

# **Impact of Action Research in Teachers' Professional Development Training**

A Thesis

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and Management for the partial fulfillment  
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### Acceptance Letter

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## ***ABSTRACT***

*The research entitled **Impact of Action Research in teachers' Professional Development Training** has the main objective to find out the present situation and impact of action research in teachers' professional development training, along with the difficulties and problems with their solutions.*

*The research is qualitative and quantitative in nature with descriptive method used to analyze the data. Seventeen respondents that were ten teachers and seven informants as four head teachers, two resource persons and a District Education Officer were the primary sources of data. Four sets of questionnaire, a set of focus group discussion, an observation form containing checklist, and an interview schedule were applied as the main tools in the research. The data from the field were analyzed using qualitative analysis techniques. Additionally means were calculated for questions containing a one through three and a one through five point Likert scale. The questions stated "explain your reason(s) for choosing that level", such reasons for their choice were qualitatively analyzed. The information from action research reports submitted by the teachers has been used as the secondary sources of the data.*

*The study found that the Teachers' Professional Development Training was able to introduce action research to the teachers. This training alone is not sufficient enough to change their attitude, give proper action research skills and knowledge as expected. Inexperienced facilitators who have not gone through the process of action research themselves presented it in short sessions theoretically. However, their impacts were positive as teachers became more reflective practitioner in the learning of their students, their teaching, and career. They were motivated and confident in trying new methods with reflection. They found reviewing related research and analyzing data difficult in the action research process. Teachers with masters' degree qualification found these process components moderately difficult.*

*The policy level has been recommended to manage separate workshop for action research with experienced action researcher as facilitators during holidays. Financial incentives, publication of teachers research, changing the teachers' attitude to research positively, use of diagnostic supervision followed by reward and punishment, minimizing strikes in the schools, action research studies*

*curriculum to be embedded in teachers' academic courses are strongly recommended to the policy level.*

*The practice level has been suggested to enforce better training policy, focusing on action research process stages, supporting, nurturing, and sharing researches, easing needy female teachers' work pressure with an extra leisure period per week, interschool subject teachers' monthly meetings, publication of soft copy of action research in schools' face book pages or in the local newspapers are some suggestions for practice level.*

*The future researches should be done on 'Benefit of action research in children', 'Teachers' motivation in action research'. A comparative study can be conducted between teachers who carry out action research and who do not.*

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**ABBREVIATIONS/ACRONYMS**

<b>AR:</b>	Action Research.
<b>B. Ed.:</b>	Bachelors in Education.
<b>DEO:</b>	District Education Office
<b>ETC:</b>	Education Training Centre
<b>ETN:</b>	Extensive Training Network
<b>HSEB:</b>	Higher Secondary Education Board.
<b>I. Ed.:</b>	Intermediate in Education.
<b>MOE:</b>	Ministry of Education.
<b>NCED:</b>	National Centre for Educational Development.
<b>NESP:</b>	National Education System Plan (1971)
<b>RC:</b>	Resource Centre.
<b>RP:</b>	Resource Person
<b>SMC:</b>	School Management Committee
<b>TPD programme:</b>	Teachers professional development programme.
<b>TPD training:</b>	teacher's professional development training.
<b>VDC:</b>	Village development committee
<b>WPA:</b>	Work Performance Appraisal

# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the Study

Action research is a tool for improving teaching and learning. It involves 'Action' by teachers to improve teaching then 'Research' systematically describes or measures the impact of their actions. It is a small scale intervention into educational practice with systematic analysis of effects of intervention/action. The development of a teacher in his or her professional role as a result of increased experience with examining his or her teaching systematically is professional development. Any urgent problems that arise in the work place are solved through action research by present day teachers as part of their professional development globally. It is for the improvement of work performance in the local setting through research and evaluation. It is reflecting one's own teaching for better learning of the students. In professional practice, it is a process of rigorous and systematic thinking based on evidence. According to Kemmis and Mc Taggart, Action Research is characterized by five spiraling steps (a) planning, (b) acting, (c) observing, (d) reflecting, (e) re-planning (Kemmis & McTaggart, 1990)

Teachers are the key stakeholders in a particular education system in a nation and have a role to build a more civilized society. The impact of their behaviors, responsibilities attitudes and beliefs plays decisive roles in effective teaching in terms of quality education. It is only teachers' professional development (TPD) that can ensure and clarify different roles of the teachers in action. They need to be developed and changed according to the learners' needs, curriculum and teaching and learning theories, approaches, methods, techniques and so on. It is possible through TPD and their change in the aspects such as their attitudes and beliefs required for effective teaching. Glathorn (1995) states, "...Professional development in a broad sense refers to the development in his/her professional growth... a teacher achieves as a result of gaining increased experiences and examining his/her teaching systematically" (as cited in Villages, p. 41)

Here Glathorn focuses that professional development develops teachers' professional roles which can be gained through experiences and reflection. It is also clear that experienced, self reflective teachers are more developed and they can teach more effectively than the novice ones.

Similarly, Ganser (2002) says, "TPD is, in a way new to learning. Unlike a staff development and in-service training (short term process), professional development has been considered as a long term process that includes regular opportunities and experiences planned systematically to promote growth and development in the profession" (as cited in Villegas, p. 13)

Thus we understand that TPD is a long term process in which teachers develop themselves through opportunities and experiences. TPD enables teachers to develop themselves so that they realize their different roles in and outside the classroom situation. Doubtlessly, TPD has expanded teachers' roles as professionals.

Dadds (2001) also says, "Teachers are not only the transmitters of knowledge to the learners but also active learners in the concrete task of teaching, assessment, observation, and reflection. They have roles accordingly" (as cited in Villegas, p. 13)

From this it becomes clear that teachers are not only to teach or serve their gained knowledge to the learners mind. Instead they have different roles in different essential tasks in teaching including: teaching, evaluating, observing students' behavior and reflecting themselves. They cannot deny the roles of being a learner/participant in classroom activities. It means effective teachers are those who can play different roles required for different classroom situations.

TPD as stated above is not a short term process that can be achieved at once like a capsule to a patient. Rather it is a long term process which can be gained in the course of different activities through gained and received knowledge. It does not have a single model. It assumes that teachers learn to develop through reflection and collaborated learning like observation, discussion, and so on. According to Villegas Characteristics of TPD can be pointed out as follows:

1. It is perceived as a long term process.
2. It is a process that takes place within a particular context.
3. It may look and be very different in diverse settings and even within a single setting; it can have a variety of dimensions.
4. A teacher is conceived as reflective practitioner.
5. It is a collaborative process as immediately linked to school reform.

Source: (Villegas p. 14)

From the points mentioned above, it is understood that TPD is attached to long lasting experiences of teaching and can vary according to context. Unlike other training, TPD is attached to school activities and its reform and considered as continuous process.

According to NCED (2010), TPD trainings came in Nepal after the implementation of the TPD program. The TPD program focuses to remove confusion of teachers in choosing appropriate methods in teaching and support effective teaching to enhance quality education in Nepal. The program has tried to provide some fundamental skills required for the behaviour management in teaching like : skills about how to behave with teenage students, creating a child friendly learning environment in the class and at the school, bringing equality and equity in the school and classroom practices, application of soft skills by the teachers, human value education etc. TPD training is now in the form of demand based training. Some of the particular needs and problems related to particular subjects are collected at schools under the Resource Centres prior to conducting the programme. The programme schedule is prepared on the basis of those demands. According to NCED, (2010) the programme is composed of two phases: Education Training Centre (ETC) based activities and secondly school based activities where the major focus is given to reflection and co-operative teaching and learning. After completion of the first, ETC based activities; teachers involve themselves into the second phase of school based activities which takes place in the real context. Teachers in co operation with the head teacher and other teachers make their teaching improvement plan (TIP) to boost up their teaching accordingly. They carry out project work, action research, case study, related book review etc. We understand that Action Research has been already introduced and used tool in teachers' professional development.

Furthermore, it was the TPD program that brought this popular reflective tool, action research, in Nepal via TPD training. Therefore it encourages teachers to teach accordingly.

Thus the TPD programme is expected to support teacher development, and professional teacher education to a great extent. It aims at bringing about positive change in teachers' attitude and belief and at impacting positively in their teaching as well as the learning of their students.

Teaching is a process associated basically with teachers, learners and the curriculum. Both teachers and learners have their own expectations in all the subjects and their teaching and learning styles are highly influenced by the culture of inquiry the teachers bring into the classroom. Teachers make decisions on instructional choices based on practical knowledge, personal experience and beliefs, and the context and evidence available to them. It is part of their continuous learning. This continuous learning forms and shapes their professional development which also undergoes change due to training and experience. However, it is still more necessary for teachers to be more developed and changed in terms of their skills, knowledge and attitude about the subject they teach and other educational concerns such as learners, learning, teaching, and teachers themselves. On the other hand, they require to be changed because the subject matters also undergo change with change in time. Similarly, teacher training goes on changing in accordance with the changes in teaching and learning principle, approaches methods, techniques and so on. Next with the change in the curriculum the teacher require to be changed and more developed.

In the context of Nepal, NCED (2010) shows that almost all the teachers of Nepal have received ten months in-service training. It was as a result of a planned effort for about the last four decades. NCED has continually planned, updated and practised many teacher development programs to promote professional qualification and to improve performance after the implementation of National Education System Plan (NESP) in AD 1971.

The teacher development programs in Nepal initiated with Seti Education and Rural Development Project in 1980. Subsequently, Primary Education Project, Basic and Primary Education Project, Radio Education

Teacher Training, Science Education Project and others that followed held training programs with their duration ranging from 10 days to 2.5 months. The teachers were given only survival skills to maintain minimum quality in teaching and learning process as they lacked basic teaching skills. Inquiry or research based training was not introduced in these all.

In 1992, 'Primary Education Development Project' and 'Secondary Education Development Project', both started to revive and continue the 10 months teacher training for primary and secondary teachers respectively. These two projects prepared plans, as well as physical and organizational infrastructures to extend teacher training. They also prepared curriculum and training materials for the training of teachers. After that 'Education For All', Action Plan (2001-2015) came with the aim of training 99% primary teachers by 2009. It promulgated the training policy 2005 to train primary teachers. Teacher Education Project 2003-2009 and Secondary Education Support Program 2003-2009, jointly established Extensive Training Network (ETN) and cleared the backlog by completing the training of partially trained and untrained teachers. It achieved the aim of training 98.2 % of the teachers by October 2009 (NCED, 2010). Action research was not truly implemented in these trainings.

At this point only professionally and academically qualified teachers can join the teaching job on the basis of the teaching license. All the teachers in their post receive both types of qualification in Nepal. There is good enough 'exit strategy' already implemented for untrained teachers. The review claims that about \$150 million has been invested from different sources and foreign donation for the in-service trainings of the teachers.

It is found that teachers in the Nepalese context are qualified and trained as the pre- service training has become a pre requisite to enter the job. Consequently, they have been made more capable and developed through in-service training of different types like demand based refreshers and so on. However teachers are blamed on teaching less effectively and less appropriately so that most of the students fail the subjects taught by such qualified and trained teachers. The main reason behind such failures of the students lies on teachers and the way they believe and think about educational concerns along with their

professional development. In spite of the tremendous efforts and expense of the government in educating teachers for effective teaching, only a little of the training output is reported to be transferred to the real classroom situation which has not been satisfactorily improved yet. It is the fact that compelled this researcher to explore the causes of ineffective and inefficient teaching although the teachers are well equipped with various aspects of professional development like action research. How can we bring changes in the spirit of those trained teachers? The researcher thought about action research embedded in TPD training and was inspired to carry out this research on the topic '**Impact of Action Research in Teachers' Professional Development Training.**' The researcher expects that the findings of this research certainly help answer the queries and support the stakeholders who are involved in similar situations.

The school based /on the job based or the need based training in Nepal seems to be the TPD. It seems to be the last training that aims to make teachers self studious professionals, capable to solve their classroom problems through action research, case study, and project work. It is on the basis of worldwide stages of teacher trainings like:

1. Apprenticeship of Observation,
2. Pre-Service Teacher Preparation,
3. Job Induction, and
4. Professional Development.

*Source: NCED (2010)*

Former three steps out of the aforementioned four have been completed by Nepali teachers before 2009. Therefore TPD has been on-the -job based/on the school -based and or school cluster based considering the capacities of the schools (NCED 2010, 4-6).

After the TPD program, teachers in Nepal are encouraged to carry out on-the -job based classroom action researches to solve recurrent classroom problems. Moreover they are required to carry out and submit a research report along with their work performance appraisal at the end of every academic session. Classroom action research and its reports are also obligatory for them to



obtain their TPD training certificate. It has been supposed that teachers are already equipped with the necessary knowledge and skills to carry out action research.

The traditional instructor-led workshop model for professional development has not been proven to be an effective method for teacher learning in Nepal because of the lack of follow-up and immediate relevance to the classroom context. Effective professional development must primarily focus on student learning and be directed by the teachers themselves, based on their individual needs. A tool for teacher centered professional development is action research, as this allows for autonomy, professionalism and active and engaged learning in how teaching and learning is transformed in the classroom. Action research included inquiry learning that is already intrinsic to teachers' practice with collaboration and sharing of problems, data collection, theoretical, personal and professional reflections, action and a renewal of the spiral together to improve student and teacher learning.

Action research is known through many other names, including participatory research, collaborative inquiry, emancipatory research, action learning, and contextual action research, but all are variations on a theme. Put simply, action research is "learning by doing" – individual or a group of people identify a problem, do something to resolve it, see how successful their efforts are, and, if not satisfied, try again. While this is the essence of the approach, there are other key attributes of action research that differentiate it from common problem-solving activities that we all engage in every day.

There are three primary models of action research. Nepali teachers have been given the Kemmis and McTaggart model in the TPD training handbook as a model.

The three primary models of action research define similarly. These models of action research incorporate the process of five steps. While the models of research have variety of differences, they share the steps of data collection and analysis, and taking action on an identified focus. As noted in table No.1 below,

the Sagor Model, Kemmis and Mc Taggart Model, and Calhoun Model, each are a unique variation of the five step process.

However the researcher has summarized the action research components after the comparative study of the following three models for the purpose of this research. These are:

- i) Defining the research question
- ii) Writing the literature review
- iii) Developing and writing the methodology
- iv) Analyzing the data, and
- v) Organizing and writing the finding

Table 1: *Five- Step Action Research process*

Five- Step Process	Sagor Model	Kemmis & McTaggart Model	Calhoun Model
Step 1	Problem Formulation	Planning	Selecting the Area of focus
Step 2	Data Collection	Acting	Collecting Data
Step 3	Data Analysis	Observing	Organizing Data
Step 4	Reporting of Results	Reflecting	Analyzing and Intrepreting Data
Step 5	Action Planning	Replanning	Taking Action

*Source: Kemmis & McTaggart (1990), Sagor (1992), and Calhoun (1994)*

Although each of the above models uses different words, in real meaning, each of them use data to act or react to a defined problem or area of concern. According to above models, action research can be summarized as a spiraling process that facilitates planning, acting ,collecting, observing, reflecting, analyzing, reacting and evaluating in a manner that is systematic but flexible in nature. These spiraling cycles of query identification, observation,

organized data collection, reflection, analysis, data -driven action, and problem redefinition, identify action research.

The action research model taught to the teachers in the resource centres under study was flexible and open to modification by the teachers as per their immediate need. The resource persons and the trainers repeatedly focused on the immediate application not on the development of theory or on generalization of application. The researcher has therefore summarized the above mentioned five step process as follows for this study:

- Defining the research question
- Writing the literature review
- Developing and writing the methodology
- Analyzing the data, and
- Organizing and writing the finding

What separates this type of research from general professional practices, consulting, or daily problem-solving is the emphasis on scientific study, which is to say the researcher teacher studies the problem systematically and ensures the intervention is informed by theoretical considerations. Much of the researcher's time is spent on refining the methodological tools to suit the necessity of the situation, and on collecting, analyzing, and presenting data on an ongoing, cyclical basis.

Several attributes separate action research from other types of research. Primary is its focus on turning the people involved into researchers, too - people learn best, and more willingly apply what they have learned, when they do it themselves. It also has a social dimension - the research takes place in real-world situations, and aims to solve real problems.

Action research is a tool that is used to help teachers and other educators uncover strategies to improve teaching practices (Sagor, 2004). It is a practical and realistic endeavor for all educators. Action research requires teachers to design a study in an area of interest that they would like to carry out in their classrooms or schools. Many times, action research is considered a professional development opportunity because, frequently, teachers test a new

instructional strategy, assess a new curriculum program, or evaluate an existing pedagogical method.

Promoting teachers' professional development involves enhancing effectiveness in teaching and supporting professional growth. Different authors have presented a number of criteria that should guide programs that promote teachers' professional development. For example according to Little (1992), teachers' professional development requires growth in knowledge , skills , judgment (classroom related ) and the contribution teachers make to a professional community.

Leithwood (1992), on the other hand, recommends that programs which promote professional development should focus on the following:

1. developing survival skill;
2. becoming competent in the basic skills of teaching;
3. expanding one's instructional flexibility;
4. acquiring instructional expertise;
5. contributing to the professional development of colleagues; and
6. exercising leadership and participating in decision making.

This proposed study has attempted to identify the level of teacher's professional development and their problem solving capacity on account of their Classroom Action Research. It has also attempted to facilitate them by trying to identify the problems and difficulties as well as by presenting appropriate solutions.

## **1.2 Statement of the Problem**

Nepali teachers have received different theoretical trainings up to now. NCED claims that it has achieved the aim of training 98.2 % of the teachers with ten months training by October 2009 (NCED 2010, 4). However we see that teachers' professional development opportunities are too often imposed on teachers rather than developed within them. These opportunities were, as a tendency provided to teachers external to their actual classroom and school setting. This frequently neglected to consider the individual teachers'

professional needs. Action research does not seem to be truly implemented in and after these trainings. After its implementation also, its impact has not been studied and the problems are not yet addressed appropriately.

The TPD training expects to change teachers attitude, develop skill and knowledge to carry out action research in the teachers to give continuity to transfer their training in their classes. It anticipates changing teachers' attitude towards research. However, field based knowledge of the trainers in the TPD training hub in Ilam district and resource persons in many resource centres shows that a lot of teachers are found to be copying their colleagues' action research report to fulfill the requirement of their school based TPD training certificate. The same trainers notified the researcher that many teachers copied other teacher's research reports to submit their work performance appraisal as well. This study therefore makes an attempt to look into the improved quality of learning- teaching practices of teachers and students with reference to classroom action research they have carried out as its impact. The school or school cluster based TPD training and the trainers either have not enabled the teachers to practically understand and implement classroom action research in true sense; or the teachers have other problems that hinder their professional development. The main problem seems to be related to the lack of improvement of teaching practices using action research as expected.

Given the above scenario, this small research project attempted to find difficulties in the action research process and problems faced by teachers as action researchers and self reflective practitioners. So the aim of this study was to find out what is the present situation of the teachers' professional development through action research as mentioned in their TPD training module? How they value action research in the TPD and what is its impact in their professional growth? It intends to improve its effectiveness in policy and practice level after conducting the study on its impact and suggesting measures to overcome the problems and difficulties.

### **1.3 Rationale of the Study**

The proposed study 'Impact of Action Research in Teacher's Professional

Development Training' bears significance because several changes and reforms in teacher training have been made by NCED to enhance the quality in teaching and learning. TPD training came as the latest approach which brought Action Research. The role of teacher is very critical unless s/he is able to carry out action research for voluntary self development, otherwise the professional development objectives of the ongoing TPD training programme cannot be attained. This research proposes to establish this fact through this research. The main idea is to encourage teachers to carry out action research in their classrooms for effective change and flexible research based decision making in their daily work. It hopes to ensure that research is, and can be flexible and is not the work of experts and theorists alone to be applied by the teachers. This topic is selected to establish the culture of inquiry among teachers who can contribute a lot to maintain educational standard with their involvement in action research. It hopes to motivate them to be involved in action research to improve work performance in the local setting for professional development as it presents and analyzes the opinion and works of the other real teachers who are already familiar with action research process. It is as Nihlen (1992:12) in Vialle et al. (1997) has mentioned:

"...The view about teachers as 'technocrats and public servants' need to be replaced by one that recognizes them as 'active reflective scholars and empowered practitioners in their schools.'" Nihlen (1992:12) in Vialle et al. (1997)

#### **1.4 Objectives of the Study**

The general objective of the research is to analyze the impact of classroom action research in teacher's professional development training.

The specific objectives are as follows:

1. to find out the present situation and impact of action research in teachers' professional development training.
2. to find out the difficulties and problems in the classroom action research process and;
3. to suggest some measures and solutions to improve teacher's action research for their professional development.

## 1.5 Research Questions

The research questions of the study are as follows:

1. Are the TPD training and its facilitators appropriate enough to give expected action research skills to the teachers?
2. Is action research valuable to the teaching learning process for teachers as researcher?
3. Has action research positively impacted the teaching and learning of the teachers and their students?
4. What is its impact on their current and future instructional practices as well as their long lasting profession?
5. Which components of action research process are difficult for the teachers and why?
6. How these difficulties can be eased in the process?
7. What are the problems faced by the teachers in carrying it out?
8. How these problems can be solved?

## 1.6. Delimitation of the Study

Though teachers' professional development (TPD) is a wide concept, the area of this study was limited to study the impact of action research in two resource centres: Danabari RC, and Chulachuli RC, of southern part of Ilam district. The study treated the ten TPD trained teachers from the schools of three VDCs of Danabari Resource Centre as the main respondents. Similarly eleven selected action research reports submitted to the Chulachuli resource centre from schools of three VDCs were thoroughly studied with the help of observation form/checklist. The reports were used as the secondary sources of data. The responses of the other respondents were categorized as resource persons and district education officer respectively. The study was focused on teachers who have gone through the process of the action research and have accomplished action research experiences. So the findings of the study can be generalized on the public schools of these six VDCs of the two resource centres of southern Ilam at the primary level. The findings however are relevant to the teachers of all level as the secondary sources of data, action research reports analyzed here, were from the teachers of primary to secondary level. As the limited schools and

teachers are selected for this study it may not have examined the issue in broader context. This is an academic research to fulfill the requirement of master's degree in education in certain time and place and was completed within limited time and resources.

Despite these limitations, finding of this research might be helpful for further investigation of other area of the TPD programme in general and TPD training in particular.



## **CHAPTER TWO: REVIEW OF RELATED LITERATURE AND THEORETICAL FRAMEWORK**

### **2.1 Review of Related Literature**

This section deals with the study of related literature of the proposed study. On the basis of the review of literature, an attempt has been made to define the impact of action research, on teachers' professional development.

Although the explanation of impact of action research in teachers' professional development is one of the influential factors to improve the present situation in TPD, there has been a little research related to this area. Some of the relevant studies in this area are briefly reviewed below to place this proposed study into the context of previous related literature and researches.

Rijal (2011) on her study on 'Opportunity and Practices of Teacher Professional Development in the School Setting' chose the objectives to explore the different strategies and approaches teachers used in practice for their professional development. She took seven respondents including two teachers and one inspector from Service Training School for data collection and came to the conclusion that TPD is an ongoing process that is meant for making teachers better in what they do.

Bishwa (2010) through his qualitative research into 'Professional Development Practice of Secondary Level English Teachers in Damak Municipality' took an objective to explore the professional development practices of secondary level EFL teachers in Damak Municipality. By using the sample of both public and private school teachers in Damak Municipality of Jhapa and providing them a questionnaire and an interview he explored that all the teachers view professional development as a continuous process of learning to be better teachers.

Shah (2009) conducted research into the topic entitled 'Reflective Practices in the Secondary Level English Language Teacher Education and Training Programmes in Nepal' in which he put an objectives to explore how reflective practice is incorporated in teacher education and training programmes in Nepal. He provided a questionnaire and an interview to two educators from education centres and explored that the training programmes in Nepal have the purposes of producing well- educated and well trained teachers who have knowledge, skill and attitudes to teach English in the secondary level schools in Nepal.

Ferrance (2000) finds action research to be a force for positive change

“In many research studies, participating in action research has been found to be the impetus for positive change exemplified by teacher improvement, self-reflection, and overall learning that enhances classroom practices (Ferrance, 2000). Ferrance further says action research helps teachers to “pick up threads suggested in academic circles, and weave them in their own classroom” (Ferrance, 2000, p. 13).

This study by Ferrance is relevant to this topic as action research was found to be the impetus or force for positive changes in teacher improvement. Therefore this research project (at hand) looks at the impact of action research in creating such ‘positive change’ in teachers’ practices during or after the TPD training in Nepal.

Action research can be taken as the path of teacher’s learning. This is relevant to this research as can be seen in the following extract in Johnson and Button’s (2000) study. The writers say action researcher teachers noticed the links between their own learning and the learning of their students, affirming that the principles of good learning that they used with their own students applied to their own classrooms. By using the findings of action research, teachers began to appreciate their own ability to increase knowledge through their own projects.

Johnson and Button (2000) found that engaging in action research is a natural activity that gives teachers a sense of order in their daily classroom practices. Customarily, the role of research for teachers has been “that of a

consumer of someone else's research results" or as "the object" of what is being researched, instead of being an active participant in the research design and data collection (Johnson & Button, 2000, p. 08).

Confirming their view Sax and Fisher(2001) say the same thing stirring up this researcher to carry out action research, '...For some teachers who have conducted action research, new roles begin to form as they become mentors to other teachers...' (Sax & Fisher,2001).

Henson (1996) explored that action research provides teachers the opportunity to set up an intentional and systematic plan in order to closely examine their practice. This study is relevant to this research as Hensen says, "Conducting action research puts teachers in control of their professional development. When teachers have ownership of the research process, specifically action research, learning can occur in numerous ways including trying new strategies, evaluating existing programs, expanding instructional repertoires, engaging in professional development, and most importantly helping teachers develop new pedagogical knowledge." (Hensen, 1996).

There is lack of literature available on this topic in Nepal as both components of the research topic "Action Research" as well as "teacher's professional development" are virtually new. Furthermore, very few teachers undertake to carry out AR even when it is obligatory for them. There have been no such studies in the context of Nepal and outside on the topic. So this study is fairly new in this field.

The researcher found the following in the context of Nepal.

Department of Education DOE (2007) in a handbook of action research proposed "...to implement the plan of action research in the resource centre schools to familiarize the teachers towards the practice of scientific and research oriented solutions to teaching learning problems." (DOE, 2007). However it seems that teachers are familiarized with only theoretical knowledge.

The TPD training module, No 4, of (NCED, 2010), claims that "...the teachers have obtained various trainings including the required qualifications for that level..." (p81). '...the various trainings including the required qualifications

for that level' doesn't seem to include action research. It seems to be introduced only after the year 2010 and not implemented in true sense.

Part two of the same module consists of the "self-study exercise" that includes:

- i) Action research /teacher research, project work
- ii) Case study- case study as teaching method
- iii) Student Evaluation (use of particular evaluation for checking understanding, active participation and Programme evaluation) (p85).

A thorough study of the module leads us to opine that action research, an important tool for teachers' professional development, has recently been used in Nepal. So it is not surprising to be a new phenomenon for the teachers of Nepal. If one wants to seek samples of action research proposals and reports one has to surf the internet. It is because of the lack of resources in Nepal.

These studies in the past bear great significance of their own. They are highly regarded in their findings. However very few of them are based on research studies relating action research with teacher's professional development. Therefore this proposed study attempts to explore how 'conducting action research puts teachers in control of their professional development.'

## **2.2 Theoretical Framework**

There are two domains in research: theory and observation. Theory is what is going on inside the head of the researcher, while observation is what goes on in the real world where data are collected.

This research is related to teachers' professional development (TPD). There are common different approaches to TPD where teachers become reflective practitioners. Some common approaches that are being used by the teachers are: peer observation, journal writing, self-reports, group discussion, feedback from students, self monitoring, surveys and questionnaire, video recording of the lessons, and action research. To do these all, teachers need motivation from promotion in their upper level. Action research is one of the criteria of promotion in the appraisal of their yearly work performance.

Abraham Maslow's theory of motivation is the theoretical framework for this study. Teachers need motivation to conduct action research for their professional development. Motivation is the result of interaction between an individual and a work situation. We define motivation as the process that accounts for an individual's intensity, direction, and persistence of effort toward attaining a goal. Motivational concepts were developed in the 1950s. Abraham Maslow is the founder of hierarchy of needs theory. He hypothesized that within every human being, there exists a hierarchy of five needs.

This is shown in the figure below assuming that teachers carry out action research being motivated for promotion to achieve *status need* in the fourth level of Maslow's Hierarchy of need theory.

Figure:1 : Maslow's Hierarchy of five needs



Source: Robbins et al., 2009

**Physiological Needs:** The so called physiological needs are taken as the starting point for Maslow's motivation theory. These needs include such things as food, clothing, shelter, air, water, medicine, married life and other necessities of life. These needs must be met at least partially before higher level needs emerge. These needs relate to the survival and maintenance of human life. Entrance in

job, basic salary and human relation are physiological needs of the teachers to go to the higher level of their professional development.

**Safety Needs:** After satisfying the first level of needs, the safety needs begin to dominate human behavior. They need pension plan with job security. They need personal and physical security, security of income source, provision for old age, insurance against risks etc. It also includes the desire to know the limits of acceptable behavior. Once these safety needs are satisfied, they no longer motivate us. They are also called security needs.

**Social Needs:** After satisfying lower order of first and second level needs, the love or belongingness needs become important motivators of behaviour. Man is a social being. She/he is therefore interested in conversation, sociability, exchange of feelings and grievances, companionship, belongingness, friendship, relation etc.

In workplace seniors love the juniors, juniors respect the seniors, and a friendly or equal relationship should be there among colleagues /friends. In some countries or societies they are the strongest needs of the individuals.

**Esteem/ Ego needs:** They are higher order of needs also called egoistic needs. They are concerned with prestige and status of the person. It is also status need. Job titles according to qualification, promotion, experience, confidence etc. are the organizational examples. According to Maslow they are of two types:

**i) Self -esteem:** They include self confidence, achievement, competence, self-respect, independence and freedom etc. They are self- realized.

**ii) Esteem of others:** Status, recognition, attention, appreciation are esteem of others. They are achieved through others.

**Self -actualization needs:** The final step under this model is the need for self-fulfillment. It comprises self fulfillment, achieving ones potential personal growth etc. It is the person's motivation to transform perception into reality. Self actualization needs are unique in that once activated, they can never be fully satisfied. According to this theory, the more self actualization needs are fulfilled, the stronger they become. In short, it is "what a man CAN be MUST be."

According to Maslow's need theory, human interest increases to the upper level when a person becomes able to fulfill them, he takes one need for the next. First humans want to fulfill the basic needs, and then they go for the advanced need. The case of the teachers that seek professional development in this study also resembles the same. They first look to fulfill their basic needs with the salary and long for the promotion so that they get motivated in their duty. The teachers need promotion so they need to be innovative self reflective practitioner. It can be achieved through different approaches to TPD mentioned above. It is because of this relevant hypothesis that the researcher has chosen this theory to study the professional development practices of teachers through action research under this framework.

The researcher believed that the teachers carry out action research for professional development. It is mandatory for them to carry out action research to fulfill and submit their 'Work Performance Appraisal' (WPA). It is at the fourth level of human need under this theory of motivation that the teachers long for promotion, job title according to their qualification experience and confidence. Teachers are promoted when they gain certain level of experience and confidence along with their action research. Experience and confidence are the part of professional development.

Although, Abraham Maslow's theory of motivation is the theoretical framework for this study, it is relevant to develop a theoretical framework of the researchers own to interpret teachers' action research. So the researcher has developed a theoretical framework. It was after going through the review of the three models of action research . It was based on the theory and practice by Kemmis & McTaggart (1990), Sagor (1992), and Calhoun (1994)

The three primary models of action research define similarly. These models of action research incorporate the process of five steps. While the models of research have variety of differences, they share the steps of data collection and analysis, and taking action on an identified focus. As noted in table No.1 below, the Sagor Model, Kemmis and Mc Taggart Model, and Calhoun Model, each are a unique variation of the five step process.

However the researcher has summarized the action research components after the comparative study of the following three models for the purpose of this research. These are:

- i) Defining the research question
- ii) Writing the literature review
- iii) Developing and writing the methodology
- iv) Analyzing the data, and
- v) Organizing and writing the finding.

Table 2: *Five- Step Action Research process and model developed for this research*

<b>Five- Step Process</b>	<b>Sagor Model</b>	<b>Kemmis &amp; McTaggart Model</b>	<b>Calhoun Model</b>	<i>Model developed for the purpose of this study.</i>
Step 1	Problem Formulation	Planning	Selecting the Area of focus	<b><i>Defining the research question</i></b>
Step 2	Data Collection	Acting	Collecting Data	<b><i>Writing the literature review</i></b>
Step 3	Data Analysis	Observing	Organizing Data	<b><i>Developing and writing the methodology</i></b>
Step 4	Reporting of Results	Reflecting	Analyzing and Intrepreting Data	<b><i>Analyzing the data</i></b>
Step 5	Action Planning	Replanning	Taking Action	<b><i>Organizing and writing the findings.</i></b>

*Source: Sagor (1992), Kemmis & McTaggart (1990), and Calhoun (1994)*

Although each of the above models uses different words, in real meaning, each of them use data to act or react to a defined problem or area of concern. According to above models, action research can be summarized as a spiraling process that facilitates planning, acting ,collecting, observing, reflecting, analyzing, reacting and evaluating in a manner that is systematic but flexible in nature. These spiraling cycles of query identification, observation, organized data collection, reflection, analysis, data -driven action, and problem redefinition, identify action research.

### **2.3 Implications of the review for the research**

On the basis of the above literature review and theoretical framework, an attempt has been made to find out the present situation and impact of action research in teachers' professional development in addition, the difficulties in the



action research process and problems in performing action research along with their solutions. The topic of this study is linked with Maslow's hierarchy of needs theory of motivation. Motivation always drives people towards good performance. Good performance helps professional development.

This study has found that the Teachers' Professional Development Training was able to introduce action research to the teachers. The training alone is not sufficient enough to change their attitude, give proper action research skills and knowledge as expected. However, their impacts were positive as teachers became more reflective practitioner in the learning of their students, their teaching, and their long lasting career. They were motivated and confident in trying new methods with reflection. Some of the pedagogical implications are: A teacher should have not only skills to teach particular subject matter but also should be reflective in an efficient way. The public school administrations should give supreme importance to the proper and effective reflective action research environment, managing time and space available with it; and the basic skills of action research should be provided to all those who are involved in the administration section of an academic institution changing their attitude towards action research positively.

The study emphasizes on easing the difficulties and problems faced by the teachers. The review of related literature helps us to conclude that positive attitude to action research, research skills, and knowledge has reflective effect in solving classroom problems as well as almost all the difficulties and problems in the field of education.

The HSEB, and university courses for teacher preparation like I.Ed. and B.Ed. need to embed at least these reflective approaches that are being used by the teachers as: journal writing, self-reports, group discussion, feedback from students, self monitoring, surveys and questionnaire, video recording of the lessons, and action research. To be competent teacher and to create good academic environment, teachers must be competent in action research and it cannot be taken as an extra burden.

On the basis of the review, action research has been found to be one of the vital skills, which can advance the professional development of teachers. The reviewed literature has further paved the way for attaining the objective of this study by underlining the theoretical concepts and other guidance while conducting field survey for the research. The reviewed literature also suggested that excellence in reflective action research skills in education is considered to be the main key of the successful professional teachers.

There are various benefits of the research as it helps the teachers to carry out action research in true sense with the feeling of ownership of the research project that they carry out. It can motivate them by presenting other action researchers' experiences and their impact in their profession, confidence and daily instructional practices with self reflection.

## **CHAPTER THREE: METHODS AND PROCEDURES**

### **3.1 Research design**

This study has applied mixed research design. The teachers, head teachers, resource persons, and the District Education Officer, were approached as the key informants to this research by means of focused group discussion, questionnaires, and interview schedules. Their response to questions has been analyzed using qualitative analysis technique. The teachers' responses given as reason for rating the statements with the help of the given category have been analyzed quantitatively as well by counting the mean scores of the statements. Eleven selected action research reports, submitted to the resource centre at Chulachuli, were studied with the help of an evaluation form containing a Likert scale. It was used as secondary sources of data.

### **3.2 Population and Sample**

#### **3.2.1 Population of the study.**

TPD trained teachers, head teachers, resource persons, out of the total teachers, head teachers, and resource persons, of Ilam district were the population of this study.

#### **3.2.2 Sampling of the study**

A total of ten percent of the population of the study was involved in this research as respondents. They were ten TPD trained teachers, four head teachers, two resource persons, and a district education officer. The teachers for the sample were selected randomly. However the teachers that have completed action research process successfully were selected purposively for the reason that only the permanent teachers of primary to secondary level in schools in Ilam carry out action research. Thus a mixed sampling method of random and purposive was applied to select the sample.

### **3.3 Sources of Data**

#### **3.3.1 Primary sources of data**

The population of the study -teachers, head teachers, resource persons, and the district education officer, as primary respondents, worked as the source of primary data. The researcher gathered information from selected schools' teachers, head teachers, resource persons, and the district education officer. The respondents supplied information in raw form that can be added. Their responses, which were recorded through the use of questionnaire, and note form were used as primary source.

#### **3.3.2 Secondary source of data**

Information collected from different published and unpublished articles, research reports, newspapers, journals, books, eBooks, and internet sources were consulted as the secondary source of data. The study of the eleven action research report in chulachuli resource centres has been used here as the secondary source of data.

### **3.4 Instrumentation of the study**

Three Sets of questionnaire, a discussion session with relevant agendas, two interview schedules and an observation form to study the action research reports, were used as the main tools to collect the necessary data-mostly the primary data.

#### **3.4.1 Questionnaire**

Altogether three sets of questionnaires (appendix 4, 5, and 6 developed, tested, and refined among 18 teachers at Danabari resource centre) were used in order to collect necessary information from teachers, head teachers, and the resource persons. The questionnaires sought after information on various aspects of action research and the teachers' professional development such as: adequacy of their TPD training and its facilitators in teaching action research process and skills, value of action research to the teaching learning process for teachers as a researcher, its positive impact in the teaching and learning of the

teachers and their students, its impact on teachers' current and future instructional practices, difficult components of action research process, measures to ease the difficulties and problems faced by the teachers in carrying out action research were the agenda . The questions also asked information on how the problems could be solved.

### **3.4.2 Focus Group Discussion**

A group discussion session was held among teachers that had carried out action research in Danabari Resource centre. It focused on: present practices of action research, factors that motivate and demotivate teachers in doing action research, teachers' necessary skills in carrying out action research, their success stories in solving the classroom problems using action research, problems in action research, and suggestions from the action researcher teachers were hunted. (Appendix 3)

### **3.4.3 Observation form/Checklist**

The researcher developed an observation and evaluation form to study the action research reports of the teachers submitted to the Chulachuli Resource Centre by the teachers along with their work performance appraisal form. The observation form sought information about reality of the research problem, strong purpose, trustworthiness of the data, appropriate intervention to improve the situation, and whether it changed the teacher as researcher aspects.

The researcher got permission and help from the resource person from resource centre. The researcher and the resource person then studied the action research reports in the resource centre library and rated teachers' reports with the help of the observation and evaluation form developed for this study. (Appendix 9).

### **3.4.4 Interview Schedule**

Interview with the head teachers, resource person and the district education officer were used to seek information from them about: professional and social relation among teachers, factors that motivate and demotivate teachers in doing action research, teachers' necessary skills in carrying out action research,

along with the type of problems the teachers came to the head teacher and resource person for assistance regarding action research, and extra suggestions from the respondents were also sought. The head teachers and RPs were visited with a questionnaire containing eight questions each (Appendix 7). The district education officer was interviewed with similar questions (appendix 8).

### 3.5 Data collection procedures

A total of 16 respondents were involved in this research. They were ten teachers, four head teachers, two resource persons from two RC and six VDCs under two resource centres of Danabari and Chulachuli , in southern part of Ilam district. There was District Education Officer too. The schools for the sample were selected randomly. However the teachers were selected purposively for the reason that only the TPD trained permanent teachers in these schools carried out action research. Thus a mixed sampling method of random and purposive was applied to select the sample.

Eight public (primary to secondary) schools under two resource centres covering six big VDCs of Ilam were selected as shown in the following table.

Table 3: Distribution of respondents

S.No.	Respondents	Number	Remarks
1.	Schools	8	
2.	Teachers	10	Only those that carry out AR
3.	Head teachers	4	Randomly selected from among the action researcher
4.	Resource Persons	2	One each from Danabari and Chulachuli RC
5.	District Education Officer	1	From District Education office Ilam
5.	Action research Reports	11	Randomly selected with the help of RPs for evaluation (using Observation form)

### 3.6 Data Analysis Procedure

The Data Collected through the use of research tools and documents of

the study were treated both qualitatively and quantitatively. Data collected from the teachers were analyzed and interpreted according to themes. First of all Data were tabulated itemwise in table and converted into mean score where quantification of data was necessary for counting the frequency of instances. The other information on teachers and other respondent's perception towards AR and their opinion for improvement etc. were analyzed qualitatively. The nature of the problem under study appeared to need the style of qualitative analysis. Moreover the collected data were analyzed using reference from the theory of motivation. Thus the thematic analysis of the data formed the qualitative aspect. Statistical analysis of the data, using simple mean scores and percentage form for quantification of teachers' value of action research in the given Likert scale, impact on them and the level of difficulty in the action research process statements were analysed by counting their mean scores. Teacher's reason for selection of that particular level of difficulty was analyzed qualitatively.

## CHAPTER FOUR: DISCUSSION OF RESULTS

This chapter deals with the discussion of the results of the study. The results are drawn in terms of impact of action research in the TPD trained teachers, their present action research practices, and measures to improve them. They therefore work as the findings of the study. The discussion that follows is very much in line with the objectives set for the study with analysis of the responses received from the respondents.

### **4.1 Present situation and impact of action research in the TPD training.**

Action research is reflective practice to improve teachers' teaching and students' learning. It was introduced by the TPD training in Nepal. The data in this study show that teachers did not value TPD training highly. It also tells us about the inadequacy of the training and the trainers of the TPD. Even so action research was highly valued by them to their teaching process, their students' learning process and for how it changed them into flexible researchers. Completion of action research impacted their confidence and daily instructional activities. It has lasting impact on themselves and their students. The following section thus presents and discusses the data in terms of the difficulties in action research process steps as well as the problems faced by the teachers with their solutions obtained with the help of different instruments of the study.

Data from the field study were examined using qualitative analysis techniques, specifically content analysis. The questionnaire contained categories of the content. The frequency of the instances when those categories occur was counted on the basis of the reason for the choice of that level given by the informants in the space provided below the scale.

#### **4.1.1 Teachers' value of TPD training, action research and its impact.**

Ten teachers were asked to rate their level of agreement regarding seven statements related to the first objective of the study. The questions tried to find out the present situation of action research in and after the TPD as well as



teachers' attitude about their participation in action research for continuous professional development.

A level one (1) indicated that the teacher disagreed with the statement. A level two (2) indicated that the teacher is neutral and does not feel strongly either way in regard to the statement, and then a level three (3) indicated the teacher agrees with the statement. Each of the statements is discussed in the following sections. Table 4.1 displays the summary of the mean score for the action research impact statements with reference to TPD training received by the respondent teachers of this study. The section that follows is the detailed qualitative analysis of the reasons given by the teachers for choosing that level of agreement. The mean is calculated on a 1 through 3 point Likert scale with a 3 indicating agreement to the statement (see appendix 4). For the convenience of the presentation the tables show the level of agreement and the counting of mean has been presented in the tables.

Table 4.1: Mean scores obtained by TPD training and action research statements

S. N.	Statements	No. of teachers	Mean
A	The TPD training I received, is enough for me to carry out action research	10	1.6
B	I gained enough knowledge, skill and attitude to carry out action research in the TPD.	10	1.8
C	Action research is valuable to the teaching and learning process for me as a teacher.	10	2.8
D	Action research is valuable to the teaching and learning process to my students.	10	2.9
E	This action research project positively impacted my students' learning	10	2.6
F	This action research project positively impacted my teaching.	10	2.6
G	I view myself as a teacher researcher.		2.8

*Source: Field study, (2015)*

**A) The TPD training I received is enough for me to carry out action research.**

When the respondent teachers were asked to indicate their agreement with the statement "The TPD training I received, is enough for me to carry out action research" there was a low level of agreement with an average of 1.6 on a three-point Likert scale, with three indicating agreement and one indicating disagreement. The following table (4.1.A) shows how teachers valued the adequacy of TPD training for action research.

Table 4.2: Teachers' evaluation of sufficiency of TPD training

<b>Variable</b> ( <i>Level of agreement with sufficiency of TPD training statement considering action research</i> ) <b>x</b>	<b>Frequency</b> ( <i>No. of teachers selecting that level</i> ) <b>f</b>	<b>f x</b>	<b>Here,</b> $\sum fx = 16$ <b>N=10</b> <b>Therefore Mean</b> $= \frac{\sum fx}{N}$ $= 16/10$ $= 1.6$
Disagree <b>1</b>	5	5	
Do not feel strongly either way <b>2</b>	4	8	
Agree <b>3</b>	1	3	
	N=10	$\sum fx = 16$	

*Source: field study, (2015)*

Five respondents chose a one showing their disagreement, four chose a two indicating indifference, and only one out of the ten chose a three indicating agreement. The teachers most frequently commented that in all the three phases of the TPD training, Action research was taught on the fifth day and mostly in the second last session. The trainer and the trainee both sometimes agreed to finish the five day's TPD training within four days. "...it needs separate program for action research itself" Said five of them repeatedly in the space provided to explain their reason to rate that level of agreement. Lack of feedback, lack of practical method, lack of time to practise in the training centre or hub itself, etc. were some of the reasons given by the teachers who conducted action research in the school after the completion of the second and third phase of the TPD training. So they demanded separate workshop for the action research.

**B) I gained enough knowledge, skills and attitude to carry out action research in the TPD Training.**

The statement, "I gained enough knowledge, skill and attitude to carry out action research in the TPD", also had the lowest average 1.8. None marked a three indicating agreement. Eight teachers marked a two and it was eighty percent (n=8 out of 10) of the respondents. It showed that they did not feel strongly either way, or were indifferent to the statement. Two teachers marked a one indicating disagreement and it was twenty percent (n=2 out of 10) of the respondents as shown in the following table.

Table 4.3: Teachers' evaluation of action research learnt in the TPD training

<b>Variable</b> ( <i>Level of agreement with the statement about the role of TPD training for action research</i> ) <b>x</b>	<b>Frequency</b> ( <i>No. of teachers selecting that level</i> ) <b>f</b>	<b>f x</b>	<b>Here,</b> $\sum fx = 18$ <b>N=10</b> <b>Therefore Mean</b> $= \frac{\sum fx}{N}$ $= \frac{18}{10}$ $= 1.8$
Disagree <b>1</b>	2	2	
Do not feel strongly either way <b>2</b>	8	16	
Agree <b>3</b>	0	0	
	N=10	$\sum fx = 18$	

Source: field study, (2015)

The reasons the teachers gave in the space provided for the selection of the levels were that there was only theoretical explanations. Lack of time, lack of presentation of good and practical model and, lack of practice in the training hub were repeated reasons they gave to mark that level in the space provided below the Likert scale. Therefore they complained that there were no practical workshops during the training. So action research was not practically practised. It is because of this that majority of the teachers demanded separate workshop for action research. Moreover most interviewees felt and said that the facilitators of action research had not gone through the process of action research themselves in some training centres/hubs. They were not able to transfer their first hand experience and were not able to empathize with the problems that teachers often experienced in conducting action research. We can say that the teachers disagreed with the statement.

**C) Action research is valuable to the teaching and learning process for me as a teacher.**

The respondents were asked to indicate their agreement with the statement, 'Action research is valuable to the teaching and learning process for me as a teacher'. There was a high level of agreement with an average of 2.8 on a three point likert scale with three indicating agreement. Eight teachers circled a three, indicating agreement; two chose a two and none chose a one.

Table 4.4: Teachers' value of action research for themselves

<b>Variable</b> (Level of agreement with the action research statement) <b>x</b>	<b>Frequency</b> (No. of teachers selecting that level) <b>f</b>	<b>f x</b>	<b>Here,</b> $\sum fx = 28$ <b>N=10</b> <b>Therefore Mean</b> $= \frac{\sum fx}{N}$ $= \frac{28}{10}$ $= 2.8$
Disagree <b>1</b>	0	0	
Do not feel strongly either way <b>2</b>	2	4	
Agree <b>3</b>	8	24	
	N=10	$\sum fx = 28$	

Source: field study, (2015)

Teachers frequently commented that they got new tool to reflect their teaching and review their own activity and push it towards perfection. A masters' degree (M. Ed.) holder primary teacher with 13 years of teaching experience, viewed himself as, '... a small scale teacher researcher' for the first time practically after going through the action research cycle twice. Another opined that once one solved a problem using action research he/she can solve another in different setting. One comment included, "Action research is valuable to the teaching learning process for me because it has made me more aware of the way I teach and the methods I will use..." The same teacher paid closer attention to the learning situation within the classroom as they occurred. Another teacher said she changed what she was doing to better meet the needs of her students. Action research gave her tools to make a change in her science class.

Overall teachers agreed that Action research was valuable to the teaching and learning process for them as a teacher.

**D) Action research is valuable to the teaching and learning process for my students.**

Respondent teachers agreed with the statement "Action research is valuable to the teaching and learning process to my students." Nine teachers out of ten agreed with the statement by circling a three on the Likert scale. Only one teacher chose a two indicating impartiality and none chose a level one.

Table 4.5: Teachers' value of their teaching and learning process in their students

<b>Variable</b> ( <i>Level of agreement with the action research value statement</i> ) <b>x</b>	<b>Frequency</b> ( <i>No. of teachers selecting that level</i> ) <b>f</b>	<b>f x</b>	<b>Here,</b> $\sum fx = 29$ <b>N=10</b> <b>Therefore Mean</b>  $= \frac{\sum fx}{N}$ $= \frac{29}{10}$ $= 2.9$
Disagree <b>1</b>	0	0	
Do not feel strongly either way <b>2</b>	1	2	
Agree <b>3</b>	9	27	
	N=10	$\sum fx = 29$	

*Source: field study, (2015)*

With the average of 2.9, the majority of the respondent teachers agreed that action research by the teacher was a valuable process for their students. They commented that it helps the teacher to find what works best with the students and it actually benefits them. It also helps teachers discuss with each other in group and figure out different aspects of the students. At the same time teachers get opportunity to study their students. One teacher said, "Providing the best teaching will impact the learning process of my students." Another respondent said that his action research helped him provide remedial teaching in teaching of reading in grade seven.

So it was good sign that teachers are seeking what works best with their students using action research.

**E) This action research process positively impacted the learning of my students.**

The average for this statement was 2.6. None of the respondents chose a level one that indicated disagreement. Four respondents circled a two indicating neutrality, and six teachers circled a three indicating agreement.

Table 4.6: Teachers' value of action research in their students' learning

<b>Variable</b> (Level of agreement with their action research's impact on student learning) <b>x</b>	<b>Frequency</b> (No. of teachers selecting that level) <b>f</b>	<b>fx</b>	<b>Here,</b> $\sum fx = 26$ <b>N=10</b>
Disagree <b>1</b>	0	0	<b>Therefore Mean</b> $= \frac{\sum fx}{N}$ $= \frac{26}{10}$ $= 2.6$
Do not feel strongly either way <b>2</b>	4	8	
Agree <b>3</b>	6	18	
	N=10	$\sum fx = 26$	

Source: field study, (2015)

One of the teachers who agreed with a three said that he learnt how to go forward with a plan in solving a particular classroom problem and which tools of evaluation he should use from his researches. Another reported that he became energetic and purposeful in teaching learning and giving feedback to his students. One teacher commented, "The children were excited about the new strategy. Thus I was able to give more effective instructions to the children." Yet another said that she was able to present science in such a way that the children were excited and wanted to do science every day. Another teacher was able to implement new writing instruction in her English class by determining new teaching style through action research.

#### **F) This action research project positively impacted my teaching.**

When the teachers were asked to rate the statement, "This action research project positively impacted my teaching" sixty percent (n=6 out of 10) of the respondents agreed that their action research project positively impacted their teaching.

Table 4.7: Teachers' value of positive impact of action research in teaching

<b>Variable</b> (Level of agreement with their action research impact statement on their teaching) <b>x</b>	<b>Frequency</b> (No. of teachers selecting that level) <b>f</b>	<b>fx</b>	<b>Here,</b> $\sum fx = 26$ <b>N=10</b>
Disagree <b>1</b>	0	0	<b>Therefore Mean</b> $= \frac{\sum fx}{N}$ $= \frac{26}{10}$ $= 2.6$
Do not feel strongly either way <b>2</b>	4	8	
Agree <b>3</b>	6	18	
	N=10	$\sum fx = 26$	

Source: field study, (2015)

This statement had the average of 2.6 where 3 meant agreement. The teachers mentioned that their project gave them energy. One teacher mentioned that he was able to evaluate his students properly in his subject by substituting a monthly test with a home assignment followed by interview with the students about the students' writing. One female teacher was able to look at the content differently using new instructional strategies. One respondent said, "I found a new way to teach spelling and it worked." One said that he was able to give planned intervention to his students, as per the need of their difficulty. This meant that respondents became more aware of their teaching because of action research.

**G) I view myself as a teacher researcher.**

The statement, "I view myself as a teacher researcher." had the average of 2.7 and received seventy percent three level score (n=7 out of 10). Only three teachers selected a level two indicating their indifference. The following table shows the counting of the mean scores and the paragraph that follows presents the analysis of the reasons given by the teachers as an explanation of their choice of that level.

Table 4.8: Teachers' value of their new role as 'a teacher researcher'

Variable( <i>Level of agreement with action research impact on their new role as teacher researcher</i> ) <b>x</b>	Frequency ( <i>No. of teachers selecting that level</i> ) <b>f</b>	<b>f x</b>	Here, $\sum fx = 27$ <b>N=10</b>
Disagree <b>1</b>	0	0	<b>Therefore Mean</b> $= \frac{\sum fx}{N}$ $= \frac{27}{10}$ $= 2.7$
Do not feel strongly either way <b>2</b>	3	6	
Agree <b>3</b>	7	21	
	N=10	$\sum fx = 27$	

Source: *field study, ((2015))*

The statement, "I view myself as a teacher researcher." had the average of 2.7 and received seventy percent three level score (n=7 out of 10). For those teachers who agreed, said that their action research built their confidence. One said giving reason for his choice of a three, "I have been learning new skill as a student and to promote students learning achievement." Another said, "I have been conducting studies about teaching process that best fits my students in this

school." Other teacher said that she entered into new study as part of her TPD training. She is constantly in search of new ways to make students' learning more meaningful. Those who marked two or remained indifferent said that they have done only one of this researches and it would take more time for them to consider themselves as teacher researchers.

It was found that teachers were introduced with action research in their TPD training. Teachers however are not satisfied by the way it was presented for a short time and it was not sufficient enough to give them knowledge, skill and attitude to carry out action research, They did not rate a three showing agreement for the first two statements and the reason they gave for not rating it is considerable.

#### **4.1.2 Impact of action research on current and future instructional practices**

The first objective was addressed by some open ended questions also. The questions asked the respondents to describe how the completion of the action research projects would impact their profession, confidence, and daily instructional activities. The data were organized into the following three categories.

##### **I. Long lasting professional development impact.**

When asked to describe the long lasting impact the action research project would have in their professional development, the themes of planned intervention, student centered methods, searching the solution of the problem in the local setting, appeared most frequently in the teachers answers. These themes can be summarized as the theme of positive change. A teacher said, "I will replace the traditional class by positive, behavioral and scientific one I hope." Another said that he would take the risk with future students in trying new methods he learnt from his action research process. A teacher said that making change was very simple. It took them time to accept it as a teaching method. Now in discussions programs like counseling or, subject teachers meetings, at the resource centre level, they are eager to listen to other teachers' experiences supported by their research.



## **II. Confidence or Motivational Impact.**

When the teachers were asked how the action research experience empowered them or their teaching. They perceived themselves as more reflective and effective teachers. Action research experience made them more 'self evaluative'. One teacher claimed, " I became more answerable and more self evaluative than before. Now I self-reflect my previous practices also." Another teacher informed that she started claiming the help of all her staff and the facilitators when she needs it. One said, "I'm able to involve more students than before using more entertaining activities, discussions and practices. Now I analyze my students work more carefully with awareness. I'm confident of the students' needs"

Therefore action research included in the TPD training program appears to be professional development opportunity affecting teachers in positive ways, building confidence in and empowering them positively.

## **III. Daily Instructional Impact.**

Respondents answered a third open ended question about how their action research project has informed their instructional practices. One said "I still need to learn research methods and process more than at present." This answer suggested that he was learning to conduct action research. However, majority of the teachers' answers focused on awareness to change and daily reflection of their practices. They learnt to find out their students' learning standard and change the instructional strategy. Some teachers learnt to involve their students in active learning. One teacher instructed her students to collect pebbles of small size. She wrote the alphabets in the pebbles in plenty. Her students were involved in spelling games and word games even in her absence. She was able to improve their spelling dramatically. However two teachers answered almost negatively by saying that it hindered them to complete the course in time. Their answer was suggesting that they did action research to complete their TPD training and to get the certificate.

## 4.2 Difficulties in the action research process components.

The second objective of the research was to find out the difficulties in the action research process. It has been established in chapter two that there are five action research process stages while developing the theoretical framework. It has been addressed and analyzed using a tool with five point likert scale and calculating the mean scores from it. The teachers' explanation for choosing that level in the likert scale has been presented and analyzed qualitatively. Table 2 displays the mean scores as the perceived level of difficulty for the action research process components.

Table - 4.9 Perceived level of difficulty, mean scores for action research components.

Action research process stage	No. of respondents	Mean
1. Defining the research question	10	2.9
2. Writing the literature review	10	3.3
3. Developing and writing the methodology	10	2.9
4. Analyzing the data	10	3.3
5. Organizing and writing the findings	10	2.7

Note: The mean is calculated on a 1 through 5 point Likert scale with 5 being an extreme level of difficulty. (See appendix 5)

Source: Field survey 2015

### 4.2.1. Defining the research question.

The first component of action research, defining the research question, had a 2.8 difficulty average out of five, with one indicating no difficulty and five being extreme level of difficulty in the Likert scale. Having difficulty in choosing exact wording for the research question was a theme that appeared in thirty percent (n=3) of the responses. One teacher commented, "I knew what I wanted to do, but not just the word for it." One of the two teachers that marked a one in the scale commented this way in giving reason for choosing that level, "There appear several problems in teaching in a real class, so defining the problem is just the verbal translation of the problem in the paper." Another commented that writing the exact problem from the class is easy so he chose a one. However, the researcher found out from some of their action research reports that they were

raising issues that exactly were not their problems but that of school administration or of the SMC. In a sense it is a positive sign that teachers are learning to go through the process of action research.

#### **4.2.2. Writing the literature review**

The next component of action research, 'writing the literature review' had a mean score of 4.1, indicating higher level of difficulty. Majority of the respondents marked a four and a five point (n=8 out of 10) mentioned two themes: i) difficulty in finding articles in Nepali and ; ii) a large amount of time it took to organize the literature into themes and use it in their research. Only the master's degree holder teachers found it of moderate difficulty. The teachers lacked library for resources. Four of them said that they need further training and practice on how to find print articles, books and online articles to make their inquiry informed. Many of them were found using peer reviewed pieces without citation.

#### **4.2.3. Developing and writing the methodology**

'Developing and writing the methodology' was the third component listed and was found at the moderate level of difficulty with 2.9 mean score out of five. Teachers said that they use observation methods mostly and keep reflective journal. They use group discussion method also. Many teachers said that they need proper counseling and special training for action research facilitated by teachers or the roster trainers who have gone through the process of action research him/herself. A teacher said, "It was hard to think about the methods to fit my problem." Another respondent said, " I don't really know yet whether I just have to write in 'planning, acting observing, reflecting, and re-planning' or as per my own comfort as I do not have sample action research report yet."

It seems easy for the teachers to develop the components of action research flexibly, as per their need and as taught by their experience.

#### **4.2.4. Analyzing the Data.**

Analyzing the data was another component that had the average difficulty of 3.3 out of five. Only one teacher chose a five point out of five

saying that he did not have complete knowledge of analyzing the data. Two teachers chose a four saying that it is difficult in tabulating and analyzing it. Another remarked that he does not have knowledge of mathematics or statistics. Teachers did not feel prepared for the statistics involved, including how to present the statistics in tables and figures. From their comments it was evident that knowledge of presentation and what to do during analysis was the most difficult part. It was time consuming also. One teacher said that analyzing qualitative data was easier than analyzing quantitative data.

From this it was understood that the facilitators in the training presented action research as rigid formal research, and made it difficult for the learner teachers.

#### **4.2.5. Organizing and writing the finding.**

'Organizing and writing the finding' was the final component in the action research process. It was found to be the least difficult part perceived by the teachers as evident in the questionnaires they completed, none chose a five, only one chose a four, it received 2.7 rating as the mean out of five. Sixty percent of the teachers (n=6) rated a three. The most frequent response was that it needs good analysis of the data. Therefore it needs thinking and rethinking. In particular, for the teachers who collected large amount of data organizing and writing the finding was time consuming. For them it was tedious job also. Some teachers said that the data speaks in itself and it is easy to organize the findings and write it after some time and efforts in thinking over and over it again. A teacher said that time factor makes the finding of today, unimportant for tomorrow.

According to the mean scores, teachers found defining the research question and writing the findings as the least difficult steps and writing the literature review and analyzing the Data as the most difficult steps in the action research process.

### **4.3 Problems faced by teachers in carrying out action research and their solutions.**

Each and every task of the teachers might have problems of their own.

To solve these problems, each related organizations and personnel should play different roles.

The researcher asked the questions to the informants on problems faced by teachers. They reported different problems and obstacles in doing action research. The problems are related to training, individual work pressure and family pressure, increasing outside pressure in the school, teachers' cooperation, policy level problems and facility and technical problems. The problems reported by the teachers have been discussed here under the following topics.

#### **4.3.1 Training related problems.**

Many teachers mentioned that the TPD training is inadequate in developing action research skills in them.

The teachers most frequently commented that in all the three phases of the TPD training, Action research was taught on the fifth day and mostly in the second last session. Moreover, the trainer and the trainee both sometimes agreed to finish the five day's training within four days. "...it needs separate program for action research itself" Said five of the informants repeatedly. Some of the other problems raised by the respondents were: Lack of feedback, lack of practical method, lack of time to practise in the training centre or hub itself. The respondents have completed the second and third phase of the TPD training. A teacher, who was a roster trainer for primary level English subject himself, said that the training is more formal and the action research topics discussed in the face to face training were centered in hypothetical classroom problems. He honestly admitted that he was also doing the same.

Many teachers regard TPD training as a burden imposed upon them. Moreover most interviewees said that the facilitators of action research had not gone through the process of action research themselves in some training centres/hubs. They were not able to transfer their first hand experience and were not able to empathize with the problems that teachers often experienced in conducting action research. The TPD training could not change the teachers' attitude towards action research as it was expected.

#### **4.3.2 Individual work pressure and family related problems.**

Teachers reported that they are performing several roles in the school. They work as class teacher, and have to maintain various record of the newly implemented continuous assessment system (CAS) in the basic level. So they do not have enough time to maintain the reflective journal for action research. They demanded separate days at least two days a month to write action research report in the school. They reported that they spend their little leisure period in correcting students' homework. Most of the female teachers reported themselves busy at their home as there is none to help them in the household chores. The male teachers also complained that they became tired by the time they reached back home from school. They should spare some time for their family members old parents etc. So they said that sometimes they do not have time to read and write even when it is mandatory for them. At the same time lack of confidence in them that they can also conduct action research was one point raised by the teachers in the preliminary group discussion. Four teachers interestingly pointed out that reflecting was thought to be a hard skill, but now it was as easy as looking oneself in front of mirror or watching one's own class performance in a video.

#### **4.3.3 Problems related to increasing outside pressure in the school.**

The informants reported that the increasing outside pressure intensified their time problems in the school. New curriculum, new text books, Resource Centre level exam, district level exam, S.L.C. board exam, meeting with the parents, filling and submitting flash report before the deadline, etc. are some of the intensifier of the teachers' time. Many teachers regarded such factors both as outside and inside pressure in the school. The teachers teaching in classes eight and ten said that they did not find substitute teachers to do their subjects in the school when they attended five days TPD training or went to another school for counseling. On the other hand it was found difficult for them to complete their course in time. Teachers reported that they sometimes do not have time to correct their students' homework and some guardians make complaints about it.

The teachers who have completed the training and come back to their school do not actively share what they have learnt to those who have not attended

any training. There is no culture of sharing and caring with each other in the school among the teaching staff. One informant said, "Our school management committee and our colleagues that are about to retire never encourage us to be innovative as action researchers. Those who are innovative have no time to help us in conducting action research." A primary teacher and head teacher of the same school in Danabari said that he had so many problems to address and sometimes could not prioritize them for action research. He said that his action research process could not benefit all the students of the same class as the students were not regular.

#### **4.3.4 Policy problems**

Action research still not included in the teacher evaluation process using diagnostic supervision followed by reward and punishment from school administration was felt as policy level problem. Other problems mentioned in this topic are: lack of help from school administration and SMC, TPD training during busy class hour season instead of being organized during long school holiday time etc. The teachers who called themselves self motivated action researcher, felt the need of some (though small scale) financial incentives from administration also. It is what the policy lacks.

Many interviewees complained about the selection process of the facilitator also. They said that the facilitators were not chosen on the basis of efficiency but on the basis of proximity to power as well as their political views also. This caused low level of interest for the teachers to participate in the training. The respondents felt that it is important for the facilitators of the action research to have carried out action research themselves.

#### **4.3.5 Problems related to resource and facility management**

Teachers reported that they all do not have facility of library to study and review the reports of the other teachers in the school or resource centre. The informants said that it is necessary to give some financial incentives to the teachers to carry out the process of action research on their real classroom problems so that they can visit the nearby library, or consult the internet to search literature in the related topic.

Their complaint is that the action research reports the teachers in the resource centres have prepared should be compiled as important commodity and should be made available to all the schools. They are not given the facility to report their progress in front of the experienced teachers and get feedback from the groups. The district education office should publish it in local newspapers serially. Discussion with the teachers from other schools teaching the same subject should be held on monthly basis. It was found that teachers felt comfortable discussing their action research progress with the teachers from other school.

#### **4.4 Measures for improving the problems in the action research process.**

Teachers change is journey not destination. The TPD training has helped the teachers a lot on their journey towards perfection in their professional carrier. It has more or less taught the teachers about the action research to solve their problems themselves. Although most interviewees stressed the positive nature of the experience, some teachers as seen in 4.2 and 4.3 above shared some difficulties and problems that they had encountered before, during and after the action research process. This study presents the following measures for improving teachers' action research projects and process.

##### **4.4.1 The problems related to training.**

The problems related to TPD training with reference to action research can be solved by including the topic on the very first day of the training instead of discussing it on the fifth day and in the second last session. It can give enough time for practice in the training centre/or hub with lot of time to practice and enough feedback for future steps back in their school. Some teachers complaint against the about to be retired teachers, who take TPD as the burden, should be managed properly by the SMC and the policy level. The training should focus on changing teachers' attitude about the research. Instead of traditional slogan, "knowledge, skill and attitude" It should change teacher's attitude from negative to positive and develop action research skills in them. Knowledge does not count much in modern times.



Considering the demand of majority of teachers about separate action research workshop, it should be taken in positive light by all the stakeholders. On the other hand the facilitators of action research should be selected from among the experienced action researchers that can understand the complexity of the process and can help the needy teachers with empathy. There can be separate workshop and discussion and feedback session every four month for action research process and for the feedback from other teachers to mutually promote teachers' research in the resource centre level.

#### **4.4.2. Problems related to individual work pressure and family pressure**

Teachers' involvement in local social and political work can be decreased by positively focusing their management of time for professional development activities alone. Female teachers said that school can help them by easing their class hour load by two periods a week. Teachers' confidence can be increased by convincing that everyone is capable of carrying out action research by reflecting at the end of the day. Almost every teacher can now video reflect their practices and improve them with the help of their cell phones.

#### **4.4.3 Problems related to increasing outside pressure in the school.**

The respondents suggested solutions to such problems while raising the problems in this theme like different benchmarks and deadlines in the discussion session and the questionnaire also. The frequent strikes can be solved by the local consensus to utilize such times in action researches TIP case study and related project works. They suggested to organize TPD training, its counseling session or action research workshop during school holiday time for the students. It can be done before or after the academic session. The busy head teachers were heard suggesting other teachers regarding how they can delegate the authority by dividing works such as data collection to other teachers who have leisure periods.

#### **4.4.4 Policy level problems.**

District Education Officer in the interview said that action research should be included in the teacher's real evaluation process using diagnostic supervision. It can be followed by reward and punishment.

As stated in 4.4.1 above, the teachers demanded that TPD trainings need not be held during the season of busy class hour. If possible some financial incentives to the teacher researcher can be provided for internet stationary and reporting cost. The policy can be responsible for the selection of the facilitator on the basis of approved action research skill and experience in them. There can be national consensus and law can be formed never to organize strikes in the school by the policy level. Teachers must be asked to talk about their research at school staff meetings.

#### **4.4.5 Facility related problems and technical difficulties.**

There can be the facility of reading and reviewing other teachers' action research reports in the school library and resource centres. If the soft copies of such reports are made available in the CDs or DVDs or schools' facebook pages, teachers can benefit a lot. When teachers travel to the nearby library or cyber, they can be encouraged by small amount of financial help. When teachers meet with the teachers from other school, and get feedback, they feel more comfortable to talk than with the teachers from the same school. The DEO or resource centre can publish reports of good practices in the local newspaper weekly. This can foster good practices and writing habit in the teachers.

The technical difficulties in action research process stage mentioned in 4.2 above show that writing the literature review, developing and writing the research methodology and, analyzing the data are the difficult action research components for the teachers in terms of the mean scores. This can be eased by proper workshops and trainings focusing on these process stages. The facilitators can establish that action research is not a formal research and it is flexible also.

According to Maslow's need theory human interests increases when a person becomes able to fulfill the basic lower level of needs. Once the preliminary needs are met, and the cycle continues till the highest needs are met. The case of the action researcher teachers in this study also resembles the same. When they get permanent job and TPD training opportunities, they long for promotion and carry out action researches so that their motivation towards professional development is sustained .

## CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Conclusions.

On the basis of the discussion of the findings of the study, the researcher has arrived at a number of conclusions. Based on the conclusions, recommendations are made to address the impact of action research in the teachers' professional development training issues. The recommendations are made basically at three levels: policy level, practice level, and research level.

The TPD training was found able to introduce action research to the teachers and culture of reflecting themselves in terms of their teaching profession, learning process of their students and teachers' own teaching. The teachers started viewing themselves as teacher researchers. However teachers did not find TPD training sufficient and enough to change their attitude, instill action research skill, and broaden their knowledge to carry out action research. It was because of time constraints and inexperienced facilitators. The teachers became self studious and started conducting action research themselves. They honestly stated that they copied the reports of others to learn action research in the beginning stage.

The respondents stated that their participation in action research positively impacted them for change in the profession. They take risk in trying new method and listen to other teachers experiences based on research. Next impact was on their confidence and empowered them in being reflective. The impact on their daily instruction was that they learnt to study their students and change their teaching strategy.

Out of the five action research process stages teachers found writing the literature review and analyzing the data as the more difficult stages compared to other components. It was because action research in general and these two components in particular are not so well addressed in the trainings. Teachers' academic qualification courses like I.Ed.,and B.Ed. excluded action research and or formal research also. The teachers found defining the research question and

organizing and writing the findings as the easier component in the action research process stage. Teachers with Masters' degree also found them moderately difficult.

The teachers reported different types of problems and obstacles. They demanded separate workshop for action research along with experienced action researcher as their facilitators in the training hubs. Changing teachers' attitude to research, proper management of time, supportive environment alongside different work pressure and outside pressure in the school like benchmarks , TIP, course completion and several policy level problems were problems to be addressed. Need of some financial support was also frequently mentioned by the respondents. The respondents also suggested the solutions to these problems by reporting how they try to overcome them.

## **5.2 Recommendations**

On the basis of the above conclusions, the researcher has suggested the following recommendations in order to address the problems of the teachers in carrying out action research for professional development. The recommendations are suggested at three levels: policy, practice, and research levels.

### **5.2.1 Policy level**

Government should ease training related problems by organizing separate workshop for action research. Before that action research should be included in the first and second days of the present TPD training. The facilitator should be from experienced action researchers, a researcher who has already gone through the action research process several times which are published or proven. There should be the culture of helping the teachers to analyze and synthesize their research by publishing it. The NCED training module should also be changed along with the handbook. Action research should be flexible with the aim to improve but not to prove. The trainings should be able to change the teachers' attitude towards research positively. The trainings should be organized before the academic sessions begin or during holiday for the students, so that it does not affect teachers' class hours and ease the increasing outside time pressures in the school. Using diagnostic supervision of the trained teachers' researches followed by reward and punishment at the local level should be encouraged. It is recommended that teachers should be provided internet in the

schools or with financial incentives for cyber expenses to sustain the research culture initiated by the TPD program. There can be national consensus and law can be formed never to organize strikes in the school by the policy level.

Teachers' academic qualification courses like I.Ed. and B.Ed. should embed action research studies curriculum also. MOE can have it done by integrating with different universities in the country.

### **5.2.2 Practice Level**

DOE should ensure proper action research training environment to the teachers, head teachers, RPs and supervisors by implementing enforcing better training policy. Schools can create supportive and nurturing research environment by dividing certain hours a month for group discussion. It can ease needy female teachers' work pressure by providing an extra leisure period per week or month and helping them collect the necessary data for their action researches. The school management committee and the head teacher should provide time and space for the action research culture of caring and sharing among the teachers in the school. This should be done at the resource centre level by organizing interschool subject teachers' monthly meeting which widens their knowledge and confidence. The soft copies of action research reports should be made available in the CDs or DVDs or schools' facebook pages. The school or resource centre should publish reports of good practices in the local newspaper weekly or monthly. The technical difficulties in action research process stages can be eased by proper workshops and trainings focusing on these process stages. The facilitators must establish that action research is not a formal research and it is flexible also.

### **5.2.3 Research level**

Future research considerations may include how the children benefit from action research. As all the participants in this study were from primary/basic level to secondary level, separate efforts should be made to study teachers from secondary level and basic level. Future studies will be needed to find out possible alternative ways of managing time and allocating resources because teachers in this research referred to time as the constraining force which discouraged them in the action research process. A comparative study can be conducted between teachers who carry out action research and who do not. Teachers' motivational level in action research can be another area of study.

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## Appendix 1

### Name of the action researcher teachers as respondents sampled for the study

S.No.	Name of the action researcher teacher	Name and address of the School	Teaching experience	Remarks
1.	Satya Narayan Chaudhari	Amlise Bhabjyang Primary Danabari -9, Ilam.	24 Years	Head Teacher
2.	Chandra Keshar Karki	Bintibinayak Primary, Mahamai-8, Ilam.	8 Years	
3.	Chandra Kala Budhathoki	Laxmi Adarsha Secondary, Mahamai -8 Ilam.	20 Years	
4.	Khadga Bdr. Kandel	Bintibinayak Primary, Mahamai-8, Ilam.	12 Years	
5.	Ratna Man Giri	Kankai Higher Secondary, Danabari-1, Ilam	13 years	Roster Trainer
6.	Tek Nath Bhattarai	Laxmi Bidhya Bhawan Lower Secondary, Danabari-1, Ilam	13 Years	
7.	Hari Pd.Guragain	Kamana Primary (English Medium Public) School, Danabari- 1, Ilam	15 Years	Head teacher
8.	Indra Bahadur Ghimire	Soktim Primary School, Chisapani, Soktim, Ilam.	12 Years	
9.	Bishnu Kumar Niroula	Saraswati Sec. School. Danabari- 6, Musekhola ,Ilam	21 Years	Head teacher
10.	Bishnu Mani Shrestha	Kankai Higher Secondary, Danabari-1, Ilam	16 Years	



## Appendix 2

### Name of the action researcher teachers and their action research topics sampled for the study.

SN	Name Of the teacher	School's name	Address	Topic
1	Dharma Pd. Acharya	Banjhogaun secondary, Shikharkateri	Chulachuli-9, Shikharkateri, Ilam.	Improving factorization skills in class eight students.
2.	Muga Dhan Rai	Saraswati L. Sec.	Banjho-2, Ilam.	Low learning achievement in science in the primary classes.
3.	Ganesh Prasad Neupane	Kiranteshwor Sec.	Chulachuli-6, Ilam.	An effort to increase learning achievement in English in the primary classes.
4.	Kamal Kanta Bhandari	Janata H.S.School	Chulachuli-3, Ilam.	Improving Reading Skill in Class 7 English.
5.	Ram Sundar Yadav	Janata H.S.School	Chulachuli-3, Ilam.	An effort to increase learning achievement in class eight Mathematics
6.	Mohamad Rustam Husen	Janata Sec. Kamal	Chulachuli-1, Kamal, Ilam.	How to improve learning achievement in secondary science classes?
7.	Mohan Kumar Adhikari	Bhanu Sec. Bukuwa	Chulachuli-8, Ilam.	An effort to solve bad performing students' problem of sitting at the last bench in the class.
8.	Hari Pd. Dhakal	Janata Sec. Kamal	Chulachuli-1, Kamal, Ilam.	Improving learning achievement in geometry in secondary level
9.	Ram Pd. Thapa	Janata H.S.School	Chulachuli-3, Ilam.	Easing students' homework problem.
10.	Megh Nath Subedi	Bal Jyoti Secondary	Chulachuli-7, Ilam.	Teaching of "Matra" (punctuation) in class One
11.	Bhakteswori Sapkota	Janata H.S.School	Chulachuli-3, Ilam.	Prolonging stay of grade one students in the class after the tiffin break time.

### **Appendix 3**

#### **Impact of action research in teachers' professional development Training. Subject matters /Questions discussed in the focus group discussion session With the TPD trained Teachers.**

1. What sort of assistance do you expect from institutions( like the school, head teacher, SMC, TPD training facilitator, resource persons, school supervisor , district education officer) in your action research?
2. How often these institutions ask you about your professional problems?
3. Has the school administration conducted any action research for professional improvement?
4. What has been the role of your school administration for your professional improvement?
5. Why do you think the majority of teachers do not carry out action research?
6. How do you carry out action research for your work performance appraisal (WPA)?
7. What factors motivate and demotivate you in carrying out action research?
8. What factors motivate and demotivate you in carrying out action research?
9. How far have you been successful in solving classroom problems using action research? Please narrate you success story in brief.
10. What problems arose in conducting action research?
11. How did you manage to solve these problems? Whose help did you take?



## Appendix 5

**Impact of action research in teachers' professional development Training.  
Questionnaire for the teachers (who have gone through the process of action  
research, at least once after the TPD training).**

*Please read all the guidelines carefully before completing all sections of the  
questionnaire.*

**Please rate the difficulty level you experienced, with reason(s), with the following  
components of action research process using the following scale:**

Difficulty level of the AR components	Indicator
This component is easy (has no difficulty)	1
This component has low level of difficulty	2
This component is moderately difficult	3
This component is highly difficult	4
This component is extremely difficult	5

1. Defining research question

(No difficulty)      **1**      **2**      **3**      **4**      **5**      (extreme difficulty)

Explain your reason(s) for choosing that level of difficulty for this component.

2. Reviewing the literature and writing the review.

(No difficulty)      **1**      **2**      **3**      **4**      **5**      (extreme difficulty)

Explain your reason(s) for choosing that level of difficulty for this component.

3. Developing and writing the methodology

(No difficulty)      **1**      **2**      **3**      **4**      **5**      (extreme difficulty)

Explain your reason(s) for choosing that level of difficulty for this component.

**4. Analyzing the data**

(No difficulty)      **1**      **2**      **3**      **4**      **5**      (extreme difficulty)

Explain your reason(s) for choosing that level of difficulty for this component.

**5. Organizing and writing the findings**

(No difficulty)      **1**      **2**      **3**      **4**      **5**      (extreme difficulty)

Explain your reason(s) for choosing that level of difficulty for this component.

## Appendix 6

### **Impact of action research in teachers' professional development Training. Questionnaire for the teachers (who have gone through the process of action research, at least once after the TPD training).**

*Please respond to the following questions.*

1. What can be the long -lasting effects of action research on your professional career in your belief?
  
2. In what ways has your action research experience empowered you and your teaching?
  
3. How has your research informed you and your instructional practices?
  
4. What issues arose for you while being engaged in action research and how did you resolve them?
  
5. Which learning gave you more confidence: things learned in the face to face training or things learnt from your own action research?

Description of the respondent teacher
Name:
Name of the school
Completed phase of the TPD:
Teaching experience in years:
Classes:

## **Appendix 7**

### **Impact of action research in teachers' professional development Training.**

#### **Interview Schedule for the Head Teachers and Resource Persons**

1. What type of professional and social relationship have you found among the teachers?
2. What factors motivate the teachers towards professional development?
3. What factors demotivate them in carrying out action research?
4. What is teachers view about action research?
5. What sort of problems do the action researcher teachers bring to you?
6. How do you give decisions to them? What is/are your basis for such decision making?
7. Do you agree that there should be separate budget for action research? What can be the source for such a budget?

## **Appendix 8**

### **Impact of action research in teachers' professional development Training.**

#### **Interview Schedule for the District Education Officer**

1. What type of professional and social relationship have you found among the teachers?
2. What factors motivate the teachers towards professional development?
3. What factors demotivate them in carrying out action research?
4. What is teachers view about action research?
5. How much did this office invest in TPD training in the district?
6. Do you agree that this office should invest separate budget for action research?  
What can be the source for such a budget?



## Appendix 9

### Impact of action research in teachers' professional development.

**Observation form to study teachers action research reports (in the resource centre)**

**Rate the action research report you studied with the following scale for the following quality.**

- a) 1 indicates no agreement
- b) 2 indicates a low level of agreement
- c) 3 indicate a moderate level of agreement.
- d) 4 indicates a high level of agreement
- e) 5 indicates an extreme level of agreement

1. This action research takes place in real situation

(I don't agree)    1    2    3    4    5    (I extremely agree)

Explain your reason(s) for choosing that level of agreement

2. This action research has strong purpose

(I don't agree)    1    2    3    4    5    (I extremely agree)

Explain your reason(s) for choosing that level of agreement

3. This action research has trustworthiness of data

(I don't agree)    1    2    3    4    5    (I extremely agree)

Explain your reason(s) for choosing that level of agreement

4. It improved teaching learning situation.

(I don't agree)    1    2    3    4    5    (I extremely agree)

Explain your reason(s) for choosing that level of agreement

5. This action research turned the into a researcher.

(I don't agree)    1    2    3    4    5    (I extremely agree)

Explain your reason(s) for choosing that level of agreement.

अनुसुची १

Impact of action research in teachers' professional development training.

शिक्षकको पेशागत बिकास तालिममा कार्यमूलक अनुसन्धानको प्रभाव

उत्तरदाता शिक्षकहरुको नामाबली

Table 1

Name of the action researcher teachers as respondents sampled for the study

क्र.सं	शिक्षकको नाम	विद्यालयको नाम र ठेगाना	शिक्षण अनुभव वर्ष	कैफियत
१.	सत्यनारायण चौधरी	अम्लिसे भञ्ज्याङ्ग प्रा.वि., दानाबारी-९, इलाम	२४	प्र.अ.
२.	चन्द्रकेशर कार्की	बिन्तिबिनायक प्रा.वि., महमाई-१, इलाम	८	
३.	चन्द्रकला बुढाथोकी	लक्ष्मी आदर्श मा. वि., महमाई-८, इलाम	२०	
४.	खड्ग ब. कंडेल	बिन्तिबिनायक प्रा.वि., महमाई-१, इलाम	१२	प्र.अ.
५.	रत्नमान गिरी	कन्काई उ.मा वि. (श्रोतकेन्द्र), दानाबारी-१, इलाम	१३	रोष्टर प्रशि क्षक
६.	टेकनाथ भट्टराई	लक्ष्मी विद्याभवन नि.मा. वि., दानाबारी-४, इलाम	१३	
७.	हरि प्र. गुरागाई	कामना प्रा.वि., (अंग्रेजी माध्यम) दानाबारी-१, इलाम	१५	प्र.अ.
८.	इन्द्र ब. घिमिरे	शोक्तिम प्रा.वि., चिसापानी, इलाम	१२	
९.	बिष्णु निरौला	सरस्वती मा.वि. दानाबारी-६, इलाम	२१	प्र.अ.
१०.	बिष्णुमणी श्रेष्ठ	कन्काई उ.मा वि., दानाबारी-१, इलाम	१६	

## अनुसुची २

Impact of action research in teachers' professional development training.

शिक्षकको पेशागत बिकास तालिममा कार्यमूलक अनुसन्धानको प्रभाव  
छनौट गरिएका शिक्षकहरु र कार्यमूलक अनुसन्धान प्रतिवेदनको शिर्षक बिबरण

Table 2

SN.	Name Of the teacher	School's name	Address	Topic
1.	Muga Dhan Rai	Saraswati L. Sec.	Banjho-2,Ilam.	बिज्ञान विषयमा न्युन शैक्षिक उपलब्धी
2.	Ganesh Prasad Neupane	Kiranteshwor Sec.	Chulachuli-6,Ilam.	कक्षा ४ को अंग्रेजीमा सिकाई उपलब्धी वृद्धिगर्ने एक प्रयास
3.	Kamal Kanta Bhandari	Janata H.S.School	Chulachuli-3, Ilam.	Improving Reading Skill in Class 7.
4.	Ram Sundar Yadav	Janata H.S.School	Chulachuli-3, Ilam.	कक्षा ८ को गणितमा सिकाई उपलब्धी वृद्धिगर्ने एक प्रयास
5.	Mohamad Rustam Husen	Janata Sec. Kamal	Chulachuli-1, Kamal,Ilam.	माध्यमिक तहको विज्ञान विषयमा सिकाई उपलब्धी कसरी वृद्धिगर्ने ?
6.	Mohan Kumar Adhikari	Bhanu Sec Bukuwa	Chulachuli-8,Ilam.	कमजोर विद्यार्थी कक्षाको पछाडी बस्ने समस्या, एक समाधान
7.	Dharma Pd. Acharya	Banjhogaun Ma.Vi.,Shikharkateri	Chulachuli-9, Shikharkateri, Ilam.	कक्षा ८ मा गणितको खण्डीकरण शिक्षण सुधार
8.	Hari Pd. Dhakal	Janata Sec. Kamal	Chulachuli-1, Kamal,Ilam.	माध्यमिक तहमा ज्यामिति सिकाई उपलब्धी सुधार
9.	Ram Pd. Thapa	Janata H.S.School	Chulachuli-3, Ilam.	विद्यार्थीमा गृहकार्य कठिनाईमा सुधार
10.	Megh Nath Subedi	Bal Jyoti Ma.Vi. Chulachuli	Chulachuli-7, Ilam.	कक्षा १ मा नेपाली विषयमा मात्रा शिक्षणमा कठिनाई
11.	Bhaktewori Sapkota	Janata H.S.School	Chulachuli-3, Ilam.	मध्यान्तरपछि, कक्षा १ मा विद्यार्थी कक्षा छाड्ने समस्या समाधान

### अनुसूची ३

#### Impact of action research in teachers' professional development training.

शिक्षकको पेशागत विकास तालिममा कार्यमूलक अनुसन्धानको प्रभाव

छलफलका लागि प्रश्नावलि विषयवस्तु

शिक्षकको लागि

१. संशागत रूपमा (विद्यालय, प्र.अ., वि.व्य.स. वि.नि., प्रशिक्षक, जि.शि.का. जस्ता व्यक्ति तथा संस्थाबाट) पेशागत विकासका लागि तपाईंले गर्ने कार्यपरक अनुसन्धानमा कस्तो सहयोगको अपेक्षा गर्नुहुन्छ ?
२. विद्यालय लगायतका माथि उल्लेख गरिएका संस्थाबाट कुन कुन समयमा कतिपटक पेशागत समस्यावारे सोधिन्छ ?
३. विद्यालय प्रशासनकै नेतृत्वमा पेशागत सुधारका लागि कार्यमूलक अनुसन्धान गरिएको छ वा छैन ?
४. पेशागत विकासका लागि विद्यालय प्रशासनको भूमिका कस्तो रहेको छ ?
५. तपाईंहरूको विचारमा शिक्षकहरू किन कार्यपरक अनुसन्धान गर्दैनन् ?
६. तपाईंहरू कार्यसम्पादन मुल्यांकनको लागि कसरी कार्यमूलक अनुसन्धान गर्ने गर्नुहुन्छ ?
७. के के कुराले तपाईंलाई कार्यमूलक अनुसन्धान गर्न उत्प्रेरणा दिन्छ ?
८. के के कुराले तपाईंलाई कार्यमूलक अनुसन्धान गर्न अनुत्प्रेरित गर्छ ?
९. कक्षाकोठाका समस्यालाई कार्यमूलक अनुसन्धान बाट कतिसम्म समाधान गर्न सफल रहनु भएको छ ? छोटकरिमा तपाईंका सफलताका कथा भन्नुहोस ।
१०. कार्यमूलक अनुसन्धान गर्दा के के समस्या र कठिनाईहरू आइलागे ?
११. त्यस्ता समस्याहरूलाई के के र कस कसले कसरी समाधान गर्नुपर्ला ?





अनुसूची ५

शिक्षकको पेशागत बिकास तालिममा कार्यमूलक अनुसन्धानको प्रभाव  
Impact of action research in teachers' professional development training.

प्रश्नावली / फारम

कार्यमूलक अनुसन्धान गरेका शिक्षकका लागि

(कृपया यो सर्वेक्षण फारमका हरेक प्रश्नहरूको वारेमा आफ्नो प्रतिक्रिया दिनुअघि सम्पूर्ण निर्देशनहरू राम्रोसग पढ्नुहोला ।)

क) कार्यमूलक अनुसन्धान गर्दा यसका निम्न भागहरूमा तपाईंले महसुस गरेका अप्ठ्यारा कठिनाईहरूलाई निम्न स्केल अनुसार (१,२,३,४,वा ५ अंक मध्ये कुनै एकमा मात्र) गोलो चिन्ह लगाउनुहोस् ।

प्रश्नहरूको कठिनाईस्तर	सङ्केत
सजिलो	१
न्यून रूपको अप्ठ्यारो	२
मध्यम तहको अप्ठ्यारो	३
उच्च तहको अप्ठ्यारो	४
अति नै अप्ठ्यारो	५

२. समस्या (अनुसन्धान प्रश्न) परिभाषित गर्न ।

१                      २                      ३                      ४                      ५

किन त्यो तह छान्नुभयो कारण (हरू) पनि ब्याख्या गर्नुहोस ।

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२. साहित्यको पुनरावलोकन गरेर लेख्न ।

१                      २                      ३                      ४                      ५

किन त्यो तह छान्नुभयो कारण (हरू) पनि ब्याख्या गर्नुहोस ।

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३. अनुसन्धान विधि विकसित गरेर लेख्न ।

१                      २                      ३                      ४                      ५

किन त्यो तह छान्नुभयो कारण (हरु) पनि ब्याख्या गर्नुहोस ।

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४. तथ्याङ्क विप्लेषण गर्न ।

१                      २                      ३                      ४                      ५

किन त्यो तह छान्नुभयो कारण (हरु) पनि ब्याख्या गर्नुहोस ।

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५. निष्कर्षहरु निकालेर तिनीहरुलाई व्यवस्थित गरेर लेख्न ।

१                      २                      ३                      ४                      ५

किन त्यो तह छान्नुभयो कारण (हरु) पनि ब्याख्या गर्नुहोस ।

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अनुसूची ६

शिक्षकको पेशागत विकास तालिममा कार्यमूलक अनुसन्धानको प्रभाव  
**Impact of action research in teachers' professional development training.**

कार्यमूलक अनुसन्धान गरेका शिक्षकका लागि

*कृपया तलका प्रश्नहरूको उत्तर दिनुहोस :*

१. तपाईंको पेशागत विकासमा कार्यमूलक अनुसन्धानले पार्नसक्ने दिर्घकालिन असर कस्तो र के हुनसक्छ भन्ने तपाईंको विश्वास छ ?

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 .....  
 .....

२. तपाईं अथवा तपाईंको शिक्षणलाई कार्यमूलक अनुसन्धानले कसरी सशक्तिकरण गरेको छ ?

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३. तपाईंको शैक्षिक कृयाकलाप र प्रयोगलाई तपाईंले गरेको कार्यमूलक अनुसन्धानले कसरी सुसुचित गरिरहेको छ ?

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४. तपाईंले कार्यमूलक अनुसन्धान गरिरहंदा के के मुद्दाहरू उठे र तपाईंले तिनीहरूको समाधान कसरी गर्नुभयो?

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५. तुलनात्मक रूपमा प्रशिक्षक केन्द्रित भएर तालिम केन्द्रमा लिएको तालिमबाट सिकेका पेशागत कुरा र यसरी आफैं कार्यमुलक अनुसन्धान गरेर सिकेका शिक्षक केन्द्रित सिकाईका कुरामा कुनमा बढी दिगोपन पाउनुभयो र किन?

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#### शिक्षकको विवरण

नाम : ..... पद .....

पुरा गरेको.टि पी.डी. तालिमको चरण.....दिन.....

विद्यालयको नाम : .....

कार्य अनुभव : .....बर्ष । अध्यापन गर्ने कक्षाहरु.....

सहयोगका लागि धेरै धन्यवाद ।

### अनुसुची ७

शिक्षकको पेशागत बिकास तालिममा कार्यमूलक अनुसन्धानको प्रभाव  
**Impact of action research in teachers' professional development training.**

प्रधानाध्यापक तथा श्रोतब्यक्तिलाई अन्तरवार्ताको प्रश्न

१. शिक्षकहरु वीचको सामाजिक तथा पेशागत सम्बन्ध कस्तो पाउनु भएको छ ?
२. शिक्षकलाई पेशागत विकाशमा आकर्षण गर्ने तत्व के होला ?
३. पेशागत रुपमा कार्यमूलक अनुसन्धान प्रति विकर्षण गर्ने तत्व के होला ?
४. शिक्षकहरुको कार्यमूलक अनुसन्धान प्रतिको दृष्टिकोण कस्तो छ ?
५. शिक्षामा लगानी अन्तर्गत पेशागत विकासको लागि गत वर्ष यस कार्यालयले इलाम जिल्लामा कति लगानी गर्‍यो ?
६. तपाईंसँग कार्यमूलक अनुसन्धान कर्ता शिक्षकले कस्ता प्रश्न समस्या लिएर आउनु हुन्छ ?
७. त्यस्ता समस्याहरुको समाधान गर्ने निर्णयमा कसरी पुग्नुहुन्छ? के का आधारमा निर्णय गर्नुहुन्छ ?
८. पेशागत विकासको लागि कार्यमूलक अनुसन्धान शिर्षकमा छुट्टै बजेट व्यवस्था गर्नुपर्ने देखिन्छ ? के श्रोतबाट त्यस्तो लगानी हुनसक्छ ?
९. अन्य सुभाब भए उल्लेख गर्नुहोस ।

### अनुसुची ८

शिक्षकको पेशागत विकास तालिममा कार्यमूलक अनुसन्धानको प्रभाव  
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#### जिल्ला शिक्षा अधिकारीलाई अन्तरवार्ताको प्रश्न

१. शिक्षकहरु बीचको सामाजिक तथा पेशागत सम्बन्ध कस्तो पाउनु भएको छ ?
२. शिक्षकलाई पेशागत विकाशमा आकर्षण गर्ने तत्व के होला ?
३. पेशागत रूपमा कार्यमूलक अनुसन्धान प्रति विकर्षण गर्ने तत्व के होला ?
४. शिक्षकहरुको कार्यमूलक अनुसन्धान प्रतिको दृष्टिकोण कस्तो छ ?
५. शिक्षामा लगानी अन्तर्गत पेशागत विकासको लागि गत वर्ष यस कार्यालयले इलाम जिल्लामा कति लगानी गर्‍यो ?
६. पेशागत विकासको लागि कार्यमूलक अनुसन्धान शिर्षकमा छुट्टै बजेट व्यवस्था गर्नुपर्ने देखिन्छ ? के श्रोतवाट त्यस्तो लगानी हुनसक्छ ?

### अनुसुची ९

शिक्षकको पेशागत बिकास तालिममा कार्यमूलक अनुसन्धानको प्रभाव

**Impact of action research in teachers' professional development training.**

स्रोतकेन्द्रमा छनौट गरिएका कार्यमूलक अनुसन्धानको अध्ययनको लागि तयारगरिएको

अवलोकन फारम

कार्यमूलक अनुसन्धानका प्रत्येक प्रतिवेदन हरुका लागि तल दिईएको स्केलका आधारमा

मुल्यांकन गर्ने

कथनप्रतिको सहमतिको स्तर	सङ्केत
असहमत	१
न्यून रूपमा सहमत	२
मध्यम रूपमा सहमत	३
उच्च रूपमा सहमत	४
पुर्ण रूपमा सहमत	५

१. यो कार्यमूलक अनुसन्धान काल्पनिक मुद्दामा गरिएको छैन ।

(असहमत) १      २      ३      ४      ५ (पुर्ण सहमत)

किन त्यो तह छान्नुभयो कारण (हरु) पनि व्याख्या गर्नुहोस् ।

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२. यो कार्यमूलक अनुसन्धान उदेश्यमूलक छ।

(असहमत) १      २      ३      ४      ५ (पुर्ण सहमत)

किन त्यो तह छान्नुभयो कारण (हरु) पनि व्याख्या गर्नुहोस् ।

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३. यो कार्यमूलक अनुसन्धान भरपर्दाखाले तथ्यांकमा आधीरत छ ।

(असहमत) १      २      ३      ४      ५ (पुर्ण सहमत)

किन त्यो तह छान्नुभयो कारण (हरु) पनि व्याख्या गर्नुहोस् ।

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 ४. यो कार्यमुलक अनुसन्धानले शिक्षण सिकाइमा साँच्चै नै सुधार गरेको छ ।

(असहमत) १      २      ३      ४      ५ (पूर्ण सहमत)

किन त्यो तह छान्नुभयो कारण (हरु) पनि ब्याख्या गर्नुहोस ।

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५. यो कार्यमुलक अनुसन्धानले शिक्षकलाई अनुसन्धानकर्तामा बदलेको छ ।

(असहमत) १      २      ३      ४      ५ (पूर्ण सहमत)

किन त्यो तह छान्नुभयो कारण (हरु) पनि ब्याख्या गर्नुहोस ।

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