TEACHERS PROFESSIONAL DEVELOPMENT THROUGH ACTION RESEARCH

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Abstract: Action research is teacher process oriented to reflect upon and improve their own practices of teaching and learning. Teachers'reflective practices as a continuous content and pedagogic enrichment to address the diverse needs of the children in their classrooms, through their learning outcomes will be improved.This paper reports on the basis ofparticipatory constructivist and experiential learning results of seven weeks and two credit online course on 'action research' for in-service teachers conducted by the National Council of Educational Research and Training (NCERT). This course provided an opportunity to get on-line training as per their needs and time with continuously mentored and support by subject experts and educationists through web-login credentials such as dashboard, learners profile, scheduled course materials, telegraph messages, forums and synchronous meeting. The course module contains variety of content experts' explanation video, learning materials, assignments and feedback on submitted assignments. In this course a heterogeneous group of 127 in-service teachers has participated from school level teachers to university level faculty members across the India, the investigator used the mixed method approach and the data were collected from 107 teachers the investigator was the part of the learner group; The findings of the study reveals that it's an good opportunities to the in-service teachers to learn, observe, feel do and reflect, with these learning and doing experiments they came out with wonderful reflective experiences through online action research course with clarity in how to improve the day-to-day practices in classroom activities with handful resources and mindful ideas of action research to meet the classroom challenges and to improve the practices in the classroom as well.

Keywords: In-service Teachers Professional Development (ITPD), Action Research, Self-Reflective Practice and National Council of Educational Research and Training(NCERT).

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Introduction

Action research is a form of research where teachers learn to improve their practice while improving the understanding of their practice. It is not just thinking about teaching but is a more systematic and collaborative process. Action research is become common as a form of in-service training. Teachers are empowered to examine their own teaching practices rather than receiving outside in-service training that may or may not be of value to the teachers. Action research teams support teachers in studying their teaching practice and to actually take action to improve what they are doing in their classrooms. Teachers should certainly use theoretical research to help in their understanding of what occurs in their classrooms. In addition to this knowledge, however, action research allows teachers to collect data that more specifically relates to the current issues relevant in their own classrooms.

The action research relies on teachers developing a focus for study in their classrooms / schools. Teachers must plan out an area of interest or concern in their practice. The focus may be difficult to narrow down in that teachers must consider what kind of data will be realistic for them to collect while still busy working in their classrooms. Once a focus is decided, the teachers must collect data. The data is analyzed and interpreted to look for particular patterns that exist. The final reflection stage is to develop an action plan for what to implement to improve the classroom/school practice.

In-service teachers professional development is the enrichment training provided to teachers over a period of time to promote their development in all aspects of content and pedagogy. Professional development for teachers should be analogous to professional development of other professionals. Becoming an effective teacher is a continuous process that stretches from pre-service experiences to the end of the professional career. It is the tool by which policy makers' visions for change are disseminated and conveyed to teachers. The ultimate beneficiary of In-Service Teacher Professional Development (ITPD) is the student though the receiver is the teacher.

Definitions of Teacher Professional Development

Themain focus of definitions is the development of the individual role as a teacher. Villegas-Reimers and Reimers (2000) describes teacher professional development as "a life-long learning

process… aimed at consolidating the teacher's role professional role… and enabling them to teach effectively at high levels to all children". Schlager and Fusco (2003) define it as "a process of learning how to put knowledge into practice through engagement in practice within a community of practitioners". Meanwhile, Glatthorn (1995) cited as in Villegas-Reimers and Reimers (2000) gives the definition of "the professional growth a teacher achieves as a result of gaining increased experience and examining his or her teaching systematically".

The new focus of professional development world-wide is now on the implementation of action research as a means for teachers to evaluate their own practice for self-improvement. Great efforts have been initiated by the NCERT-CIET from last for year they are continuously conducting the online action research course for the in-service teachers of the nation. Numerous presentations at various levels have been conducted at both the national and state levels. But really, how has action research helped Indian teachers grow professionally? Action research has been defined as "the voluntary, collegial involvement of teams of teachers at the same site as they pursue joint inquiries into defined areas of significant personal/professional concern". The concept of 'teachers-as-researchers" requires teachers to observe and analyse both teacher and student existing classroom behaviour, call upon their own knowledge and skills in deciding what to change and what not to change, and monitor the teaching and learning process. The professional development options will locate problems of 'implementation' that is the ability to iron out the probable internal contradictions and tensions that might exist between the proposed reforms and teachers' existing beliefs, commitments and practices. It isthe practitioner professionalism.

Action research is said to enable teachers to develop knowledge from their experience and to help them understand better their own practice. The process of questioning, inquiring and discovering is said to contribute to teacher development and learning. Through action research, teachers are able to take note under which circumstances and with which students a new set of materials or a new strategy is most effective. The reflexive teacher is then the practitioner whose approach and mindset to self-development is that of a self-critic. In this context, it is all right to for the teacher to be at times uncertain, confused or frustrated because the path to 'self-

enlightenment' is not always smooth-sailing and rosy but is in fact fraught with risks and difficulties.

Factors Affecting Teacher Professional Development

The professional development both changes and is changed by the organizational context in which it takes place. Literature points to two basic categories affecting teacher professional development, whichare personal factors and contextual factors. Personal factors include the stage of concern the teacher is in, the teacher's career stage and the cognitive development. Contextual factors include the type of class the teacher teaches, the teacher's colleagues, the head of department, the school culture, the school leadership, school policies as well as time and financial resources (Villegas-Reimers&Reimers, 2000).

So how do we measure the success of teacher professional development programmes? Do we measure by the participants' attitudes and perceptions? How about teachers' attendance? Or maybe facilitators' evaluations?Student learning? All the preceding indicators may be considered less rigorous than measures of teacher learning, adoption and implementation of new instructional method (Cwikla, 2003). According to her, for innovations to be successfully passed on to the grass-root level, much time and opportunity is required for teachers to understand, experiment as well as change attitudes and perceptions about teaching and learning. Further to that, teachers who attend professional development programmes outside of their schools are better able to implement what has been learnt and more likely to "keep the fire burning" when they are given support through networking with other fellow participants who can "care and share" with respect to problems or issues that may arise and also to celebrate success in their achievements. This would help alleviate the feeling of being isolated in their effort to change.

Theoretical Framework

The investigator has used the constructivist approach as a framework for the study to understand the opportunities and challenges were faced by the participant of the in-service teachers by managing teaching, learning and active-experimenting the learnt thinks in the classroom that can improve their practice. Constructivism is a situated concept, which creates ambiguity among learnersin learning situation in education settings. It makes that learner to know and understand

in novel and unique ways to create their own new knowledge and understanding.The basic ontological assumption of constructivism is relativism that is need to understand and improve the classroom practices, the study hope to reveal solutions that can help teachers to improve the classroom practices.

Fig. 1: Pictorial Presentation of Theoretical Framework
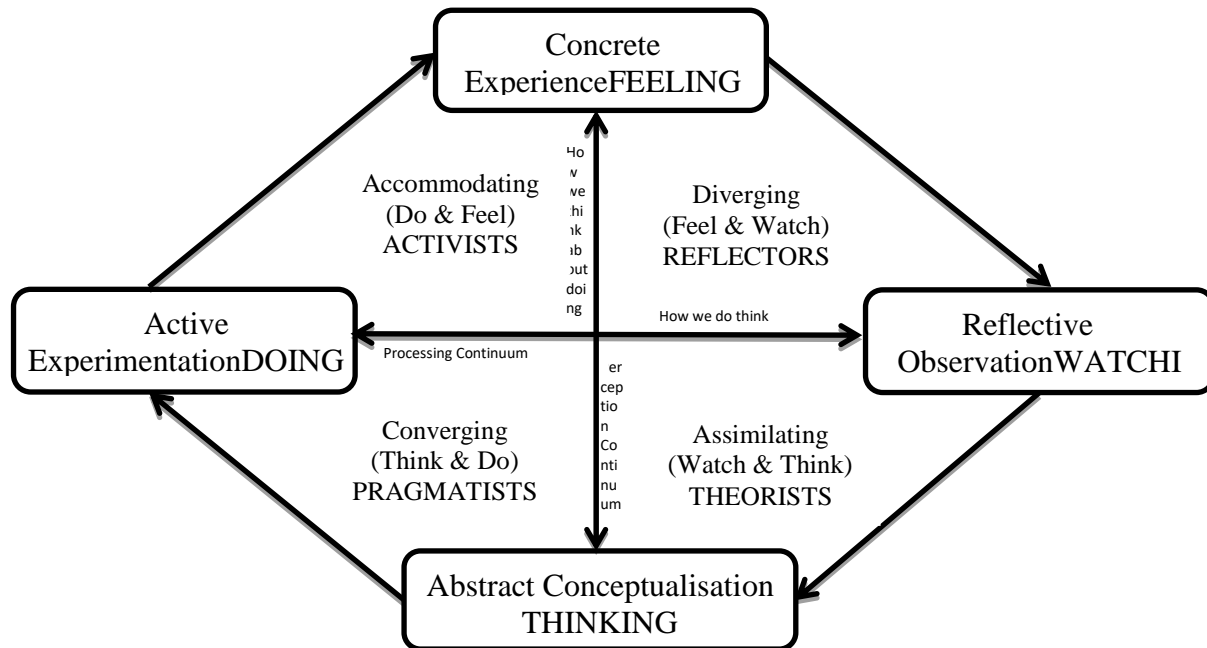
Action research as Teacher Professional Development

The new paradigm for teacher professional development recognises that decisions by curriculum developer are deeply rooted on their knowledge and beliefs about change. Therefore, their theories affect the way teachers teach. Traditionally, teacher professional development programs have been developed and conducted by a team of experts of NCERT, SCERTs, CTEs and DIETs in-service training programs. Consequently, in order to meet teacher needs effectively, their professional development, including their teaching practice, should focus on their thinking and students' learning. This is one of the reasons why teachers today throughout the world are encouraged to engage in individual research or in collaboration with their peers in classrooms and schools where they teach in order to find solutions to problems they face in their everyday life. The teachers participation in research helps them to be more 'changeable' and more open towards new ideas and external authorities, to be more active and have more confidence on their own to cope with difficult situation that may arise during their teaching experience, to be more

creative andface unknown solutions and challenges as a result of experimentation, discovery and modification. Investigatoractively participated in this research conducted investigations in NCERTonline action research course as part of their action research course. This paper deals the in-service teacher professional development thorough the action research inincreasing their self-confidence and their role, as researchers, in fostering collaborationamongst peers, as well as in improving their classroom teaching practices.

Research Question

The research question investigated in this study is: What and how does action research made impact on teachers' professional development?

Methodology

Theinvestigator used the mixed method, which was qualitative and quantitative approach.

Participants

It is a participatory constructivist and experiential learning through theNational Council of Educational Research and Training (NCERT) conducted seven weeks and two credits online course on 'action research' for in-service teachers. In this course a heterogeneous group of 127 in-service teachers of different streams such as science, commerce, arts and teacher educators of school level to university level teachers were participated, of which the investigator received data from 107 members and the investigator was the part of the learner group as well.

Procedure of Data Collection

This course provided an opportunity to get on-line training as per their needs and time with continuously mentored and support by subject experts and educationists through web-login credentials such as dashboard, learners profile, scheduled course materials, telegraph messages, forums and synchronous meeting. The course module contains variety of content experts' explanation video, learning materials, assignments and feedback on submitted assignments, NCERT online feedback form and participatory observation technique, the online feedback formconsist both open ended and closed-ended questions.

Analyses and interpretation of the data

In this study the investigator has used the percentage technique for the analysis of quantitative data than interpreted the results, for the qualitative data on open ended statements as the participants expressed their comments, suggestions, remarks and views were compiled and interpreted.

Table: 1. Action Research Course Reading Material Dimensions (N=107).

Sl. No.	Dimensions of Reading Material	SA N (%)	A N (%)	UD N (%)	DA N (%)	SDA N (%)
1	Reading material covers all aspects of Action Research	59 (55.14)	48 (44.86)	00 (00)	00 (00)	00 (00)
2	Language of the reading material was easy to understand	64 (59.81)	43 (40.19)	00 (00)	00 (00)	00 (00)
3	Modules length were appropriate	38 (35.51)	64 (59.81)	02 (1.87)	03 (2.8)	00 (00)
4	Terminologies used in the material were clear and easy comprehend	52 (48.60)	55 (51.40)	00 (00)	00 (00)	00 (00)

Source: https://itpd.ncert.gov.in/mod/feedback/analysis.php?id=768

The above table 1 data reveals 55 percent of the participants are strongly agreed and 45 percent agreed that online action research course reading material covers all aspects the action research. 60 and 40 percent of the online action research course participants felt strongly agreed and agreed that the language of the reading material was easy to understand. 35 and 60 percent of the participants were strongly agreed and agreed for the appropriateness of the module length and 49 and 51 percent of the participant were felt strongly agree and agreed for terminologies used in the material were clear and easy comprehend.

Table: 2. Online Action Research Course Procedure (N=107).

Sl. No.	Course Procedure	SA N (%)	A N (%)	UD N (%)	DA N (%)	SDA N (%)
1	AR course registration procedure was easy	75 (70.09)	30 (28.04)	1 (0.93)	1 (0.93)	00 (00)
2	Module-wise assignments were helpful for exploring the content	71 (66.36)	35 (32.71)	1 (0.93)	00 (00)	00 (00)
3	Synchronous meetings time for weekends were suitable	21 (19.63)	66 (61.68)	11 (10.28)	8 (7.48)	1 (0.93)
4	Synchronous meeting was helpful to understand the content and other aspects of AR	22 (20.56)	55 (51.40)	26 (24.30)	3 (2.80)	1 (0.93)
5	Frequency of synchronous meeting was sufficient	24 (22.43)	53 (49.53)	18 (16.82)	10 (9.35)	2 (1.87)
6	To attend synchronous meetings I had to go to the Cybercafe	5 (4.67)	15 (14.02)	9 (8.41)	48 (44.86)	30 (28.04)
7	Motivated the course communications through SMS, Telegram and Email	67 (62.62)	39 (36.45)	1 (0.93)	00 (00)	00 (00)

Source: https://itpd.ncert.gov.in/mod/feedback/analysis.php?id=768

As observed from the table 2, it clearly shows that the data related to online action research course procedure, in this 70 and 28 percent participants were strongly agreed and agreed for action research course registration procedure was easy. 66 and 33 percent of participants were strongly agreed and agreed for module-wise assignments were helpful for exploring the content of the action research. 20, 62 and 10 percent's of participants were strongly agreed, agreed and undecided for weekend synchronous meetings time were suitable. 21 percent strongly agreed, 51 agreed and 24 percent of participants were undecided for synchronous meeting was helpful to understand the content and other aspects of action research. Frequency of synchronous meeting was sufficient as the participants of the action research course 22 percent strongly agreed, 50 agreed and 17 percent of participants were undecided. For attending the synchronous meetings of the course the participant has to go to the Cybercafe for this 45 percent of the participants disagreed, 28 percent strongly disagreed, 14 percent agreed and only 5 percent were strongly agreed. 63 percent were strongly agreed, 36 percent were agreed for communications through SMS, Telegram and Email Motivated the online action research course participants.

Table: 3. Process of Evaluation in Online Action Research Course (N=107).

Sl. No.	Components of Evaluation Process	SA N (%)	A N (%)	UD N (%)	DA N (%)	SDA N (%)
1	Assignments, online test and involvements in discussion forum	51 (47.66)	49 (45.79)	6 (5.61)	1 (0.93)	00 (00)
2	The time and day of initial and end test suitability to me	33 (30.84)	55 (51.40)	8 (7.48)	8 (7.48)	3 (2.80)
3	The time duration for initial and final test was sufficient	33 (30.84)	52 (48.60)	19 (17.76)	3 (2.80)	00 (00)
4	Conducting online test through website was appropriate	42 (40.00)	46 (43.81)	15 (14.29)	2 (1.90)	00 (00)
5	Items in the final test were related to the contents of the course	25 (23.81)	49 (46.67)	31 (29.52)	00 (00)	00 (00)

Source: https://itpd.ncert.gov.in/mod/feedback/analysis.php?id=768

The above table 3 data reveals that the process of evaluation in online action research course assignments, online test and involvements in discussion forum for this 48 percent of participants were strongly agreed, 46 percent were agreed and 6 percent were undecided. 31 percent of participants were strongly agreed, 51 percent of participants were agreed, 7 percent of participants were undecided and disagreed for the time and day of initial and end test suitability. 31 percent of participants were strongly agreed, 49 percent of participants were agreed and 18 percent of participants were undecided for the time duration for initial and final test was sufficient. 40 percent of participants were strongly agreed, 44 percent of participants were agreed and 14 percent of participants were undecided for conducting online test through website was appropriate. Items in the action research online course final test were related to the contents of the course for this 47 percent of participants were agreed, 30 percent of participants were undecided and 24 percent of participants were strongly agreed.

Table: 4. Video in Action Research (N=107).

Sl. No.	Video Dimensions	SA N (%)	A N (%)	UD N (%)	DA N (%)	SDA N (%)
1	Video contents was suitable in support to text	50 (47.62)	53 (50.48)	1 (0.95)	1 (0.95)	00 (00)
2	Concepts in the video were clear to understand	51 (48.57)	49 (46.67)	3 (2.86)	2 (1.90)	00 (00)
3	Language of the video was easy to	54	48	1	2	00

	understand	(51.43)	(45.71)	(0.95)	(1.90)	(00)
4	Expert voice was audible in the video	57 (54.29)	46 (43.81)	1 (0.95)	00 (00)	1 (0.95)
5	Delivery of content speed was appropriate	48 (45.71)	56 (53.33)	1 (0.95)	00 (00)	00 (00)

Source: https://itpd.ncert.gov.in/mod/feedback/analysis.php?id=768

Table 4 data shows video of online action research course. The video contents were suitable in support to text in online action research course for this 48 percent of participants were strongly agreed and 50 percent of participants were agreed. Concepts in the video were clear to understand the action research course for this 49 percent of participants were strongly agreed, 47 percent of participants were agreed and 3 percent of participants were undecided. The language of the video was easy to understand in online action research course for this 51 percent of participants were strongly agreed, 46 percent of participants were agreed, 2 percent of participants were strongly disagreed. The expert voice was audible in the video of action research course for this 54 percent of participants were strongly agreed and 44 percent of participants were agreed. For delivery of content speed was appropriate in action research course for this 46 percent of participants were strongly agreed and 53 percent of participants were agreed.

Table: 5. Action Research Practicability (N=107).

Sl. No.	AR Practicability	SA	A	UD	DA	SDA
		N (%)	N (%)	N (%)	N (%)	N (%)
1	After completion this AR course, I am able to conduct AR	63 (59.43)	39 (36.79)	3 (2.83)	1 (0.94)	00 (00)
2	AR course made me to improve practice and capabilities	66 (62.26)	37 (34.91)	2 (1.89)	1 (0.94)	00 (00)

Source: https://itpd.ncert.gov.in/mod/feedback/analysis.php?id=768

As seen from the table 2 data, it depicts the practicability of the action research course. After completion this action research course, the participants were able to conduct action research study for this 59 percent of participants were strongly agreed, 37 percent of participants were

agreed and 3 percent of participants were undecided. Online action research course made the participants to improve the practice and capabilities for this 62 percent of participants were strongly agreed, 35 percent of participants were agreed and only 2 percent of participants were undecided. In totality after going through the online action research course the participants were felt that it is practicable.

For the open ended questions the participants were commented, suggested, remarked and expressed their views as follows:

1.   **For the online action research course participant has suggested the following suggestions to further improve the course:**

•   Course material was useful and informative to the in-service teachers to carry action research in their classroom.

•   Course content and explanatory examples of AR should be relevant to the Indian context is more helpful, a sample of action research worked out projects can be given for references and should be some examples also on Action Research taken from various states across the country from govt. and public schools, residential schools as well.

•   Course should be designed with practically challenged and classroom based reflective exercises and assessments expected.

•   The course is really informative and it tried to address all the aspects of action research.

•   For data analysis techniques more information can be included.

•   If there is a provision for print material including soft copy, we can collect a copy for our institution.

•   Gap between the successive modules was too lengthy and boring.

•   Synchronous meeting should be scheduled regularly; it would be more beneficial if there were more synchronized meetings.

•   Responses provided through telegram and synchronous meetings are appreciable. But sometimes when it is not possible to connect through these modes, please provide the guidance and feedback through portal also (in the feedback option of assignment submission).

•   Concept of the research should be cleared more after that action research should be focused and more number of expert/ mentors should be engaged because there is large number of participants.

- During the course schedule at least one day face to face meeting was expected by the participants at RIE level, we can clarifying our doubts and to share their experiences of the day to day practice problems, issues, challenges and improvements via action research.

- Previously course completed in-service teachers can be used as tutors especially KendriyaVidyalaya (KVs), JawaharNavodayaVidyalaya (JNVs) and state government teachers, it would be more helpful and may reinforces the current learners.

- Not expected the extension of deadlines frequently it dilutes the seriousness of learning and submitting the assignments on time else give submission in two to three slots accordingly due weightage.

- To prepare a proposal there could be some more guidelines and exemplars, Theses exemplars can be on different types of action research and dimensions of practices are desired.

- Action research project proposal preparation is quite difficult for primary school teachers; it should be designed in such a way that it is easy and motivating if it is multiple choice items, instead of writing a detailed proposed work, which may not be easy for primary teachers.

- Received feedback for the assignments was general in nature and all most same for most of the participants. It should be individualistic on the merit and loopholes of assignment.

- After successful completion of the course, the participants may be given an opportunity share the ideas and nurture the culture of conducting action in the school or classroom level for this purpose hands on workshop on action research could be organise in NCERT or regional institute of education (RIEs) or it may be in association with DIET or other institutions across the country.

- The NCERT can make a repository of different studies/ research proposals for the fellow participants or passed out candidates. This will allow the participants to access these studies and understand their action research problems more significantly.

- Financial support may be provided to conduct action research if the topic he/ she selected has some potential value and impact for school/ society.

- This course has helped us to understand and find solutions of the problems faced by teachers with their practice.

- Time lines should be flexible in a distance learning mode where everyone can make progress according to their own pace according to time and situation.

- About online test no proper guidelines that are marks, number and nature of questions and number of attempts.

- The course design is really good but the NCERT team may introduced a small quiz like end test, but it should be serious and should assess the understanding level of the participants.

- Finally, a time frame of the overall course with expected dates of course line can be provided for the over clashing of the dates with other events. It will help the participants to get prepared for the various events in the course.

2.   Participants views on quality of content of the modules.

- Quality of content of the modules was excellent. The various modules were aptly designed to understand the various aspects of Action Research. It is a vast ocean, content of the modules tried to cover all the points that has to be focused on in Action Research and the quality of each module is excellent in general but specifically imported from other country.

- Module or books should be from Indian Authors or Indian context is desirable.

- NCERT should develop own material through workshop. It should be done with the help of field workers under the guidance of professors of NIE / RIEs.

- There are certain basic doubts among the participants on the reporting of action research. Many teachers and teacher educators are engaging themselves in action research but are not reporting due to lack of competent skills of doing it. One module can be step by step guide to prepare report right from the first step of identifying and stating the problem to till report writing. The stepwise reporting will help Practioners to document the process there by encouraging them to report and share it in the appropriate forum.

- The content was appropriate catering the needs of the participants. It was well synchronized with the theme of the every week.

- The quality of content and videos both are appropriate and self-explanatory. It helped us a lot in understanding the concept of AR.

- Quality of content of the modules was good and easy to comprehend the concept. More case studies and real classroom example should be included in modules.

- Content is adequate and gives all necessary information for conducting action research. However, participants need to explore more about this area from other sources.

- Prof D.N Sansanwal videos are easy to understand the action research theoretically and highlighted part of the AR course.

3.   Comments on the process of conducting online action research course.

- It is really useful for improving our teaching practice.

- Easy, understandable and organised. But it should be more in-depth and expected more guidance.

- It would be say that it is remarkable and great experience with the course and it is very convenient for the participants reflect their practices through the action research course.

- The process of conducting online course on action research was interesting and helpful for in-service teachers. Actually it helps us to face and solve some real problems of the classroom setting.

- It is a good attempt to learn online as it saves time, energy and money and it provides lots of good reading material.

- The process of conducting action research online is good. But the problem of rushing at the same time it would be hectic and time management is another issue.

- It was really a great learning experience and the way things were answered instantly is really appreciable. Content in easy language, synchronous meeting and telegram all the things helped us a lot in clearing our doubts.

- It is supportive actions, easy and well guided course by eminent mentors.

- It is first on line experiences it's very useful but synchronous meeting held more than two times, the process is user-friendly.

- It's really good for motivated learners and practicener, it has flexible structure.

- It was systematic but the extensions given repeatedly for assignment submissions are not fair for those who submit it within the time limit before the extensions.

- In-service learners can learn anywhere and anytime within the given duration.

- The process of conducting online course is excellent as it is providing a good platform of understanding with the help of online resources.

- It's a very good process but the time schedule of the modules is runs quite slowly.

- The process for conducting the course is appreciable but may be improved by introducing a small quiz (like end test) after completion of every assignment to keep every participant more dynamic.

4. Participants' comments on the evaluation procedure in online action research course.

- Yes,excellent feedback for the assignments it was on time and appropriate assignments were given to the participants, but most of the participants felt that it is a generalized feedback to every participant, no specific feedback provided to improvement.

- Evaluation should be done regularly and grades might have given before another assignment.

- Beside one end test one more exam is necessary to check the assimilation and level of understanding the action research.

- Immediate feedback encourages us to do other assignments.

- Feedback procedure is not up to mark. It was monotonous and need Improvement.

- The timely assignments and end test provided both formative and summative assessment. It was excellent though sometimes more detailed and comprehensive evaluation would have been given more insight for the learners

- Evaluation process is fine. The assignment based small quiz may be added to the evaluation process to make it more participatory.

5. Participants' comments on the video in support of textual material in online action research course.

- The videos were simple and understanding, which was provided in different module it was very useful and in simple way.

- Good clarity in approach, visible, audible and easy to understand, it makes sure about good accent of spoken language. Video provided were clear in approach, content, and voice.

- The video should be provided in Hindi language.

- Videos of the modules help us to understand the matter very accurately.

- The video information is only covering basics of action research. The videos can be included that talk and discuss on some action research that is carried out, the challenges, the

satisfaction and use of doing such activities in the regular practices. There can be a video on few experts and few learners talking about the procedure and reporting of the research done.

- Videos are good but if at least five six action research example expected in it, and also it should be in dialogue mode at least 2-3 people should be engaged for discussion on the topic.

- Videos must be pleasant and enjoying in learning though the content was good but there must be change of presentation at each module. During traveling such videos become sleepy. It should be energetic.

- Teaching which was confined only in the classroom has now moved online. Watching the videos provided me with variety of methods to be used in Action Research. It also saved my time by re-watching it time and again and helped me in preparing my assignment.

6. Participants' comments on use of telegram app during the action research course.

- Participants do not understand each other, but even it is good experience in support to queries, doubts and updates any things during the courseprogress.

- It is a good technic for communication and clarification by using and working with a new social media platform.

- It was more of announcements or anxious people like introverts looking for a way forward.

- Telegram is a great alternative to any of the leading messages app; most of the participants used the telegram for communicating with all the participants during the course. Through it every participant gets the information at right time. The information provided through telegram was accurate and reliable. Telegram also reminds us to submit all assignments in time. Telegram was a perfect platform to share our resources, discussion among our peers.

- It provided important information relating to course and views of others about the course.

- It is better initiative as one can instant ask about queries, doubts and updating the course.

- The group is really good and always keeps the participants on their toes; it is very helpful for everyone for peer learning as well for expert learning. Moreover, it's a good tracker to keep up with the pace of the course timeline.

7. Participants' open remarks on all aspects of online action research course.

- The online course was appropriate for the in-service teachers of the nation and need to improve and implement it at the ground level are important as participants felt the same.

- Whatever content and material provided in course it was very meaningful and useful. Participants assured to improve their teaching approach with help of action research course knowledge.

- Use tutors from trained people to address the problems of the classroom teachers.

- It develops the quality to understand the situation and problem of the students and to solve their problems.

- Course should be designed with advanced levels. Its basic course giving the parameters but not enhancing the competencies in in-service teachers. Participants are not to confident in conducting it. Practically they still feel apprehensive.

- Follow up on the course after six months can be included to encourage the participants to take up the proposal and publish in NCERT journal. There can be a new journal for action research to publish the best practices that are documented. This may be guided to prepare articles and edited.

- The course was highly remarkable and informative for in-service teachers; Teachers can solve their day-to-day classroom problems through action research and also improving their practices.

- Research makes sense to a person conducting it and action research is very helpful in the context. A teacher while dealing with the students confronts problems associated with teaching learning and action research helps him to get out of it with possible solutions.

- The AR topics found to be useful should be promoted further to be taken up in real life situation and the result should be put forth otherwise many could remain only on papers.

- Action research process is easy and it makes the learners to improve their competencies and skills of the profession, teachers may able to conduct it easily, they do not taking it as another big task to be done. Teachers felt regular guidance regarding the way they take their research further is needed. Even after reading all the things, they are having many doubts in their minds to lead the action oriented research further.

- Some participants are requested to change in the pattern of online test;   with respect to test detailed information must be provided on website rather on telegram app.

- The overall course design is really appreciable. There are always rooms for improvement and in the opinions of participants a small quiz after completion of every assignment may prove to be a value addition.

- The course has very less popularity against the value it carries. The Course must be promoted through proper channel like CBSE, NVS and KVS to reach the masses. There may be certain motivational factor added for doing the course through consultation with the above mentioned government bodies.

Findings of the Study

- Action research coursereading material: the reading material covers all aspects of action of action research, language of the reading material was easy to understand, modules length were appropriate and terminologies used in the material were clear and easy to comprehend, for this majority of the participants were satisfied with the course material, simultaneously the participants expected Indian context based reading material.

- Procedure of the online action research course: registration for online action researchcourse was easy, module-wise assignments were helpful for exploring the content, weekend synchronous meetings time were suitable, only two meetings were arranged and also only few participants were connected to it, for remains it shown connecting… within an hour meetings were completed. Most of the participants were upset in this connectivity to the synchronous meeting, and they also expected every weekend meetings to solve their instant doubts and queries.Motivated the course communications through SMS, telegram and email too.

- The process of evaluation in online action research course through assignments, online test and involvements in the discussion forum, the time and day of initial and end test were suitable to majority of the participants, few of the participants were unable to attend the end test due to pre-occupied responsibility and they also had another ARPIT test on the same day, for these participants the coordinator has gave the another chance to attend the end test. The time duration for initial and final test was sufficient but most of the participants were expected at least for 100 marks test with three hour duration.Conducting online test through website was appropriate and items in the final test were related to the contents of the course.

- Video in Action Research:Concepts in the video were clear, used language was easy, voice in the video was audible, delivery of the content was appropriate totally it was suitable in

support to text, participants were made suggestions to arrange interactions with the experts by participants at least once in a module.

- The practicability of the action research: the ultimate aim of the course was its implementation in the day-to-day practices of the teachers, most of the teachers felt that they are competent and capable to conduct the action research for improving their practices.

Conclusion

The quality of education in schools depends on the competence and commitment of teachers. There is a decline in the quality of education in most developing countries as a result of inadequate teacher preparation. This realisation has led to a growing emphasis on in-service teacher professional development. Actionresearch is the powerful tool for anyone for their professional development in general; specifically it is apowerful weapon for the in-service teachers' professional development. Action research provides an opportunity to think about their day-to-day practice and reflect through the action research to solve problems to improves the practices and to try out new techniques and ideas to improve the practice further for the promoting the teaching-learning process in the given context for both teacher and learner. Action research would also serves to create a culture of enquiry in which teachers are learners, critically reflecting on their daily practices to improve the conditions of the context. When undertaken the action research individually or collaboratively with facilitation by the facilitator, it has a greater potential impact on professional development of one-self, in others and within the learning context in which it is carried out.

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