

# Sharing and Adaptation of Open Educational Resources: Exploring the Teachers' Attitude of The Open University of Sri Lanka

**Jeetendra Pande**

Visiting Fellow- The Open University of Sri Lanka  
and  
Assistant Professor- Computer Science  
Uttarakhand Open University, Haldwani, India

**Alka Singh**

Email: [jpande@uou.ac.in](mailto:jpande@uou.ac.in)  
Assistant Professor, Central Institute of Educational Technology, National Council for  
Educational Research and Training, Sri Aurobindo Marg, New Delhi-110096, India.

**Shironica P. Karunanayaka**

Email: [edu.alkasingh@gmail.com](mailto:edu.alkasingh@gmail.com)  
Professor in Educational Technology; Dean/Faculty of Education  
The Open University of Sri Lanka, Nawala, Nugegoda, Sri Lanka.  
Email: [spkar@ou.ac.lk](mailto:spkar@ou.ac.lk)

## ***Abstract***

The Open Educational Resource(OER) is based on culture of sharing and learning, encouraging the teachers to adopt existing OER, adapt and share with others to keep up the cycle of collaboration and continuous improvement. Understanding teachers' attitude towards the use of OER and associating demographic data viz. gender, age and teaching experience may help to recognize the issues and potential that impact OER take-up. The major objectives of the present paper is to study the teacher's attitude towards OER including sharing and adaptation of OER at The Open University of Sri Lanka(OUSL). In addition, the influence of gender, age, and teaching experiences on sharing and adaptation of OER have been studied which will help in undertaking initiatives to promote OER and provide training to the teachers with appropriate planning. The paper included the interaction between demographic variables of teachers of OUSL and their perception towards OER to provide of path of OER uptake in ODL system in Sri Lanka.

The questionnaire was used to collect the data and there were 43 respondents of OUSL considered for analysis. The data have been analysed quantitatively by implying statistical measures. The findings indicates that Teachers of Sri Lanka are encouraged to share OER for their professional enhancement and personal satisfaction. It is interesting to find that majority of them are motivated to share and contribute to OER for dissemination of ideas in a knowledge

society. The results showed that Age, gender and teaching experience of OUSL teachers and their interaction have no significant influence on sharing of OER. Although, Gender has influence on adaptation of OER but age and gender interaction do not significantly influence the adaptation of OER by higher education teachers of OUSL.

**Keywords:** Open Educational Resources (OER), Attitude, Adaptation, Sharing resources.

## **Introduction**

Open Educational Resources (OERs) has become a core component of higher education in Open and Distance Learning (ODL) settings. OER has been defined by UNESCO in 2002 for the first time in a forum on the Impact of Open Courseware for Higher Education in developing Countries. OER, are digital or any other form of resources for teaching, learning and research available in public domain with an open license which authorize the users or creators to freely use, adapt, redistribute with no or limited restrictions. The degree of usage, sharing and contribution to OER varies as per the creative commons licencing system.

In the current scenario of COVID-19 pandemic, when the regular educational institutions have closed face-to-face classes, the potential of OER emerged in a big way as all the teaching learning process are taking place online. In such a condition, the OER uptake is important at global level for maintaining quality education.

## **Objectives of the Study**

The objectives of the study are stated below:

1. To study the OUSL teachers' attitude towards Sharing of OER
2. To study the OUSL teachers' attitude towards Adaptation and Use of OER
3. To study the influence of Age of Teachers, Gender and their interaction on the sharing of OER by teachers of OUSL
4. To study the influence of Gender, Teaching experience and their interaction on the sharing of OER by teachers of OUSL
5. To study the influence of Age of Teachers, Gender and their interaction on the Adaptation and Use of OER by teachers of OUSL
6. To study the influence of Gender, Teaching experience and their interaction on the Adaptation and Use of OER by teachers of OUSL

## **Hypotheses of the Study**

The objectives of the study are stated below:

1. There is no significant influence of Age of Teachers, Gender and their interaction on the sharing of OER by teachers of OUSL
2. There is no significant influence of Gender, Teaching experience and their interaction on the sharing of OER by teachers of OUSL

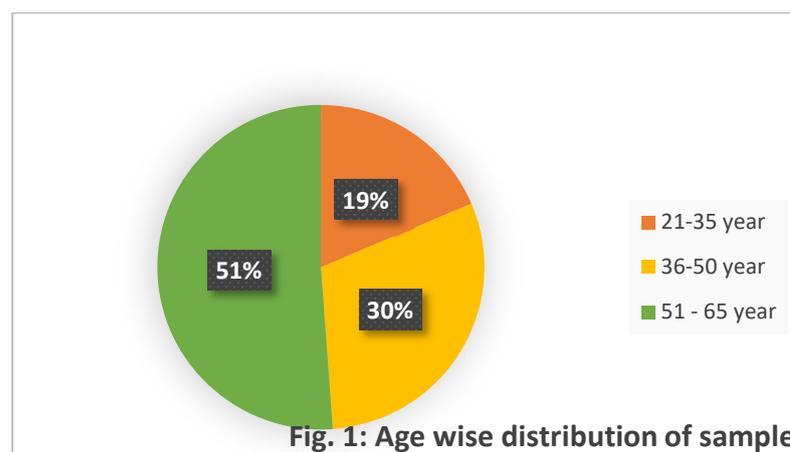
3. There is no significant influence of Age of Teachers, Gender and their interaction on the Adaptation and Use of OER by teachers of OUSL
4. There is no significant influence of Gender, Teaching experience and their interaction on the Adaptation and Use of OER by teachers of OUSL

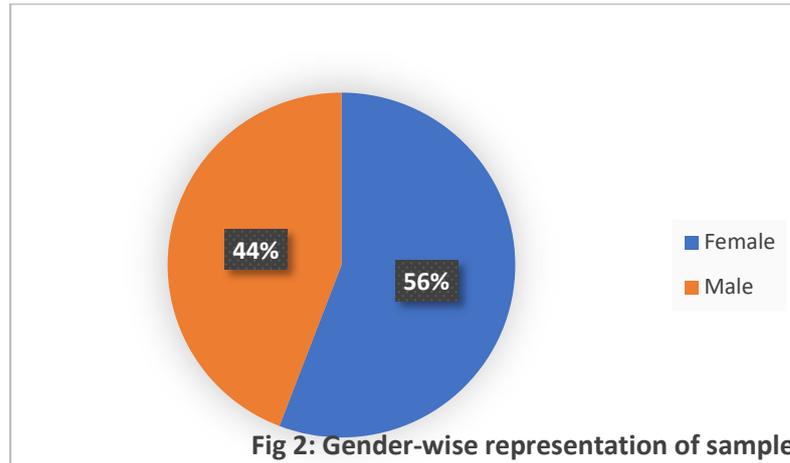
## Methodology

The quantitative approach of research has been used to study the attitude of faculty of The Open University of Sri Lanka (OUSL) towards OER including sharing and adaptation of OER. The sample of 43 faculty members were randomly selected from the The Open University of Sri Lanka (OUSL). After examining the review of related literature, the researchers adapted an attitude scale for OER (ATOER) developed and standardized by Mishra et.al (2016). The questionnaire included some demographic variables such as age, gender, designation, teaching experience etc. Moreover, a five-point scale (strongly agree, agree, undecided, disagree, strongly disagree) was used for collecting attitude of faculty towards sharing of OER, and ways of adaptation & use of OER. The data was collected online using google form. Overall, 43 responses of OUSL faculty members were considered for data analysis. The data was analyzed quantitatively through SPSS implying statistical techniques such as Mean, Standard Deviation and two-way ANOVA.

## Demographic representation of the Respondents

There were total 43 faculty members who responded to the questionnaire. It was found that majority (51%) of university teachers were within the age group of 51-65. There was about one-third of the sample (30%) within the age group of 36 to 50 years. The young teachers (19%) were counted to be lowest in sample. It indicates that more than three-fourth of the teachers in the present study were in the middle of their career (Figure 1). The Figure 2 indicates that more than half number of teachers with 56 % were female, while 44 % were male.





In addition, Figure 3 shows that majority of teachers (54%) were designated as senior lecturer in their respective open university, whereas, one-fourth of them were lecturer. There were less number of professors (12%) and senior professors (7%) participated in the study. It is noted that majority of sample represent lecturer and senior lecturer working in OUSL.

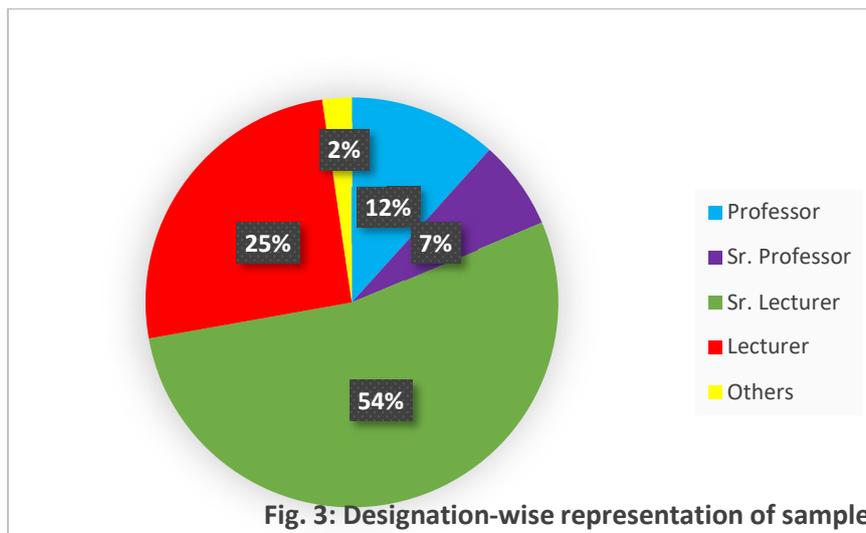


Figure 4 shows the nearly equal distribution of sample in terms of teaching experiences. The data shows that about one-third of the faculty members of OUSL were having less than 10 years of teaching experience. On the other hand, 28 % had 21 to 30 years and 19 % teachers reported that they have more than 30 years of experience. The teachers having 11 to 20 years of teaching experience were counted as 21%. Therefore, majority of teachers are in middle stage of teaching experience.

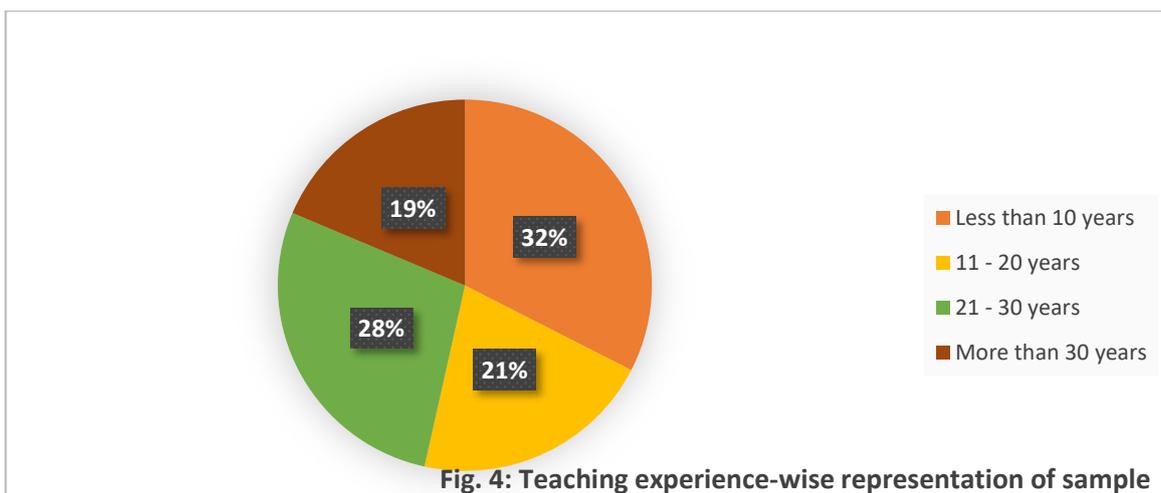


Fig. 4: Teaching experience-wise representation of sample

## Findings of the study

### Attitude of OUSL faculty towards OER

The teachers' attitudes towards OER were collected using the questionnaire and analysed as per the 5-point scale categories (1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly agree). Analyses of the overall means and standard deviation were done on all the statements as per the scale. Table 1 presents the overall average responses of OUSL faculty along with sub-scales of sharing of OER, and adaptation & use of OER. It is revealed from table 1 that OUSL faculty indicated more positive attitude towards sharing of OER (Mean = 4.23; SD = 0.712) as compared to adaptation of OER (Mean = 3.93; SD = 0.827). Overall, the faculty of a Sri Lankan open university found to be positive towards OER (Mean = 4.08; SD = 0.769) indicating to further OER uptake in the country for promoting unhindered and flexible open and distance education.

**Table 1:** Average of OUSL Faculty Attitude towards OER

Overall teachers' attitude towards OER	N	Mean	Standard Deviation
Sharing of OER	43	4.23	0.712
Adaptation & Use of OER		3.93	0.827
Total	43	4.08	0.769

### Attitude of OUSL faculty towards Sharing of OER

Table 2 indicated the responses of participants towards the 13 items sub-scale on sharing of OER. It is already reported that overall, OUSL faculty are optimistic towards sharing of OER. The attitude means ranged from 4.58 to 4.02 indicates that the respondents were mostly positive about sharing OER. They strongly agreed that sharing of OER gives them pleasure when someone adapts/adopts their created educational OER (Mean = 4.58; SD = 0.58). Sharing OER

enhances their professional respect (Mean = 4.37; SD = 0.61) and helps in getting feedback (Mean = 4.37; SD = 0.65) on created and shared eContent. The teachers of OUSL further agreed that sharing of OER enhanced their personal as well as professional reputation (Mean = 4.34; SD = 0.68) which would improve their professional profile amongst peers and others (Mean = 4.30; SD = 0.70). Apart from that, they strongly felt a sense of achievement (Mean = 4.20; SD = 0.77) as they consider it as responsibility to share the created eResources by them (Mean = 4.18; SD = 0.76) and further encourage colleagues and others to share OER (Mean = 4.18; SD = 0.58). In addition, teachers reflected that sharing of OER helps to disseminate their ideas freely (Mean = 4.18; SD = 0.76), promotes collaboration and consortia (Mean = 4.16; SD = 0.65), increases their professional networks and sphere of influence (Mean = 4.09; SD = 0.83) along with enhanced confidence to be a part of larger academic community (Mean = 4.06; SD = 0.79) and recognition at global level (Mean = 4.02; SD = 0.83). The OUSL faculty were found positive towards sharing of OER as it satisfy and motivate them both intrinsically as well as extrinsically.

**Table 2:** Average of OUSL Faculty Attitude towards 'Sharing of OER'

<b>Statement on Sharing of OER</b>	<b>Mean</b>	<b>Std. Deviation</b>
It gives me pleasure if someone adopts/adapts my educational resources	4.5814	.58686
Sharing of educational resources improves my professional respect	4.3721	.61811
Sharing helps me to get feedback	4.3721	.65550
Sharing enhances my personal and organizational reputation	4.3488	.68604
Sharing of educational resources increases my profile amongst peers and others	4.3023	.70828
When others use my OER, it improves my sense of achievement	4.2093	.77331
As a teacher, it is my responsibility to share all educational resources created by me	4.1860	.76394
I believe that sharing educational materials as OER will encourage others to do so as well	4.1860	.58781
OER helps to disseminate my ideas	4.1860	.76394
OER promotes collaboration and consortia	4.1628	.65211
OER increases my network and sphere of influence	4.0930	.83990
Sharing enhances my confidence as I see myself in part of larger community	4.0698	.79867
OER improves my chance of recognition at a global level	4.0233	.83062

### **Attitude of OUSL faculty towards Adaptation and Use of OER**

The analysis of teachers' attitude towards adaptation and use of OER shown in Table 3 also presents the positive attitude. The means scores ranged from 4.09 to 3.72 shows OUSL faculty agreement regarding adaptation and use of OER. The OUSL faculty indicated that they have

efficient ICT skills to adopt and use OER in their profession (Mean = 4.09; SD = 0.78). In addition to ICT skills, they have knowledge of intellectual property rights to understand the ways to share, adopt/adapt, contribute to OER (Mean = 4; SD = 0.72). Hence, they felt confidence on their competency and knowledge to adopt/adapt OER (Mean = 3.93; SD = 0.79). They somewhat agreed that OER adoption for teaching could fulfil the academic requirement of their students ( Mean = 3.72; SD = 1.00). Overall, OUSL faculty has shown positive attitude towards adopting/adaptation and use of OER as they have all the qualifying efficiency to use it in their teaching and learning as well as for professional growth.

**Table 3:** Average of OUSL Faculty Attitude towards 'Adaptation & Use of OER'

<b>Statements on Adaptation &amp; Use of OER</b>	<b>Mean</b>	<b>Std. Deviation</b>
I am efficient in Information Communication Technology (ICT) skills to adopt and use OER	4.0930	.78115
I have knowledge of Intellectual Property Rights to understand OER	4.0000	.72375
My own competencies and knowledge towards OER helps me to participate or adopt OER	3.9302	.79867
I adopt OER for my teaching as they fulfil academic requirement of my students	3.7209	1.00772

### **Influence of Age of teachers, Gender, and their interaction on Sharing of OER**

The Objective was to study the influence of Age of teachers, Gender, and their interaction on Sharing of OER. The age of the teachers were categorised into four levels viz. 21-35 year, 36-50 year, 51 - 65 year, and more than 65 years. There were two levels of Gender, namely, Male and Female. Thus the data were analysed with the help of 2X2 Factorial Design ANOVA and the results are given in Table 4.

**Table 4:** Summary of 2X2 Factorial Design ANOVA of Sharing of OER by OUSL faculty

<b>Source of variance</b>	<b>Df</b>	<b>Sum of Squares</b>	<b>Mean Square</b>	<b>F-value</b>	<b>Remark</b>
Age of the teachers (A)	2	0.086	0.043	0.160	p>0.05
Gender (B)	1	0.418	0.418	1.551	p>0.05
A X B	2	0.025	0.013	0.047	p>0.05
Error	37				

Total	43				
-------	----	--	--	--	--

### ***Influence of Age of OUSL faculty on Sharing of OER***

From Table 4, it can be seen that the F-value of Age of Teachers is 0.160 which is not significant at 0.05 with  $df=2/37$ . It reflects that the mean scores of Sharing of OER amongst various age groups of teachers do not differ significantly. Thus the null hypothesis that there is no significant influence of Age of OUSL teachers on sharing of OER is not rejected. It may, therefore, be said Age of Teachers do not significantly influence the sharing of OER.

### ***Influence of Gender of OUSL faculty on Sharing of OER***

The F-value of Gender is 1.551 which is also not significant at 0.05 with  $df=1/37$  (Vide Table 4). It reflects that there was no significant influence of Gender on Sharing of OER. Thus the null hypothesis that there is no significant influence of Gender on Sharing of OER is not rejected. It may, therefore, be said that Gender of Teachers do not significantly influence the Sharing of OER.

### ***Influence of interaction between Age of OUSL Teachers and Gender on Sharing of OER***

From Table 4 it can be seen that the F-Value for interaction between Age of teachers and Gender is 0.047 which is not significant. So there was not significant influence of interaction between Age of teachers and Gender on Sharing of OER is not rejected.

It may, therefore, be interpreted that Sharing of OER was found to be independent from Age and Gender of teachers separately and free from interaction between Age and Gender of Teachers as well.

### ***Influence of Gender, Teaching Experience and their interaction on Sharing of OER***

The Objective was to study the influence of Gender, Teaching Experience and their interaction on Sharing of OER. The Teaching Experience were categorised into four levels viz. Less than 10 years, 11 - 20 years, 21 - 30 years, More than 30 years. There were two levels of Gender, namely, Male and Female. Thus the data were analysed with the help of 2X2 Factorial Design ANOVA and the results are given in Table 5.

**Table 5:** Summary of 2X2 Factorial Design ANOVA of Sharing of OER by OUSL faculty

Source of variance	df	Sum of Squares	Mean Square	F-value	Remark
Gender (A)	1	.129	.129	.553	$p>0.05$
Teaching Experience (B)	6	1.724	.287	1.235	$p>0.05$
A X B	6	1.540	.257	1.104	$p>0.05$

Error	29				
Total	43				

***Influence of Teaching Experience of OUSL faculty on Sharing of OER***

It is already reported (Table 4) that Gender of Teachers do not significantly influence the Sharing of OER (Table 5 also indicates  $p > 0.05$ ). Hence, only Teaching experience is taken here for analysis.

From Table 5, it can be seen that the F-value of Teaching Experience of OUSL faculty is 1.235 which is not significant at 0.05 with  $df = 6/29$ . It reflects that the mean scores of Sharing of OER amongst OUSL faculty with diverse teaching experience do not differ significantly. Thus the null hypothesis that there is no significant influence of Teaching Experience of OUSL faculty on sharing of OER is not rejected. It may, therefore, be said Teaching Experience do not significantly influence the sharing of OER.

***Influence of interaction between Teaching Experience of OUSL Teachers and Gender on Sharing of OER***

From Table 5 it can be seen that the F-Value for interaction between Teaching Experience and Gender is 1.104 which is not significant. It indicates that the mean scores of Sharing of OER amongst Male and Female teachers of various Teaching Experience did not differ significantly. So there was not significant influence of interaction between Teaching Experience and Gender on Sharing of OER is not rejected.

It may, therefore, be interpreted that Sharing of OER was found to be independent from Teaching Experience and Gender of teachers separately and free from interaction between Teaching Experience and Gender of Teachers as well.

***Influence of Age of teachers, Gender, and their interaction on Adaptation and Use of OER***

The Objective was to study the influence of Age of teachers, Gender, and their interaction on Adaptation and Use of OER. The age of the teachers were categorised into four levels viz. 21-35 year, 36-50 year, 51 - 65 year, and more than 65 years. There were two levels of Gender, namely, Male and Female. Thus the data were analysed with the help of 2X2 Factorial Design ANOVA and the results are given in Table 6.

**Table 6:** Summary of 2X2 Factorial Design ANOVA of Adaptation and Use of OER by OUSL faculty

Source of variance	df	Sum of Squares	Mean Square	F-value	Remark
Age of teachers (A)	2	.896	.448	1.266	p>0.05
Gender (B)	2	1.675	1.675	4.731	P<0.05
A X B	2	1.275	.638	1.801	p>0.05
Error	37				
Total	43				

***Influence of Age of OUSL faculty on Adaptation and Use of OER***

From Table 6, it can be seen that the F-value of Age of Teachers is 1.266 which is not significant at 0.05 with df=2/37. It reflects that the mean scores of Adaptation and Use of OER amongst various age groups of teachers do not differ significantly. Thus the null hypothesis that there is no significant influence of Age of OUSL teachers on Adaptation and Use of OER is not rejected. It may, therefore, be said Age of Teachers do not significantly influence the Adaptation and Use of OER.

***Influence of Gender of OUSL faculty on Adaptation and Use of OER***

The F-value of Gender is 4.731 which is significant at 0.05 with df=2/37 (Vide Table 6). So there was significant influence of Gender on Adaptation and Use of OER. Thus the null hypothesis that there is no significant influence of Gender on Adaptation and Use of OER is rejected. It may, therefore, be said that Gender of Teachers significantly influence the Adaptation and Use of OER.

***Influence of interaction between Age of OUSL Teachers and Gender on Adaptation and Use of OER***

From Table 6 it can be seen that the F-Value for interaction between Age of teachers and Gender is 1.801 which is not significant. It indicates that the mean scores of Adaptation and Use of OER amongst Male and Female teachers of various Age groups did not differ significantly. So there was not significant influence of interaction between Age of teachers and Gender on Adaptation and Use of OER is not rejected.

It may, therefore, be interpreted that Adaptation and Use of OER was found to be independent from interaction between Age and Gender of Teachers as well.

## **Influence of Gender, Teaching Experience and their interaction on Adaptation and Use of OER**

The Objective was to study the influence of Gender, Teaching Experience and their interaction on Adaptation and Use of OER. The Teaching Experience were categorised into four levels viz. Less than 10 years, 11 - 20 years, 21 - 30 years, More than 30 years. There were two levels of Gender, namely, Male and Female. Thus the data were analysed with the help of 2X2 Factorial Design ANOVA and the results are given in Table 7.

**Table 7:** Summary of 2X2 Factorial Design ANOVA of Adaptation and Use of OER by OUSL faculty

<b>Source of variance</b>	<b>Df</b>	<b>Sum of Squares</b>	<b>Mean Square</b>	<b>F-value</b>	<b>Remark</b>
Gender (A)	1	0.066	0.066	4.170	P<0.05
Teaching Experience (B)	6	1.760	0.293	.751	p>0.05
A X B	6	1.974	0.329	.843	p>0.05
Error	29				
Total	43				

### ***Influence of Teaching Experience of OUSL faculty on Adaptation and Use of OER***

It is already reported (Table 6) that Gender of Teachers significantly influence the Adaptation and Use of OER (Table 7 also indicates  $p < 0.05$ ). Hence, only Teaching experience is taken here for analysis.

From Table 7, it can be seen that the F-value of Teaching Experience of OUSL faculty is 0.751 which is not significant at 0.05 with  $df = 6/29$ . So there was no significant influence of Teaching Experience of OUSL faculty on Adaptation and Use of OER. Thus the null hypothesis that there is no significant influence of Teaching Experience of OUSL faculty on Adaptation and Use of OER is not rejected. It may, therefore, be said Teaching Experience do not significantly influence the Adaptation and Use of OER.

### ***Influence of interaction between Teaching Experience of OUSL Teachers and Gender on Adaptation and Use of OER***

From Table 7 it can be reported that the F-Value for interaction between Teaching Experience and Gender is 0.843 which is not significant. It indicates that the mean scores of Adaptation and Use of OER amongst Male and Female teachers of various Teaching Experience did not differ significantly. So there was not significant influence of interaction between Teaching Experience and Gender on Adaptation and Use of OER is not rejected.

It may, therefore, be interpreted that Adaptation and Use of OER was found to be independent from interaction between Teaching Experience and Gender of Teachers.

## **Conclusion**