

# Perceived Effectiveness of B.Ed.-ODL Programme through Counsellors and Coordinators: An NSOU Experiment

Pratim Maity

Ph.D. Scholar, Department of Education, University of Calcutta, Kolkata-27, West Bengal,  
India. Mobile No. 09007194704, Email Id: pratimmaity91@gmail.com

**Abstract:** The study focused on assessment of effectiveness of general and special B.Ed.-ODL of Netaji Subhas Open University in West Bengal on the basis of perception of counsellors and coordinators of both the programmes. The major objectives of the study were to analyse the to study the effectiveness of the general and special B.Ed.-ODL programme of NSOU as perceived by counsellors and coordinators with relation to their age, gender, caste, stream of teaching and year(s) of teaching experiences. Total 50 counsellors and coordinators were selected as the sample of the study using convenient sampling and snowball sampling techniques. It was a cross sectional survey type of research. As tools of data collection the researcher used self developed perception scale namely “Perceived Effectiveness Scale on B.Ed.-ODL Programme for Counsellors and Coordinators”. The major findings were: 84% have showed positive perception, 16% have showed moderate perception, and no one number counsellors and coordinators have negative perception for this research. And Except stream of teaching no significant differences were found in the perception of counsellors and coordinators towards effectiveness of B.Ed.-ODL programme with regard to their age, gender, caste and year(s) of teaching experiences.

**Key Words:** Perceived Effectiveness, B.Ed.-ODL Programme, NSOU

## 1. INTRODUCTION:

According to UNESCO, half of the world’s 195 countries will have to expand their stock of teachers significantly – some by tens of thousands – if the goal of universal primary education as articulated in the Dakar Framework for Action in 2000 is to be met by 2015. Kangai & Bukaliya (2011) mentioned that teacher education in Africa have indicated that acute shortages of teachers exist and rural communities are the most challenged in recruiting and retaining qualified teachers. In India, according to Educational Statistics at a Glance, MHRD Report 2013-14, Government of India 2013-14 (P), there are 2684 thousands teachers at primary school level and 2513 thousand at upper-primary. The pupil-teacher ratio is at present 42: 1 at the primary and 37:1 at the upper primary level of education. Despite the significant improvement in number of teachers, the percentage of female teachers is still low at 35 and 36 percent respectively at the primary and upper primary level of education (MHRD, 2000a). With the implementation of RTE Act, 2009, it is expected that all schools in the States/UTs should have teachers in accordance with the norms stated in the Schedule of the RTE Act. However it is reported that the schools in 60 per cent (18) of the States/UTs have teachers according to RTE norms. On the other hand the schools of 40 per cent (12) of the States/UTs have number of teachers less than the RTE norms. Five States/UTs did not provide information (Source: Education for all in India, National Report on Quality Intervention in Elementary Education (NCERT), (MHRD, 2016)). Particularly in West Bengal, 2,38,402 number of in-service untrained teachers requiring up gradation of professional qualification as per NCTE norms (Source: Report of the Joint Review Mission on Teacher Education, West Bengal, 2013). In India, it is realized that in order to provide quality education at the Elementary/Upper primary levels in compliance with the provisions of the RTE-Act-2009; it is to be ensured that teachers possess the required academic and professional qualifications as prescribed.

Netaji Subhas Open University (NSOU) is the premier State Open University in India, established by W.B. Act (XIX) of 1997 and Recognized by U.G.C. and DEC. The RTE Act-2009 mandates that all teachers teaching classes at elementary level must be trained and those who don’t possess training have to acquire it by March 31, 2015. According to the State records provided, the number of untrained teachers at primary (Class I-IV) and upper primary levels (V-VIII) in West Bengal are 75,715 and 29,515 respectively. The task of training of 75,715 untrained teachers at primary level (Class I-IV) was assigned to Primary Education Board. State Government had also decided to impart teacher training (B.Ed. Course) to untrained school teachers of all Govt. run/ Govt. aided / schools in West Bengal engaged in teaching the students of upper primary classes i.e. from class V to class VIII through ODL mode in compliance with the provisions of RTE Act, 2009. The entire training programme was assigned to Netaji Subhas Open University to organise by through different NCTE approved B.Ed. colleges of this state. Consequently NSOU organised the B.Ed.-ODL programme from 2013-2015. The total 181 number of study centres situated in different districts of West Bengal distributed under six clusters were engaged for this programme. However, the NSOU is also

from the very beginning running a special B.Ed.-ODL programme for intake capacity of 500 (yearly). The programme is running through 13 study centres situated in different districts of West Bengal. This programme is offered jointly by NSOU and RCI. The programme aims to educate and train the aspirants to become agents of change as teacher-professional by imbibing required knowledge, understanding, attitude and skill. The education and training will enable them to tap the hidden talents and potentialities buried in the differently abled; develop in them faith as well as sense of freedom, self-respect and dignity not only to stand on their own legs but also to contribute their services to the society and the nation.

## 2. RATIONALE OF THE STUDY:

Globally, distance learning has gained legitimacy as an effective mode for learning and training. This legitimacy has occurred as a result of, inter alia, its flexibility with respect to time, pace and entry requirements, affordability, cost-effectiveness, and reputation for high quality. Sah (2011) maintained that teacher preparation programme is a rigorous and skill oriented programme. Open and distance learning system has proven its importance in basic training to teachers and their continuing professional development as well. The National Curriculum Framework for Teacher Education (NCTE, 2010) also found that open and distance learning as a powerful instrument for providing professional support to the teacher, particularly with a view to overcoming the barriers of physical distance. Navaneethan & Girija (2010) while studying on effect of reflective teaching pedagogy in teacher education through open and distance learning found to be favorable as it reflected on better academic performance of the students in whose class the reflective teaching- learning pedagogy was practiced. Sharma (2000) found that the practical works of B.Ed. programme like school based activities; co-curricular activities and action research were not given proper attention. Lawrence & Barathi (2009) revealed that the attitude of B.Ed. students towards ODL institutions in TNOU is neutral. There is no significant difference in the attitude of B.Ed. students towards ODL institutions in TNOU in terms of (i) gender, (ii) locality and (iii) teaching experience, English medium students are having favorable attitude towards ODL institutions in TNOU than Tamil medium students and Language subject students are having favorable attitude towards ODL institutions in TNOU than arts and science subject students.

From the perusal of the studies in the area of teacher education through ODL mode as discussed above it is evident that though many research studies has been conducted in the field of teacher education, but still the field need special attention of researchers. It is observed that most of the studies were conducted abroad and few studies in India and not a single study found in West Bengal. The investigator could not find any study, which was conducted to evaluate the perception of counsellors and coordinators of the programme to assess the effectiveness of these programmes either in India, in general or in West Bengal and on Netaji Subhas Open University (NSOU) in particular. Hence the above research gaps and conditions evoked the researcher to think about conducting a comprehensive study to assess the Perceived Effectiveness of B.ED.-ODL Programme through Counsellors and Coordinators of NSOU.

## 3. OBJECTIVE OF THE STUDY:

To study the effectiveness of the B.Ed.-ODL programme of NSOU as perceived by counsellors and coordinators with relation to their age, gender, caste, stream of teaching and year(s) of teaching experiences.

### 3.1 Research Hypotheses

*In keeping with the problem formulated and objectives to be tested, the following hypothesis is proposed to be tested:*

**H<sub>01</sub>:** There is no significant difference in the perception of counselors and coordinators towards effectiveness of B.Ed.-ODL programme with regard to their age.

**H<sub>02</sub>:** There is no significant difference in the perception of counselors and coordinators towards effectiveness of B.Ed.-ODL programme with regard to their gender.

**H<sub>03</sub>:** There is no significant difference in the perception of counselors and coordinators towards effectiveness of B.Ed.-ODL programme with regard to their caste.

**H<sub>04</sub>:** There is no significant difference in the perception of counselors and coordinators towards effectiveness of B.Ed.-ODL programme with regard to their stream of teaching.

**H<sub>05</sub>:** There is no significant difference in the perception of counselors and coordinators towards effectiveness of B.Ed.-ODL programme with regard to their year(s) of teaching experiences.

## 4. METHOD OF THE STUDY:

This is a cross sectional survey type research. Here in order to select the sample from the whole population two different sampling techniques were used i.e. Convenient Sampling and Snowball Sampling Techniques. The researcher first of all selected the study centres namely Jyotirmoy School of Education, Lieutenant Abhishek Ray Chaudhuri Teacher's Training College, Annapurna Memorial College of Education, Gangadharapur Sikshan Mandir (B.Ed.. College), Monovikash Kendra Rehabilitation and Research Institute for the Handicapped, Ali Yavar Jung National Institute for the Hearing Handicapped, (ERC) by using convenient sampling technique as these are viable to the researcher. 50 are counsellors and coordinators of different study centres of NSOU in West Bengal. Here the

researcher used self developed perception scale namely “Perceived Effectiveness Scale on B.Ed.-ODL Programme for Counsellors and Coordinators” developed by Lalit Lalitav Mohakud and Pratim Maity (2015) for collection of data. This scale included three dimensions namely A) Institutional Support Systems, B) Instructional Systems, and C) Evaluation Systems and Out-Comes. The tool contains 45 items to be responded in a 5 point Likert Scale of five options, namely ‘Strongly Agree’ (SA), ‘Agree’ (A), ‘Undecided’ (U), ‘Disagree’ (D) and ‘Strongly Disagree’ (SD) respectively. Among them 35 items are positive and 10 items are negative. The scoring of this scale is very simple. In this scale each positive item is scored from 5 to 1 and each negative item is scored from 1 to 5. The total attitude score based on the sum of all 45 items can range from 45 to 225.

For analysis and interpretation of the collected data the researcher used simple percentage analysis, mean, Standard Deviation (SD) as descriptive statistics and ‘t –test’ and ANOVA as inferential statistic with the help of Microsoft Excel and SPSS .

**5. ANALYSIS AND INTERPRETATION OF DATA:**

**Effectiveness of the B.Ed.-ODL programme of NSOU as perceived by counsellors and coordinators with relation to their age, gender, caste, stream of teaching and year(s) of teaching experiences.**

**Table 1 and Figure 1: Representing perception level in score interval, total number and percentage of counsellors and coordinators**

Perception category with Score	N	%
Positive Perception (158-225)	42	84.0
Moderate Perception (113-157)	8	16.0
Negative Perception (45-112)	0	00
<b>Total</b>	<b>50</b>	<b>100.0</b>

**Interpretation**

From the table 1 and figure 1 it is found that out of total 50 counsellors and coordinators, 84% have showed positive perception as they scored above 158 to 225, 16% counsellors and coordinators scored between 113 to 157 and no one number counsellors and coordinators have scored between 45 to 112 on the perception measuring scale used for this research. Here most (84%) of the counsellors and coordinators showed positive perceptions towards effectiveness of B.Ed.-ODL programmes of NSOU in West Bengal and interestingly not a single counsellor or coordinator showed negative perception towards this programme. Hence it can be safely concluded that on the basis of perception of counsellors and coordinators the B.Ed.-ODL programmes of NSOU in West Bengal is effective.

**Ho1: There is no significant difference in the perception of counsellors and coordinators towards effectiveness of B.Ed.-ODL programme with regard to their age.**

**Table 2: Depicting age wise descriptive statistics regarding counsellors and coordinators perception towards effectiveness of B.Ed.-ODL programme**

Age wise categories	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Up to 30	18	172.11	18.673	4.401	162.83	181.40	118	193
31 to 40	26	177.85	18.471	3.622	170.39	185.31	137	211
Above 40	6	171.83	17.725	7.236	153.23	190.43	149	184
<b>Total</b>	<b>50</b>	<b>175.06</b>	<b>18.322</b>	<b>2.591</b>	<b>169.85</b>	<b>180.27</b>	<b>118</b>	<b>211</b>

**Table 3: ‘F -Test’ representing the age wise differences in perception of counsellors and coordinators towards effectiveness of B.ED.-ODL programme**

Source of Variations	Sum of Squares	df	Mean Square	F	Sig.	Remarks
Between Groups	420.824	2	210.412	.617	.544	$P > 0.05$ *NS
Within Groups	16027.996	47	341.021			
Total	16448.820	49				

\*NS: Not significant

**Interpretation**

For the measuring of effectiveness in the B.Ed.-ODL programme, here the researcher used the descriptive statistics as shown in table no.2 to ascertain the mean values and the result revealed that the mean of the ages ‘up to 30’ is 172.11, ‘between 31 and 40’ is 177.85 and ‘above 40’ is 171.83 respectively. Here the mean score of all these groups fall under the range of 158-225 which was categorised as positive type perception regarding effectiveness of B.Ed-ODL programme. That means all the groups show positive perception towards effectiveness of B.Ed-ODL programme. Again, the initial descriptive statistic also shows that there exist some differences between these groups with regard to their perception towards effectiveness of B.Ed-ODL programme. But in order to ascertain whether these differences are statistically significant or not significant enough to draw a valid conclusion regarding the effectiveness of B.Ed-ODL programme of NSOU, the researcher further employed ANOVA.

In the table no.3 the independent variable tested here is ages with three categories namely ‘up to 30’, ‘between 31 and 40’ and ‘above 40’ and dependent variable tested here is ‘perception towards effectiveness of B.Ed.-ODL programme’. They were computed and the result showed that no significant differences in perception of counsellors and coordinators of different ages groups towards effectiveness of B.Ed.-ODL programme is found as the  $F=.617$ , and  $p > .05$  (i.e.  $P= .544$ ). That means the computed F- value is less than its critical or table value at .05 level of significance and as  $p=.544$  which means  $p > .05$ . That means the null hypothesis cannot be rejected and it may be confidently say that the difference between the group means are not significant and therefore, there is no need for further testing with the help of t- test. Hence, it can be concluded that, no significant difference exists between counsellors and coordinators of different ages groups with regard to their perception towards effectiveness of B.Ed.-ODL programme of NSOU.

**Ho2: There is no significant difference in the perception of counsellors and coordinators towards effectiveness of B.Ed.-ODL programme with regard to their gender.**

\*NS: Not Significant

**Table 4: ‘T-Test’ showing gender wise mean difference in perception score of counsellors and coordinators regarding effectiveness of B.ED-ODL programme of NSOU**

Gender	N	Mean	M difference	SD	SE <sub>M</sub>	df	t value	Sig (2-tailed)	Significance level
Male	30	177.50	6.100	18.878	3.447	48	1.157	.253	NS* (at 0.05 level)
Female	20	171.40		17.270	3.862				
Total	50								

**Interpretation**

The analysis in the above table revealed that the mean perception score of 30 male counsellors and coordinators and 20 female counsellors and coordinators towards B.Ed-ODL programme are 177.50 and 171.40 respectively. That means both the categories of counsellors and coordinators showed positive perception towards effectiveness of their B.Ed-ODL programme as mean perception score of both the categories fell under the range of 158-225. It has been also observed that the mean difference between these two groups is 6.100. Hence the descriptive analysis of the data revealed that a negligible mean difference found among these two groups with respect to their perception towards effectiveness of B.Ed-ODL programme. However to ascertain whether this difference is significant enough to draw a valid conclusion regarding the sample and inference regarding the population, the researcher further concentrated on t-test as inferential statistics for comparing the means and determining its significance level.

Through the t-test as shown in the above table, it is found that the calculated value of ‘t’ is 1.197 which smaller than the critical value of ‘t’ at .05 level of significance i.e. 1.96. That indicates that the mean difference between these two groups is not significant at 0.05 level or 5% level of significance. Therefore, the null hypothesis

can easily be retained and as a result, the given difference in sample means being insignificant can only be attributed to some chance factors or sampling fluctuations.

Hence from the above discussion, it can be concluded that both the group showed positive perception towards their B.Ed.-ODL programme and there is no significant gender wise differences found in the perception of counsellors and coordinators towards effectiveness of B.Ed.-ODL programme of NSOU.

**Ho3: There is no significant difference in the perception of counsellors and coordinators towards effectiveness of B.Ed.-ODL programme with regard to their caste.**

**Table 5: Depicting caste wise descriptive statistics regarding counsellors and coordinators perception towards effectiveness of B.Ed.-ODL programme**

Caste wise categories	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
General	30	173.47	19.901	3.633	166.04	180.90	118	203
SC	12	176.33	10.891	3.144	169.41	183.25	150	187
Others	8	179.13	22.139	7.827	160.62	197.63	163	211
Total	50	175.06	18.322	2.591	169.85	180.27	118	211

**Table 6: 'F -Test' representing the caste wise differences in perception of counsellors and coordinators towards effectiveness of B.ED.-ODL programme**

Source of Variations	Sum of Squares	df	Mean Square	F	Sig.	Remarks
Between Groups	227.812	2	113.906	.330	.721	<i>P</i> > 0.05 *NS
Within Groups	16221.008	47	345.128			
Total	16448.820	49				

\*NS: Not significant

**Interpretation**

For the measuring of effectiveness in the B.Ed.-ODL programme, here the researcher used the descriptive statistics as shown in table no. 5 to ascertain the mean values and the result revealed that the mean of the caste 'general' is 173.47, 'SC' is 176.33 and 'Others (OBC+ST)' is 179.13 respectively. Here the mean score of all these groups fall under the range of 158-225 which categorised as positive type perception regarding effectiveness of B.Ed.-ODL programme. That means all the groups show positive perception towards effectiveness of B.Ed.-ODL programme. Again, the initial descriptive statistic also shows that there exist some differences between these groups with regard to their perception towards effectiveness of B.Ed.-ODL programme. But in order to ascertain whether these differences are statistically significant or not significant enough to draw a valid conclusion regarding the effectiveness of B.Ed.-ODL programme of NSOU, the researcher further employed ANOVA.

In the table no. 6, the independent variable tested here is gender with three categories namely 'General', 'SC' and 'Others (OBC+ST)' and dependent variable tested here is 'perception towards effectiveness of B.Ed.-ODL programme'. They were computed and the result showed that no significant differences in perception of counsellors and coordinators of different teaching experience groups towards effectiveness of B.Ed.-ODL programme is found as the  $F=.330$ , and  $p > .05$  (i.e.  $P= .721$ ). That means the computed F- value is less than its critical or table value at .05 level of significance and as  $p=.721$  which means  $p > .05$ . That means the null hypothesis cannot be rejected and it may be confidently say that the difference between the group means are not significant and therefore, there is no need for further testing with the help of t test. Hence, it can be concluded that, no significant difference exists between counsellors and coordinators of different gender groups with regard to their perception towards effectiveness of B.Ed.-ODL programme of NSOU.

**Ho4: There is no significant difference in the perception of counsellors and coordinators towards effectiveness of B.Ed.-ODL programme with regard to their stream of teaching.**

**Table 7: 'T-Test' showing stream wise mean difference in perception score of counsellors and coordinators regarding effectiveness of B.ED.-ODL programme of NSOU**

Stream	N	Mean	M difference	SD	SE <sub>M</sub>	df	t value	Sig(2-tailed)	Significance level
--------	---	------	--------------	----	-----------------	----	---------	---------------	--------------------

Science	19	166.89	-13.170	17.058	3.913	48	-	2.609	.012	S* (at 0.05 level)
Arts	31	180.06		17.481	3.140					
Total	50									

**\*S: Significant**

**Interpretation**

The analysis in the above table revealed that the mean perception score of 19 science counsellors and coordinators and 31 arts counsellors and coordinators towards B.Ed-ODL programme are 166.89 and 180.06 respectively. That means both the categories of counsellors and coordinators showed positive perception towards effectiveness of their B.Ed-ODL programme as mean perception score of both the categories fall under the range of 158-225. It has been also observed that the mean difference between these two groups is -13.170. Hence the descriptive analysis of the data revealed that a negligible mean difference found among these two groups with respect to their perception towards effectiveness of B.Ed-ODL programme. However to ascertain whether this difference is significant enough to draw a valid conclusion regarding the sample and inference regarding the population, the researcher further concentrated on t-test as inferential statistics for comparing the means and determining its significance level.

Through the t-test as shown in the above table, it is found that the calculated value of 't' is 2.609 which more than the critical value of 't' at .05 level of not significance i.e. 1.96. That indicates that the mean difference between these two groups is significant at 0.05 level or at 5% level significance. Therefore, the null hypothesis cannot be retained and as a result, the given differences in sample means being significant cannot be attributed to any chance factor or sampling fluctuation.

Hence from the above discussion, it can be concluded that though both the group showed positive perception towards their B.Ed-ODL programme but there exists significant stream wise differences in the perception of counsellors and coordinators towards effectiveness of B.Ed.-ODL programme of NSOU.

**Ho5: There is no significant difference in the perception of counsellors and coordinators towards effectiveness of B.Ed.-ODL programme with regard to their year of teaching experiences.**

**Table 8: Depicting year of teaching experiences wise descriptive statistics regarding counsellors and coordinators perception towards effectiveness of B.Ed-ODL programme**

Teaching experiences	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0 to 5 years	20	172.25	18.990	4.246	163.36	181.14	118	193
6 to 10 years	26	175.96	19.124	3.750	168.24	183.69	137	211
Above 10 years	4	183.25	1.500	.750	180.86	185.64	181	184
Total	50	175.06	18.322	2.591	169.85	180.27	118	211

**Table 9: 'F-Test' representing the years of experiences wise differences in perception of counsellors and coordinators towards effectiveness of B.ED.-ODL programme**

Source of Variance	Sum of Squares	Df	Mean Square	F	Sig.	Remarks
Between Groups	447.358	2	223.679	.657	.523	P>0.05 *NS
Within Groups	16001.462	47	340.457			
Total	16448.820	49				

**\*NS: Not significant**

**Interpretation**

For the measuring of effectiveness in the B.Ed.-ODL programme, here the researcher used the descriptive statistics as shown in table no.8 to ascertain the mean values and the result revealed that the mean of the teaching experiences '0-5' is 172.25, between 6 and 10 is 175.96 and above 10 years teaching experience is 183.25 respectively. Here the mean score of all these groups fall under the range of 158-225 which categorised as positive

type perception regarding effectiveness of B.Ed-ODL programme. That means all the groups show positive perception towards effectiveness of B.Ed-ODL programme. Again, the initial descriptive statistic also shows that there exist some differences between these groups with regard to their perception towards effectiveness of B.Ed-ODL programme. But in order to ascertain whether these differences are statistically significant or not significant enough to draw a valid conclusion regarding the effectiveness of B.Ed-ODL programme of NSOU, the researcher further employed ANOVA.

In the table no.9, the independent variable tested here is 'teaching experience' with three categories namely '0-5', '6 to 10' and 'above 10' and dependent variable tested here is 'perception towards effectiveness of B.Ed.-ODL programme'. They were computed and the result showed that no significant differences in perception of counsellors and coordinators of different teaching experience groups towards effectiveness of B.Ed.-ODL programme is found as the  $F=.657$ , and  $p > .05$  (i.e.  $P= .523$ ). That means the computed F value is less than its critical or table value at .05 level of significance and as  $p=.523$  which means  $p > .05$ . That means the null hypothesis cannot be rejected and it may be confidently say that the difference between the group means are not significant and therefore, there is no need for further testing with the help of t test. Hence, it can be concluded that, no significant difference exists between counsellors and coordinators of different teaching experience groups with regard to their perception towards effectiveness of B.Ed.-ODL programme of NSOU.

## 6. CONCLUSION:

In case of perception of counsellors and coordinators towards effectiveness of both these B.Ed.-ODL programmes of NSOU in West Bengal it was observed that most of the counsellors and coordinators i.e. 84% showed positive perceptions towards these programmes and interestingly not a single counsellor or coordinator showed negative perception towards these programmes. Hence it was safely concluded that both these B.Ed-ODL programmes of NSOU in West Bengal were perceived as effective by the counsellors and coordinators of these programmes. However except stream of teaching no significant differences were found in the perception of counsellors and coordinators towards effectiveness of B.Ed.-ODL programme with regard to their age, gender, caste and year(s) of teaching experiences. From the above discussion taking into considerations of enrollment trend analysis and perceptions of all categories of individuals from whom data were taken, it can be broadly concluded that the B.Ed-ODL programmes of NSOU in West Bengal is highly effective as per the perceptions of counsellors and coordinators concerned and moderately effective as per the perceptions of pupil-teachers of the programme concerned. It can also be overall concluded that the programmes might not be highly effective but it was effective ranging from moderately effective to highly effective.

## REFERENCES:

1. Bukaliya, R., & Muyengwa, B. (2016). New post graduate diploma in education (PGDE) students' perceptions on ODL teacher education. *International Journal of Humanities Social Sciences and Education (IJHSSE)* , 122-132, Vol. 3, issu2.
2. Danaher, P. A., & Umar, A. (2010). *Teacher education through open and distance learning*. Vancouver: Commonwealth of Learning.
3. Ghosh, M., & Wadegaonkar. (2012). Challenges in teacher education through distance mode. *Scholarly Research Journal for Interdisciplinary Studies*, 1-8.
4. IGNOU. (2009). *Recognition of open and distance learning (ODL) Institutions, Handbook*. Maidan Garhi, New Delhi: Distance Education Council.
5. Kangai, C., & Bukaliya, R. (2011). Teacher development through open and distance learning: The case for Zimbabwe. *International Journal on New Trends in Education and Their Implications*, 124-141.
6. Lawrence, A. L. S., and Barathi, C. (2009). Attitudes of B.Ed. students' towards ODL institutions in Tamil Nadu Open University, *The Online Journal of Distance Education and e-Learning* Volume 2, Issue 3.
7. Lewin, K. M. (2004). The Pre-service training of teachers- Does it meet its objectives and how can it be improved? *Background Paper for the EFA Global Monitoring Report*, 1-39.
8. MHRD. (2016). *year end review*, Government of India.
9. Muyinda, P. B. (2012). Open and distance learning in dual mode universities: A treasure unexploited. *International Perspectives in Distance Learning in Higher Education*, 33-50.
10. Navaneethan, & Girija, C. (2010-11). Reflective teaching pedagogy as innovative approach in teacher education through open and distance learning. *Commonwealth of Learning*.
11. NCTE. (2010). *National curriculum framework for teacher education*, New Delhi.
12. NSOU. (2015). *B.Ed. special education (M.R./ H.I./ V.I.)- ODL, Hand Book, Recognised by Rehabilitation Council of India*, New Delhi.
13. Onuka, A. (2015). Teacher education in open and distance learning university in Afrika. 55-70.
14. Pitsoe, V. J., & Maila, M. W. (2012). Rethinking continuing professional teacher development within the open distance learning framework. *International Journal of Technology and Inclusive Education (IJTIE)*, Vol. 1, Issu.1.

15. Rabinson, B. (2008). Using distance education and ICT to improve access, equity and the quality in rural teachers' professional development in western China. *International Review of Research in Open and Distance Learning*, 1-17.
16. Sah, P. K. (2011). Teacher education through open and distance learning: Opportunities & challenges.
17. Samkange, W. (2013). Training teaches at a distance: Perceptions and challenges of open and distance learning (ODL) in teacher education. *Turkish Online Journal of Distance Education-TOJDE*, 222-234.
18. Sharma, N. (2003). Understanding adolescence. NBT India.
19. Siaciwena, R., & Lubinda, F. (2008). The role of open and distance learning in the implementation of the right to education in Zambia. *IRRODL*, 1-10.
20. Sifuna, D. N. (2011). The role of distance teacher education in increasing the supply of primary school teachers in sub-saharan Africa. *Journal of International Cooperation in Education*, 205-220.
21. Sikwibele, A. L., & Mungoo, J. K. (2009). Distance learning and teacher education in Botswana: Opportunities and challenges. *IRRODL*, Vol. 10, No.4.
22. UGC. (2013). Regulations regarding open and distance learning institutions and programmes of study.
23. UNESCO. (2001). Teacher education through distance learning. Technology- Curriculum-Cost- Evaluation.
24. West Bengal. (2013). Report of the joint review mission on teacher education.