

# **Perception of Teacher Trainees regarding Web Radio Programmes in Enhancing Learning Opportunities: A Case Study of NIOS**

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## **Abstract**

In imparting education through ODL mode, the developments in ICT have expanded possibilities of connecting with the learners. Whether the teaching is done face-to-face or through other modes, the teacher needs to create an enabling environment for learners to participate in the learning process. National Institute of Open Schooling (NIOS) harnesses internet web streaming wherein web radio (Mukta Vidya Vani) programmes live are broadcast on a regular basis. NIOS offered Diploma in Elementary Education (D.El.Ed) to in-service untrained teachers of elementary school children throughout the country. The programme was delivered online through SWAYAM.. Also, live web radio programmes were broadcast on a regular basis. The paper explores the awareness and perception of teacher trainees' regarding these programmes as an important teaching-learning platform. The sample was selected using non probability purposive sampling technique. Survey method was used to collect the data through a questionnaire developed on Google Forms. Findings showed that the trainees did find the programmes useful in terms of content coverage and andragogical style. It revealed that web radio platform could serve as an effective medium for supporting socio-emotional needs of the learners. Also, this could be utilized for disseminating information related to the course. The findings also highlighted content areas which can be effectively discussed through web radio. The study also gives insight as to how the programmes can be improved and made more learner friendly.

**Key Words: Web Radio, Mukta Vidya Vani, ODL, Diploma in Elementary Education**

## **Introduction**

Today in the era of ICT, multiple delivery modes are being used in educational settings for teaching and learning. In education through open and distance learning (ODL) mode, MOOCs, online teaching, audio and video tutorials, social media etc. are being used for making learning accessible for diverse needs and priorities. Radio—both broadcast and interactive—has been a commonly used model for distance-based teacher instruction, primarily in terms of upgrading existing teachers' content knowledge and skills. (Burn, M, 2011). Today, the success of ODL system largely depends on the quality of academic support and opportunities provided to learners in accessing the content through multiple channels. Bansal and Choudhary (1999) reported that radio holds great potential in terms of supporting students who are learning at a distance (Chandar & Sharma, 2003).

The Right of Children to Free and Compulsory Education (RTE) Act, 2009, envisaged under Article 21-A, that every child of the age of six to fourteen years shall have a right to free end compulsory education in a neighbourhood school till completion of elementary education. To provide age appropriate, interesting and engaging learning experiences to children, teachers trained in curriculum and pedagogy of primary and upper primary education is imperative.

Thus, under an initiative of the Ministry of Human Resource Development, Government of India, (NIOS) conducted D.El.Ed during October, 2017 to March, 2019. It is an elementary teacher education programme which aimed to train more than 1.3 million in-service untrained elementary teachers working with elementary class children (classes I-VIII) throughout the country using blended learning design. According to Jonker, Marz & Voogt, 2018 for overcoming deficiencies, a shift in teacher education is required and it can be achieved with blended curriculum, which is a combination of ICT based tool with face to face method of education. The programme was delivered online through SWAYAM portal consisting of four quadrants viz reading material that can be downloaded/printed, audio & video tutorials, self-assessment tests and online discussion forum ([www.swayam.gov.in](http://www.swayam.gov.in)). Along with this, face to face personal contact programmes, school based activities and workshops were an integral part. Learning was further augmented by live web radio programmes (Mukta Vidya Vani) which were broadcast daily on different topics of the D.El.Ed by the in-house faculty and resource persons from various institutes of India. Around 751 live programmes were broadcast from October 2017 to March, 2019. Radio is an important medium that helps support students studying at a distance, as well as those generally interested in expanding their knowledge (Chandar & Sharma, 2003). Mukta Vidya Vani is the unique educational web radio in India and pioneering initiative of the NIOS for using streaming audio for educational purposes (<https://nios.iradioindia.in>). It is an interactive platform for extending quality audio tutorials as an academic support to the learners from its studio located at the NIOS Headquarters in NOIDA, India. The prime

objective is to facilitate the learners of secondary, senior secondary, teacher education and vocational streams studying various course materials. This provides learners a platform to connect, share experiences and understand concepts. Many programs have integrated emerging technologies into student and teacher learning, using a combination of radio and television together with online course materials (Burn, M, 2011, pp-11). The use of this web streaming of programmes for learning purposes has produced an immense number of opportunities to ensure that quality education is accessible from anywhere in the world.

### **Research Questions**

In the broadest terms, the key aim of the study was to assess the awareness and quality of web radio programmes from the viewpoint of D.El.Ed teacher trainees and draw specific insights to the extent to which web radio tutorials could be used as one of the teaching tools in teacher education through ODL mode. It was required to investigate teacher trainees' perception and future expectations regarding live programmes in light of local specific contexts of learners. The study sought to answer the following questions:

1. Whether web radio programmes were easily accessible to teacher trainees?
2. Whether the trainees could be benefited by the live feature of the programmes?
3. Whether they were satisfied with the style of teaching or interaction?
4. How far are the trainees satisfied with content coverage and other aspects of programmes?
5. What are the trainees' expectations towards web radio in the future?

### **Objectives**

The objectives of the study are to:

- assess the awareness of teacher trainees regarding web radio programmes of D.El.Ed.
- find the perception of the teacher trainees regarding the quality of web radio programmes.
- explore the content areas which can be effectively discussed through web radio.
- acquire feedback from the trainees to improve the programmes.

### **Methodology**

In the present study, survey method is used to collect the data from the selected sample. Respondents were asked about the web radio programmes conducted exclusively on D.El.Ed during October 2017-March, 2019.

### **Sample and Sampling Technique**

The population of the present study are in-service untrained elementary teachers who pursued D.El.ED from NIOS during October, 2017 to March, 2019.

204 teacher trainees of this programme were selected as a sample of the study using non probability purposive sampling. Out of 204 participants, 82 were males (40.19%) and 122 (59.80%) were females.

### **Tool for the Study**

An online questionnaire for teacher trainees was developed on Google Forms. The draft questionnaire consisted of four sections and 15 questions. Content validity was confirmed by five experts. Two questions as suggested by experts were deleted and two more were added. One question was modified. The four sections of the questionnaire are (i) Demographic profile (ii) Awareness of the web radio programmes (iii) Quality of the programmes and (iv) Feedback for improvement of programmes. The final online questionnaire consisted of 04 sections and 15 questions.

### **Collection and Analysis of Data**

The questionnaire was sent to 1000 teacher trainees from six zones viz..North, South, East, West, North-East and Central India through bulk message and email. Out of 1000, only 204 trainees responded to the questionnaire. The analysis is based on the responses received from 204 participants only out of 1000 (20.4%).

The data was analysed quantitatively as well as qualitatively.

## Delimitation of the Study

The study is delimited to teacher trainees who pursued D.El.Ed, an in-service elementary teacher training programme from NIOS.

## Results and Discussion

The key findings emanating from the study with respect to various objectives specified above have been summarized. The findings are presented under four separate sections: (i) Demographic profile (ii) Awareness of the web radio programmes (iii) Quality of the programmes and (iv) feedback for improvement of the programmes.

### (i) Demographic Profile

The findings relate to respondents' gender and age. The total sample comprised of 204 teacher trainees out of which 122 were females and 82 were males.

**Table: 1 Demographic Profile-Gender**

Demographic Profile	Percentage of Participants (Females)	Percentage of Participants (Males)
Gender	59.80%	40.19%

**Table: 2 Demographic Profile-Age**

Demographic Profile	Percentage of Participants
Age	
20 to 30 years	55.39 %
30 to 40 years	28.43 %
Above 40 years	16.17%

The table 2 reveals that the majority (55.39 %) of respondents are youth between 20 to 30 years of age. Whereas, 28.43 % of trainees belong to age between 30-40 years. Trainees in the age range of above 40 were found to be 16.17%.

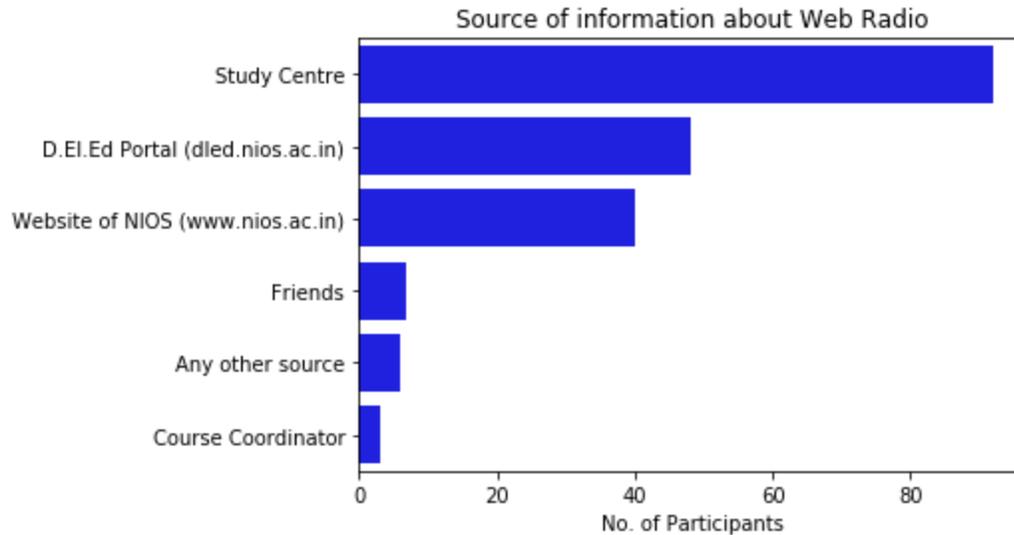
### (ii) Awareness of the Web Radio Programmes

The first objective of the study was to assess the awareness of teacher trainees regarding web radio programmes of D.El.Ed. The findings with respect to each item is presented as:

In response to the item '*Did you listen to the live web radio programmes of D.El.Ed?*' 196 respondents said that they listened to the web radio programmes. However, 08 respondents did not listen to these programmes.

The findings highlight that the majority (96.07%) of the participants listened to the live D.El.Ed web radio programmes. In view of the findings, the further analysis was carried out only on 196 respondents as 08 of them did not listen to the programmes.

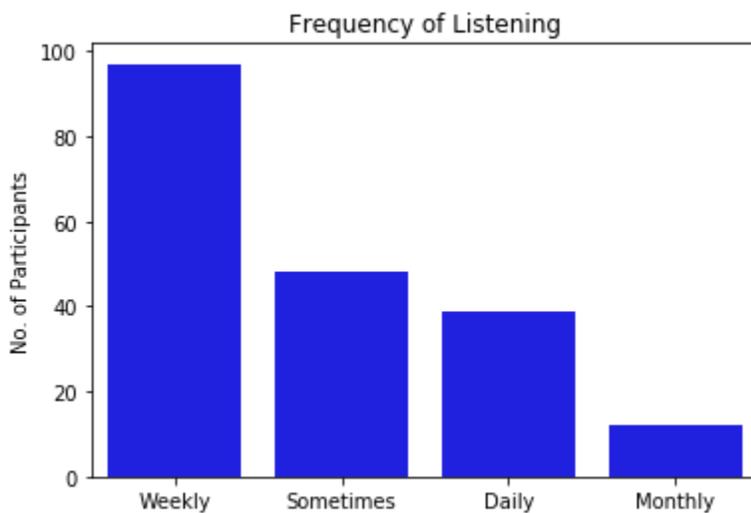
In response to the item '*How did you come to know about the web radio?*' 92 (46.93%) respondents stated that they came to know about the web radio programmes from their study centre and 48 (24.48%) respondents came to know about these programmes from D.El.Ed Portal. 40 (20.40%) respondents said that website of NIOS was the source of the information whereas 7 (3.57%) came to know from friends, 6 (3.55%) from other sources and 3 (1.53%) from the course coordinator.



**Figure: 1 Source of Information regarding Web Radio Programmes**

From the above findings, it can be concluded that the major source of awareness about the web radio are the study centres, D.El.Ed portal and the NIOS website. It can be inferred from the findings that adequate advocacy may have been done by the study centres regarding these programmes. Also, the availability of information on web portals also helped teacher trainees to know about the programmes.

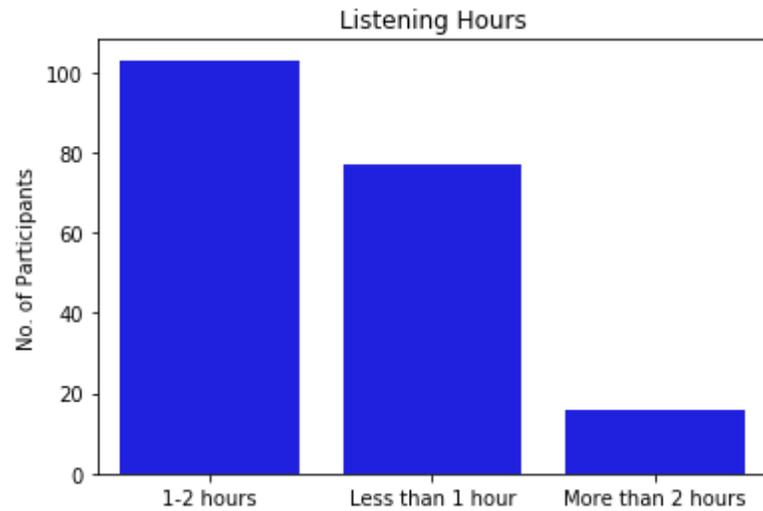
In response to the item, ‘*How often did you listen to the web radio programmes?*’ among the 196 listeners, 97 of them listened to the web radio once a week while 48 of them listened sometimes. 39 teacher trainees responded that they listened daily whereas 12 stated that they listened to these programmes once in a month.



**Figure: 2 Frequency of Listening the Programmes**

The findings indicate that nearly half of the respondents 49.48% stated that they listened to the D.El.Ed programmes on web radio once a week and 24.48 % listened only sometimes. Near about 20% teacher trainees listened daily. It is to emphasize here that these programmes were live broadcast daily from 14.45 hrs to 15.30 hrs and repeat broadcast of the recorded programmes was also there. The figure 2 shows that despite being aware of the programme, a significant percentage of teacher trainees did not listen to the programmes on a regular basis.

In response to the item, 'How many hours did you listen to the web radio in a day?' nearly 52% of the respondents



listened to the programmes for 1-2 hours.

**Figure: 3 Duration of Listening the Programmes**

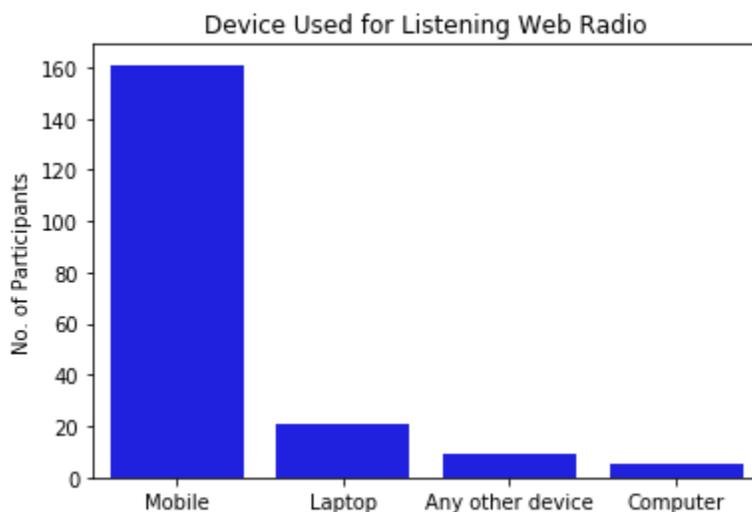
77 (39.28%) teacher trainees spent less than 1 hour whereas 16 (8.16 %) of them responded that they listened to the programmes for more than 2 hours.

The findings of the study indicate that the time duration of the programme is sufficient as since many of them stated the lesser time duration and very less opted for more than two hours in a day.

In response to the item, 'Were you able to connect to the web radio programmes easily?' 180 respondents said that they were able to access the programmes easily whereas 16 teacher trainees could not easily connect to the programmes.

The results highlight that the programmes were easily accessible to them and perhaps this may not be the reason for not listening to the programmes on a regular basis.

In response to the item, 'Which device did you use for accessing the web radio programmes?' the figure 4 below shows that 161 participants (82.14%) responded that they accessed the programmes from the mobiles whereas laptop was stated by 21 (10.71%) participants. Very less participants accessed the programmes from the computer (4.59%) and from any other device (2.55%).



**Figure: 4 Device used for Listening the Programmes**

The findings show that majority of teacher trainees used mobiles and laptop for listening to the live programmes.

In response to the item, 'Did you know that web radio programmes were live and you had the opportunity to ask your query to the expert delivering the programme?' two-thirds of the respondents i.e. 79.59% teacher trainees were aware that the D.El.Ed programmes were live and they could ask their queries to the expert during the programme. The live feature enables the trainees to interact and participate in the learning process and it also removes social isolation. The results of the study is supported by that found by Chander & Sharma, 2003 that 'Interactive radio or audio has proved to be a more effective teacher training tool than non-interactive broadcast radio'.

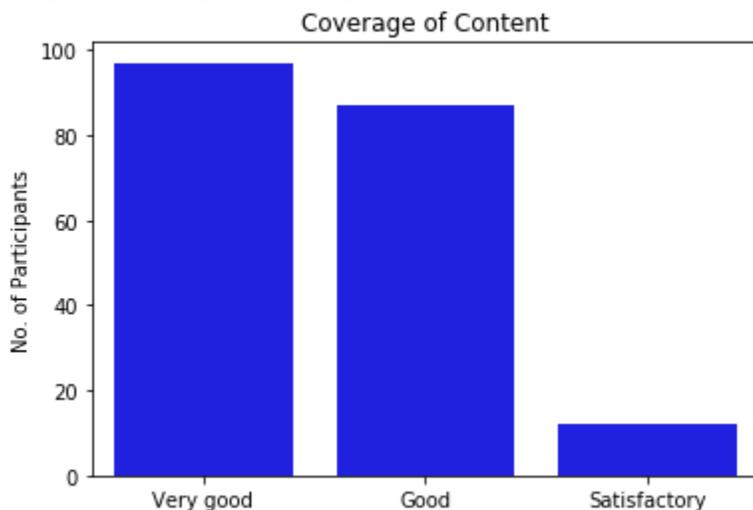
In response to the item, 'Did you ask the questions during the live programme and were you satisfied with the answer provided by the expert?' majority of the participants (66.83%) responded that they asked the question during the live programme whereas 33.16 % did not ask any question.

The results show that perhaps in ODL mode, live feature and the opportunity to ask questions to the expert during the programme provide a support during the self-study and perhaps the reason the majority of the respondents asked and participated in the topic being discussed/taught during the programme.

### (iii) Quality of the Programmes

The second objective of the study was to find the perception of the teacher trainees regarding the quality of web radio programmes of D.El.Ed. In response to the items related to the quality of the programmes on certain parameters, the findings parameter-wise is presented as below:

1. **Coverage of Content:** In response to the parameter, the figure 5 shows that 97 (50%) of the participants reported that content coverage was very good, 87 (44.38%) of them said good, 12 (6.12%) of them reported satisfactory. None of them responded to not good and not good at all.

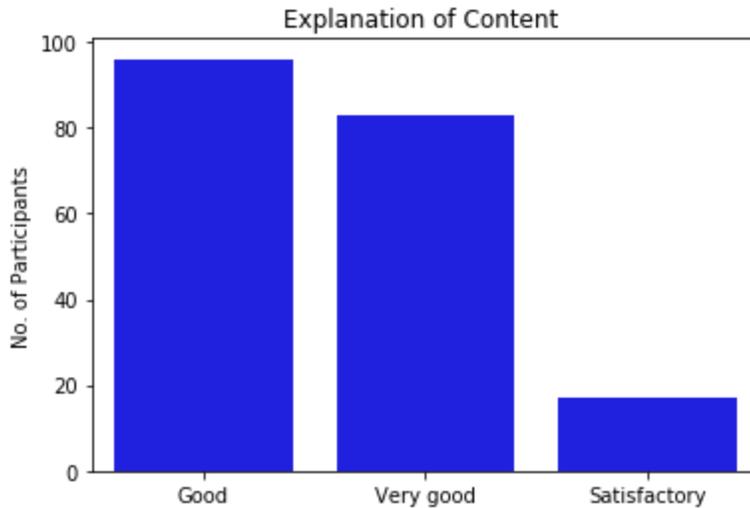


**Figure: 5 Content Coverage in the Programmes**

It may be inferred from the findings that most of the topics and sub-topics were covered during the programmes.

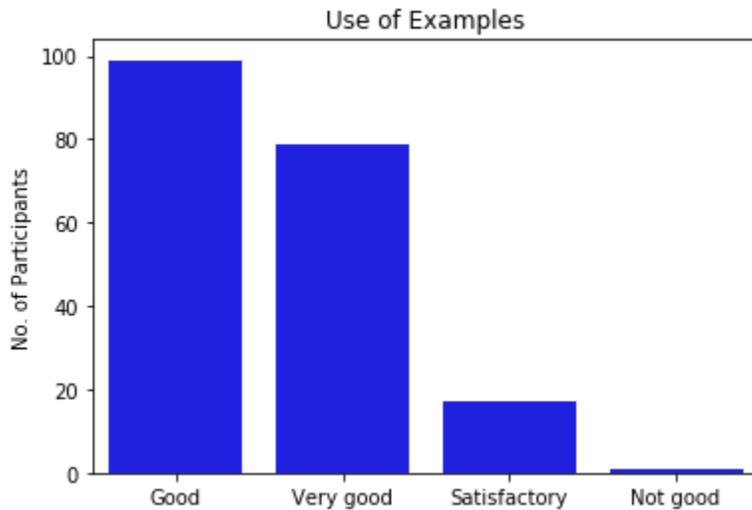
2. **Explanation of Content in Simple and Easy Language:** The figure indicates that majority of the participants found explanation of content in simple and easy language. However, 17 (8.67%) responded that it was satisfactory. None of them responded to not good and not good at all.

The results of the study indicate that teacher trainees found the programmes simple to understand.



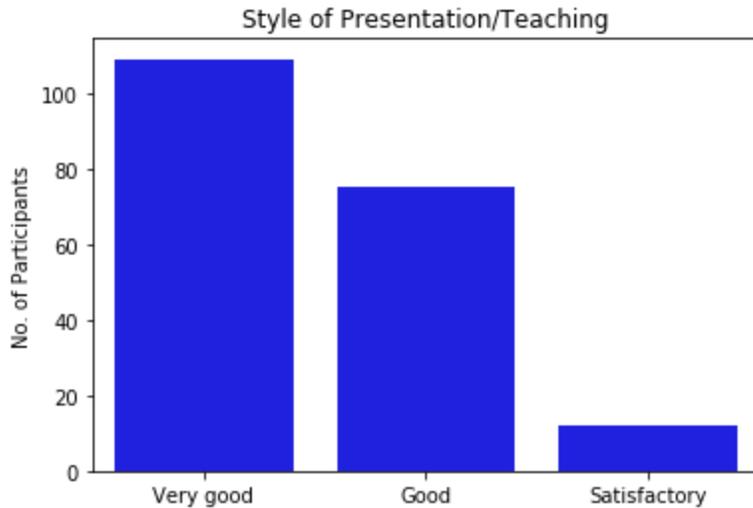
**Figure: 6 Content Explanation in the Programmes**

**3. Use of Examples while Explaining the Content:** In response to the parameter, 79 (40.30%) reported that use of examples was very good and 99 (50.51%) responded as good. 17 (8.6%) participants said that it was satisfactory whereas not good was opted by only one participant.



**Figure: 7 Use of Examples during Content Explanation**

**4. Style of Presentation/Teaching:** In response to the parameter, the figure 8 shows that 109 (55.61%) participants said that the style of presentation or teaching was very good and 75 (38.26%) participants rated it as good.

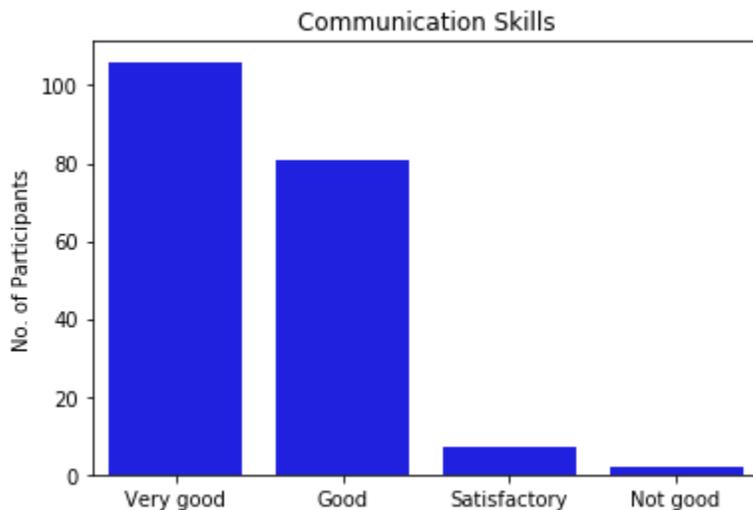


**Figure: 8 Style of Presentation**

Few participants said that it was satisfactory. On the other hand, not good and not good at all was not reported by anyone.

It may be inferred from the findings that the style of teaching however differs from one teacher to another but it should be such that the learners get engaged and find the topics interesting and meaningful. In teaching through radio, it becomes even more challenging. The results indicate that despite challenges, the learners liked the way of presentation by the resource person or expert.

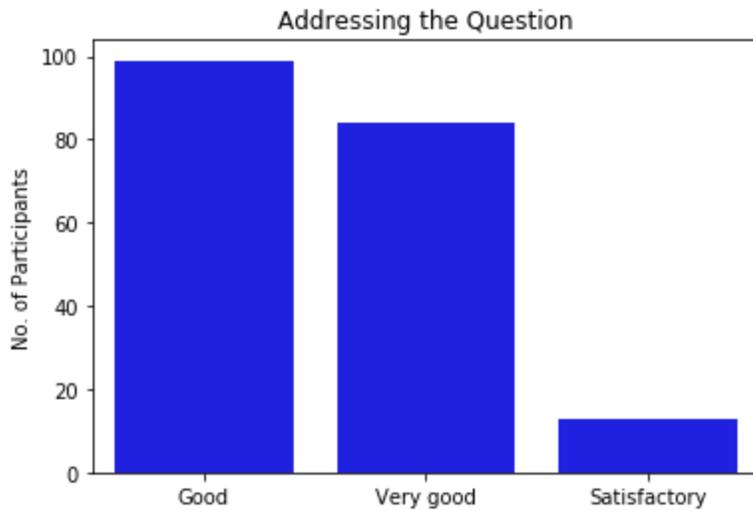
**5. Communication Skills of the Experts:** Figure 9 shows that 106 (54.08%) participants rated communication skills of the expert as very good and 81 (41.32%) participants rated it as good. On the other hand, 7 (3.57%) teacher trainees found communication skills as satisfactory.



**Figure: 9 Communication Skills**

Very less participants found it as not good. The findings highlight that majority of teacher trainees were able to understand the topic explained by the experts. The results also show that few participants found that communication skills were satisfactory. It may be inferred that since the programmes are delivered via web radio, communication skills may be improved so that audience is able to understand the topic being taught or information being communicated.

**6. Addressing the Questions:** In response to this quality indicator as the graph shows that 99 (50%) participants said that addressing the questions by the experts was good. On the other hand, 84 (42.85%) responded it as very good. However, few of them rated this parameter as satisfactory.



**Figure: 10 Addressing the Questions by the Experts**

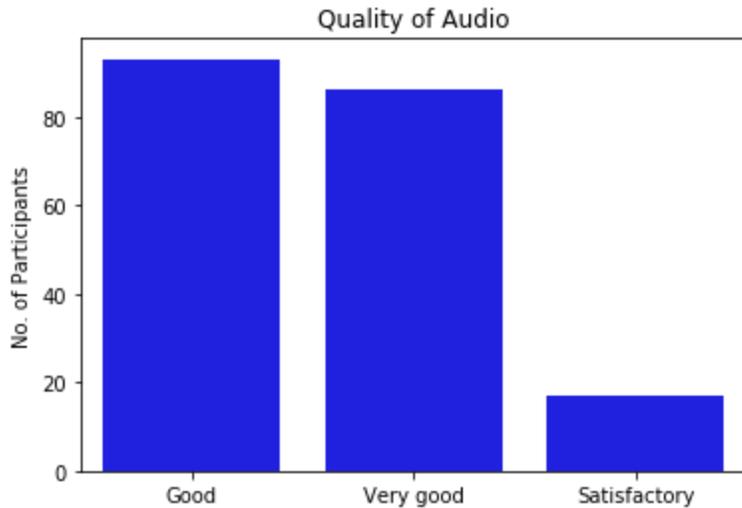
The results indicate that whatever the questions are asked by the learners while the programme is live needs to be duly addressed.

**7. Motivation provided by the Expert:** In answer to this parameter, 104 (53.06%) participants reported that the motivation provided by the expert was very good and 80 (40.81%) said that it was good. Very less rated as satisfactory and not good. In education through ODL, motivation provided by the teacher holds a very important place and that needs to be an integral part of the teaching learning process.



**Figure: 11 Motivation provided by the Expert**

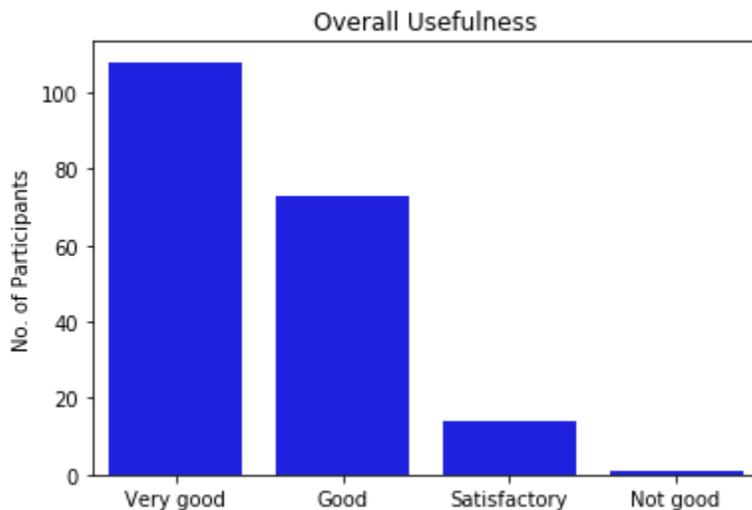
**8. Quality of Audio:** In response to this parameter, the figure 12 shows that 93 (32.14%) rated the quality of audio as good and 86 (43.87%) as very good.



**Figure: 12 Quality of Audio**

However, 17 participants reported the quality of audio as satisfactory.

**9. Overall Usefulness of the Programmes:** On this parameter, among the 196 listeners, 108 (55.10%) rated the programmes as very good, 73 (37.24%) said good and 14 (7.14%) of them rated the overall usefulness of these programmes as satisfactory.



**Figure: 13 Overall Usefulness of the Programmes**

It may be concluded from the findings that live web radio programmes is a good initiative and can be used as one of the teaching tools in training large number of teacher trainees at a distance.

In response to the item related to the quality of the programme on certain other parameters, the findings are presented as below:

- 1. Boosting Confidence:** On this aspect, 98 (50%) participants reported that they agree that the programmes boosted their confidence to study further. Also, 82 (41.83%) participants said that they strongly agree with the statement. However, 13 (6.6%) of the participants also said they could not decide and still very few strongly disagreed with the statement.

2. **Providing general information related to D.El.Ed:** In this, 95 (8.46%) participants provided favourable opinion by agreeing to the statement. 84 (42.85%) participants also agreed for the same. However, 17 (8.6%) could not decide. It may be inferred from the findings that apart from teaching the content or addressing the queries of the participants, live radio programmes also provided general information related to D.El.Ed. This platform also served as an important medium of disseminating important information related to the programme.
3. **Providing information regarding Assignments:** On this parameter, 97 (48.48%) participants responded that they agree that the live programmes provided information related to assignments. 83 (42.34%) reported as strongly agree whereas 15 (7.6%) opted for undecided. The findings revealed that the programmes were effective in providing academic support to the learners.
4. **Providing information related to SWAYAM:** On this parameter, 92 (46.93%) participants agreed that sufficient information was provided related to SWAYAM through this platform. 84 (42.85%) of them reported as strongly agree whereas 19 (9.6%) participants remained undecided. The findings support the fact that most of the time in the beginning or during the programme, information related to SWAYAM was provided to the teacher trainees. It was mandatory for all the enrolled trainees to register and pursue studies on SWAYAM portal. Self-learning material in printed form was not provided to the learners in this programme.

The responses of the participants show that the web radio could serve as one of the potential mediums through which trainees were oriented on different aspects of the D.El.Ed programme.

The third objective was to explore the content areas which can be effectively discussed through web radio. In response to the descriptive item *-What are the content areas from courses of D.El.ED in which you found the programmes as useful?* varied responses were written by all the participants. The content areas from D.El.Ed programme as found useful by the trainees are *Indian education system, child development, NCF-2005, enhancing power of teaching skills, learning of Environmental Science, learning in Hindi, Social Science, assessment, child pedagogy, society and language, RTE Act, fundamentals of education, adolescence and childhood and Bachon ki vikas ki awsthayen aur balyawstha.*

#### (iv) Suggestions for Improvement of Web Radio

The fourth objective was to take feedback from the trainees to improve the programmes. For the item namely *'Please provide your suggestions to improve the Web Radio programmes'*, the answers obtained were varied which have been presented in the table below:

**Table: 3 Suggestions for Improvement of Web Radio**

<i>Need to motivate more</i>
<i>Better examples should be used while explaining the content lesson wise</i>
<i>Is programme ko aage badhane ke liye advertisement deni chahiye taki logo ko iske bare m pata chal sake aur unko knowledge mil sake, advertisements at social media</i>
<i>Make separate playlist</i>
<i>The programme should be publicized widely</i>
<i>Provide download link</i>
<i>Improve the audio quality</i>
<i>Programmes Should be in Hindi and in all regional languages</i>
<i>Make access more easy</i>

## Conclusion

The study shows that live web radio programmes has an immense potential and can be effectively harnessed to train teacher trainees. A number of factors are responsible for successful designing and implementing learning experiences for adult learners. Among those factors, one is understanding of needs and learning styles of these learners. Appropriate andragogy needs to be employed for helping adult learners engage in the learning process and successfully learn. The whole process of planning, delivering and programme evaluation needs to keep in consideration the profile of adult learners. The unique qualities of live web radio (Mukta Vidya Vani) may be essentially harnessed to reach out to learners sitting at a distance and create an interactive and participative learning environment.

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