		29-36
	Positive attitude		37-42
	Critical viewing skills	CVS direction - web	43-48
		CVS direction - media	49-54
		CVS skill	55

Table 2.
Component Parts of Questionnaire 2

Category	Content	Items
Target attribute	Location, grade, gender, student ID	1-5
Family condition	Income, relationship	6-8
Media using	Frequency of media use	9-11
Guardian information	Relationship with target, educational background, occupation, view about children using media	12-23
School information	Construction of curriculum, frequency, content, methods, place	24-28

In contrast, the questionnaires showed only students information and opinions. In order to identify the perspective of teachers, the authors interviewed two teachers in September 2016, one is from the urban school, and one is from the rural school. The content of the interviews included the condition of school equipment, educational background of teachers, views about children using media, and views about media education for middle school students.

Results - Diversity of Media Literacy

The authors distributed Questionnaire 1 to 220 students in the rural school and 240 students in the urban school. The valid questionnaires received were 196 from the rural school and 211 from the urban school.
The authors used t-test and cross-tabulation to analyze the data. According to the result, the authors found that the diversities between rural and urban school exits in these three aspects.

1. Diversity of media use

Table 3 shows that 91.33% of rural school students use television, but internet users were only 36.73, while 82.94% of urban school students are internet users.

Table 3.
Media Using by Location

(%)	YES		NO	
	Rural	Urban	Rural	Urban
Newspaper	38.27	51.66	61.73	48.34
Radio	19.90	38.39	80.10	61.61
Television	91.33	83.89	8.67	16.11
Internet	36.73	82.94	63.27	17.06
Telephone	88.27	96.68	11.73	3.32

The types of media used also differed. Figure 1 shows that the number of students using two kinds of media was highest, with 37.76% in rural school students. In contrast, in urban school students, the highest use included three types of media. Moreover, almost 90% students use more than 3 kinds of media in urban school; while only 50% students use more than three kinds of media in rural school. (Figure 1.)

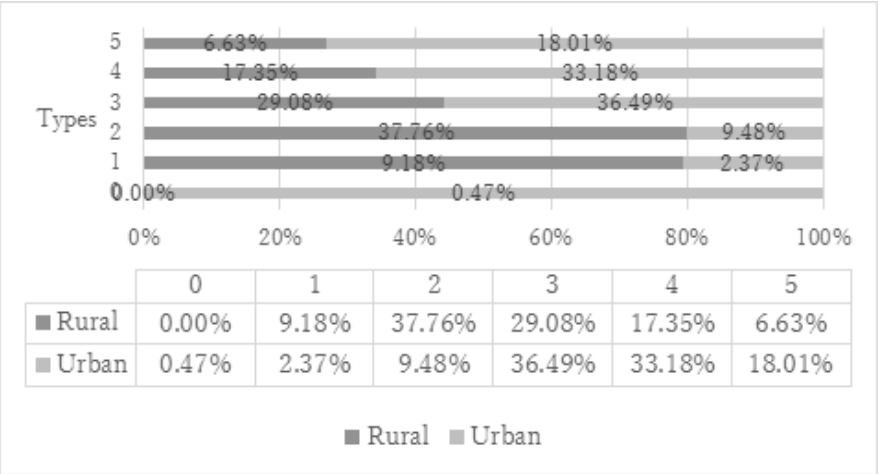


Figure 1. The Numbers of Media Students Using

In addition, Figure 2 shows that the differences between computer and smartphone, which students use to surf the internet, is markedly higher in rural school. 69.41% students use smartphone and 30.59% students use computer. However, the difference is not as great in urban school students. (Figure 2.)

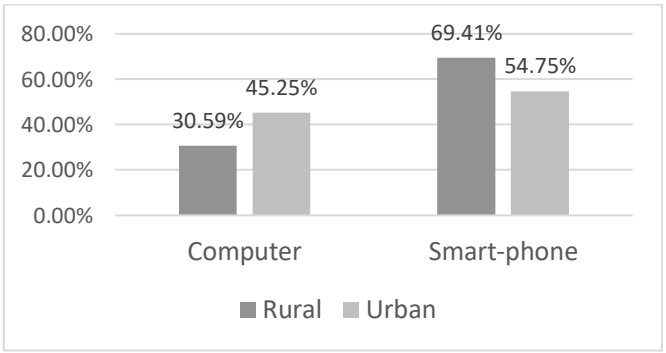


Figure 2. Media that Students Use to Surf the Internet

According to Miyada (2001), high-literacy groups usually use computers, while, low-literacy groups tend to use television. In regards to data related to using materials when surfing the internet, the low literacy group had a tendency to use the smartphone. Based on the data collected, the authors noted that students in the rural school showed the feature of the low-literacy group, while students in the urban school showed the feature of the high-literacy group.

2. Diversity of media literacy

In order to identify diversity among students in different grade levels, Gotoh (2006) calculated scores based on student answers, and compared scores among elementary, junior, senior, and undergraduate by t-test. The authors utilized this method, and analyzed the data between rural school and urban school students. Results are shown in Table 4.

Table 4.
Results of T-Test

		M	SD	t-score
Skills of media utilization (28 point)	Rural	20.61	4.03	11.12***
	Urban	25.10	4.10	
Positive attitude (25 point)	Rural	21.99	3.35	-5.31***
	Urban	23.63	2.89	
CVS direction scales -web (20 point)	Rural	17.40	4.92	2.28*
	Urban	16.31	4.71	
CVS direction scales -mass media (25 point)	Rural	17.30	2.45	.43n.s. (p=.67)
	Urban	17.41	2.97	
CVS skill scale (4 point)	Rural	1.62	.69	5.17***
	Urban	2.06	1.02	

*$p<.05$ **$p<.01$ ***$p<.001$

Table 4 showed the diversities in Skills of media utilization, Positive attitude and CVS skill.

In order to further identity diversities in more detail, the authors analyzed each multiple-choice question of Skills of media utilization and Positive attitude parts, omitting CVS skill part as the question about CVS skill is an essay question. Results showed that 1) urban school students operated the internet and used multimedia to solve everyday problems better than rural school students; 2) urban school students had better sense of satisfaction when using media than rural school students; 3) urban school students were more curious about what they found on the internet than rural school students; 4) urban school students had better sense of critically reading information than rural school students.

Results- Reasons of diversities

The authors distributed questionnaire 2 to the same students as questionnaire 1 in the rural and urban school. The valid questionnaires received were 167 from the rural school and 190 from the urban school. According to the analysis, the authors identified reasons of diversities from family and school characteristics.

Family Characteristics

As for family side, the authors identified the relationships among income, media environment, guardian, and family education with media literacy of students.

Income. Table 5 shows that family income of urban school students is higher than rural school students. Moreover, Figure 3.1 and Figure 3.2 show that when Skills of media utilization score and Positive attitude score are higher, family income is also higher. Therefore, the authors considered family income as one of reasons for the differences in media literacy.

Table 5.
Income of Nuclear Families

	<1000RMB	1000-5000RMB	5000-10000RMB	10000-15000RMB	>15000RMB	Total
Urban	3(1.8%)	57(34.13%)	71(42.51%)	18(10.78%)	18(10.78%)	167
Rural	36(18.95%)	131(68.95%)	18(9.47%)	4(2.11%)	1(0.53%)	190

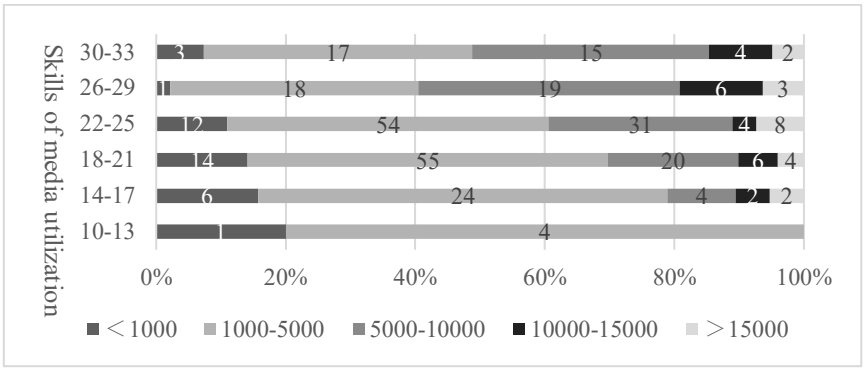


Figure 3.1 Relationship between Skills of Media Utilization and Income

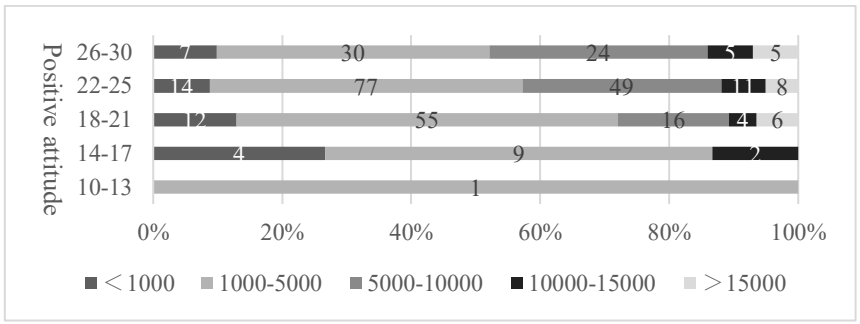
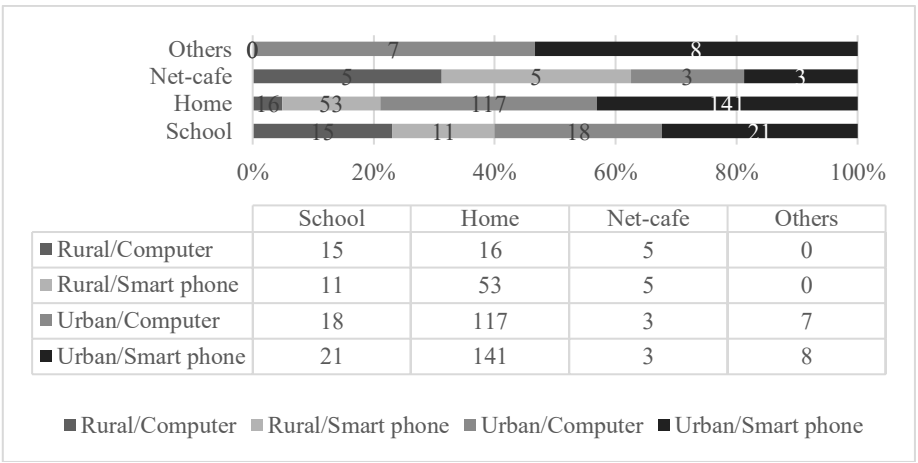


Figure 3.2 Relationship between Positive Attitude and Income

Family Media Environment. Figure 4.1 shows that urban students used the internet more often at home than rural students. Figure 4.2 shows that more students own their own phone in the urban school than in the rural school. Moreover, according to Figure 4.3, students, who use the internet at home, use the internet more frequently than ones who use the internet at school or at a net-café. Therefore, the authors concluded that the family's media environment could affect the frequency of media use.



	School	Home	Net-cafe	Others
Rural/Computer	15	16	5	0
Rural/Smart phone	11	53	5	0
Urban/Computer	18	117	3	7
Urban/Smart phone	21	141	3	8

Figure 4.1 Place of Surfing the Internet

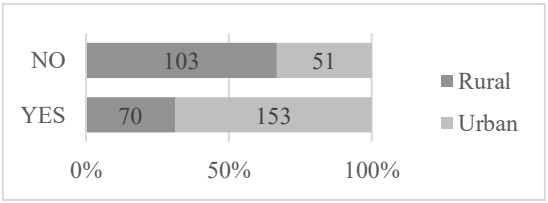
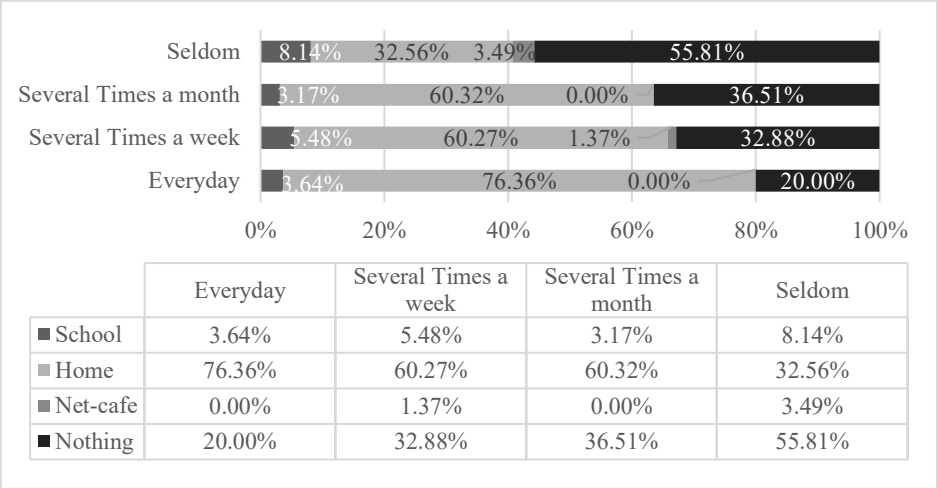


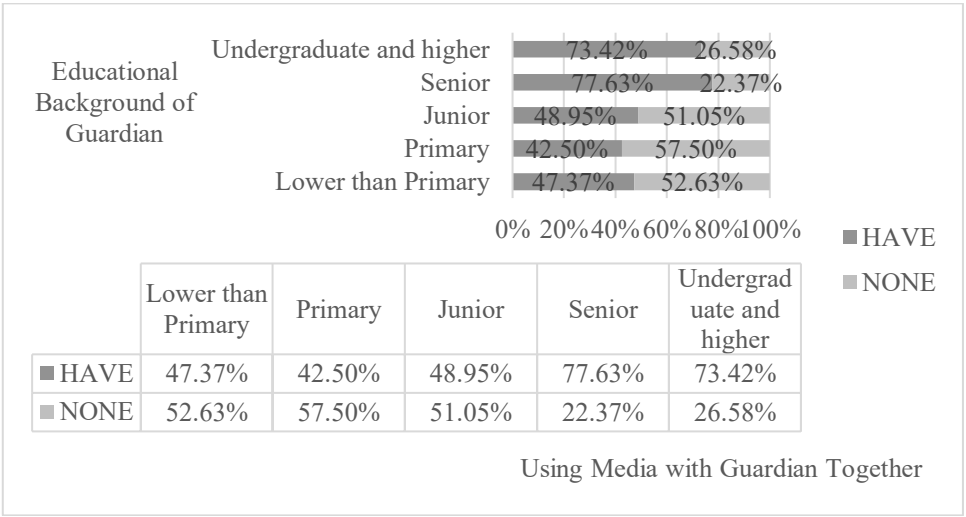
Figure 4.2 Own a Phone or Not



	Everyday	Several Times a week	Several Times a month	Seldom
School	3.64%	5.48%	3.17%	8.14%
Home	76.36%	60.27%	60.32%	32.56%
Net-cafe	0.00%	1.37%	0.00%	3.49%
Nothing	20.00%	32.88%	36.51%	55.81%

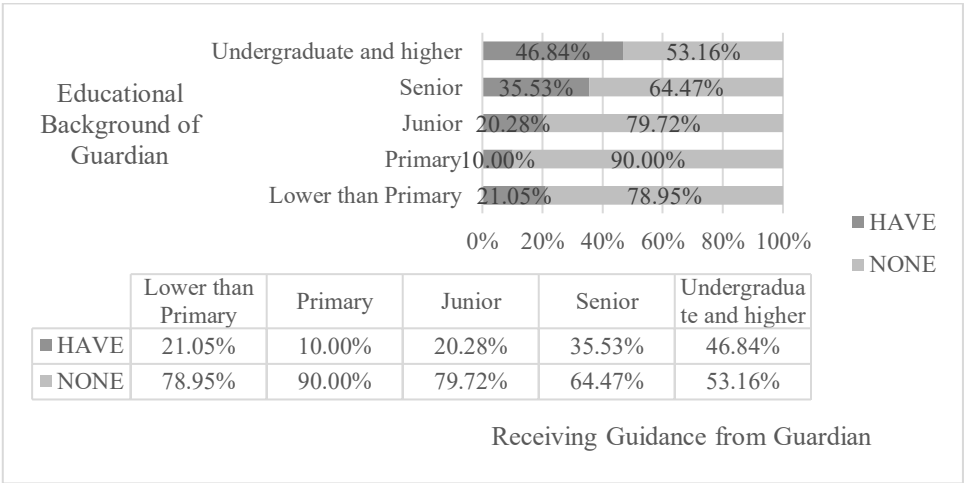
Figure 4.3 Relationship between Place and Frequency of Surfing the Internet

Ability of guardian. Figure 5.1 and Figure 5.2 show that when the educational background of the guardian was higher, students have more experience using media and receiving guidance from the guardian. Therefore, the authors thought that ability of guardian also affected use of media by students.



	Lower than Primary	Primary	Junior	Senior	Undergraduate and higher
HAVE	47.37%	42.50%	48.95%	77.63%	73.42%
NONE	52.63%	57.50%	51.05%	22.37%	26.58%

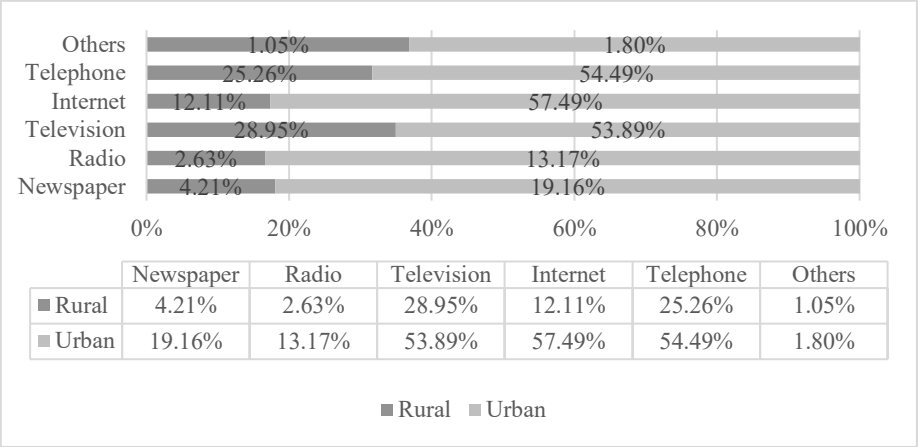
Figure 5.1 Relationship between Educational Background of Guardian and Using Media with Guardian



	Lower than Primary	Primary	Junior	Senior	Undergraduate and higher
HAVE	21.05%	10.00%	20.28%	35.53%	46.84%
NONE	78.95%	90.00%	79.72%	64.47%	53.16%

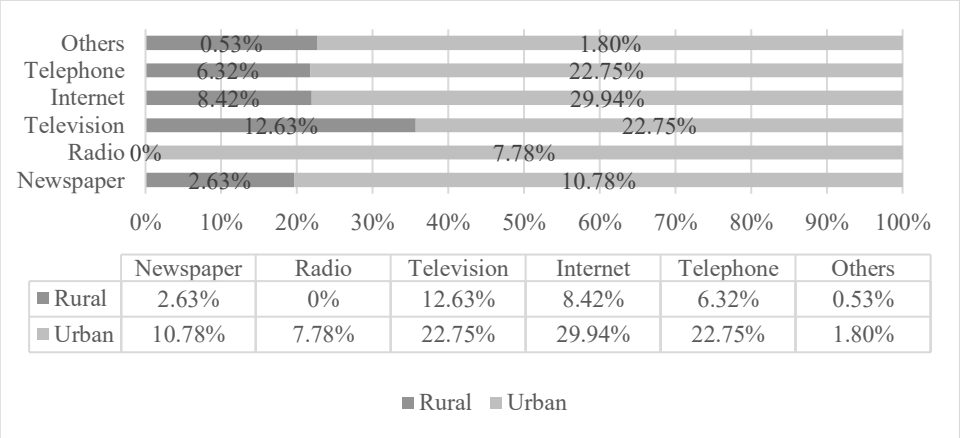
Figure 5.2. Relationship between Educational Background of Guardian and Receiving Guidance from Guardian

Family education. Figure 6.1 shows that urban school students use more types of media with guardians than ones in rural school. Figure 6.2 and Figure 6.3 show that urban school students receive more guidance from guardians than rural school students. In other words, students in the urban school learned more about a greater variety of media than those in the rural area. Therefore, the authors suggest that family education is another reason which caused the diversities between rural and urban students.



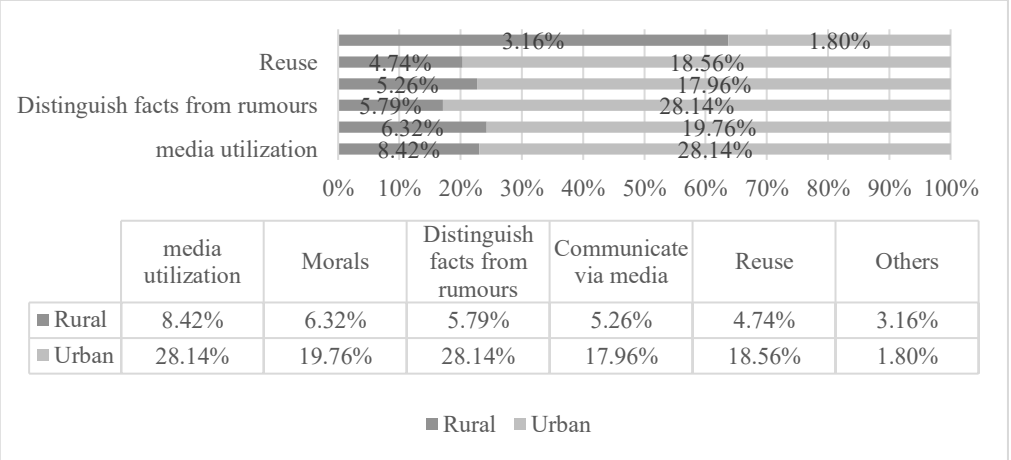
	Newspaper	Radio	Television	Internet	Telephone	Others
Rural	4.21%	2.63%	28.95%	12.11%	25.26%	1.05%
Urban	19.16%	13.17%	53.89%	57.49%	54.49%	1.80%

Figure 6.1 Media Usage with Guardian



	Newspaper	Radio	Television	Internet	Telephone	Others
Rural	2.63%	0%	12.63%	8.42%	6.32%	0.53%
Urban	10.78%	7.78%	22.75%	29.94%	22.75%	1.80%

Figure 6.2 Types of Media when Receiving Guidance from Guardian



	media utilization	Morals	Distinguish facts from rumours	Communicate via media	Reuse	Others
Rural	8.42%	6.32%	5.79%	5.26%	4.74%	3.16%
Urban	28.14%	19.76%	28.14%	17.96%	18.56%	1.80%

Figure 6.3 Content of Guardian Teaching

School Characteristics

According to the interviews with the two teachers, the authors identified three points which are different between rural and urban schools. In the authors' opinion, these differences are also the reasons which caused diversities between rural and urban students.

Equipment. Each classroom in the urban school has a radio system, computer, and projector. However, in the rural school, computers and projectors were installed in March 2016. Besides, there are three computer classrooms and each has 60 computers which can support each student in the "Information Technology" class in the urban school. In contrast, in the rural school, although the one computer classroom with 60 computers could support every student in class, actually almost half of the computers were damaged and could not be used. (Table 6.)

Table 6.
Equipment Condition in Two Schools

Equipment	Rural school	Urban school
Radio system	◎	◎
Computer	○	◎
Projector	○	◎
Number of computer rooms	1	3

Teachers. There are four classes in each grade in the rural school. However, only one teacher, who graduated with a degree in physics, was teaching "Information Technology" in the entire school. There is no teacher who graduated from informatics or communication and media studies at present in the rural school. Although this teacher attended a media education training program for teachers, the content of the training program included computer operation and utilization in teaching only. Moreover, according to this teacher, media education goal for students is to help students pass the eighth grade information technology examination, which is conducted by the Hunan Province Department of Education.
In contrast, there are eight classes in each grade in the urban school. Each grade has two teachers, who graduated from informatics, teaching "Information Technology". Furthermore, the content of subject included not only media utilization, but also critical thinking about information received from media.

Subject. As for the frequency of information technology class, students at both schools attended one period per week. However, because of the damaged computers, students in the rural school could attend class once in two weeks.

Moreover, there are differences existing in the content of this subject. In the rural school, the content of the subject includes computer operation and media utilization only, while in the urban school, the course includes morals and distinguishing fact from rumors.

Discussion

Based on the results of this research, the authors believe that rural school can improve the present condition to develop students' ability better by adapting the following four points:

1) Increase the opportunities for students in rural schools to explore and use media, and at the same time provide guidance on the appropriate use of media. As the results show, most rural school students use media because they have these media, and are not being taught by teachers or guardians. Therefore, the first thing which needs to be done, is increasing the opportunities for students to explore media and provide guidance.
2) Maintain the existing equipment of the rural school. The results showed that half of the computers are damaged in the rural school. According to the teacher said, at present official and unofficial organizations support rural schools. However these organizations provide new equipment without maintaining the equipment. Once the equipment is damaged, students must wait for support to be provided. Unfortunately, this support does not occur very frequently. Therefore, maintaining the existing equipment is also necessary.
3) Change the curriculum and method of teaching the subject. More importantly, is to teach media literacy classes. In reality, the current "Information Technology" class is not a media literacy class. Considering the situation of Hunan Province, adding a new subject in middle school is very difficult. Changing the content and methods of an existing subject is more practical.
4) Train teachers with workshops. In order to provide improved classes, teacher training is essential. Furthermore, the present training program included computer operation and media utilization only.

Therefore, there is a need to change the content of program, adding media literacy and teaching methods for media education.

Conclusion

The authors identified the diversities between rural and urban school students through questionnaires, interviews and by using Gotoh's (2006) scales. Table 7 shows the diversities in detail. The author want to emphasize that rural school students showed television dependence, while urban school students showed internet dependence.

As for the reasons of diversities, the authors identified from two perspectives: 1) Family: income, media environment, ability of Guardian, and family education; 2) School: equipment, teachers, and subject.

Based on the results, the authors advised Hunan Province to improve media education of rural area from four points. However, these four points are preliminary suggestions based on this research. Further research needs to be conducted to provide more detailed plans on how to implement and improve media literacy classes in middle schools.

Table 7.
Comparison of Rural and Urban

Category	Content	Comparison
Media using	Television dependence	Rural>Urban
	Internet dependence	Rural<Urban
Skills of media utilization	Utilization on internet	Rural<Urban
	Using multimedia to solve problems	Rural<Urban
Positive attitude	Sense about necessary of plural media using	Rural ≈ Urban
	Sense of satisfaction when using media	Rural<Urban
	Curiosity	Rural<Urban
	Sense about critically reading information	Rural<Urban
Critical view skills	CVS direction	Rural ≈ Urban
	Skills	Rural<Urban

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