



# **A Guide to Action Research**

**Enhancing Professional Practice of  
Teachers in Bhutan**

*Provisional Edition 2018*

**Royal Education Council**



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**Enhancing Professional Practice of Teachers in Bhutan**

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**ROYAL EDUCATION COUNCIL**



## Forward

This provisional edition of “A Guide to Action Research: Improving Professional Practice of Teachers in Bhutan” intends to assist teachers and school leaders in planning, and conducting action research projects to improve their instructional and educational management practices. Among other strategies, action research is a powerful strategy that can be used by teachers to study their own pedagogical practices, implement interventions to improve upon and refine their pedagogical practices. Action research can also be used by school leaders to study school improvement and management plans, activities and initiate changes to enhance the school ambience.

The initial motivation of publishing this guideline emerged from recommendations of the Master plan for In-Service Education of Teachers in Bhutan, Bhutan Education Blueprint 2014-2024, and the National School Curriculum Conference 2016 that research be an integral strategy for teachers to inform their teaching and learning practices. Besides, there was a need for such a guideline to support the operation of the Sherig Endowment Fund, which was granted by the government to promote research based teaching learning culture in schools.

The guideline was developed by the Royal Education Council in close professional collaboration with the Samtse College of Education, Royal University of Bhutan and in consultation with the Teacher Professional Support Division, Ministry of Education.

The draft was also consulted with the District and Thromde Education Officers, Principals, Vice Principals, and teachers of Haa, Thimphu, Wangdue, Gelephu, and Bumthang. The Director General, Department of School Education, Ministry of Education chaired one of the consultation meetings with the Ministry in which valuable comments and directions were received.

The Honourable Secretary, Ministry of Education provided guidance and encouragement as he graced the closing of the five day action research workshop for the first cohort of Cluster and School Lead Teachers in May 2017 and also chaired the meeting of Ministry of Education, Bhutan Council for School Examinations and Assessment and Royal Education Council on 2 March 2018 which endorsed the guideline.

The guideline is developed and published with financial assistance from UNESCO as a part of the Participation Programme 2016-2017, under the project title Technical Assistance to develop Guidelines for School Level Action Research. It contains a step-by-step process in planning and conducting action research in a systemic scholarly manner, whether the researcher applies for the Sherig Endowment Fund or even otherwise. The guideline also provides tools and mechanism for institutionalising research culture in schools.

It is hoped that the guideline comes as a useful resource for teachers and school leaders to carry out a systemic self-reflection of their professional actions and improve learning experiences and outcomes of all students.

Sd/-  
(Kinga Dakpa)  
Director





# Contents

<b>Introduction .....</b>	<b>1</b>
What is Action Research? .....	1
Types of Action Research.....	4
Who is a Critical Friend?.....	4
How is Action Research different from Conventional Research?.....	4
<b>Process of Action Research.....</b>	<b>5</b>
Stage 1 Planning.....	6
Stage 2 Acting.....	6
Stage 3 Observing.....	6
Stage 4 Reflecting .....	6
<b>Doing the Action Research.....</b>	<b>6</b>
<b>Stage 1 Planning.....</b>	<b>6</b>
Problem identification.....	6
Reconnaissance.....	8
Action research question.....	10
Action plan.....	12
<b>Stage 2 Acting.....</b>	<b>13</b>
Qualitative data collection method.....	13
Quantitative data collection method.....	15
<b>Stage 3. Observing.....</b>	<b>15</b>
Thematic analysis .....	15
Descriptive analysis .....	15.
<b>Stage 4 Reflecting.....</b>	<b>18</b>
<b>Action Research Proposal Structure .....</b>	<b>20</b>
<b>Action Research Report Structure.....</b>	<b>21</b>
<b>Ethics and Integrity.....</b>	<b>22</b>
<b>Referencing and Citation.....</b>	<b>22</b>
<b>References.....</b>	<b>28</b>
<b>Annexures.....</b>	<b>30</b>



## Introduction

As one of its game changing initiatives, the Bhutan Education Blueprint 2014-2024, recommends every teacher to produce at least one action research paper in a year related to teaching and learning. Similarly, the National School Curriculum Conference, 2016, endorses a resolution to 'promote a culture of research-based teaching and learning in schools.'

These initiatives align with growing international interest in teacher action research because action research provides opportunities to integrate theory and practice in a classroom and a single school. It provides teachers a forum to collaborate and work towards studying and addressing issues of common concern. Enhancing research capacity among teachers empowers them in playing key roles in the educational system. Teachers have first-hand knowledge in understanding their own practices and identifying areas for improvement.

In this context, this guideline was developed to help facilitate teachers in Bhutan to carry out action research in the classrooms and schools to achieve self-improvement and enhance student learning. It contains relevant information on the conceptual understanding, processes and procedures necessary for the successful conduct of action research.

### 1. What is Action Research?

Literature shows a variety of definitions for Action Research (AR) by different authors. However, the definitions are found to be fundamentally similar in nature, highlighting important aspects of education, such as improved student learning and teacher effectiveness as the core purpose of AR. AR is defined as:

1. a process in which practitioners study problems scientifically so that they can evaluate, improve and steer decision making and practice (Corey, 1953, p.6).
2. a systematic study that combines action and reflection with the intention of improving practice (Ebbutt, 1985, p.156).
3. a form of collective self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social or educational practices, as well as their understanding of these practices and the situations in which these practices are carried out

(Kemmis & McTaggart, 1988, p. 5).

4. a systematic inquiry done by teachers to gather information about, and subsequently improve, the ways their particular educational setting operates, how they teach, and how well their students learn (Mills, 2000).
5. an enquiry, undertaken with rigour and understanding so as to constantly refine practice; the emerging evidence-based outcomes will then contribute to the researching practitioner's continuing professional development (Koshy, 2005, p.1).

For the purpose of this guideline, AR is defined as a systematic process of self-reflective inquiry on teaching learning practices in the classroom and school by a teacher or in collaboration to improve one's own educational practices and student learning.

- To better understand the concept of AR, it is important to know that AR is:
- not what usually comes to mind when we hear the word 'research'.
- not just simple problem-solving but involves problem-posing.
- not about doing research on or about other people but done by particular people on their own work.
- not the usual reflection that teachers do but it is more evidence based and systematic.
- not a library project where you find information on a topic of your interest.
- not about learning why we do things, but rather how we can do things better.

## **2. Types of Action Research**

AR can be carried out by an individual teacher or in collaboration with colleagues to address common issues that concern them. A summary of the types of AR is shown in Table 1.

**Table 1. Types of Action Research**

	Individual teacher AR	Collaborative AR	School-wide AR
Focus	Single issue in the classroom, (classroom management, instructional strategies, use of materials, student learning, and so on)	May include few teachers or groups interested in addressing a common classroom issue, trying out one strategy in different classes or subjects or common departmental issues.	Issues common to all in the school such as the concern on parental involvement, organizational structure.
Possible support required	Mentor /critical friend Access to ICT and physical resources Leadership and administrative support	Mentor /critical friend Access to ICT and physical resources Release time and substitute teachers Leadership and administrative support	Mentor /critical friend Access to ICT and physical resources Proactive participation of the school community Leadership and administrative support Principal researcher from within the school
Potential impact	Self-improvement in the delivery of curriculum, instruction and assessment Improved student learning outcome	Self-improvement in the delivery of curriculum, instruction and assessment Enhanced team-work and collaboration Develop a professional learning community Effective school policy and procedure Improved student learning outcome	Self-improvement in the delivery of curriculum, instruction and assessment Enhanced team-work and collaboration Strengthened professional learning community Effective school policy and procedure Improved student learning outcome

Drawbacks	Information about the research and findings may not be shared	Disagreements on process	Disagreements on process
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*(Adapted from Ferrance, 2000)*

### 3. Who is a Critical Friend?

Generally, AR involves a teacher researcher who takes up dual roles as teacher and researcher, participant student and a critical friend. Having a critical friend is advantageous in developing professional wisdom in the teacher researcher.

The idea of a 'critical friend' or 'critical colleague' is a 'partner' who can give advice and is working with the teacher–researcher in the AR. Instead of perceiving their role as an advisor or consultant, the 'critical friends' see themselves as the 'friend' of the teacher–researcher (Stenhouse, 1975). In the words of Costa and Kallick (1993), a critical friend is "a trusted person who asks provocative questions, provides data to be examined through another lens, and offers critique of a person's work as a friend".

The critical friend is there for a teacher researcher throughout the AR process. The purpose of having a critical friend is to ensure that the researcher does not make narrow or biased interpretations of data. The critical friend takes a proactive role in promoting the learning capacity of teachers in reflective enquiry in a supportive and cooperative manner. However, a critical friend should also respect and maintain the teacher researcher's autonomy in constructing knowledge related to his or her practice.

### 4. How is Action Research different from Conventional Research?

Often the understanding of AR is perceived to be similar to that of conventional or traditional research process. This belief intimidates teachers in carrying out AR although many feel the need to study and improve upon their teaching-learning practices. The following table presents the differences between AR and conventional research.

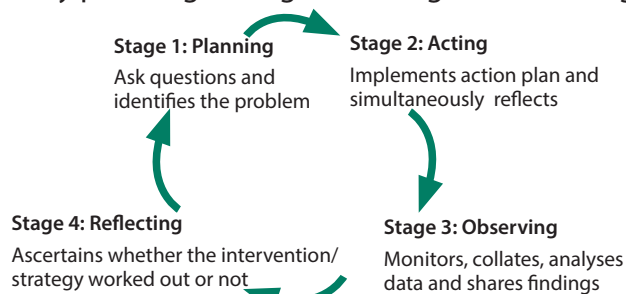
**Table 2. Comparison between Action Research and Conventional Research**

	Action Research	Conventional research
Purpose	To take action and effect positive change in the specific school that was studied.	To develop and test educational theory and derive generalizations.
Problem identification	Teacher researcher identifies problems during the teaching-learning processes through general observations and self-reflection.	A wide range of methods (surveys, interviews, scientific experiments, literature) are used to identify a problem.
Literature review	Less extensive literature review.	Extensive literature review.
Participants	Students and/or members of the school community	Random or representative preferably with large populations
Research design	Flexible, context driven and adaptable research design.	Structured research design which has been validated.
Data analysis	Simple theme based analysis supported by descriptive statistics (frequency, mean, percentage) on small scale data	Complex analysis (T-test, ANOVA, regression) on large scale data.
Application of results	Findings are used by the teacher researcher immediately in the classroom or school.	The findings are usually generalized for broader application.

*(Adapted from New South Wales Department of Education and Training, 2010)*

## 5. Process of Action Research

AR is a form of applied research. It is an evolving and dynamic process of transforming the practices of teachers. Therefore, in order to carry out AR effectively, the teacher researcher needs to have a thorough understanding of the AR process. Most models of AR propose a cyclical and spiral four stage process, namely planning, acting, observing and reflecting.



*Figure 1: Action Research Process*

## **Stage 1 Planning**

**First stage planning-** In this stage, the teacher researcher asks questions and identifies the area of practice that he or she wants to change or improve upon. Upon identifying the area, he or she takes stock of the situation by carrying out a reconnaissance (situational analysis, competence and literature review) to develop the AR question. The AR proposal framework should be used at this stage and a description of the data collection methods provided.

**Second stage planning-** At this stage, the action plan is developed. It can be presented in a matrix form indicating the activity and the time lines. This is the activity plan which will be implemented in the acting stage.

## **Stage 2 Acting**

The teacher researcher implements the action plan and simultaneously reflects on the process and modifies the plans as and where necessary. The teacher researcher collects and compiles data while documenting the modification(s) made.

## **Stage 3 Observing**

The teacher researcher observes the action process, the effects of action (intended and unintended), the circumstances of and constraints on action, the way circumstances and constraints limit or channel the planned action and its effects, and other issues which arise (Kemmis, McTaggart, & Retallick, 2004).

In this stage, the teacher researcher also monitors, collates, analyses data, and shares findings with co-researchers or colleagues for interpretation.

## **Stage 4 Reflecting**

Reflection is based on the analysis and findings to ascertain whether the intervention or strategy worked and to better understand the reason(s) why it did or did not work. This could lead to the next cycle.

## **6. Doing the Action Research**

### **Stage 1 Planning**

#### **Problem identification**

The problem identification is essentially a process of identifying an area of



focus to study. It is written as a statement which links an idea to an action. It refers to the state of affairs or situations ones wishes to change or improve on. The following is the criteria for problem identification. The problem or area of focus should:

1. involve teaching and learning and should focus on one's own practice.
2. be within one's locus of control.
3. be something that one feels passionate about.
4. be something that one would like to change or improve (Mills, 2011, p. 41).

Given below are two examples of a problem statement:

1. Students are dissatisfied with the methods by which they are assessed.

**Scenario 1:**

Mr. Dorji teaches Mathematics in class IX. He conducts regular class tests as one of the ways to assess the impact of his teaching. Despite all his efforts, most students in his class expressed dissatisfaction with the method of the class tests he conducted. Upon realizing the situation he felt the need to change and improve upon his teaching and assessment methods.

2. Parents are unhappy with the way the parent-teacher meetings are conducted.

**Scenario 2:**

In a certain school, parent-teacher meetings are conducted to make decisions on school activities and share information about the school. Parents are normally informed of the meeting a day earlier to the meeting. Parents either gather in the school ground or the school multipurpose hall for at least two hours. Often it is the school management and teachers taking turns to lecture parents on the same issues repeatedly. Many parents have expressed frustration over the way these meetings are conducted. A group of teachers share the parents' concerns and aspires to conduct AR projects to address the problem.

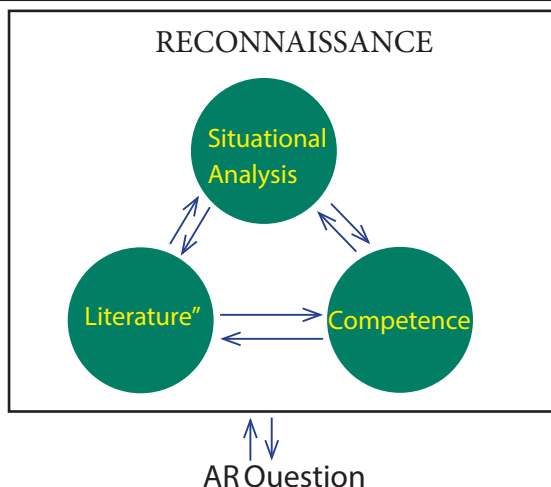


Figure 2: The Reconnaissance (Maxwell, 2003, p.9)

## Reconnaissance

Reconnaissance is preliminary information gathering. It consists of analysing the situation in which the problem is identified, competence of the teacher researcher and participants, and relevant literature to produce research questions that will lead to improvement. All the three components are interconnected to clarify, review and strengthen the formulation of AR questions. The three components are usually completed over the same period of time.

### Situational analysis

When a teacher wants to improve upon or change his or her practices, he or she needs to critically assess the realities of the current situation he or she is in.

In a classroom situation, the following are the suggested key components to reflect upon during the situational analysis:

- Information about the class (e.g. grades, strength, gender, etc)
- Teacher researcher's (and others') observation and comments on the situation
- Participating students' achievements
- Behaviour and attitudes of participating students
- Cultural and social mix of the participating class

- Participants' previous experiences
- Timetable organisation
- Opportunities and challenges

### Competence

The teacher researcher needs to analyse his or her personal competency, and that of the critical friend and participating students. Analysing the competency helps identify the area of improvement. Given below are some suggested question cues for the researcher to use.

#### Teacher researcher

- What knowledge and skill does the teacher researcher possess?
- What are the teachers' feelings and beliefs related to the problem?
- What improvements does the teacher researcher need to help students?
- What responsibilities does the teacher researcher have?
- What workshops, trainings, seminars has the teacher researcher attended?

#### Student

- What is the current level of the students' knowledge and skills?
- What are the strengths and weaknesses of students?
- What are the areas that students need to improve on?
- What is the students' level of language competency?

#### Critical friend

- What knowledge and skill does the critical friend possesses?

### Literature review

The teacher researcher reviews literature related to the problem to reflect on the identified problem through someone else's lens. Literature review also helps the teacher researcher identify potential promising practices that might be useful to address the problem. As a result of the literature review the teacher researcher attains a broad understanding of the problem and a

better perspective of the areas for improvements. Eventually it helps frame a relevant data plan and corresponding intervention methods. Literature review will entail the teacher researcher to read relevant books, book chapters, journal articles and other forms of publications to find additional information in addition to the researcher's existing ideas

### **Action research question**

As a result of doing reconnaissance, the teacher researcher develops a research question. There are two sets of criteria that can be used to frame AR question as given below:

#### **General criteria for developing AR questions:**

1. Limit the question to one that is meaningful and doable in the confines of daily work.
2. Be higher-order questions and not yes or no questions.
3. Be stated in common language avoiding jargons.
4. Be concise and specific.
5. Not already have an answer.
6. Be specific, achievable, strategic and improvement oriented.

#### **Maxwell's criteria**

1. Specific (Can I gather data about this?)
2. Strategic (Will it make a difference to my practice or the situation or both?)
3. Doability (Can I possibly change this in the time given?)

#### **Some examples of AR questions:**

1. How can I collaborate to improve student assessment?
2. How can I improve the conferencing process using student led conferences?
3. Will dictation of difficult words help students improve their English spelling?
4. What strategies can I use to become an effective classroom manager?
5. Would more time spent in cooperative learning groups help students understand concepts at a higher level?

The above five questions are all acceptable AR questions. Some questions appear as a yes or no type questions (question 3 and 5). However, these questions are action oriented. They are asking the researcher to act or do something for improvement and are of a higher order.

### **Formulating an action research question**

The following three steps can be followed if one finds it difficult to frame an AR question.

#### **Step 1.**

Identifying the problem – The starting point to formulate an AR question is the problem statement or problem identification. For example – a problem can be – ‘students do not engage in reading independently’.

#### **Step 2.**

Why is this problem occurring? – Try to hypothesize the possible causes of the problem. List down all that comes to one’s mind.

For example – Lack of knowledge

Lack of resources

Poor study habits

Lack of motivation

Lack of support at home

From the above five possible causes, choose the one that is the main cause. Let us say the main cause is the lack of motivation.

#### **Step 3.**

Brainstorm possible actions - Brainstorm all the possible actions that can be carried out to address the lack of motivation.

Example – Calling parents every day

Letting students read on computer

Setting up a learning contract to provide motivation.

Providing reading materials

Now choose the best possible action. The best one can be setting up a learning contract to provide motivation.

Following the above three steps, one can finally design an AR question as suggested below:

If I draw a learning contract that I will reward students for reading independently, will the amount of time they spend in reading increase?

Or

How can I help students increase their independent reading time by establishing a contract of rewarding students?

### **Action plan**

An action plan summarizes the AR thoughts into a plan that will guide the teacher researcher.

It is presented in a tabular format as give below (Action Plan A) or in a matrix form (Annexure 11) indicating the activity and timeline. Additional information necessary for such things as resources required may be inserted under the remarks column.

**Table 3. Action Plan A**

Activity	Timeline	Remarks
Research proposal preparation	Third week of February	
Research proposal presentation	Second week of March	
Ethical clearance	Third week of March	
Baseline data collection	Fourth week of March	
Baseline data analysis	Third week of April	
Interventio	Second week of May	
Post data collection	First week of June	
Data triangulation	Second week of June	
Research report writing	Fourth week of June	

Action Plan B has been developed incorporating important steps that are required in applying for the Sherig Endowment Fund. A Flow Chart (Annexure

10) has also been created to show the order of process for the application of Sherig Endowment Fund.

**Table 4. Action Plan B**

Activity	Timeline	Remarks
AR proposal preparation	Week 3 February	
AR proposal presentation to School AR Committee	Week 1 March	
AR proposal presentation to Cluster AR Committee	Week 2 March	
Baseline or pre-data collection and analysis	Week 4 March -Week 1 April	
Conduct intervention	Week 2 April-Week 4 May	
Post-data collection and analysis	Week 1 & 2 June	
Research finding presentation School AR Committee/Cluster AR Committee	Week 1 August	
Research report submission to the Ministry of Education	Week 1 October	

## Stage 2 Acting

Put the action plan into action. As the plan is being implemented, collect data and closely monitor the effect of the interventions. Here, the process of acting is fluid and dynamic. It is guided but not controlled by the action plan, so minute changes in the plan can be made but a proper recording of the changes need to be recorded.

In AR, pre-data or baseline data is collected before the introduction of the intervention to establish the authenticity of the issues. Post-data is collected using the same data tool(s) at the end of the intervention cycle. This does not preclude the collection of data in other forms during the process of the intervention. In AR, both qualitative and quantitative data are collected.

## Qualitative data collection method

### Interviews

Interviews are conducted by the teacher researcher(s) to collect in-depth information. Interviews can be structured, semi structured or focus group

discussions. The kinds of interviews planned and used depend on the nature of the study and the availability of time and other resources.

In structured interviews the teacher researcher asks a series of prepared questions to the participants in a pre-determined order. The content and structure of the questions cannot be changed to suit the changes in the responses. Whereas in semi-structured interviews, the teacher researcher can modify the questions based on the responses they get. However the focus still remains on the research problem.

Focus group discussions are conducted with a minimum of four and a maximum of eight persons by the teacher researcher with the help of an observer who acts as the time keeper or note keeper. The teacher researcher asks prepared questions being mindful of respecting and providing equal opportunities for all the members to participate. At the end of the focus group discussion the observer must present the recorded discussion to authenticate the shared information.

The interviews need to be transcribed for analysis.

It is important that the interviewer knows how to conduct interviews properly or in a professional way. If one has no experience or has little knowledge of conducting interviews, one should read relevant literature to acquire the skills of conducting interviews.

## **Observations**

In AR, observing participants in action and recording information about others by viewing their actions and behaviours in their natural surroundings is a common way of collecting data. Some forms of observations are briefly discussed below:

- i. **Field notes:** Field notes are direct, written observations (dialogue, impressions, or feelings) about what is occurring that contain rich, detailed information that create a basis for the study.
- ii. **Logs:** Logs generally record entry times, identify individuals involved, and detail events targeting information identified for future study.
- iii. **Diaries:** Diaries are usually unedited accounts of events that also include personal thoughts and feelings. Acceptable diary formats include written and oral (video or audio) account of events.
- iv. **Journals:** Maintaining a journal contain information that relates to specific



events, answer questions, or analyses information. Generally, journals serve as an event reminder during the analytical and evaluative phases of research.

- v. Checklist: Checklists are structured observation tools used when specific, predictable results are expected. Items on the checklist help the observer remain focused on key points by asking for the frequency, absence, or presence of specific events. Category, numeric, graphic, and pictorial rating scales help the observer record information.

## Quantitative data collection method

### Questionnaires

In AR the teacher researcher administers questionnaires when they have a large number of respondents and when individual and small group interviews are not possible. Questionnaires may include open-ended items where the respondent creates their own answers or closed-ended items where respondents answer to a limited number of responses.

### Class test

Class tests are conducted by the teacher researcher(s) to collect pre-data and post-data to evaluate the effects of the interventions.

## Stage 3 Observing

To carry out the stage of Observing, the teacher researcher needs to be sensitive to the research context, be responsive, flexible, and open-minded, because action will always be limited by constraints of reality, and all of these constraints will never be clear in advance. At this stage the collected data is collated, analysed, and findings shared with a critical friend and other colleagues for interpretation.

Suggested below are two methods of data analysis:

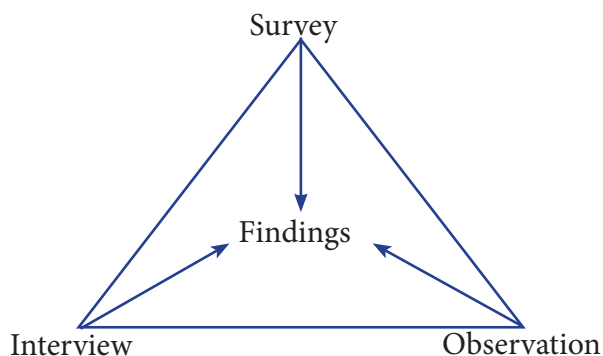
### Thematic analysis

For qualitative data such as interviews, field notes, and observation notes, thematic

analysis is used to analyse data. Thematic analysis refers to qualitative data interpretation and analysis in accordance with the research topic and question. After coding and classifying data, themes can be generated under

main and sub-categories. The triangulation technique can be used to code and classify themes.

Triangulation is the use of multiple sources of data (Figure 3) for bringing different kinds of evidence into some relationship with each other so that they can be compared and contrasted (Elliott & Partington, 1975) for validity and objectivity of the study. Pre-data and post-data are used in the triangulation process.



*Figure 3. Triangulation*

#### Example of thematic data analysis of an interview

Segmenting (can be done with words, phrases or sentences) and coding (labels or tags assigned for themes) are usually used while analysing interview scripts. Colour coding is used to categorise themes. For example red for theme A and blue for theme B. The following example is taken from Davison Zireva:

Interviewee script - In my group the three of us do not understand most of the things (LU). It's only Chipo who understands and writes answers for us (LAP). When we ask him to help us on how to get the answers, he says that at break we must give him some food (CH). If we don't the next day he writes answers quietly (LAP). I am nervous to ask you a question in the hearing of the whole class (PA). One day the class laughed at me (CD) when I asked.

These segments of the sentences have been labelled as LU (lack of understanding), LAP (lack of participation), CH (conditional help), PA (personal anxiety), CD (classroom discipline).

The segments are then categorized into themes as shown below:

Theme	Sub-theme	Excerpts from Interview
Ineffective grouping	Lack of active participation Conditional help	- Only Chipu understands and writes answers for us - He writes answers for us - When we ask him to help us ... he says at break we must give him some food
Ineffective learning facilitation	Lack of understanding Class indiscipline	- Three of us do not understand most of the things - The class laughed at me when I asked
Presence of anxiety	Nervousness	- I am nervous to ask you a question in the hearing of the whole class

*(Zireva, 2013, p.40)*

### Descriptive analysis

Descriptive analysis is used to describe and explain the quantitative data using frequencies, mean, percentage, and standard deviation in a meaningful manner. Summary of findings can be presented as tables, pie charts, and line graphs. A simple descriptive analysis can be done using the spreadsheet.

#### Example of a descriptive analysis

The following diagram has been generated using a spreadsheet. The quantitative pre-data and post-data of the average score of reflective writing is compared. To describe or summarise the data, three elements need to be captured. Firstly, location of the information needs to be provided to give direction to the reader. Referring to the table or figure are the words used to refer to the location. Secondly, the generalization or understanding of the table or figure needs to be highlighted. For example, what does the score of 45 in pre-test and 60 in post-test mean? Thirdly, a concluding statement is written to explain the implication or the final judgement of the information. The description of table, figure or any quantitative data is called a data commentary.

Example of a data commentary

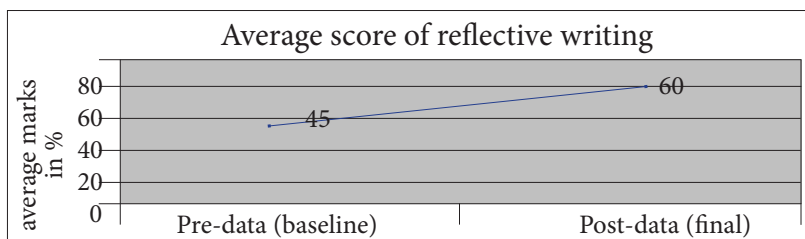


Figure 4: Reflection Paper (Dr. Sonam Rinchen, PPT)

Figure 4 shows an average score of students' reflective writing during the pre-test and post-test. The graph shows an increased trend. The average score has increased from 45 to 60 after the intervention indicating the effectiveness of the same.

### Stage 4 Reflecting

According to Boud et al. (1985), reflection is a generic term for those intellectual and affective activities that individuals engage in to explore their experiences leading to new understanding and appreciation. This is the final stage of the cycle where the teacher researcher evaluates the research process and the effectiveness of the interventions. Depending on the conclusion about what has been achieved and what needs to be done, the researcher identifies possible ways of moving forward into the next cycle.

One possible model suggested for reflection is the Borton's (1970) framework to guide reflective activities (Figure 5). The framework asks questions around 'What?, So What?, and Now What?'

It is also important to keep in mind that reflection in AR takes place in all stages of the AR.

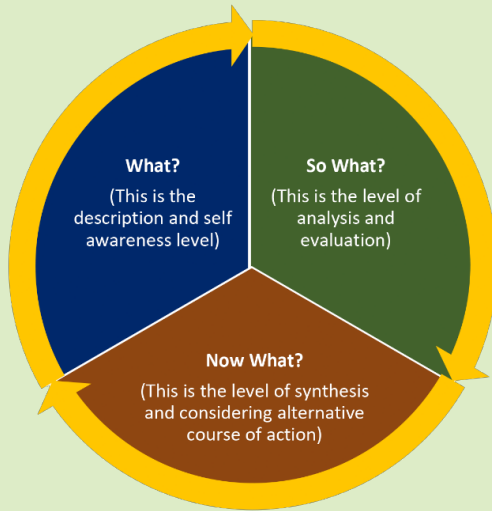


Figure 5. Process of reflection

What?

1. What is the problem?
2. What was my role in the situation?
3. What was I trying to achieve?
4. What actions did I take?
5. What was the response of others?
6. What feelings did it evoke in myself and in others?
7. What was good or bad about the experience?
8. ...

Now What?

1. What do I need to do in order to make things better?
2. What broader issues need to be considered if this action is to be successful?
3. What might be the consequences of this action?
4. ...

So What?

1. What does this tell me?
2. What was going through my mind as I acted?
3. What did I base my actions on?
4. What other knowledge can I bring to the situation?
5. What could I have done to make it better?
6. What is my new understanding of the situation?
7. What broader issues arise from the situation?
8. ...

*(Questions adapted from Brighton University, n.d.)*

The following diagram shows the whole process of AR.

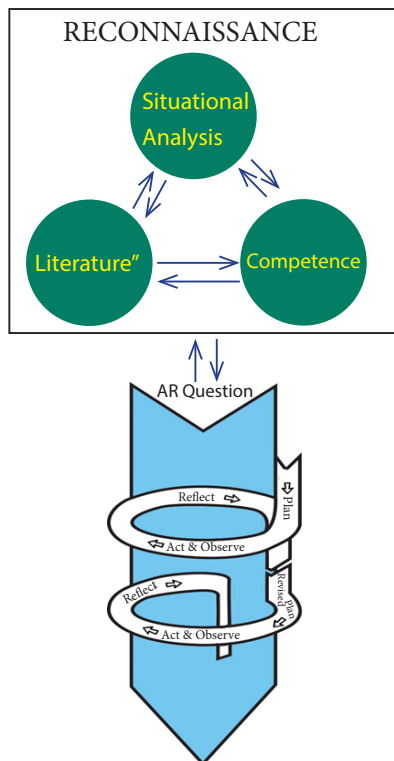


Figure 6: The Reconnaissance and AR Spiral linked by the AR Question after Kemmis & McTaggart (1988) (Cited in Maxwell, 2003, p.12)

## 7. Action Research Proposal Structure

Having a proposal is necessary for carrying out AR in a formal context, and to avail funds and support required during the research process. Developing a proposal helps the researcher think through the process of research and to address the research objective.

An AR proposal is developed consisting of the following components:

5. Title: Related to the AR question (It should not be in a question form)
6. Introduction: Short paragraph on the background or context of your AR
7. Aims and objectives of the AR
8. Reconnaissance: Situational analysis, literature review and competence (Capture problem formulation under situational analysis).

9. AR question: State the AR question
10. Data plan (Methodology): Describe the methods of data collection.
11. Intervention plan: Describe the intended intervention methods
12. Ethical clearance: Complete the Ethics Clearance Form (Annexure 2) and apply for ethical clearance
13. Action plan (Timeline): Describe the activities and state the Timeline
14. References: List the references used using APA style
15. Appendixes: Include necessary materials developed such as questionnaires, interview questions and budgetary plan if applying for fund.

## 8. Action Research Report Structure

Action research report is a detailed document on intervention, research process, methodology, data interpretation, conclusions reached, lessons learnt and changes made in the researcher's practice. The report is necessary for documentation, knowledge dissemination, and publication.

### The AR report consists of the following:

1. Title: Related to the AR question
2. Introduction: Short paragraph about the potential benefit of the AR and your situation. State or outline the model you plan to use in the study.
3. Reconnaissance: Situational analysis, competence and literature review
4. AR questions: State the AR question
5. Data plan (Methodology) and Action plan (Timeline)

Act: What you did including differences from the action plan; clearly show how you modified your plans as the actions were monitored.

Observe: Present each data set separately as a trend. Compare and triangulate.

Reflect: Did your action improve behaviour or situation? Why do you think these outcomes occurred? Did your competence improve?

6. Conclusion: Briefly summarize main findings, suggest future cycle or research project ideas
7. Reference: List the references used in your study using the APA style of referencing
8. Appendixes: Include necessary materials developed such as questionnaires and additional materials used.

## **9. Ethics and Integrity**

Ethics and integrity are an integral part of any research. It is important for a researcher to know and adhere by the research ethics. Therefore, a teacher researcher needs to be mindful of respecting the participants of the study. No participants should be harmed as a result of the AR process and outcome. This is to ensure that human dignity is upheld and respected.

In the same manner, integrity is a fundamental value for any research. The teacher researcher must be honest with himself or herself and others as it is about self-reflection and self-improvement. Ethics clearance needs to be sought from relevant authorities in your school, while informed consent also needs to be obtained from the research participants (students) and from parents especially if the participants are minors.

## **10 Referencing and Citation**

In a continuous learning environment, it is important to uphold academic integrity and avoid plagiarism. Plagiarism in any form is an academic offence because knowledge is an intellectual creation and it must be appreciated and respected. Unethical and irresponsible use of any materials without proper acknowledgement is an unacceptable behaviour in the academic world. At the international level plagiarism is considered as an academic crime and liable to punishment.

Hence, to guide the teacher researcher carry out research with ethics and integrity, it is important for the researcher to use academic writing style. In this guideline, teacher researchers are recommended to use the APA style of referencing which is one of the referencing styles commonly used in educational institutions in Bhutan.

The following material on citation and referencing is based on the 6th edition of the Publication Manual of the American Psychological Association (APA) and it is not a comprehensive guide. For all rules and requirements of APA



citations, teacher researchers are suggested to consult the 6th edition of the Publication Manual of the American Psychological Association which is freely available online.

APA style requires that information be cited within the text and in a reference list at the end of the paper. The reference list should be on a new page, double spaced, and use the hanging indent method (all lines after the first one are indented).

### **In-text citations**

APA uses the author-date method of citation. The last name of the author and the date of publication are inserted in the appropriate place of the text.

#### **One work by one author:**

In one developmental study (Smith, 2016), children learned... OR

In the study by Smith (2016), primary school children... OR

In 2016, Smith's study of primary school children...

#### **Works by multiple authors:**

When a work has 2 authors cite both names every time you reference the work in the text. When a work has three to five authors cite all the authors' last names the first time the reference occurs and then subsequently include only the first author followed by et al.

For example:

First citation: Masserton, Slonowski, and Slowinski (1989) state that...

Subsequent citations: Masserton et al. (1989) state that...

For 6 or more authors, cite only the name of the first author followed by et al. and the year.

#### **Works by no identified author:**

When a resource has no named author, cite the first few words of the reference entry (usually the title). Use double quotation marks around the title of an article, chapter, or Web page. Italicize the title of a periodical, book, brochure, or report. For example:

The site seemed to indicate support for homeopathic drugs (“Medical Miracles,” 2009).

The brochure argues for home schooling (Education Reform, 2007).

Treat reference to legal materials such as court cases, statutes, and legislation as works with no author.

### **Two or more works in the same parenthetical citation:**

Citations of two or more works in the same parentheses should be listed in the order they appear in the reference list (i.e., alphabetically, then chronologically).

Several studies (Jones & Powell, 1993; Peterson, 1995, 1998; Smith, 1990) suggest that...

For specific parts of a source, Always give the page number for quotations or to indicate information from a specific table, chart, chapter, graph, or page. The word page is abbreviated but not chapter.

For example:

The painting was assumed to be by Matisse (Powell, 1989, Chapter 6), but later analysis showed it to be a forgery (Murphy, 1999, p. 85).

If, as in the instance of online material, the source has neither visible paragraph nor page numbers, cite the heading and the number of the paragraph following it. This allows the reader to locate the text in the source. For example:

The patient wrote that she was unimpressed by the doctor’s bedside manner (Smith, 2006, Hospital Experiences section, para. 2).

### **Secondary source citation:**

The information one gets of Pema through Dorji’s work. In the end text reference list, the entry of the reference will be that of Dorji.

For example:

According to Pema’s study (as cited in Dorji, 2014), .....

In the end text reference list, the entry of the reference will be that of Dorji.

## Reference list citations

In general, references should contain the author's last name, publication date, title, and publication information. Include the issue number if the journal is paginated by issue.

For information obtained electronically or online include the DOI:

DOI - a unique alphanumeric string assigned to identify content and provide a persistent link to its location on the internet. The DOI is typically located on the first page of the electronic journal article near the copyright notice. When a DOI is used in your citation, no other retrieval information is needed. Use this format for the DOI in references: doi:xxxxxxx

If no DOI has been assigned to the content, provide the home page URL of the journal or of the book or report publisher. Do not insert a hyphen if you need to break a URL across lines; do not add a period after a URL, to prevent the impression that the period is part of the URL.

In general, it is not necessary to include database information. Do not include retrieval dates unless the source material has changed over time.

Here are some examples of writing references for different resource that a teacher researcher might use:

### Book:

Strunk, W., Jr., & White, E. B. (1979). *The guide to everything and then some more stuff*. New York, NY: Macmillan.

Gregory, G., & Parry, T. (2006). *Designing brain-compatible learning* (3rd ed.). Thousand

### Chapter of a book:

Bergquist, J. M. (1992). German Americans. In J. D. Buenker & L. A. Ratner (Eds.), *Multiculturalism in the United States: A comparative guide to acculturation and ethnicity* (pp. 53-76). New York, NY: Greenwood.

### Journal article with DOI:

Paivio, A. (1975). Perceptual comparisons through the mind's eye. *Memory & Cognition*, 3, 635-647. doi:10.1037/0278-6133.24.2.225

### Journal article without DOI:

Becker, L. J., & Seligman, C. (1981). Welcome to the energy crisis. *Journal of Social Issues*, 37(2), 1-7.

Hamfi, A. G. (1981). The funny nature of dogs. *E-journal of Applied Psychology*, 2(2), 38-48. Retrieved from <http://ojs.lib.swin.edu.au/index.php/fdo>

### Online newspaper articles:

Becker, E. (2001, August 27). Prairie farmers reap conservation's rewards. *The New York Times*. Retrieved from <http://www.nytimes.com>

### Encyclopedia articles:

Brislin, R. W. (1984). Cross-cultural psychology. In R. J. Corsini (Ed.), *Encyclopedia of Psychology* (Vol. 1, pp. 319-327). New York, NY: Wiley.

Developmental genetics. (2005). In *Cambridge Encyclopedia of Child Development*. Retrieved from [http://www.credoreference.com.library.muhlenberg.edu:80/entry/cupchilddev/developmental\\_genetics](http://www.credoreference.com.library.muhlenberg.edu:80/entry/cupchilddev/developmental_genetics)

### Technical and research reports (often with corporate authors)

Hershey Foods Corporation. (2001, March 15). 2001 Annual Report. Retrieved from <http://www.hersheysannualreport.com/2000/index.htm>

### Book reviews:

Dent-Read, C., & Zukow-Goldring, P. (2001). Is Modeling Knowing? [Review of the book *Models of Cognitive Development*, by K. Richardson]. *American Journal of Psychology*, 114, 126-133.

### Data sets:

Simmons Market Research Bureau. (2000). *Simmons National Consumer Survey* [Data file]. New York, NY: Author.

### Blog post:

Lincoln, D. S. (2009, January 23). The Likeness and Sameness of the Ones in the Middle. [Web log post]. Retrieved from <http://www.blogspot.com/lincolnworld/2009/1/23.php>

**Website with no author or date of publication:**

Census data revisited. (n.d.). Retrieved March 9, 2009, from Harvard, Psychology of Population website, <http://harvard.edu/data/index.php>

**Reprint from another source:**

Citation in the text:

(Newton, 1998/1999).

Reference list citation for this is:

Newton, W. (1999). Return to Mars. In C. Mari (Ed.), *Space Exploration* (pp. 32-41). New York, NY: H.W. Wilson. (Reprinted from *National Geographic*, pp. 2-26, August 1998).

In this example of a reprinted book review, the author of the book is named first, followed by the editor of the reprinting source, then the reviewer. In your parenthetical citation, it is necessary to name the author of the book, while the reviewer is named to distinguish from other reviews of this book.

## 11. References

- Bassey, M. (1998). Action Research for Improving Educational Practices. In R. Halsall, *Teacher Research and School Improvement*. Buckingham: Open University Press.
- Borton, T. (1970). *Reach Touch and Teach*. London: Hutchinson.
- Boud, D., Keogh, R., & Walker, D. (1985). *Reflection: Turning Experience into Learning*. London: Kogan Page.
- Brighton University. (n.d.). Reflection. Retrieved from [www3.hants.gov.uk/reflection-2.Doc](http://www3.hants.gov.uk/reflection-2.Doc).
- Classroom Action Research Guidelines. (n.d.). Retrieved from <https://pd.madison.k12.wi.us/node/341>.
- Corey, S. M. (1953). *Action Research to Improve School Practices*. New York: Bureau of Publications.
- Costa, A. & Kallick, B. (1993). Through the Lens of a Critical Friend. *Educational Leadership: Journal of the Department of Supervision and Curriculum Development*. N.E.A 51(2).
- Ebbutt, D. (1985). Educational Action Research: Some general concerns and specific quibbles. In B. R. G, *Issues in Educational Research: Qualitative Methods* (pp. 152-174). Falmer Press.
- Elliott, J. (1991). *A Practical Guide to Action Research. Action Research for Educational Change*. Milton Keynes: Open University Press.
- Elliott, J. & Partington, D. (1975). *Three Points of View in the Classroom: Generating Hypotheses from Classroom Observations, Recordings and Interviews*. (Norwich: Centre for Applied Research in Education).
- Ferrance, E. (2000). *Action Research*. Northeast and Islands Regional Educational Laboratory at Brown University.
- Kemmis, S. & McTaggart, R. (1988). *The Action Research Planner* (3rd edn). Geelong, Deakin: University Press.
- Kemmis, S., McTaggart, R. & Retallick, J. (2004). *Four Moments of Action Research*. Retrieved from <http://individual.utoronto.ca/sadaf/resources/>

parhandout2.pdf.

- Koshy, V. (2005). *Action Research for Improving Practice: A Practical Guide*. New Delhi, India: Paul Chapman.
- Maxwell, T.W. (2003). Action Research in Bhutan. *RABSEL*, III, 1-20, Paro, Bhutan: Centre for Educational Research.
- Mills, G.E. (2000). *Action Research: A Guide for the Teacher Researcher*. Upper Saddle River, NJ: Merrill.
- Mills, G.E. (2011). *Action Research: A Guide for the Teacher Researcher* (4th ed.). Boston: Pearson.
- Ministry of Education (2014). *Bhutan Education Blueprint 2014-2024*. Thimphu: Ministry of Education, Royal Government of Bhutan.
- Muhlenberg College. (n.d.). *APA Style*. Retrieved from [http://www.muhlenberg.edu/library/reshelp/apa\\_example.pdf](http://www.muhlenberg.edu/library/reshelp/apa_example.pdf).
- NSW Department of Education and Training. (2010). *Action Research in Education. Guidelines* (2nd ed.) NSW, Professional Learning and Leadership Development Directorate.
- The University of British Columbia. (2003). *Action/Participatory/Practitioner Research: Special Considerations in Ethical review*. Retrieved from [https://ethics.research.ubc.ca/sites/ore.ubc.ca/files/documents/action\\_research\\_guidelines\\_app3.pdf](https://ethics.research.ubc.ca/sites/ore.ubc.ca/files/documents/action_research_guidelines_app3.pdf).
- Rinchen, S. (n.d.). *Lecture: What is AR?* [PowerPoint slides].
- Royal Education Council (2016). *National School Curriculum Conference Report*: unpublished.
- Stenhouse, L. (1975). *An Introduction to Curriculum Research and Development*. London: Heinemann.
- Zireva, D. (2013). Qualitative Data Analysis. In M.T. Mukabeta, S. Hamandishe, & C.Nzombe (Eds.), *AR: Some Practical Ideas for Educational Practice*. (pp.

38-44). Harare, Zimbabwe: Save the Children.

## 12. Annexures

### Annexure 1: Reading list

Title	Author/s	Source
Action Research for Bhutan	Tom Maxwell	<a href="https://www.academia.edu/20873717/Action_Research_for_Bhutan">https://www.academia.edu/20873717/Action_Research_for_Bhutan</a> or <a href="https://www.researchgate.net/publication/279948945_Action_Research_for_Bhutan">https://www.researchgate.net/publication/279948945_Action_Research_for_Bhutan</a>
Strategies for teaching Physics: An Action Research	Sherab Jatsho & Sonam Rinchen	<a href="http://www.sce.edu.bt/e107_pdf/SCE_Journal_Spring_2016.pdf">http://www.sce.edu.bt/e107_pdf/SCE_Journal_Spring_2016.pdf</a>
Developing reflective thinking: Encouraging pre- service teachers to be responsible for their own learning	Sonam Rinchen	<a href="http://files.eric.ed.gov/fulltext/ED524757.pdf">http://files.eric.ed.gov/fulltext/ED524757.pdf</a> or <a href="https://eric.ed.gov/?id=ED524757">https://eric.ed.gov/?id=ED524757</a>
Cultivating and improving classroom reinforcement strategies to optimise pre-service student teachers' learning	Ugyen Tshomo & Lhaden	<a href="http://www.pce.edu.bt/sites/default/files/Journal%20of%20Educational%20Action%20Research%20Vol.1%20No.1.pdf">http://www.pce.edu.bt/sites/default/files/Journal%20of%20Educational%20Action%20Research%20Vol.1%20No.1.pdf</a>
Enhancing the use of Internet and Web services for quality learning: an Action Research	Kinley Khamsum	<a href="http://eprints.qut.edu.au/39614/1/c32782a.pdf">http://eprints.qut.edu.au/39614/1/c32782a.pdf</a>
An Action Research on teaching science through technology supported inquiry - based learning: a pilot study	Zeynep Koyunlu Unlua, Ilbilge Dokmeb & Aysel Tufekcic	<a href="http://ac.els-cdn.com/S187704281502443X/1-s2.0-S187704281502443X-main.pdf?_tid=7fc4c64c-1a7d-11e7-8c1d-00000aab0f27&amp;dnat=1491451377_67636d3d245900408d44b43f4acbbd6a">http://ac.els-cdn.com/S187704281502443X/1-s2.0-S187704281502443X-main.pdf?_tid=7fc4c64c-1a7d-11e7-8c1d-00000aab0f27&amp;dnat=1491451377_67636d3d245900408d44b43f4acbbd6a</a>
A Sample Action Research Proposal Ways to actively engage Bhutanese pre-service student teachers in their curriculum studies classes: Plans for an Action Research case study.	Kezang Sherab	<a href="http://www.pce.edu.bt/sites/default/files/Journal%20of%20Educational%20Action%20Research%20Vol.1%20No.1.pdf">http://www.pce.edu.bt/sites/default/files/Journal%20of%20Educational%20Action%20Research%20Vol.1%20No.1.pdf</a>



<p>How can I improve my behavioral strategies in the class room to encourage students' participation? – An Action Research</p>	<p>Dawa Dukpa</p>	<p><a href="http://www.pce.edu.bt/sites/default/files/Rabsel%20Volume%20-%20XIV.pdf">http://www.pce.edu.bt/sites/default/files/Rabsel Volume - XIV.pdf</a></p>
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## Annexure 2: Ethics Clearance Form

This ethics form covers research dealing with non-invasive procedures such as interviews, questionnaires, video recordings, audio recordings and observations that contain sensitive information. This form can be submitted to the School AR Committee and or Cluster AR Committee along with your AR proposal

1. Title of AR:		
2. Purpose of AR:		
3. Teacher researcher:	Name:	
	School:	
	Email:	
	Phone/mobile:	
4. Funding:		
5. Proposed date of commencement:		
6. Duration and estimated finishing date:		
7. Approximate intended number of participants:		
8. Source of participants:		
9. Briefly describe the research methods to be used.		
10. (a) Describe any risks or serious burdens which this research might pose for your participants and how this will be rectified. (b) Does this research involve subject matter of particularly sensitive nature? (e.g., participants' knowledge of, or participation in, illegal issues: issues deemed particularly sensitive by the cultural community of which the participants are members, etc.)		
11. If the research involves interviews with participants, briefly explain what mechanisms (if any) will be in place to respond to foreseeable eventualities such as: a revelation of illegal activity by or involving the participant; disclosure of the institutional mismanagement; a participant becoming distraught because of the subject matter of the interview, etc (e.g. Are interviewers trained for this project? Will interviewers have names and contact numbers of appropriate referral services? Is it appropriate for some arrangements to be made to respond to disclosure of harm or illegal activity involving participants?)		

12. Will your participants receive any financial reward or other compensation for their time and inconvenience? *If yes, give details.*
13. What step will you take to obtain the agreement of your participants to take part in the research? *Please attach a copy of the Plain Language Statement/Consent form.*
14. Does this research involve any impediments to obtaining the full understanding, free agreement of participants to take part in the project? (e.g., *will some or all participants be people of limited competence to consent or young children? If so, give details of how you will negotiate an agreement for the participation of these persons through a family member, career, legal guardian or other person*)
15. Are potential participants in this research independent of relationship, which may limit their belief that they are free to refuse participation? *If so, give details of the steps you will take to preserve their right to refuse participation.*
16. Will participants be informed that they are free at any time to discontinue participation? *If yes, give details. If no, explain why.*
17. Who will have access to the information you collect?
18. Confidentiality of records
  - i). How will confidentiality of records (*data collected: video, picture, audio, interviews, test score, homework etc.*) be maintained during the study?
  - ii). Are the records to be preserved after the study is completed? *If YES, how will the confidentiality of the records be protected during the period of their preservation?*
19. Ethical issues Please indicate which, if any, of the following issues are involved in this research.
  - (a) Will participants be photographed by camera or video? *If YES, please attach a copy of the Consent Form.*
  - (b) Will participants be tape-recorded? *If YES, please attach a copy of the Consent Form.*
  - (c) Does the research involve any stimuli, tasks, investigations or procedures, which may be experienced by the subjects as stressful, noxious, aversive or unpleasant? *If yes, state how these will be addressed?*
  - (d) In this study are there any procedures known (or thought) to be beneficial or harmful to one group of participants (EXPERIMENTAL) being withheld from another group of participants (CONTROL)? *If yes, state how these will be addressed?*
20. Are there any other ethical issues raised by this research? *If so, what steps will you take in response to them?*
21. Is anything in the conduct of the research project likely to be subject to legal constraint? *If so, what steps will you take in response?*
22. How will the results of your research be presented?
23. How will anonymity be preserved in publications? (eg. *Pseudonyms could be used*)
24. Signature of the Teacher Researcher/s:

*To be completed by the School Action Research Committee and or Cluster Action Research Committee*

Approval of action research:

Recommendation for improvement:

Dated signatures with names of the committee members:

*Adapted from the form of the Human Research Ethics Committee of the University of New England, Australia*

### Annexure 3: Sample Parent/Guardian Consent Form

*This consent form applies to children below the age of 18 years.  
The consent form needs to be adapted and made suitable to one's research.*

Date: .....

Dear Parent/ Guardian,

I am currently a teacher working in .....school. This year, I am in the process of working on an Action Research. The topic of my research is .....

Over a period of....., I will observe the class to collect data and I assure that no harm in any form will be done to your child. Any information that can be identified with your child will remain confidential.

In order to successfully conduct my research, I am requesting your permission to use your child's data for my research. If you agree to let your child participate in my research, I would like you to kindly fill up the form given below with your signature.

If you have any questions or concerns, please feel free to contact me via email at .....or call me at.....

Thank you in advance for your support.

Sincerely,

.....

.....School

---

Tick the relevant:

I have read the consent form. I give my child, .....(child's name) permission to take part in the research study.

I have read the consent form. I do not give my child .....(child's name) permission to take part in the research study.

Parent's/Guardian's Signature:..... Date: / /

### Annexure 4: Sample Principal Consent Form

*The consent form needs to be adapted and made suitable to one's research.*

Date: .....

Dear Principal,

This year, I am in the process of working on an Action Research. The topic of my research is ..... Over a period of....., I will observe the class ..... to collect data and I assure that no harm in any form will be done to the students. Any information that can be identified with students will remain confidential.

In order to successfully conduct my research, I am requesting your permission to use the students' data for my research. If you agree to let the students of class .....to participate in my research, I would like you to kindly fill up the form given below with your signature.

If you have any questions or concerns, please feel free to talk to me.

Thank you in advance for your support.

Sincerely,

.....

.....School

Tick the relevant:

I have read the consent form. I give my consent for class ..... students (mention the class) to take part in the research study.

I have read the consent form. I do not give my consent for class ..... students (mention the class) to take part in the research study.

Principal's Signature:.....

Date: / /

## Annexure 5: Sample Individual Student Consent Form

*This consent form applies to students 18 years above.  
The consent form needs to be adapted and made suitable to one's research.*

Date: .....

Dear Student,

I am in the process of working on an Action Research. The topic of my research is..... Over a period of..... , I will observe your class to collect data and I assure that no harm in any form will be done to you. Any information that can be identified with you will remain confidential.

In order to successfully conduct my research, I am requesting your permission to collect data for my research. If you agree to participate in my research, I would like you to kindly fill up the form given below with your signature.

If you have any questions or concerns, please feel free to talk to me.

Thank you in advance for your support.

Sincerely,

.....

.....School

I..... of class .....in..... school, have read the consent form and agree to participate voluntarily in the above mentioned Action Research.

Signature: .....

Date: / /

*Adapted from <https://earlyactionresearch.wikispaces.com/file/view/Consent+forms.doc>*

## **Annexure 6: Terms of Reference for School AR Committee**

The committee shall function in terms of this Terms of Reference

### **Objectives:**

The objectives of the committee are to:

- Institutionalize research culture in schools
- Promote sharing of research information among teachers and schools

### **Suggested composition of the Committee:**

- i. Chair: Principal
- ii. Member: Academic Head/ Vice Principal
- iii. Member: Heads of Department
- iv. Member Secretary: Lead Teacher (Cluster and School Lead Teacher)

### **Functions of the Committee**

- i. Explore funding and collaboration to support research among teachers
- ii. Review AR proposals submitted by teachers for relevancy and approval
- iii. Provide professional support to researcher(s)
- iv. Forward proposal(s) to cluster research committee for review and recommendation for endowment fund
- v. Carry out ethics clearance responsibility
- vi. Review AR report

### **Meetings**

The Committee shall meet twice a year to review AR proposals in March and AR reports in August.



## **Annexure 7: Terms of Reference for Cluster AR Committee**

The committee shall function in terms of this Terms of Reference

### **Objectives**

The objectives of the committee are to:

- Institutionalize research culture at the cluster level
- Promote sharing of research information among teachers and schools

### **Suggested composition of the Committee**

- i. Chair: Chief/Deputy Chief District/Thromde Education Officer
- ii. Member: Teacher Resource Centre host school principal
- iii. Member: Three teachers/principals/vice principals with strong research experience
- iv. Member Secretary: Cluster Lead Teacher

### **Functions of the Committee**

1. Explore funding and collaboration to promote research among teachers in the cluster
2. Review research proposals and recommend for endowment fund
3. Review and approve proposals for cluster level AR
4. Provide professional support to researcher(s)
5. Carry out ethics clearance responsibility
6. Review research report

### **Meetings:**

The Committee shall meet twice a year to review AR proposals in March and AR reports in August.

## **The Annexure 8: Terms of Reference for Technical Committee**

The Technical Committee shall function in terms of this Terms of Reference.

### **1. Objectives**

The objectives of the committee:

- To serve as a quality assuring body for AR proposals submitted for endowment fund
- To review and approve AR proposals for endowment fund
- To evaluate AR reports

### **2. Suggested composition of Technical Committee**

- i. Chair: Director General, Department of School Education
- ii. Member: Education Monitoring Division
- iii. Member: Quality Assurance and Accreditation Division
- iv. Member: Research Division, REC
- v. Member: Research Division, BCSEA
- vi. Member: Samtse/Paro College of Education, RUB
- vii. Member Secretary: TPSD, DSE, MoE

### **3. Functions of the Committee**

#### **A) AR Proposal Review (Week 4 March-Week 1 April)**

- i. Evaluate proposals ensuring that proposals are in line with the objectives of the fund
- ii. Recommend proposals based on the evaluation
- iii. Provide critical feedback if any to improve the proposal
- iv. Approve proposals for endowment fund based on the evaluation conducted using the evaluation rubrics

#### **B) Evaluate AR Report (Week 3 October)**

- i. Evaluate action research reports in line with the research proposal approved
- ii. Evaluate research report to ensure that the report is free of ghost writing/collusion/plagiarism
- iii. Recommend research report for action research seminar/publication/recognition

### **4. Meeting**

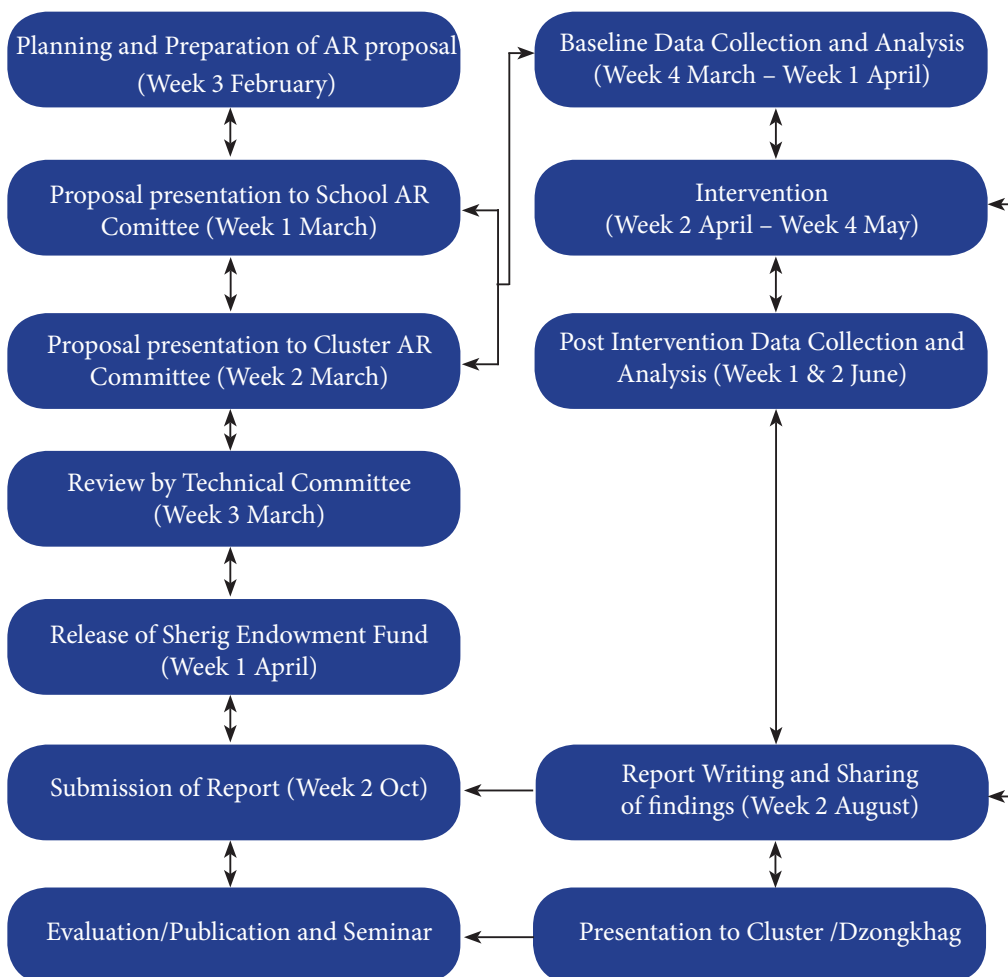
The Technical Committee shall meet twice a year to review research proposals submitted by schools/clusters for endowment fund and to evaluate the research reports.

## Annexure 9: Rubrics for Assessment of AR Proposal and Report

Criteria	4	3	2	1
<b>Purpose</b>	The main purpose of the study is clearly written and it is apparent in the paper.	The main purpose is clearly written but sometimes it is not apparent in the paper.	The purpose is not consistently clear throughout the paper	The purpose is generally unclear.
<b>Content</b>	Information relevant and clearly supports the purpose or argument. Content shows thoughtful and excellent.	Information provides reasonable support to the main purpose or argument mostly. Content shows thoughtful and good analysis.	Information supports main purpose at times. Content shows basic and general level of analysis.	Information does not support the main purpose. Analysis is vague.
<b>Process</b>	All steps are in detail and sequential order that are easily followed.	All steps are in sequential order but limited detail that are not easily followed.	Some steps are in detail in some order.	Steps are not complete, are not in sequential order.
<b>Organization</b>	The ideas are arranged logically to support the purpose. They flow smoothly from one to another and are clearly linked to each other. The reader can follow the line of reasoning.	The ideas are arranged logically to support the purpose. They are usually clearly linked to each other. The reader can follow the line of reasoning.	The writing is arranged logically, although occasionally ideas fail to make sense together. The reader is fairly clear about what the writer intends.	The writing is not logically organized. Frequently, ideas fail to make sense together. The reader cannot identify a line of reasoning and loses interest.

<p><b>Grammar and mechanics</b></p>	<p>Entirely free of punctuation, capitalizing, spellings and grammatical errors.</p>	<p>Few errors in punctuation, capitalization, spelling and grammar.</p>	<p>Several punctuation, capitalization, spelling and grammatical errors.</p>	<p>Numerous and distracting errors in punctuation, capitalization and spelling.</p>
<p><b>Sentence structure</b></p>	<p>No errors in sentence structure and word usage. Sentences are well-phrased and varied in length and structure.</p>	<p>Few errors in sentence structure and word usage. Sentences are well-phrased and there is some variety in length and structure.</p>	<p>Many errors in sentence structure and word usage that the reader is occasionally distracted.</p>	<p>Numerous errors in sentence structure and word usage that the reader is distracted.</p>
<p><b>Conclusion</b></p>	<p>Excellent summary of topic with concluding ideas that impact reader. The conclusion is engaging and restated the purpose.</p>	<p>Good summary of topic with clear concluding ideas. The conclusion restates the purpose.</p>	<p>Basic summary of topic with some final concluding ideas. The conclusion does not adequately restate the purpose.</p>	<p>Lack of summary of topic. Incomplete and unfocused.</p>
<p><b>Citation and Bibliography</b></p>	<p>All cited works both in text and visual are done in the American Psychological Association (APA) format with no errors. Bibliography is done using APA format accurately and consistently with no errors.</p>	<p>Some cited works both text and visual are done in the APA form. Bibliography is done using the APA format with some level of accuracy and consistency.</p>	<p>Few cited works both text and visual are done in the APA format with errors. Bibliography is done using APA format with many errors.</p>	<p>Cited works are not done in accordance with APA format. Bibliography is done without using APA format.</p>

**Annexure 10: Flow Chart**



## Annexure 11: Action Plan Matrix

Plan/Weeks	August 2008				Remarks
	1st - 2nd week		3rd -4th week		
<b>1. Baseline data</b>	Observation on students' discussion and presentation	Reflection by students on the proceedings of a particular class	Critiquing an article	Question/ Answer (Unit test)	Researcher keeps notes of the daily proceedings
<b>September 2008</b>					
<b>2. Analysis of baseline data</b>	1st - 2nd week				
	3rd week		4th week		
<b>3. Intervention strategies</b>	Scaffolding	Concept mapping	Reflective writing skills	Peer and group interaction	Researcher keeps notes of the daily proceedings
<b>October 2008</b>					
	1st - 2nd week		3rd -4th week		
<b>4. Post data collection</b>	Observation of trainees' discussion and presentation	Reflection by trainees on the proceedings of a particular class	Critiquing an article	Question/ Answer (Unit test).	Critical friend will be involved during the post data collection
<b>November 2008</b>					
<b>5. Analysis of post data</b>	Analysis & Report writing				
<b>December 2008</b>					
<b>6. End of AR/ Repeat 1,2,3,4.</b>					

The action plan matrix has been adapted from the Kemmis & McTaggart (1988) by Dr. Sonam Rinchen, Samtse College of Education.





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